
SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (SDEIS)

River Knoll

**40 CROTON DAM ROAD
TOWN OF OSSINING
WESTCHESTER COUNTY, NY**

VOLUME 3

Traffic Study Appendix

Prepared for:

Hudson Park Group LLC
100 Brookfield Road
Fleetwood, NY 10552

Lead Agency:

Town of Ossining Planning Board

Prepared by:



Project 15064

Date:

February 2022

River Knoll

**40 Croton Dam Road
Town of Ossining, NY 10562
Westchester County, NY
Tax Map Lot 89.08-1-83 (Town of Ossining)**

SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

VOLUME 3

Traffic Study Appendix

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TRAFFIC STUDY

RIVER KNOLL

40 CROTON DAM ROAD TOWN OF OSSINING, NEW YORK

Prepared for:

Hudson Park Group LLC

100 Brookfield Road
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120 Bedford Road
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I. **INTRODUCTION**

This Traffic Study has been prepared to assess existing conditions as well as future traffic operations in association with the proposed River Knoll redevelopment located at 40 Croton Dam Road in the Town of Ossining, NY. The location of the site is illustrated on the figures included in Appendix B.

The subject property operated as a hospital since 1927. The Stony Lodge Hospital began closing in 2012. The Applicant's previous proposal consisted of demolishing the existing hospital and constructing a new three-story building with two levels of parking below providing a total of 188 apartment units. The previously proposed building consisted of 169 market-rate rental units and 19 affordable rental units. The previously proposed redevelopment included amenities for the residents such as a swimming pool, fitness center, yoga studio, club room, etc.

Based on input from the Town and residents, the Applicant has revised the proposed redevelopment of the property. The Applicant's current proposal consists of demolishing the existing hospital and constructing an age-restricted townhouse community. The age-restricted (55 or over) community proposes a total of 95 units with 85 units as market-rate and the remaining 10 as affordable units. The redevelopment proposes a clubhouse and swimming pool as amenities for the residents of the community. [A bicycle rack for bicycle parking is proposed at the proposed clubhouse for the community.](#)

The property is currently accessed via a single driveway located along Croton Dam Road. The previously proposed and currently proposed redevelopment will reconstruct a new and widened driveway at the same location as the existing driveway. The currently proposed redevelopment also proposes two emergency access only driveways with one connecting to Croton Dam Road located north of the main site driveway and the second connecting to Narragansett Avenue.

[The proposed driveway connecting to Croton Dam Road provides two-way traffic flow. The single site access splits into two 26 foot wide two-way dead end roadways at an intersection within the property. One of the roads continues easterly from the site driveway and then curves](#)

to travel north to its terminus providing access to 64 units. This roadway provides an emergency access drive connecting to Narragansett Avenue which will include bollard and chain assemblies at both ends to prevent use except for emergency vehicles. The other road traverses in a northerly direction from the site driveway and curves to travel south to its terminus providing access to the remaining 31 units. This roadway provides an emergency access drive connecting to Croton Dam Road which will include bollard and chain assemblies at both ends to prevent use except for emergency vehicles.

II. EXISTING CONDITIONS

A. Existing Roadway Network

JMC performed field reconnaissance of the existing roadway network within the area of this Study in order to gather existing conditions data. This reconnaissance included a determination of lane widths, striping, horizontal and vertical alignments, signs, speed limits, pedestrian activities, traffic flows, sidewalks, curbing, etc. Traffic signal timing and phasing was obtained from the New York State Department of Transportation (NYSDOT).

NY 9A is generally a north/south state highway which changes to an east/west roadway within the study area. In the vicinity of the subject property, NY 9A provides two travel lanes in each direction and widens at intersections to provide additional lanes. It has a posted speed limit of 40 mph and on-street parking is prohibited.

Croton Dam Road is a north/south roadway connecting to Kitchawan Road in the north and Dale Avenue in the south. It provides one travel lane in each direction. The roadway has a posted speed limit of 30 mph and parking is prohibited on both sides of the street.

Kitchawan State Road is an east/west state roadway and is also referenced as NY 134. It provides one travel lane in each direction. The roadway has a posted speed limit of 30 mph and on-street parking is prohibited.

Pheasant Ridge Road and Feeney Road have tributary roads connecting to them; however, they terminate at a dead end. Cherry Hill Circle is a dead end roadway. All three of the roadways are general east/west roadways and provide one travel lane in each direction. The roadways have a speed limit of 30 mph and on-street parking is permitted.

Narragansett Avenue is generally a north/south roadway which changes to an east/west roadway at its northern end. It connects to Croton Dam Road in the north and Ryder Road in the south. It provides one travel lane in each direction and has a 30 mph speed limit. On-street parking is prohibited along the roadway.

Pershing Avenue, Grandview Avenue and Pine Avenue are east/west roadways which connect to Narragansett Avenue in the east. Pershing Avenue and Grandview Avenue connect to Croton Dam Road in the west. Cherry Hill Drive opposes Pershing Avenue at Croton Dam Road. Pine Avenue connects to Dale Avenue in the west. They provide one travel lane in each direction. The roadways have a posted speed limit of 30 mph and parking is permitted in certain locations along the roads.

Dale Avenue and Hawkes Avenue are north/south state roadways within the study area. These roads are also referenced as NY 134. They provide one travel lane in each direction. On-street parking is prohibited along Hawkes Avenue and is permitted on one side of Dale Avenue. The roadways have a posted speed limit of 30 mph.

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

1. Dale Avenue & Pine Avenue
2. Croton Dam Road & Hawkes Avenue

3. Croton Dam Road & Pershing Avenue with Cherry Hill Circle
4. Croton Dam Road & Site Driveway
5. Croton Dam Road & Grandview Avenue
6. Croton Dam Road & Narragansett Avenue
7. Croton Dam Road & Pheasant Ridge Road with Feeney Road
8. Croton Dam Road & Kitchawan State Road
9. Croton Dam Road & NY 9A

Pine Avenue intersects Dale Avenue at an unsignalized 'T' intersection. Both Dale Avenue approaches provide a single thru lane with shared turning movements. Pine Avenue provides a single travel lane with shared turning movements. Pine Avenue is controlled by a stop sign.

Croton Dam Road intersects Hawkes Avenue at a three-legged unsignalized intersection. Hawkes Avenue provides a single thru lane with shared turning movements in both directions. Croton Dam Road provides a single travel lane with shared turning movements and is stop sign controlled.

The intersection Croton Dam Road and Pershing Avenue with Cherry Hill Drive is a four-legged unsignalized intersection. Each approach provides a single travel lane with shared turning movements. The Pershing Avenue and Cherry Hill Circle are controlled by a stop sign.

The site driveway intersects Croton Dam Road at an unsignalized 'T' intersection. Both Croton Dam Road approaches provide a single thru lane with shared turning movements. The site driveway provides a single travel lane with shared turning movements. The site driveway is controlled by a stop sign.

Grandview Avenue intersects Croton Dam Road at an unsignalized 'T' intersection. Both Croton Dam Road approaches provide a single thru lane with shared turning movements. Grandview Avenue is controlled by a stop sign and provides a single travel lane with shared

turning movements.

Narragansett Avenue intersects Croton Dam Road at an unsignalized intersection. Both Croton Dam Road approaches provide a single thru lane with shared turning movements. The Croton Dam Road northbound approach is controlled by a stop sign. Narragansett Avenue provides a single travel lane with shared turning movements with a short channelized left turn pocket. For the purposes of the study and to obtain capacity analyses, the intersection has been analyzed as a typical 'T' intersection with stop sign control only on the minor street (Narragansett Avenue). Additionally, due to the short left turn pocket on Narragansett Avenue, this approach was analyzed as a single lane with shared turning movements.

The intersection Croton Dam Road and Pheasant Ridge Road with Feeney Road is a four-legged unsignalized intersection. Each approach provides a single travel lane with shared turning movements. The Pheasant Ridge Road and Feeney Road are controlled by a stop sign. Pheasant Ridge Road provides a small divisional island between its egress and ingress accesses at the intersection.

Kitchawan State Road intersects Croton Dam Road at a three-legged unsignalized intersection. Croton Dam Road provides a single thru lane with shared turning movements in both directions. Kitchawan State Road provides a single travel lane with shared turning movements and is stop sign controlled.

The intersection of Croton Dam Road and NY 9A is a signalized four-legged intersection. The NY 9A eastbound approach provides a 110 foot long separate left turn lane and two thru lanes as well as a 190 foot long right turn lane. The NY 9A westbound approach provides a 150 foot long separate left turn lane and two thru lanes with shared right turning movements. The northbound and southbound approaches provide a single travel lane with shared turning movements. The traffic signal provides a three phase operation. First, the NY 9A left turn lanes are provided the protected green indication which is then followed by the thru and right turn movements along NY 9A. This is then followed by the Croton

Dam Road approaches which are given the green indication with permissive turning movements.

B. Existing Volumes

Due to the pandemic, traffic volumes on the roadways have created atypical traffic conditions with remote learning for schools and remote working for businesses. In order to complete the traffic analyses for this study, our office utilized the traffic count data previously conducted for the River Knolls redevelopment from the prior traffic study. These counts were conducted in the fall of 2016. The utilization of record count information prior to the pandemic for traffic studies has been the preferred alternative by the traffic engineering community to represent typical traffic conditions and is supported by the NYSDOT in their Traffic Data Collection Guidance during COVID-19 Pandemic memorandum, dated 08/11/2020. A copy of the NYSDOT's guidance has been included in Appendix F.

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/bicycle activities and truck traffic.

Traffic counts were conducted from 6:00 – 10:00 AM and 3:00 – 7:00 PM on Thursday, September 29, 2016 for all the studied intersections. The weather conditions on September 29, 2016 were partly cloudy and dry. Additionally, all the studied intersections were counted from 9:00 AM – 1:00 PM on Saturday, October 15, 2016. The weather conditions on October 15, 2016 were sunny and dry. The peak hour volumes occurred between 7:15-8:15 AM during the weekday morning, 4:30-5:30 PM during the weekday afternoon and 10:30-11:30 AM during the Saturday midday. The intersection traffic count data is included in Appendix C. The peak hour volumes are shown on Figures 1 thru 3 "2016 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 with 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. 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.

The LOS criteria for signalized intersections are presented below.

<i>Signalized Level of Service Criteria</i>		
Control Delay (Seconds/Vehicle)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 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.

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 and Roundabouts 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.

<i>Unsignalized Level of Service Criteria</i>		
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

For TWSC intersections, the LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or the intersection as a whole at TWSC intersections. For approach-based and intersectionwide assessments at AWSC intersections and roundabouts, LOS is defined solely by control delay.

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. 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.

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 through 4. 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 through 4. All tables are included in Appendix A.

During the peak weekday AM hour, the overall intersection of Croton Dam Road and NY 9A operates at a level of service C. The NY 9A westbound left turn lane operates at a level of service F while the eastbound left turn lane operates at a level of service E. The NY 9A eastbound approach and thru lanes operate at a level of service C. The Croton Dam Road northbound and southbound approaches operate at a level of service E. All other movements at the studied intersections operate at a level of service B or better.

During the peak weekday PM hour, the overall intersection of Croton Dam Road and NY 9A operates at a level of service E. Both NY 9A left turn lanes operate at a level of service F. The NY 9A westbound thru and right turning movements operate over capacity and at a level of service F. The Croton Dam Road approaches and the NY 9A westbound approach operate at a level of service E. All other movements at the studied intersections operate at a level of service B or better.

During the peak Saturday midday hour, the overall intersection of Croton Dam Road and NY 9A operates at a level of service C. The NY 9A westbound left turn lane operates at a level of service F while the eastbound left turn lane operates at a level of service D. The NY 9A westbound thru/right lanes and approach operate at a level of service C. The Croton Dam Road southbound approach operates at a level of service D. All other movements at the studied intersections operate at a level of service B or better.

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 Village of Ossining's Planning Department and the Town of Ossining's Building Department, we have incorporated the traffic volumes associated with the proposed Parth Knolls, LLC residential development located at 87 Hawkes Avenue in Ossining has been incorporated in the study. The traffic volumes associated from the proposed Sunshine Children's Home & Rehabilitation Center in New Castle, the proposed Upper Westchester Muslim Society development in New Castle and the proposed Hudson Ridge Wellness Center development in Cortlandt will not generate substantial traffic volumes in the study area and have been considered as part of the general growth volumes.

Table I and Table IA depict the traffic volumes associated with the reoccupancy of the previous hospital use on the development property based on traffic counts conducted at

the site driveway in 2006. [The traffic figure of the 2006 site driveway volumes and a traffic generation table from the “Due Diligence Traffic Study” prepared by Schoor Depalma Engineers and Consultants has been included in Appendix C.](#) The Hospital had 250 employees, with multiple shifts coming and going 24 hours a day. In addition, delivery trucks, including large multi-axle trucks, came daily with food and supplies, as did ambulances 24 hours a day. Family members came by car to visit, usually in the evening and weekends. Staff came by even when not working, to pick up paychecks and meet with their supervisors. Outside agencies sent staff daily to coordinate care, and job seekers visited daily weekdays and weekends in significant numbers. Vans were used to transport patients daily to outside medical specialists and emergency rooms, when ambulances were not used. Regional conferences were regularly held on-site with outside visitors from the County and State. Federal Express and UPS came daily more than once for deliveries and pickups. By State regulation, incidents involving the patients required State reporting and police investigation, which by law required the local police to be involved and necessitated frequent trips by police cars. In summary, there was constant traffic. In addition, there have always been, and there continue to be, outpatients coming for treatment.

The reoccupancy of the hospital volumes based on the 2006 counts are shown on Figure 8 and have been incorporated into the no-build volumes. The resulting 2025 no-build volumes represent traffic operation in 2025 with reoccupancy of the hospital use (without the redevelopment of the site).

During the peak weekday AM hour, the Grandview Avenue approach to its intersection with Croton Dam Road is projected to increase in delay from a level of service A under existing conditions to a level of service B under no-build conditions. The overall intersection of Croton Dam Road and NY 9A is projected to increase in delay to operate at a level of service D while the Croton Dam Road approaches are projected to increase in delay to operate at a level of service F under no-build conditions. The NY 9A eastbound approach and thru lanes are projected to increase in delay to operate at a level of service D under no-build conditions. All other movements at the studied intersections under no-build conditions are projected to operate at same levels of service during the peak weekday

AM hour as experienced under existing conditions.

During the peak weekday PM hour, the Grandview Avenue approach to its intersection with Croton Dam Road is projected to increase in delay from a level of service A under existing conditions to a level of service B under no-build conditions. At the intersection of Croton Dam Road and NY 9A, the westbound approach and both Croton Dam Road approaches are projected to increase in delay to operate at a level of service F under no-build conditions. All other movements at the studied intersections under no-build conditions are projected to operate at same levels of service during the peak weekday PM hour as experienced under existing conditions.

During the peak Saturday midday hour, the Pershing Avenue approach to its intersection with Croton Dam Road is projected to decrease in delay from a level of service B under existing conditions to a level of service A under no-build conditions. At the intersection of Croton Dam Road and NY 9A, the eastbound left turn lane and Croton Dam Road northbound approach are projected to increase in delay to operate at a level of service E under no-build conditions. The NY 9A eastbound approach is projected to increase in delay from a level of service A under existing conditions to a level of service B under no-build conditions. All other movements at the studied intersections under no-build conditions are projected to operate at same levels of service during the peak Saturday midday hour as experienced under existing conditions.

Our office requested accidents reports from the Town/Village of Ossining Police Department for all the studied intersections and the roadway segments between the intersections from 01/01/2009 to 11/15/2017. Data from the accident reports have been provided in Tables AR1 thru AR34. This data incorporates 3 years of accident data when the former hospital use was in operation. Tables AR1 thru AR17 represent accident data when the former hospital use was in operation. Tables AR18 thru AR34 represent accidents after the former hospital was closed. [Table ARS contained in Appendix A provides a summary of the accidents by location and year as well as the statewide and](#)

[location accident rates. Table ARS compiles the data shown on Tables AR1 thru AR34.](#)

While the former hospital use was in operation, there were 3 accidents within the study area. One accident occurred at the intersection of Dale Avenue & Pine Avenue which involved a rear end accident having a contributing factor of backing unsafely. The other two accidents occurred along Dale Avenue between Pine Avenue and Croton Dam Road. One of these two accidents was a sideswipe accident and the other was a right angle accident. These accidents involved driver inattention and failure to yield right-of-way. There were no other reported accidents in the study area during this time period.

Since the hospital has been closed, there have been 4 accidents at the intersection of Dale Avenue and Pine Avenue. One of the accidents involved a non-fatal injury and the majority of the contributing factors for the accidents were backing unsafely and driver inattention. There was one accident along Dale Avenue between Pine Avenue and Croton Dam Road which was a right angle accident involving backing unsafely. At the intersection of Croton Dam Road and Hawkes Avenue, there was two rear end accidents and one sideswipe accident due to defective brakes and failure to keep right. At the intersection of Croton Dam Road and Cherry Road, there was one right angle accident due to driver inexperience and failure to yield right-of-way. Along Croton Dam Road between Cherry Hill and the site driveway, there was one right angle accident due to driver inexperience and slippery pavement. There was one fixed object accident along Croton Dam Road between the site driveway and Grandview Avenue. There was one fixed object accident due to the driver falling asleep along Croton Dam Road between Grandview Avenue and Narragansett Avenue. There was one right turn, one right angle, and one fixed object accident at the intersection of Croton Dam Road and Narragansett Avenue which involved an impaired driver, aggressive driving, and passing too closely. There was one fixed object accident at the intersection of Croton Dam Road and Pheasant Ridge Road due to driver inattention. There was one left turn accident at the intersection of Croton Dam Road and Kitchawan State Road due to driver failure to yield the right-of-way. There was a non-fatal injury sideswipe accident at the intersection of NY 9A and Croton Dam Road due to improper lane usage and failure to keep right. There were no other reported accidents in the study

area during this time period.

B. Build Volumes

The projected traffic associated with the previously proposed 188 apartment unit redevelopment and the currently proposed 95 age-restricted unit redevelopment is based on vehicle trip information published by the Institute of Transportation Engineers (ITE) in its publication “Trip Generation Manual, 10th Edition.” Table I shows the traffic volumes associated with the reoccupancy of the former hospital land use and the previously proposed redevelopment as well as the net change in traffic volumes between them. The previously proposed redevelopment incorporated a shuttle service to transport residents to and from the train station. The previously proposed redevelopment resulted in approximately 32, 43 and 24 net additional driveway trips during the peak weekday AM, weekday PM, and Saturday midday hours, respectively, compared to the former hospital. Table IA shows the traffic volumes associated with the reoccupancy of the former hospital land use and the currently proposed redevelopment as well as the net change in traffic volumes between them. The currently proposed redevelopment no longer proposes a shuttle service to and from the train station. The currently proposed redevelopment results in a reduction of approximately 32, 35, and 28 net driveway trips during the peak weekday AM, weekday PM, and Saturday midday hours, respectively, compared to the former hospital. The projected peak hour volumes for the proposed age-restricted redevelopment are relatively low compared to other residential uses. The primary trips for the currently proposed redevelopment have been shown in the figures in Appendix B.

The primary trips were routed through the studied intersections based on existing traffic volumes and the roadway network. The no-build volumes minus the reoccupied hospital volumes plus the currently proposed redevelopment traffic results in 2025 Build Volumes which reflect projected volumes after the completion and occupancy of the proposed redevelopment.

A sight distance analysis has been conducted for the proposed driveway. A speed study was conducted for vehicles traveling along Croton Dam Road in the vicinity of the existing site access. The speed study collected data from 9/18/2015 to 9/27/2015 for both directions of travel along Croton Dam Road [\(160 feet north of the existing property access on Croton Dam Road\)](#). Based on the speed study, the 85th percentile speed for both directions along Croton Dam Road is 43 mph in the vicinity of the existing site access. The speed study data is contained in Appendix E.

Utilizing the 85th percentile speed, our office calculated the desirable stopping and intersection sight distances based on AASHTO guidelines. The desirable stopping sight distance based on 43 mph is 335 feet in both directions along Croton Dam Road. For vehicles making a left turn (looking right) from the proposed site driveway, the desirable intersection sight distance based on 43 mph is 474 feet. For vehicles making a right turn (looking left) from the proposed site driveway, the desirable intersection sight distance based on 43 mph is 411 feet. A sight distance plan was prepared and is enclosed in Appendix G.

The existing decorative walls adjacent to the existing site access are proposed to be relocated as part of the proposed redevelopment for the proposed site access to outside of the driver's intersection sight line. Based on the sight distance analysis and the relocation of the existing decorative walls outside of the sight line, the intersection sight distances based on 43 mph are accommodated for the proposed site driveway along Croton Dam Road.

IV. FINDINGS & CONCLUSION

Intersection capacity analysis computed based on the Build Volumes indicate that the intersections will operate at the same or better levels of service as projected for the No-Build Volumes except for one turning movement during the peak Saturday midday hour. Projected operations with the proposed redevelopment are shown on Tables 2 through 4.

During the peak weekday AM hour, the Grandview Avenue approach to its intersection with Croton Dam Road is projected to decrease in delay from a level of service B under no-build conditions to a level of service A under build conditions. All other movements at the studied intersections under build conditions are projected to operate at same levels of service during the peak weekday AM hour as projected under no-build conditions. The overall delay under build conditions at the intersection of NY 9A and Croton Dam Road is projected to decrease compared to no-build conditions.

During the peak weekday PM hour, the Grandview Avenue approach to its intersection with Croton Dam Road is projected to decrease in delay from a level of service B under no-build conditions to a level of service A under build conditions. All other movements at the studied intersections under build conditions are projected to operate at same levels of service during the peak weekday PM hour as projected under no-build conditions. The overall delay under build conditions at the intersection of NY 9A and Croton Dam Road is projected to decrease compared to no-build conditions.

During the peak Saturday midday hour, the Pershing Avenue approach to its intersection with Croton Dam Road is projected to increase in delay by 0.4 seconds from a level of service A under no-build conditions to a level of service B under build conditions. At the intersection of NY 9A & Croton Dam Road, the NY 9A eastbound left turn lane is projected to decrease in delay from a level of service E under no-build conditions to a level of service D under build conditions. Additionally, the Croton Dam Road northbound approach to NY 9A is projected to decrease in delay from a level of service E under no-build conditions to a level of service D under build conditions. All other movements at the studied intersections under build conditions are projected to operate at same levels of service during the peak Saturday midday hour as projected under no-build conditions.

As previously mentioned, the proposed age-restricted redevelopment is a relatively low traffic generator compared to other residential uses. When you compare the proposed redevelopment's traffic to the other traffic volumes at the intersection of NY 9A & Croton Dam Road, the proposed redevelopment's traffic represents less than 0.6% of the traffic at the

intersection. The proposed redevelopment's traffic represents 0.24%, 0.34%, and 0.58% of the overall intersection volumes at the NY 9A and Croton Dam Road under build conditions during the peak weekday AM, weekday PM, and Saturday midday hours, respectively.

Additionally, a queuing analysis was performed at the studied intersections. Tables 5 thru 7 are included in Appendix A and depict the queuing for the three studied conditions (Existing, No Build, Build). The storage lengths depicted in the tables are measured to the nearest intersection of two streets. Based on the queuing analysis, the available storage length can accommodate the projected queue lengths for all approaches at the studied intersections, except for the eastbound left turn and northbound approach at the intersection of NY 9A and Croton Dam Road. These particular movements exceed the available queue length under existing conditions.

We have compared the currently proposed development to the previously proposed development. We have provided the operations at the studied intersections with the previous proposed development to Tables 2 thru 4 for comparison purposes. The previously proposed development generally has a greater impact at the studied intersections compared to the currently proposed development since the age-restricted development has a significantly reduced unit count and is a relatively low traffic generator. The previously proposed development results in two level of service degradations during the peak weekday AM hour, three level of service degradations during the peak weekday PM hour, and one level of service degradation during the peak Saturday midday hour compared to the currently proposed development as shown on Tables 2 thru 4.

The previously proposed development considered an improvement at the intersection of Croton Dam Road and NY 9A. Per the request of the Town's traffic consultant, we provided the projected traffic operations at this intersection with these considered improvements for the previously proposed and the currently proposed development volumes. The currently proposed age-restricted development does not propose any improvements at this intersection and is only shown for reference. In general, the considered improvements provide an improved overall intersection delay and improved overall level of service compared to no-build conditions. The operations with the considered improvements have been depicted on Tables 2 thru 4.

Based on the above, it is the professional opinion of JMC that the redevelopment of the site to 95 units of age-restricted housing will not have a significant impact on traffic operations in the study area compared to the no-build conditions, and results in reduced traffic volumes compared to the prior hospital use.

Respectfully submitted,

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APPENDIX A

TABLES

APPENDIX B

FIGURES

APPENDIX C
TURNING MOVEMENT COUNTS

APPENDIX D
CAPACITY ANALYSES

APPENDIX E

SPEED STUDY

APPENDIX F

NYSDOT GUIDANCE MEMO

APPENDIX G

SIGHT DISTANCE PLAN

APPENDIX A

TABLES

TABLE 1**PREVIOUSLY PROPOSED DEVELOPMENT VOLUMES**

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR			PEAK SATURDAY MIDDAY HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
a. Re-occupied Hospital Driveway Trip Volumes ⁽¹⁾	30	21	51	16	44	60	16	44	60
b. Proposed 188 Unit Apartments Driveway Trip Volumes (ITE Code 220) ⁽²⁾⁽³⁾	19	77	96	79	42	121	49	49	98
c. Proposed Shuttle Bus (Jitney) v. Passenger Vehicle Trip Credit ⁽⁴⁾ AM=20%, PM=20%, SAT=20%	4	15	19	16	8	24	10	10	20
d. Proposed Passenger Vehicle Driveway Volumes (Row d = Row b - Row c)	15	62	77	63	34	97	39	39	78
e. Proposed Shuttle Bus Driveway Volumes	3	3	6	3	3	6	3	3	6
f. Net Additional Driveway Volumes (Row f = Row d + Row e -Row a)	(12)	44	32	50	(7)	43	26	(2)	24

Notes:

(1) Re-occupied driveway volumes are generated from 2006 existing turning movement counts included in the "Due Diligence Traffic Study" prepared by Schoor Depalma Engineers and Consultants. The peak weekday PM hour volumes were utilized for the peak Saturday midday hour volumes.

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

(3) Apartment (ITE Code 220) is defined by ITE as rental dwelling units located within the same building with at least three other dwelling units.

(4) Shuttle bus (Jitney) credits are based on U.S. Census Bureau data for means of transportation to work for Ossining utilizing public transportation and carpooling.

TABLE 1A**CURRENTLY PROPOSED DEVELOPMENT VOLUMES**

DESCRIPTION	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR			PEAK SATURDAY MIDDAY HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
a. Re-occupied Hospital Driveway Trip Volumes ⁽¹⁾	30	21	51	16	44	60	16	44	60
b. Proposed 95 Units of Senior Attached Housing Driveway Volumes (ITE Code 252) ⁽²⁾⁽³⁾	6	13	19	14	11	25	20	12	32
c. Net Additional Driveway Volumes (Row c = Row b - Row a)	(24)	(8)	(32)	(2)	(33)	(35)	4	(32)	(28)

Notes:

(1) Re-occupied driveway volumes are generated from 2006 existing turning movement counts included in the "Due Diligence Traffic Study" prepared by Schoor Depalma Engineers and Consultants. The peak weekday PM hour volumes were utilized for the peak Saturday midday hour volumes.

(2) Trip generation is based on ITE (Institute of Transportation Engineers) Trip Generation Manual, 10th Edition.

(3) Senior Adult Housing - Attached (ITE Code 252) is defined by ITE as consisting of attached independent living developments, including retirement communities, age-restricted housing, and active adult communities.

TABLE 2

INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR

INTERSECTION	APPROACH	LANE GROUP	2016 EXISTING			2025 NO BUILD			2025 BUILD			2025 BUILD WITH PREVIOUSLY PROPOSED DEVELOPMENT		
			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. Dale Avenue & Pine Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.24	12.5	B	0.28	13.5	B	0.28	13.4	B	0.28	13.5	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.06	8.1	A	0.07	8.2	A	0.07	8.2	A	0.07	8.2	A
2. Croton Dam Road & Hawkes Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.20	11.6	B	0.24	12.3	B	0.23	12.2	B	0.25	12.4	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.01	8.3	A	0.01	8.4	A	0.01	8.4	A	0.01	8.4	A
3. Croton Dam Road & Pershing Avenue /Cherry Hill Circle (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	0.01	9.3	A	0.01	9.4	A	0.01	9.4	A	0.01	9.6	A
	WESTBOUND	LEFT/THRU /RIGHT	0.04	10.7	B	0.06	10.8	B	0.05	11.1	B	0.05	10.7	B
	NORTHBOUND	LEFT/THRU /RIGHT	0.00	7.5	A	0.00	7.5	A	0.00	7.5	A	0.00	7.5	A
	SOUTHBOUND	LEFT/THRU /RIGHT	0.00	8.2	A	0.01	8.2	A	0.01	8.2	A	0.04	8.3	A
4. Croton Dam Road & Site Driveway (Unsignalized)	WESTBOUND	LEFT/RIGHT	-	-	A	0.03	9.8	A	0.02	9.8	A	0.04	9.7	A
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	0.02	7.7	A	0.00	7.6	A	0.01	7.6	A
5. Croton Dam Road & Grandview Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.01	9.8	A	0.01	10.0	B	0.01	9.9	A	0.01	10.1	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.00	8.7	A	0.00	8.8	A	0.00	8.8	A	0.00	8.9	A
6. Croton Dam Road & Narragansett Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.06	9.3	A	0.07	9.5	A	0.07	9.4	A	0.07	9.6	A
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.10	7.9	A	0.11	8.1	A	0.11	8.0	A	0.12	8.1	A
7. Croton Dam Road & Pheasant Ridge Road /Feeney Road (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	0.03	11.0	B	0.04	11.6	B	0.03	11.4	B	0.04	11.7	B
	WESTBOUND	LEFT/THRU /RIGHT	0.04	11.6	B	0.05	12.3	B	0.04	12.1	B	0.05	12.5	B
	NORTHBOUND	LEFT/THRU /RIGHT	-	-	A	-	-	A	-	-	A	-	-	A
	SOUTHBOUND	LEFT/THRU /RIGHT	0.00	8.0	A	0.00	8.1	A	0.00	8.1	A	0.00	8.2	A
8. Croton Dam Road & Kitchawan State Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.18	11.7	B	0.24	13.0	B	0.23	12.7	B	0.24	13.0	B
	NORTHBOUND	LEFT/THRU	0.01	7.7	A	0.02	7.9	A	0.02	7.8	A	0.02	7.8	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
9. Croton Dam Road & NY 9A (Signalized)	EASTBOUND	LEFT	0.82	67.1	E	0.83	69.0	E	0.83	69.1	E	0.83	69.5	E
		THRU	0.92	25.7	C	0.99	37.8	D	0.99	38.0	D	0.99	39.1	D
		RIGHT	0.11	8.8	A	0.13	8.8	A	0.12	8.7	A	0.12	8.9	A
		COMPOSITE	-	27.1	C	-	37.9	D	-	38.2	D	-	39.2	D
	WESTBOUND	LEFT	0.90	210.9	F	0.94	199.4	F	0.95	195.7	F	0.98	173.1	F
		THRU/RIGHT	0.48	17.3	B	0.52	18.1	B	0.52	18.1	B	0.52	18.0	B
		COMPOSITE	-	18.3	B	-	19.3	B	-	19.5	B	-	20.0	C
	NORTHBOUND	LEFT/THRU /RIGHT	0.77	58.9	E	1.02	111.7	F	0.95	91.3	F	1.08	128.9	F
	SOUTHBOUND	LEFT/THRU /RIGHT	0.89	72.6	E	1.06	119.5	F	1.06	119.2	F	1.06	119.7	F
	INTERSECTION	COMPOSITE	-	30.9	C	-	45.6	D	-	44.2	D	-	48.0	D
9a. Croton Dam Road & NY 9A (Signalized w/ Considered Improvements Which Were Part of the Previously Proposed Development)	EASTBOUND	LEFT							0.81	54.7	D	0.81	55.3	E
		THRU							0.98	30.1	C	0.98	32.5	C
		RIGHT							0.12	6.6	A	0.12	6.9	A
		COMPOSITE							-	30.3	C	-	32.5	C
	WESTBOUND	LEFT		N/A			N/A		0.93	172.4	F	0.99	165.1	F
		THRU/RIGHT							0.52	14.1	B	0.52	14.4	B
		COMPOSITE							-	15.3	B	-	16.3	B
	NORTHBOUND	LEFT/THRU							0.70	48.5	D	0.75	51.8	D
		RIGHT							0.34	40.7	D	0.37	41.0	D
		COMPOSITE							-	46.3	D	-	48.7	D
	SOUTHBOUND	LEFT/THRU							0.54	42.9	D	0.54	43.0	D
		RIGHT							0.85	62.5	E	0.82	59.9	E
		COMPOSITE							-	53.9	D	-	52.4	D
	INTERSECTION	COMPOSITE							-	29.8	C	-	31.5	C

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	2016 EXISTING			2025 NO BUILD			2025 BUILD			2025 BUILD WITH PREVIOUSLY PROPOSED DEVELOPMENT		
			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. Dale Avenue & Pine Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.20	11.3	B	0.23	11.9	B	0.23	11.9	B	0.23	12.0	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.03	7.9	A	0.04	8.0	A	0.04	8.0	A	0.04	8.0	A
2. Croton Dam Road & Hawkes Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.18	11.0	B	0.22	11.6	B	0.21	11.6	B	0.22	11.6	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	-	-	A	-	-	A	-	-	A
3. Croton Dam Road & Pershing Avenue /Cherry Hill Circle (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	0.01	9.2	A	0.01	9.3	A	0.01	9.3	A	0.01	9.4	A
	WESTBOUND	LEFT/THRU /RIGHT	0.03	10.3	B	0.04	10.4	B	0.03	10.6	B	0.04	10.6	B
	NORTHBOUND	LEFT/THRU /RIGHT	0.00	7.4	A	0.00	7.5	A	0.00	7.5	A	0.00	7.5	A
	SOUTHBOUND	LEFT/THRU /RIGHT	0.01	7.5	A	0.01	7.5	A	0.01	7.5	A	0.02	7.6	A
4. Croton Dam Road & Site Driveway (Unsignalized)	WESTBOUND	LEFT/RIGHT	-	-	A	0.06	9.5	A	0.02	9.6	A	0.06	10.1	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	0.00	7.5	A	0.01	7.5	A	0.04	7.6	A
5. Croton Dam Road & Grandview Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.01	9.7	A	0.01	10.0	B	0.01	9.9	A	0.01	10.1	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.00	7.4	A	0.00	7.5	A	0.00	7.5	A	0.00	7.5	A
6. Croton Dam Road & Narragansett Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.12	9.3	A	0.14	9.6	A	0.13	9.5	A	0.14	9.6	A
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.06	7.6	A	0.07	7.7	A	0.06	7.6	A	0.07	7.7	A
7. Croton Dam Road & Pheasant Ridge Road /Feeney Road (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	0.02	11.4	B	0.02	12.2	B	0.02	12.0	B	0.03	12.6	B
	WESTBOUND	LEFT/THRU /RIGHT	0.04	11.1	B	0.04	11.8	B	0.04	11.5	B	0.05	11.9	B
	NORTHBOUND	LEFT/THRU /RIGHT	0.00	7.6	A	0.00	7.7	A	0.00	7.7	A	0.00	7.8	A
	SOUTHBOUND	LEFT/THRU /RIGHT	0.01	7.9	A	0.01	8.1	A	0.01	8.0	A	0.01	8.0	A
8. Croton Dam Road & Kitchawan State Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.11	11.7	B	0.14	12.8	B	0.14	12.6	B	0.15	13.2	B
	NORTHBOUND	LEFT/THRU	0.03	7.8	A	0.03	7.9	A	0.03	8.0	A	0.04	8.1	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
9. Croton Dam Road & NY 9A (Signalized)	EASTBOUND	LEFT	0.85	80.5	F	0.86	84.1	F	0.86	84.1	F	0.85	84.1	F
		THRU	0.45	10.8	B	0.49	11.2	B	0.50	11.7	B	0.51	13.1	B
		RIGHT	0.13	8.1	A	0.14	8.2	A	0.14	8.5	A	0.15	9.6	A
		COMPOSITE	-	17.9	B	-	18.6	B	-	19.0	B	-	20.2	C
	WESTBOUND	LEFT	0.84	142.2	F	0.84	139.3	F	0.80	111.4	F	0.76	87.1	F
		THRU/RIGHT	1.02	61.4	F	1.13	100.8	F	1.13	100.8	F	1.13	100.8	F
		COMPOSITE	-	61.6	E	-	100.2	F	-	100.1	F	-	99.7	F
	NORTHBOUND	LEFT/THRU /RIGHT	0.81	75.0	E	1.32	232.8	F	1.05	133.6	F	1.15	167.8	F
	SOUTHBOUND	LEFT/THRU /RIGHT	0.83	73.9	E	0.92	90.4	F	0.93	91.9	F	0.95	95.8	F
	INTERSECTION	COMPOSITE	-	75.0	E	-	79.6	E	-	73.4	E	-	76.2	E
9a. Croton Dam Road & NY 9A (Signalized w/ Considered Improvements Which Were Part of the Previously Proposed Development)	EASTBOUND	LEFT							1.10	151.5	F	1.10	151.5	F
		THRU							0.49	8.3	A	0.50	9.3	A
		RIGHT							0.14	6.1	A	0.15	6.8	A
		COMPOSITE							-	23.3	C	-	24.1	C
	WESTBOUND	LEFT		N/A			N/A		0.82	99.3	F	0.77	71.7	E
		THRU/RIGHT							1.07	69.1	F	1.07	69.1	F
		COMPOSITE							-	68.8	E	-	68.6	E
	NORTHBOUND	LEFT/THRU							0.78	62.5	E	0.84	70.4	E
		RIGHT							0.28	45.0	D	0.29	45.2	D
		COMPOSITE							-	58.8	E	-	65.0	E
	SOUTHBOUND	LEFT/THRU							0.49	47.1	D	0.52	47.7	D
		RIGHT							0.94	95.0	F	0.94	95.0	F
		COMPOSITE							-	75.4	E	-	75.1	E
	INTERSECTION	COMPOSITE							-	53.0	D	-	53.6	D

Notes:

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

TABLE 4

INTERSECTION OPERATIONS-PEAK SATURDAY MIDDAY HOUR

INTERSECTION	APPROACH	LANE GROUP	2016 EXISTING			2025 NO BUILD			2025 BUILD			2025 BUILD WITH PREVIOUSLY PROPOSED DEVELOPMENT		
			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. Dale Avenue & Pine Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.15	11.0	B	0.18	11.6	B	0.18	11.5	B	0.18	11.6	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.03	7.9	A	0.04	8.0	A	0.04	8.0	A	0.04	8.0	A
2. Croton Dam Road & Hawkes Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.16	10.5	B	0.20	10.9	B	0.19	10.9	B	0.20	10.9	B
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	-	-	A	-	-	A	-	-	A
3. Croton Dam Road & Pershing Avenue /Cherry Hill Circle (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	0.01	9.1	A	0.02	9.2	A	0.02	9.2	A	0.02	9.2	A
	WESTBOUND	LEFT/THRU /RIGHT	0.01	10.3	B	0.02	9.9	A	0.02	10.3	B	0.02	10.3	B
	NORTHBOUND	LEFT/THRU /RIGHT	0.00	8.2	A	0.00	8.2	A	0.00	8.2	A	0.00	8.2	A
	SOUTHBOUND	LEFT/THRU /RIGHT	0.00	7.5	A	0.01	7.5	A	0.01	7.5	A	0.02	7.5	A
4. Croton Dam Road & Site Driveway (Unsignalized)	WESTBOUND	LEFT/RIGHT	-	-	A	0.05	9.3	A	0.02	9.4	A	0.05	9.7	A
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	0.00	7.5	A	0.01	7.5	A	0.02	7.5	A
5. Croton Dam Road & Grandview Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.02	9.3	A	0.02	9.5	A	0.02	9.5	A	0.02	9.6	A
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.00	7.4	A	0.00	7.5	A	0.00	7.4	A	0.02	7.5	A
6. Croton Dam Road & Narragansett Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	0.10	9.1	A	0.11	9.4	A	0.01	9.2	A	0.11	9.3	A
	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	0.06	7.6	A	0.06	7.7	A	0.06	7.6	A	0.06	7.7	A
7. Croton Dam Road & Pheasant Ridge Road /Feeney Road (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	0.02	11.4	B	0.03	12.1	B	0.03	12.0	B	0.03	12.3	B
	WESTBOUND	LEFT/THRU /RIGHT	0.01	9.6	A	0.02	9.9	A	0.02	9.8	A	0.02	9.9	A
	NORTHBOUND	LEFT/THRU /RIGHT	0.00	7.9	A	0.00	8.0	A	0.00	8.0	A	0.00	8.1	A
	SOUTHBOUND	LEFT/THRU /RIGHT	0.01	7.6	A	0.01	7.7	A	0.01	7.6	A	0.01	7.7	A
8. Croton Dam Road & Kitchawan State Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	0.12	11.3	B	0.16	12.2	B	0.16	12.1	B	0.17	12.4	B
	NORTHBOUND	LEFT/THRU	0.02	7.7	A	0.02	7.8	A	0.02	7.8	A	0.02	7.9	A
	SOUTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-	-	-	-
9. Croton Dam Road & NY 9A (Signalized)	EASTBOUND	LEFT	0.77	45.8	D	0.80	57.7	E	0.80	54.8	D	0.80	56.2	E
		THRU	0.46	11.2	B	0.49	13.8	B	0.49	13.3	B	0.50	14.2	B
		RIGHT	0.14	8.9	A	0.15	10.8	B	0.15	10.4	B	0.16	11.2	B
		COMPOSITE	-	14.4	B	-	17.8	B	-	17.1	B	-	18.1	B
	WESTBOUND	LEFT	0.76	97.4	F	0.79	113.1	F	0.82	91.8	F	0.79	79.0	E
		THRU/RIGHT	0.82	21.9	C	0.89	33.9	C	0.88	31.0	C	0.89	32.6	C
		COMPOSITE	-	22.4	C	-	34.5	C	-	31.9	C	-	33.5	C
	NORTHBOUND	LEFT/THRU /RIGHT	0.63	33.8	C	0.84	57.2	E	0.76	46.4	D	0.80	51.1	D
	SOUTHBOUND	LEFT/THRU /RIGHT	0.75	36.4	D	0.79	49.1	D	0.82	49.8	D	0.82	50.6	D
	INTERSECTION	COMPOSITE	-	21.6	C	-	31.5	C	-	29.2	C	-	30.8	C
9a. Croton Dam Road & NY 9A (Signalized w/ Considered Improvements Which Were Part of the Previously Proposed Development)	EASTBOUND	LEFT							0.78	44.2	D	0.78	45.0	D
		THRU							0.47	9.3	A	0.48	10.0	A
		RIGHT							0.15	7.3	A	0.15	7.8	A
		COMPOSITE							-	12.6	B	-	13.2	B
	WESTBOUND	LEFT		N/A			N/A		0.84	86.1	F	0.81	71.8	E
		THRU/RIGHT							0.84	21.3	C	0.85	22.2	C
		COMPOSITE							-	22.2	C	-	23.1	C
	NORTHBOUND	LEFT/THRU							0.63	36.0	D	0.64	36.5	D
		RIGHT							0.31	32.4	C	0.31	32.5	C
		COMPOSITE							-	35.0	D	-	35.4	D
	SOUTHBOUND	LEFT/THRU							0.52	34.5	C	0.52	34.6	C
		RIGHT							0.70	37.2	D	0.66	36.6	D
		COMPOSITE							-	35.9	D	-	35.6	D
	INTERSECTION	COMPOSITE							-	20.9	C	-	21.6	C

Notes:

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

TABLE 5**QUEUING ANALYSIS-PEAK WEEKDAY AM HOUR**

INTERSECTION	APPROACH	LANE GROUP	STORAGE LENGTH	2016 EXISTING		2025 NO BUILD		2025 BUILD	
				50%	95%	50%	95%	50%	95%
1. Dale Avenue & Pine Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	445	-	23	-	28	-	28
	NORTHBOUND	THRU/RIGHT	1,500	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	100	-	5	-	5	-	5
2. Croton Dam Road & Hawkes Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	1,045	-	18	-	23	-	23
	NORTHBOUND	THRU/RIGHT	100	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	975	-	0	-	0	-	0
3. Croton Dam Road & Pershing Avenue /Cherry Hill Circle (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	70	-	0	-	0	-	0
	WESTBOUND	LEFT/THRU /RIGHT	330	-	3	-	5	-	3
	NORTHBOUND	LEFT/THRU /RIGHT	1,045	-	0	-	0	-	0
	SOUTHBOUND	LEFT/THRU /RIGHT	700	-	0	-	0	-	0
4. Croton Dam Road & Site Driveway (Unsignalized)	WESTBOUND	LEFT/RIGHT	140	-	0	-	3	-	3
	NORTHBOUND	THRU/RIGHT	700	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	825	-	0	-	3	-	0
5. Croton Dam Road & Grandview Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	800	-	0	-	0	-	0
	NORTHBOUND	THRU/RIGHT	825	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	340	-	0	-	0	-	0
6. Croton Dam Road & Narragansett Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	615	-	5	-	5	-	5
	NORTHBOUND	THRU/RIGHT	340	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	155	-	8	-	10	-	10
7. Croton Dam Road & Pheasant Ridge Road /Feeney Road (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	400	-	3	-	3	-	3
	WESTBOUND	LEFT/THRU /RIGHT	600	-	3	-	3	-	3
	NORTHBOUND	LEFT/THRU /RIGHT	155	-	0	-	0	-	0
	SOUTHBOUND	LEFT/THRU /RIGHT	285	-	0	-	0	-	0
8. Croton Dam Road & Kitchawan State Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	1,000	-	18	-	23	-	23
	NORTHBOUND	LEFT/THRU	285	-	0	-	3	-	3
	SOUTHBOUND	THRU/RIGHT	78	-	-	-	-	-	-
9. Croton Dam Road & NY 9A (Signalized)	EASTBOUND	LEFT	110	94	172	103	186	103	186
		THRU	2,000	675	1,201	882	1,399	882	1,403
		RIGHT	190	26	66	32	79	29	73
	WESTBOUND	LEFT	150	6	26	8	29	9	31
		THRU/RIGHT	9,400	251	338	291	384	291	383
	NORTHBOUND	LEFT/THRU /RIGHT	78	199	429	238	309	283	533
	SOUTHBOUND	LEFT/THRU /RIGHT	1,500	303	564	222	648	368	645

Notes:

(1) Queue length and storage length are represented in feet.

(2) Vehicle length is equal to 25 feet.

TABLE 6**QUEUING ANALYSIS-PEAK WEEKDAY PM HOUR**

INTERSECTION	APPROACH	LANE GROUP	STORAGE LENGTH	2016 EXISTING		2025 NO BUILD		2025 BUILD	
				50%	95%	50%	95%	50%	95%
1. Dale Avenue & Pine Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	445	-	18	-	23	-	23
	NORTHBOUND	THRU/RIGHT	1,500	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	100	-	3	-	3	-	3
2. Croton Dam Road & Hawkes Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	1,045	-	18	-	20	-	20
	NORTHBOUND	THRU/RIGHT	100	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	975	-	0	-	0	-	0
3. Croton Dam Road & Pershing Avenue /Cherry Hill Circle (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	70	-	0	-	0	-	0
	WESTBOUND	LEFT/THRU /RIGHT	330	-	3	-	3	-	3
	NORTHBOUND	LEFT/THRU /RIGHT	1,045	-	0	-	0	-	0
	SOUTHBOUND	LEFT/THRU /RIGHT	700	-	0	-	0	-	0
4. Croton Dam Road & Site Driveway (Unsignalized)	WESTBOUND	LEFT/RIGHT	140	-	0	-	3	-	3
	NORTHBOUND	THRU/RIGHT	700	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	825	-	0	-	0	-	0
5. Croton Dam Road & Grandview Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	800	-	0	-	0	-	0
	NORTHBOUND	THRU/RIGHT	825	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	340	-	0	-	0	-	0
6. Croton Dam Road & Narragansett Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	615	-	10	-	13	-	13
	NORTHBOUND	THRU/RIGHT	340	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	155	-	5	-	5	-	5
7. Croton Dam Road & Pheasant Ridge Road /Feeney Road (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	400	-	3	-	3	-	3
	WESTBOUND	LEFT/THRU /RIGHT	600	-	3	-	3	-	3
	NORTHBOUND	LEFT/THRU /RIGHT	155	-	0	-	0	-	0
	SOUTHBOUND	LEFT/THRU /RIGHT	285	-	0	-	0	-	0
8. Croton Dam Road & Kitchawan State Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	1,000	-	8	-	13	-	13
	NORTHBOUND	LEFT/THRU	285	-	3	-	3	-	3
	SOUTHBOUND	THRU/RIGHT	78	-	-	-	-	-	-
9. Croton Dam Road & NY 9A (Signalized)	EASTBOUND	LEFT	110	151	245	166	278	166	278
		THRU	2,000	196	347	327	406	327	406
		RIGHT	190	35	82	58	95	58	95
	WESTBOUND	LEFT	150	13	38	22	54	22	54
		THRU/RIGHT	9,400	1,280	1,423	1,526	1,652	1,526	1,652
	NORTHBOUND	LEFT/THRU /RIGHT	78	283	457	375	558	373	556
	SOUTHBOUND	LEFT/THRU /RIGHT	1,500	314	508	382	579	382	579

Notes:

(1) Queue length and storage length are represented in feet.

(2) Vehicle length is equal to 25 feet.

TABLE 7**QUEUING ANALYSIS-PEAK SATURDAY MIDDAY HOUR**

INTERSECTION	APPROACH	LANE GROUP	STORAGE LENGTH	2016 EXISTING		2025 NO BUILD		2025 BUILD	
				50%	95%	50%	95%	50%	95%
1. Dale Avenue & Pine Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	445	-	13	-	18	-	18
	NORTHBOUND	THRU/RIGHT	1,500	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	100	-	3	-	3	-	3
2. Croton Dam Road & Hawkes Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	1,045	-	15	-	18	-	18
	NORTHBOUND	THRU/RIGHT	100	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	975	-	0	-	0	-	0
3. Croton Dam Road & Pershing Avenue /Cherry Hill Circle (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	70	-	0	-	0	-	0
	WESTBOUND	LEFT/THRU /RIGHT	330	-	0	-	3	-	3
	NORTHBOUND	LEFT/THRU /RIGHT	1,045	-	0	-	0	-	0
	SOUTHBOUND	LEFT/THRU /RIGHT	700	-	0	-	0	-	0
4. Croton Dam Road & Site Driveway (Unsignalized)	WESTBOUND	LEFT/RIGHT	140	-	0	-	5	-	0
	NORTHBOUND	THRU/RIGHT	700	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	825	-	0	-	0	-	0
5. Croton Dam Road & Grandview Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	800	-	0	-	3	-	3
	NORTHBOUND	THRU/RIGHT	825	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	340	-	0	-	0	-	0
6. Croton Dam Road & Narragansett Avenue (Unsignalized)	WESTBOUND	LEFT/RIGHT	615	-	8	-	10	-	10
	NORTHBOUND	THRU/RIGHT	340	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	155	-	5	-	5	-	5
7. Croton Dam Road & Pheasant Ridge Road /Feeney Road (Unsignalized)	EASTBOUND	LEFT/THRU /RIGHT	400	-	3	-	3	-	3
	WESTBOUND	LEFT/THRU /RIGHT	600	-	0	-	3	-	0
	NORTHBOUND	LEFT/THRU /RIGHT	155	-	0	-	0	-	0
	SOUTHBOUND	LEFT/THRU /RIGHT	285	-	0	-	0	-	0
8. Croton Dam Road & Kitchawan State Road (Unsignalized)	EASTBOUND	LEFT/RIGHT	1,000	-	10	-	15	-	15
	NORTHBOUND	LEFT/THRU	285	-	0	-	3	-	3
	SOUTHBOUND	THRU/RIGHT	78	-	-	-	-	-	-
9. Croton Dam Road & NY 9A (Signalized)	EASTBOUND	LEFT	110	90	157	101	170	101	170
		THRU	2,000	154	280	174	317	252	326
		RIGHT	190	31	78	36	88	51	90
	WESTBOUND	LEFT	150	9	29	10	31	18	46
		THRU/RIGHT	9,400	482	601	585	766	585	766
	NORTHBOUND	LEFT/THRU /RIGHT	78	169	324	295	473	239	411
	SOUTHBOUND	LEFT/THRU /RIGHT	1,500	230	422	305	492	305	492

Notes:

(1) Queue length and storage length are represented in feet.

(2) Vehicle length is equal to 25 feet.

TABLE ARS

ACCIDENT ANALYSIS SUMMARY

LOCATION	NUMBER OF ACCIDENTS BY YEAR								STATEWIDE MEAN ACCIDENT RATE ⁽¹⁾	ACCIDENT RATE FOR LOCATION 2009-2012 ⁽¹⁾	ACCIDENT RATE FOR LOCATION 2014-2017 ⁽¹⁾
	2009	2010	2011	2012	2014	2015	2016	2017			
Intersection - Dale Avenue & Pine Avenue	0	0	1	0	0	2	0	2	0.18	0.12	0.64
Roadway Segment - Dale Avenue between Pine Avenue & Croton Dam Road	1	1	0	0	0	0	1	0	3.50	0.42	0.28
Intersection - Croton Dam Road & Hawkes Avenue	0	0	0	0	0	0	0	2	0.18	0.00	0.40
Roadway Segment - Croton Dam Road between Hawkes Avenue & Pershing Avenue/ Cherry Hill Circle	0	0	0	0	0	0	0	0	3.50	0.00	0.00
Intersection - Croton Dam Road & Pershing Avenue/Cherry Hill Circle	0	0	0	0	0	0	0	1	0.29	0.00	0.37
Roadway Segment - Croton Dam Road between Pershing Avenue/Cherry Hill Circle & Site Driveway	0	0	0	0	0	0	0	0	3.50	0.00	0.00
Intersection - Croton Dam Road & Site Driveway	0	0	0	0	0	0	0	0	0.18	0.00	0.00
Roadway Segment - Croton Dam Road between Site Driveway & Grandview Avenue	0	0	0	0	0	0	1	0	3.50	0.00	2.63
Intersection - Croton Dam Road & Grandview Avenue	0	0	0	0	0	0	0	0	0.18	0.00	0.00
Roadway Segment - Croton Dam Road between Grandview Avenue & Narragansett Avenue	0	0	0	0	0	0	0	1	3.50	0.00	6.09
Intersection - Croton Dam Road & Narragansett Avenue	0	0	0	0	0	1	1	1	0.18	0.00	0.70
Roadway Segment - Croton Dam Road between Narragansett Avenue & Pheasant Ridge/Feeney Road	0	0	0	0	0	0	0	0	3.50	0.00	0.00
Intersection - Croton Dam Road & Pheasant Ridge/Feeney Road	0	0	0	0	0	0	1	0	0.29	0.00	0.21
Roadway Segment - Croton Dam Road between Pheasant Ridge/Feeney Road & Kitchawan State Road	0	0	0	0	0	0	0	0	3.50	0.00	0.00
Intersection - Croton Dam Road & Kitchawan State Road	0	0	0	0	0	0	1	0	0.18	0.00	0.18
Intersection - Croton Dam Road & NY 9A	0	0	0	0	0	0	0	1	0.25	0.00	0.02
Roadway Segment - NY 134 between Hawkes Avenue & NY 9A	1	1	1	0	0	3	5	8	3.50	0.63	4.48

Notes:

(1) Accident rate is represented by the number of accidents per million entering vehicles (MEV) for intersections and the number of accidents per million vehicle miles (MVM) for road segments.

TABLE AR1

INTERSECTION NAME: Dale Avenue & Pine Avenue

TOTAL ACCIDENTS: 1

INTERSECTION NUMBER: 1

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday	1	100
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm	1	100
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain	1	100
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet	1	100
Light Conditions	Number	%
Day	1	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End	1	100
Sideswipe		
Left Turn		
Right Turn		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	1	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)	1	100
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Backing Unsafely	0.50	50
Failure to Yield ROW		
Alcohol Involvement		
Driver Inattention		
Unsafe Speed		
View Obstructed		
Other Vehicular	0.50	50
Unknown		
Year	Number	%
2009		
2010		
2011	1	100
2012		

Accident Rate Calculations

Total Volume:	5,710	vehicles per day (AADT Source: JMC base counts)
	2.08	Million Vehicles per Year
	0.3	Average number of accidents per year
	0.12	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types**Right Angle**

0.1	Average number of Right Angle accidents per year
0.06	Accident Rate in Accidents per Million Entering Vehicles
0.06	NYSDOT Mean Accident Rate

Left Turn

0.0	Average number of Left Turn accidents per year
0.00	Accident Rate in Accidents per Million Entering Vehicles
0.02	NYSDOT Mean Accident Rate

Wet Pavement

0.1	Average number of Wet Pavement accidents per year
0.06	Accident Rate in Accidents per Million Entering Vehicles
0.03	NYSDOT Mean Accident Rate

TABLE AR2

ROADWAY NAME: Dale Avenue

TOTAL ACCIDENTS: 2

BETWEEN: Pine Avenue (Int. 1) & Croton Dam Road (Int. 2)

SEGMENT LENGTH: .03 miles

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday	1	50
Wednesday		
Thursday	1	50
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am	1	50
10 am-4 pm	1	50
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear	2	100
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	2	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day	2	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Sideswipe	1	50
Rear End		
Left Turn		
Head On		
Right Angle	1	50
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	2	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)	1	50
Summer (June-Aug)		
Fall (Sep-Nov)	1	50
Contributing Factors	Number	%
Driver Inattention	1.00	50
Failure to Yield ROW	1.00	50
Following Too Closely		
Traffic Control Disregard		
Unsafe Speed		
Pavement Slippery		
Backing Unsafely		
Year	Number	%
2009	1	50
2010	1	50
2011		
2012		

Accident Rate Calculations

Total Volume:	4,560	vehicles per day (AADT Source: JMC base counts)
	1.66	Million Vehicles per Year
	0.5	Average number of accidents per year
	0.42	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

Specific Collisions Types**Fixed Object**

0.0	Average number of Fixed Object accidents per year
0.00	Accident Rate in Accidents per Million Vehicle Miles
0.49	NYSDOT Mean Accident Rate

TABLE AR3

INTERSECTION NAME: Croton Dam Road & Hawkes Avenue

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 2

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Rear End		
Right Angle		
Right Turn		
Left Turn		
Pedestrian		
Unknown		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inattention		
Pavement Slippery		
Unsafe Speed		
Failure to Yield ROW		
Alcohol Involvement		
Improper Lane Usage		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	4,610	vehicles per day (AADT Source: JMC base counts)
	1.68	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types**Rear End**

0.0	Average number of Rear End accidents per year
0.00	Accident Rate in Accidents per Million Entering Vehicles
0.06	NYSDOT Mean Accident Rate

TABLE AR4

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: _____

BETWEEN: Hawkes Avenue (Int. 2) and Pershing Ave/Cherry Hill Circle (Int. 3)

SEGMENT LENGTH: 0.21 miles

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Left Turn		
Right Turn		
Bicyclist		
Pedestrian		
Fixed Object		
Rear End		
Sideswipe		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Failure to Keep Right		
Traffic Control Disregard		
Pavement Slippery		
Failure to Yield ROW		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	2,350	vehicles per day (AADT Source: JMC base counts)
	0.86	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR5

INTERSECTION NAME: Croton Dam Road & Pershing Avenue/Cherry
Hill Road

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 3

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Rear End		
Side Swipe		
Right Turn		
Head On		
Right Angle		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Failure to Yield ROW		
Pavement Slippery		
Unknown		
Failure to Keep Right		
Unsafe Speed		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	2,500	vehicles per day (AADT Source: JMC base counts)
	0.91	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.29	NYSDOT Mean collision rate (Urban 4-leg unsignalized intersection)

Specific Collisions Types

Right Angle:	0.00	Average number of Right Angle accidents per year
	0.0	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.07	NYSDOT Mean Accident Rate

TABLE AR6

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: _____

BETWEEN: Pershing Avenue/Cherry Hill Circle (Int. 3) and Site Driveway (Int. 4)

SEGMENT LENGTH: 0.14 miles

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Right Turn		
Left Turn		
Head On		
Unknown		
Right Angle		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Pavement Slippery		
Unsafe Speed		
Failure to Yield ROW		
Following Too Closely		
Unknown		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	2,160	vehicles per day (AADT Source: JMC base counts)
	0.79	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

Specific Collisions Types**Wet Pavement**

0.0	Average number of Wet Pavement accidents per year
0.00	Accident Rate in Accidents per Million Vehicle Miles
0.57	NYSDOT Mean Accident Rate

TABLE AR7

INTERSECTION NAME: Croton Dam Road & Site Driveway

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 4

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End		
Sideswipe		
Left Turn		
Right Turn		
Unknown		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Traffic Control Disregard		
Pavement Slippery		
Brakes Defective		
Fell Asleep		
Unknown		
Failure to Yield ROW		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	2,160	vehicles per day (AADT Source: JMC base counts)
	0.79	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million entering vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

TABLE AR8

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: _____

BETWEEN: Site Driveway (Int. 4) and Grandview Avenue (Int. 5)

SEGMENT LENGTH: 0.16 miles

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Right Turn		
Left Turn		
Head On		
Sideswipe		
Pedestrian		
Fixed Object		
Unknown		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Unknown		
Pavement Slippery		
Alcohol Involvement		
Failure to Yield ROW		
Unsafe Speed		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	2,160	vehicles per day (AADT Source: JMC base counts)
	0.79	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

Specific Collisions Types**Fixed Object**

0.0	Average number of Fixed Object accidents per year
0.00	Accident Rate in Accidents per Million Vehicle Miles
0.49	NYSDOT Mean Accident Rate

TABLE AR9

INTERSECTION NAME: Croton Dam Road & Grandview Avenue

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 5

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End		
Sideswipe		
Right Turn		
Right Angle		
Fixed Object		
Pedestrian		
Unknown		
Left Turn		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Failure to Yield ROW		
Following Too Closely		
Traffic Control Disregard		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	2,200	vehicles per day (AADT Source: JMC base counts)
	0.80	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million entering vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

TABLE AR10

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: _____

BETWEEN: Grandview Avenue (Int. 5) and Narragansett Avenue (Int. 6)

SEGMENT LENGTH: 0.07 miles

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Sideswipe		
Uknwon		
Right Angle		
Right Turn		
Fixed Object		
Fixed Object		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Fell Asleep		
Unsafe Speed		
Pavement Slippery		
Failure to Yield ROW		
Passing Too Closely		
Driver Inattention		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	2,140	vehicles per day (AADT Source: JMC base counts)
	0.78	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

Specific Collisions Types**Fixed Object**

0.0	Average number of Fixed Object accidents per year
0.00	Accident Rate in Accidents per Million Vehicle Miles
0.49	NYSDOT Mean Accident Rate

TABLE AR11

INTERSECTION NAME: Croton Dam Road & Narragansett Avenue

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 6

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Right Turn		
Right Angle		
Left Turn		
Pedestrian		
Unknown		
Sideswipe		
Fixed Object		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Alcohol Involvement		
Aggressive Driving /Road Rage		
Passing Too Closely		
Unknown		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	3,890	vehicles per day (AADT Source: JMC base counts)
	1.42	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types**Wet Pavement**

0.1	Average number of Wet Pavement accidents per year
#REF!	Accident Rate in Accidents per Million Vehicle Miles
0.57	NYSDOT Mean Accident Rate

Right Turn

0.0	Average number of Right Turn accidents per year
0.00	Accident Rate in Accidents per Million Entering Vehicles
0.01	NYSDOT Mean Accident Rate

TABLE AR12

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: _____

BETWEEN: Narragansett Avenue and Freney Road

SEGMENT LENGTH: 0.05 miles

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End		
Right Angle		
Right Turn		
Left Turn		
Pedestrian		
Fixed Object		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Fell Asleep		
Unsafe Speed		
Pavement Slippery		
Failure to Yield ROW		
Driver Inattention		
Improper Lane Usage		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	3,830	vehicles per day (AADT Source: JMC base counts)
	1.40	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR13

INTERSECTION NAME: Croton Dam Road & Pheasant Ridge
Road/Feeney Road

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 7

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Rear End		
Right Angle		
Right Turn		
Left Turn		
Pedestrian		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inattention		
Pavement Slippery		
Unsafe Speed		
Failure to Yield ROW		
Alcohol Involvement		
Improper Lane Usage		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	4,250	Vehicles per day (AADT Source: JMC base counts)
	1.55	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million entering vehicles (MEV)
	0.29	NYSDOT Mean collision rate (Urban 4-leg unsignalized intersection)

Wet Pavement

0.1	Average number of Wet Pavement accidents per year
0.07	Accident Rate in Accidents per Million Vehicle Miles
0.57	NYSDOT Mean Accident Rate

TABLE AR14

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: _____

BETWEEN: Freeney Road and Kitchawan State Road (NY 134)

SEGMENT LENGTH: 0.06 miles

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Right Angle		
Right Turn		
Left Turn		
Pedestrian		
Sideswipe		
Fixed Object		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Fell Asleep		
Unsafe Speed		
Failure to Yield ROW		
Pavement Slippery		
Improper Lane Usage		
Driver Inattention		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	4,070	vehicles per day (AADT Source: JMC base counts)
	1.49	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR15

INTERSECTION NAME: Croton Dam Road & Kichawan State Road

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 8

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Right Angle		
Right Turn		
Sideswipe		
Rear End		
Fixed Object		
Left Turn		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Failure to Yield ROW		
Pavement Slippery		
Improper Lane Usage		
Unsafe Speed		
Failure to Keep Right		
Backing Unsafely		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	5,120	vehicles per day (AADT Source: JMC base counts)
	1.87	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types

Left Turn	0.0	Average number of Left Turn accidents per year
	0.00	Accident Rate in Accidents per Million entering vehicles
	0.02	NYSDOT Mean Accident Rate

TABLE AR16

INTERSECTION NAME: Croton Dam Road & NY 9A

TOTAL ACCIDENTS: _____

INTERSECTION NUMBER: 9

TIME PERIOD: 01/01/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Pedestrian		
Left Turn		
Right Turn		
Rear End		
Sideswipe		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Improper Lane Usage		
Failure to Keep Right		
Failure to Yield ROW		
Unsafe Speed		
Pavement Slippery		
Driver Inattention		
Year	Number	%
2009		
2010		
2011		
2012		

Accident Rate Calculations

Total Volume:	39,810	vehicles per day (AADT Source: JMC base counts)
	14.53	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million entering vehicles (MEV)
	0.25	NYSDOT Mean collision rate (Urban 4-leg signalized intersection)

Specific Collisions Types

Side Swipe	0.0	Average number of Side Swipe accidents per year
	0.00	Accident Rate in Accidents per Million entering vehicles
	0.02	NYSDOT Mean Accident Rate

TABLE AR17

ROADWAY NAME: NY 134

TOTAL ACCIDENTS: 3

BETWEEN: Hawkes Avenue (Int. 2) & NY 9A (Int. 9)

SEGMENT LENGTH: 0.7 mi.

TIME PERIOD: 1/1/2009 - 12/31/2012

Day of Week	Number	%
Sunday		
Monday		
Tuesday	2	67
Wednesday		
Thursday	1	33
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am	1	33
10 am-4 pm	1	33
4 pm-7 pm	1	33
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear	2	67
Cloudy		
Fog		
Rain	1	33
Sleet/Snow		
Pavement	Number	%
Dry	2	67
Snow/Ice		
Wet	1	33
Light Conditions	Number	%
Day	3	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End	1	33
Sideswipe	1	33
Left Turn		
Right Turn		
Right Angle	1	33
Fixed Object		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	3	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)	2	67
Summer (June-Aug)		
Fall (Sep-Nov)	1	33
Contributing Factors	Number	%
Driver Inexperience		
Failure to Yield ROW	1	33
Following Too Closely		
Unsafe Speed		
Failure to Keep Right		
Driver Inattention	1	33
Alcohol Involvement		
Aggressive Driving		
Backing Unsafely	0.5	17
Other Vehicular	0.5	17
Passing Too Closely		
Year	Number	%
2009	1	33
2010	1	33
2011	1	33
2012		

Accident Rate Calculations

Total Volume:	4,560	vehicles per day (AADT Source: JMC base counts)
	1.66	Million Vehicles per Year
	0.8	Average number of accidents per year
	0.63	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR18

INTERSECTION NAME: Dale Avenue & Pine Avenue

TOTAL ACCIDENTS: 4

INTERSECTION NUMBER: 1

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday	2	50
Tuesday		
Wednesday		
Thursday		
Friday	1	25
Saturday	1	25
Time of Day	Number	%
6 am-10 am		
10 am-4 pm	1	25
4 pm-7 pm	1	25
7 pm-12 Mid	1	25
12 Mid-6 am	1	25
Weather	Number	%
Clear	3	75
Cloudy		
Fog		
Rain	1	25
Sleet/Snow		
Pavement	Number	%
Dry	3	75
Snow/Ice		
Wet	1	25
Light Conditions	Number	%
Day	3	75
Night	1	25
Dawn/Dusk		

Accident Type	Number	%
Sideswipe	1	25
Left Turn	1	25
Right Turn	1	25
Right Angle	1	25
Severity	Number	%
Fatal Injury		
Non-Fatal Injury	1	25
Property-Damage Only	3	75
Time of Year	Number	%
Winter (Dec-Feb)	1	25
Spring (Mar-May)		
Summer (June-Aug)	1	25
Fall (Sep-Nov)	2	50
Contributing Factors	Number	%
Backing Unsafely	1.00	25
Failure to Yield ROW		
Alcohol Involvement	0.50	13
Driver Inattention	1.00	25
Unsafe Speed	0.50	13
View Obstructed		
Other Vehicular		
Unknown	1.00	25
Year	Number	%
2014		
2015	2	50
2016		
2017	2	50

Accident Rate Calculations

Total Volume:	5,710	vehicles per day (AADT Source: JMC base counts)
	2.08	Million Vehicles per Year
	1.3	Average number of accidents per year
	0.64	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types**Right Angle**

0.1	Average number of Right Angle accidents per year
0.06	Accident Rate in Accidents per Million Entering Vehicles
0.06	NYSDOT Mean Accident Rate

Left Turn

0.1	Average number of Left Turn accidents per year
0.06	Accident Rate in Accidents per Million Entering Vehicles
0.02	NYSDOT Mean Accident Rate

Wet Pavement

0.1	Average number of Wet Pavement accidents per year
0.06	Accident Rate in Accidents per Million Entering Vehicles
0.03	NYSDOT Mean Accident Rate

TABLE AR19

ROADWAY NAME: Dale Avenue

TOTAL ACCIDENTS: 1

BETWEEN: Pine Avenue (Int. 1) & Croton Dam Road (Int. 2)

SEGMENT LENGTH: .03 miles

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday	1	100
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm	1	100
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy	1	100
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	1	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day	1	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Sideswipe		
Fixed Object		
Rear End		
Head On		
Right Angle	1	100
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	1	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)	1	100
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inattention		
Failure to Yield ROW		
Following Too Closely		
Traffic Control Disregard		
Unsafe Speed		
Pavement Slippery		
Backing Unsafely	1.00	100
Year	Number	%
2014		
2015		
2016	1	100
2017		

Accident Rate Calculations

Total Volume:	4,560	vehicles per day (AADT Source: JMC base counts)
	1.66	Million Vehicles per Year
	0.3	Average number of accidents per year
	0.28	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

Specific Collisions Types**Fixed Object**

0.3	Average number of Fixed Object accidents per year
0.00	Accident Rate in Accidents per Million Vehicle Miles
0.49	NYSDOT Mean Accident Rate

TABLE AR20

INTERSECTION NAME: Croton Dam Road & Hawkes Avenue

TOTAL ACCIDENTS: 2

INTERSECTION NUMBER: 2

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday	1	50
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday	1	50
Time of Day	Number	%
6 am-10 am	1	50
10 am-4 pm		
4 pm-7 pm	1	50
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear	1	50
Cloudy		
Fog		
Rain	1	50
Sleet/Snow		
Pavement	Number	%
Dry	1	50
Snow/Ice		
Wet	1	50
Light Conditions	Number	%
Day	2	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End	1	50
Right Angle		
Left Turn		
Pavement Slippery		
Head On		
Side Swipe	1	
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	2	100
Time of Year	Number	%
Winter (Dec-Feb)	1	50
Spring (Mar-May)		
Summer (June-Aug)	1	50
Fall (Sep-Nov)		
Contributing Factors	Number	%
Brakes Defective	1.00	50
Unknown		
Failure to Keep Right	1.00	50
Unsafe Speed		
Alcohol Involvement		
Pavement Slippery		
Year	Number	%
2014		
2015		
2016		
2017	2	100

Accident Rate Calculations

Total Volume:	4,610	vehicles per day (AADT Source: JMC base counts)
	1.68	Million Vehicles per Year
	0.7	Average number of accidents per year
	0.40	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types**Rear End**

0.3	Average number of Rear End accidents per year
0.15	Accident Rate in Accidents per Million Entering Vehicles
0.06	NYSDOT Mean Accident Rate

TABLE AR21

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: 0

BETWEEN: Hawkes Avenue (Int. 2) and Pershing Ave/Cherry Hill Circle (Int. 3)

SEGMENT LENGTH: 0.21 miles

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Right Angle		
Left Turn		
Head On		
Unknown		
Rear End		
Sideswipe		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Failure to Keep Right		
Traffic Control Disregard		
Pavement Slippery		
Failure to Yield ROW		
Year	Number	%
2014		
2015		
2016		
2017		

Accident Rate Calculations

Total Volume:	2,350	vehicles per day (AADT Source: JMC base counts)
	0.86	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR22

INTERSECTION NAME: Croton Dam Road & Pershing Avenue/Cherry Hill Road

TOTAL ACCIDENTS: 1

INTERSECTION NUMBER: 3

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday	1	100
Saturday		
Time of Day	Number	%
6 am-10 am	1	100
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear	1	100
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	1	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day	1	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Rear End		
Head On		
Side Swipe		
Right Turn		
Right Angle	1	100
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	1	100
Time of Year	Number	%
Winter (Dec-Feb)	1	100
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience	0.50	50
Failure to Yield ROW	0.50	50
Pavement Slippery		
Unknown		
Failure to Keep Right		
Unsafe Speed		
Year	Number	%
2014		
2015		
2016		
2017	1	100

Accident Rate Calculations

Total Volume:	2,500	vehicles per day (AADT Source: JMC base counts)
	0.91	Million Vehicles per Year
	0.3	Average number of accidents per year
	0.37	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.29	NYSDOT Mean collision rate (Urban 4-leg unsignalized intersection)

Specific Collisions Types

Right Angle:	0.13	Average number of Right Angle accidents per year
	0.1	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.07	NYSDOT Mean Accident Rate

TABLE AR23

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: 0

BETWEEN: Pershing Avenue/Cherry Hill Circle (Int. 3) and Site Driveway (Int. 4)

SEGMENT LENGTH: 0.14 miles

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Right Turn		
Left Turn		
Head On		
Rear End		
Right Angle		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Pavement Slippery		
Unsafe Speed		
Failure to Yield ROW		
Following Too Closely		
Unknown		
Year	Number	%
2014		
2015		
2016		
2017		

Accident Rate Calculations

Total Volume:	2,160	vehicles per day (AADT Source: JMC base counts)
	0.79	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR24

INTERSECTION NAME: Croton Dam Road & Site Driveway

TOTAL ACCIDENTS: 0

INTERSECTION NUMBER: 4

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End		
Sideswipe		
Left Turn		
Right Angle		
Right Turn		
Unknown		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Unsafe Speed		
Pavement Slippery		
Traffic Control Disregard		
Following Too Closely		
Failure to Yield ROW		
Year	Number	%
2014		
2015		
2016		
2017		

Accident Rate Calculations

Total Volume:	2,160	vehicles per day (AADT Source: JMC base counts)
	0.79	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million entering vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

TABLE AR25

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: 1

BETWEEN: Site Driveway (Int. 4) and Grandview Avenue (Int. 5)

SEGMENT LENGTH: 0.16 miles

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday	1	100
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm	1	100
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear	1	100
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	1	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night	1	100
Dawn/Dusk		

Accident Type	Number	%
Fixed Object	1	100
Right Turn		
Left Turn		
Right Angle		
Head On		
Sideswipe		
Unknown		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	1	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)	1	100
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Unknown	1.00	100
Pavement Slippery		
Alcohol Involvement		
Failure to Yield ROW		
Unsafe Speed		
Year	Number	%
2014		
2015		
2016	1	100
2017		

Accident Rate Calculations

Total Volume:	2,160	vehicles per day (AADT Source: JMC base counts)
	0.79	Million Vehicles per Year
	0.3	Average number of accidents per year
	2.63	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

Specific Collisions Types**Fixed Object**

0.3	Average number of Fixed Object accidents per year
0.42	Accident Rate in Accidents per Million Vehicle Miles
0.49	NYSDOT Mean Accident Rate

TABLE AR26

INTERSECTION NAME: Croton Dam Road & Grandview Avenue

TOTAL ACCIDENTS: 0

INTERSECTION NUMBER: 5

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End		
Sideswipe		
Right Turn		
Head On		
Right Angle		
Fixed Object		
Pedestrian		
Left Turn		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inexperience		
Failure to Yield ROW		
Following Too Closely		
Traffic Control Disregard		
Year	Number	%
2014		
2015		
2016		
2017		

Accident Rate Calculations

Total Volume:	2,200	vehicles per day (AADT Source: JMC base counts)
	0.80	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million entering vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

TABLE AR27

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: 1

BETWEEN: Grandview Avenue (Int. 5) and Narragansett Avenue (Int. 6)

SEGMENT LENGTH: 0.07 miles

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday	1	100
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am	1	100
Weather	Number	%
Clear		
Cloudy	1	100
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	1	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night	1	100
Dawn/Dusk		

Accident Type	Number	%
Right Angle		
Right Turn		
Head On		
Left Turn		
Pedestrian		
Fixed Object	1	100
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	1	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)	1	100
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Fell Asleep	1.00	100
Unsafe Speed		
Pavement Slippery		
Failure to Yield ROW		
Passing Too Closely		
Driver Inattention		
Year	Number	%
2014		
2015		
2016		
2017	1.00	100

Accident Rate Calculations

Total Volume:	2,140	vehicles per day (AADT Source: JMC base counts)
	0.78	Million Vehicles per Year
	0.3	Average number of accidents per year
	6.09	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

Specific Collisions Types**Fixed Object**

0.3	Average number of Fixed Object accidents per year
0.43	Accident Rate in Accidents per Million Vehicle Miles
0.49	NYSDOT Mean Accident Rate

TABLE AR28

INTERSECTION NAME: Croton Dam Road & Narragansett Avenue

TOTAL ACCIDENTS: 3

INTERSECTION NUMBER: 6

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday	1	33
Wednesday		
Thursday		
Friday		
Saturday	2	67
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm	2	67
7 pm-12 Mid		
12 Mid-6 am	1	33
Weather	Number	%
Clear	1	33
Cloudy	2	67
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	2	67
Snow/Ice		
Wet	1	33
Light Conditions	Number	%
Day	2	67
Night	1	33
Dawn/Dusk		

Accident Type	Number	%
Right Turn	1	33
Right Angle	1	33
Left Turn		
Pedestrian		
Sideswipe		
Unknown		
Fixed Object	1	33
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	3	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)	3	100
Fall (Sep-Nov)		
Contributing Factors	Number	%
Alcohol Involvement	0.50	17
Aggressive Driving /Road Rage	0.50	17
Passing Too Closely	1.00	33
Unknown	1.00	33
Year	Number	%
2014		
2015	1	33
2016	1	33
2017	1	33

Accident Rate Calculations

Total Volume:	3,890	vehicles per day (AADT Source: JMC base counts)
	1.42	Million Vehicles per Year
	1.0	Average number of accidents per year
	0.70	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types**Wet Pavement**

0.1	Average number of Wet Pavement accidents per year
0.08	Accident Rate in Accidents per Million Vehicle Miles
0.57	NYSDOT Mean Accident Rate

Right Turn

0.4	Average number of Right Turn accidents per year
0.26	Accident Rate in Accidents per Million Entering Vehicles
0.01	NYSDOT Mean Accident Rate

TABLE AR29

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: 0

BETWEEN: Narragansett Avenue and Freney Road

SEGMENT LENGTH: 0.05 miles

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Right Turn		
Left Turn		
Sideswipe		
Head On		
Rear End		
Fixed Object		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Fell Asleep		
Unsafe Speed		
Pavement Slippery		
Failure to Yield ROW		
Driver Inattention		
Improper Lane Usage		
Year	Number	%
2014		
2015		
2016		
2017		

Accident Rate Calculations

Total Volume:	3,830	vehicles per day (AADT Source: JMC base counts)
	1.40	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR30

INTERSECTION NAME: Croton Dam Road & Pheasant Ridge
Road/Feeney Road

TOTAL ACCIDENTS: 1

INTERSECTION NUMBER: 7

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday	1	100
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am	1	100
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain	1	100
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet	1	100
Light Conditions	Number	%
Day		
Night	1	100
Dawn/Dusk		

Accident Type	Number	%
Right Angle		
Right Turn		
Rear End		
Left Turn		
Pedestrian		
Fixed Object	1	100
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	1	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)	1	100
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inattention	1.00	100
Pavement Slippery		
Unsafe Speed		
Failure to Yield ROW		
Alcohol Involvement		
Improper Lane Usage		
Year	Number	%
2014		
2015		
2016	1	
2017		

Accident Rate Calculations

Total Volume:	4,250	Vehicles per day (AADT Source: JMC base counts)
	1.55	Million Vehicles per Year
	0.3	Average number of accidents per year
	0.21	Accident Rate in accidents per Million entering vehicles (MEV)
	0.29	NYSDOT Mean collision rate (Urban 4-leg unsignalized intersection)

Wet Pavement

0.1	Average number of Wet Pavement accidents per year
0.07	Accident Rate in Accidents per Million Vehicle Miles
0.57	NYSDOT Mean Accident Rate

TABLE AR31

ROADWAY NAME: Croton Dam Road

TOTAL ACCIDENTS: 0

BETWEEN: Freney Road and Kitchawan State Road (NY 134)

SEGMENT LENGTH: 0.06 miles

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry		
Snow/Ice		
Wet		
Light Conditions	Number	%
Day		
Night		
Dawn/Dusk		

Accident Type	Number	%
Sideswipe		
Right Angle		
Right Turn		
Head On		
Left Turn		
Fixed Object		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)		
Contributing Factors	Number	%
Fell Asleep		
Unsafe Speed		
Failure to Yield ROW		
Pavement Slippery		
Improper Lane Usage		
Driver Inattention		
Year	Number	%
2014		
2015		
2016		
2017		

Accident Rate Calculations

Total Volume:	4,070	vehicles per day (AADT Source: JMC base counts)
	1.49	Million Vehicles per Year
	0.0	Average number of accidents per year
	0.00	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

TABLE AR32

INTERSECTION NAME: Croton Dam Road & Kichawan State Road

TOTAL ACCIDENTS: 1

INTERSECTION NUMBER: 8

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday	1	100
Saturday		
Time of Day	Number	%
6 am-10 am	1	100
10 am-4 pm		
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear		
Cloudy	1	100
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	1	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day	1	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Right Angle		
Rear End		
Sideswipe		
Right Turn		
Fixed Object		
Left Turn	1	100
Severity	Number	%
Fatal Injury		
Non-Fatal Injury	1	100
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)		
Fall (Sep-Nov)	1	100
Contributing Factors	Number	%
Failure to Yield ROW	1.00	100
Pavement Slippery		
Improper Lane Usage		
Unsafe Speed		
Failure to Keep Right		
Backing Unsafely		
Year	Number	%
2014		
2015		
2016	1	100
2017		

Accident Rate Calculations

Total Volume:	5,120	vehicles per day (AADT Source: JMC base counts)
	1.87	Million Vehicles per Year
	0.3	Average number of accidents per year
	0.18	Accident Rate in accidents per Million Entering Vehicles (MEV)
	0.18	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

Specific Collisions Types**Left Turn**

0.1	Average number of Left Turn accidents per year
0.07	Accident Rate in Accidents per Million entering vehicles
0.02	NYSDOT Mean Accident Rate

TABLE AR33

INTERSECTION NAME: Croton Dam Road & NY 9A

TOTAL ACCIDENTS: 1

INTERSECTION NUMBER: 9

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday		
Monday		
Tuesday	1	100
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm		
4 pm-7 pm	1	100
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear	1	100
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	1	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day	1	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Fixed Object		
Pedestrian		
Left Turn		
Right Angle		
Right Turn		
Sideswipe	1	100
Severity	Number	%
Fatal Injury		
Non-Fatal Injury	1	100
Property-Damage Only		
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)	1	100
Fall (Sep-Nov)		
Contributing Factors	Number	%
Improper Lane Usage	0.50	50
Failure to Keep Right	0.50	50
Failure to Yield ROW		
Unsafe Speed		
Pavement Slippery		
Driver Inattention		
Year	Number	%
2014		
2015		
2016		
2017	1	100

Accident Rate Calculations

Total Volume:	39,810	vehicles per day (AADT Source: JMC base counts)
	14.53	Million Vehicles per Year
	0.3	Average number of accidents per year
	0.02	Accident Rate in accidents per Million entering vehicles (MEV)
	0.25	NYSDOT Mean collision rate (Urban 4-leg signalized intersection)

Specific Collisions Types**Side Swipe**

0.1	Average number of Side Swipe accidents per year
0.01	Accident Rate in Accidents per Million entering vehicles
0.02	NYSDOT Mean Accident Rate

TABLE AR34

ROADWAY NAME: NY 134

TOTAL ACCIDENTS: 16

BETWEEN: Hawkes Avenue (Int. 2) & NY 9A (Int. 9)

SEGMENT LENGTH: 0.7 mi.

TIME PERIOD: 11/16/2014 - 11/15/2017

Day of Week	Number	%
Sunday	1	6
Monday	3	19
Tuesday	2	13
Wednesday		
Thursday	2	13
Friday	3	19
Saturday	5	31
Time of Day	Number	%
6 am-10 am	3	19
10 am-4 pm	2	13
4 pm-7 pm	6	38
7 pm-12 Mid	1	6
12 Mid-6 am	4	25
Weather	Number	%
Clear	8	50
Cloudy	5	31
Fog		
Rain	3	19
Sleet/Snow		
Pavement	Number	%
Dry	12	75
Snow/Ice		
Wet	4	25
Light Conditions	Number	%
Day	11	69
Night	5	31
Dawn/Dusk		

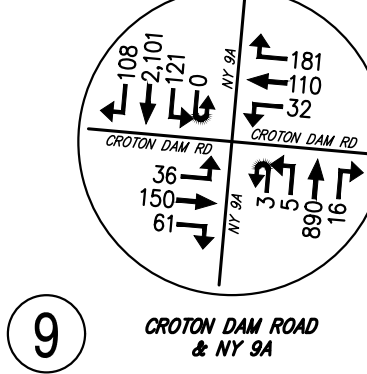
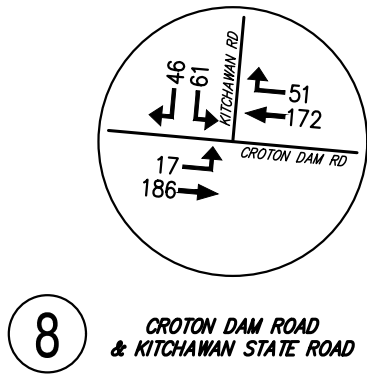
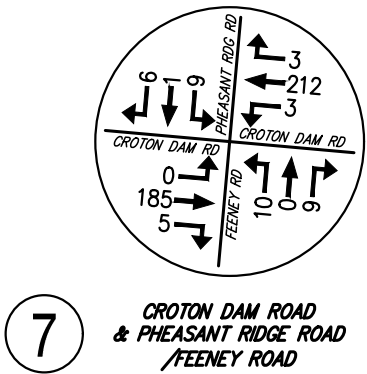
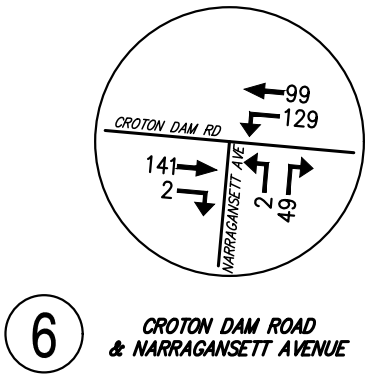
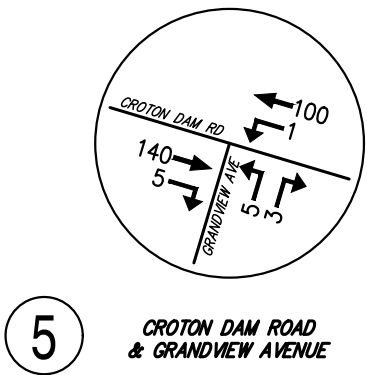
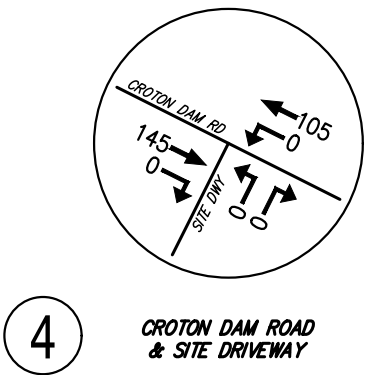
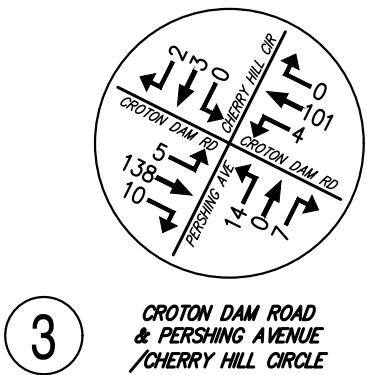
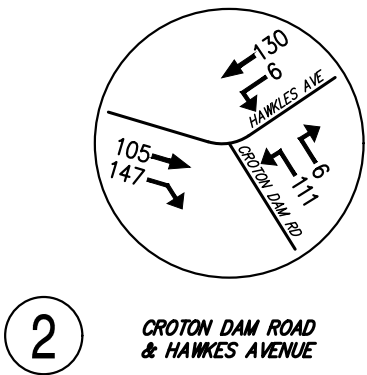
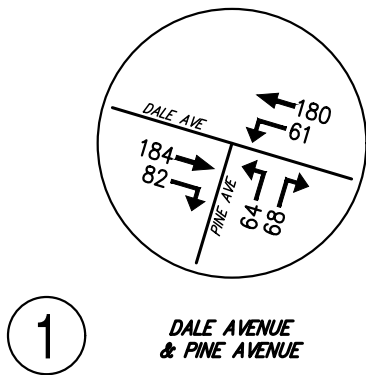
Accident Type	Number	%
Rear End	1	6
Sideswipe	3	19
Left Turn	2	13
Right Turn	2	13
Right Angle	4	25
Fixed Object	4	25
Severity	Number	%
Fatal Injury		
Non-Fatal Injury	3	19
Property-Damage Only	13	81
Time of Year	Number	%
Winter (Dec-Feb)	3	19
Spring (Mar-May)	2	13
Summer (June-Aug)	8	50
Fall (Sep-Nov)	3	19
Contributing Factors	Number	%
Driver Inexperience	1.50	9
Failure to Yield ROW	1.50	9
Unsafe Speed	0.50	3
Unknown	3.00	19
Improper Lane Usage	0.50	3
Failure to Keep Right	1.50	9
Driver Inattention	2.00	13
Alcohol Involvement	1.00	6
Aggressive Driving	0.50	3
Fell Asleep	1.00	6
Brakes Defective	1.00	6
Backing Unsafely	1.00	6
Passing Too Closely	1.00	6
Year	Number	%
2014		
2015	3	19
2016	5	31
2017	8	50

Accident Rate Calculations

Total Volume:	4,560	vehicles per day (AADT Source: JMC base counts)
	1.66	Million Vehicles per Year
	5.3	Average number of accidents per year
	4.48	Accident Rate in accidents per Million Vehicle Miles (MVM)
	3.50	NYSDOT Mean collision rate (Urban Mainline & Juncture 2-Lanes Undivided)

APPENDIX B

FIGURES



RIVER KNOLL

TOWN OF OSSINING, NEW YORK

2016 EXISTING VOLUMES PEAK WEEKDAY AM HOUR (7:15-8:15)

JMC PROJECT: 15064

SCALE: 1" = 500'

REVISED: 06/2021
DATE: 12/2016

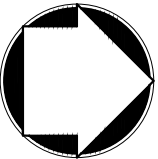
FIGURE: 01

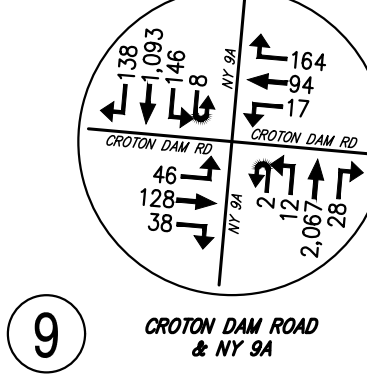
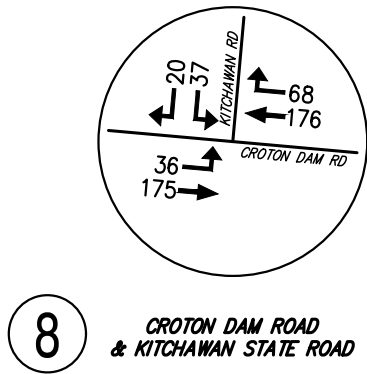
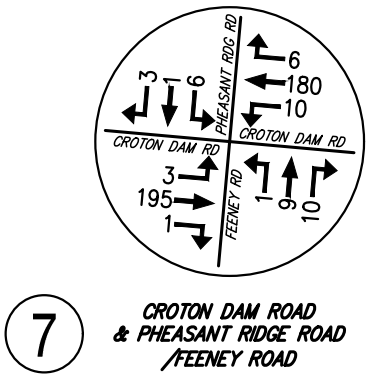
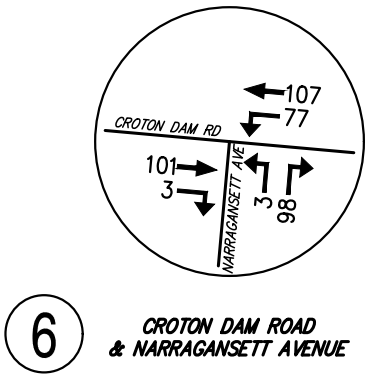
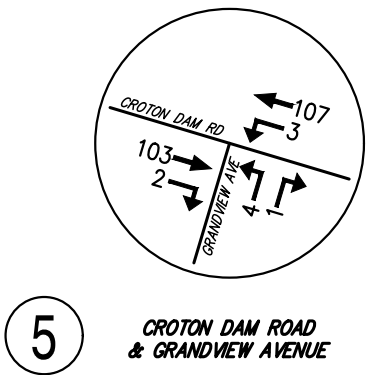
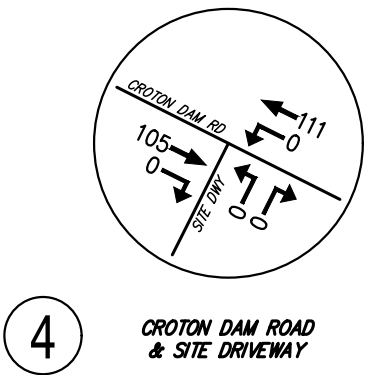
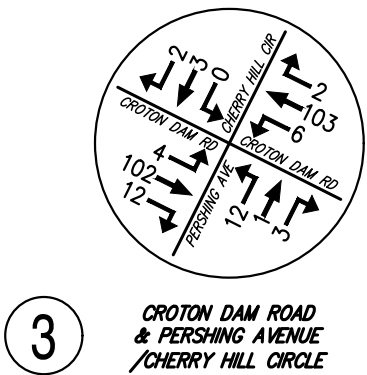
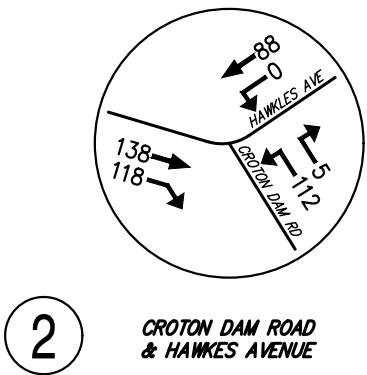
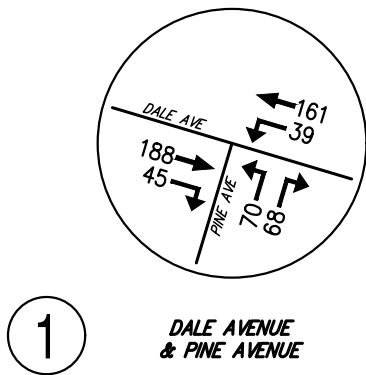
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15064- TRAFFIC-FIG.dwg; TRAFFIC FIG. tab



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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

2016 EXISTING VOLUMES
PEAK WEEKDAY PM HOUR (4:30-5:30)

REVISED: 06/2021
DATE: 12/2016

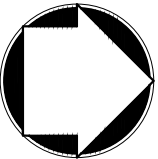
JMC PROJECT: 15064

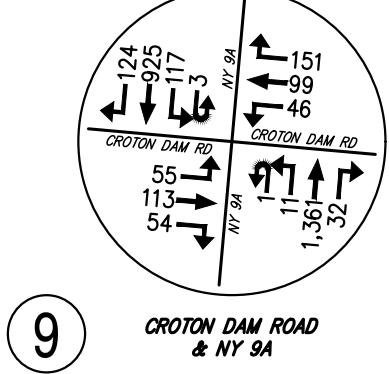
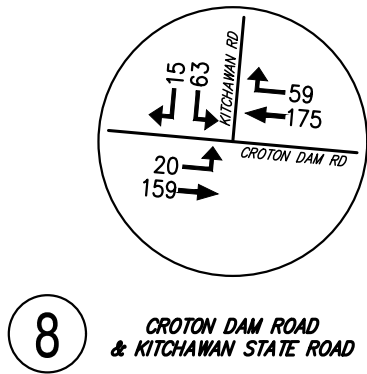
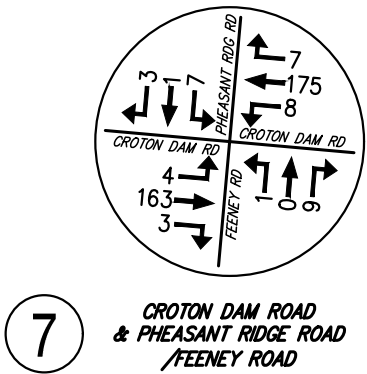
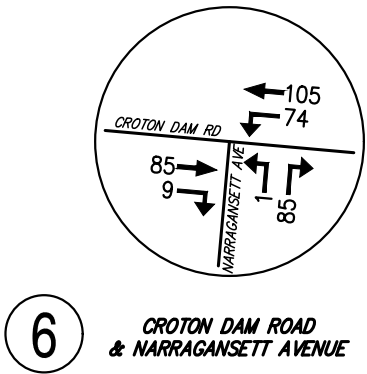
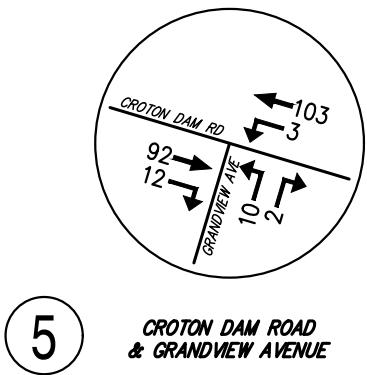
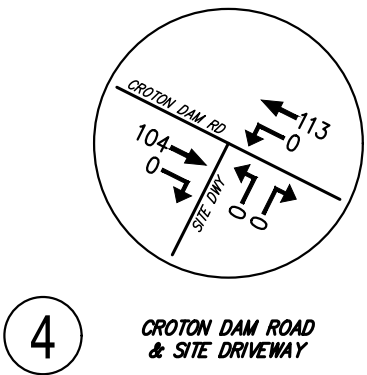
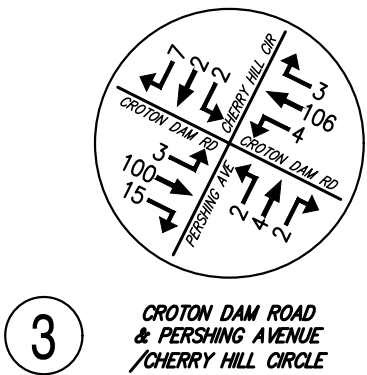
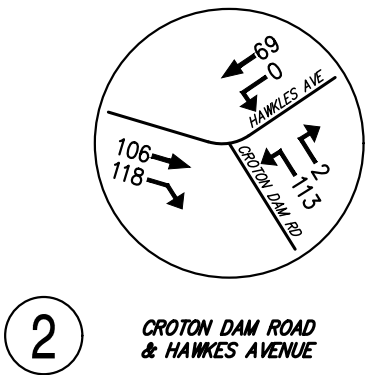
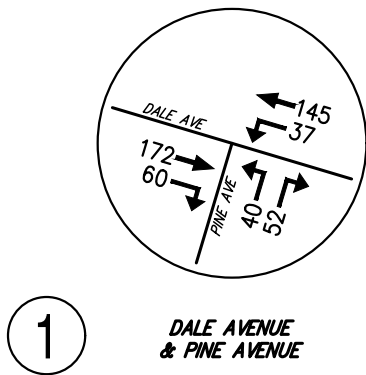
FIGURE: 02

SCALE: 1" = 500'

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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

2016 EXISTING VOLUMES
PEAK SATURDAY MIDDAY HOUR (10:30-11:30)

REVISED: 06/2021
DATE: 12/2016

JMC PROJECT: 15064

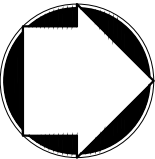
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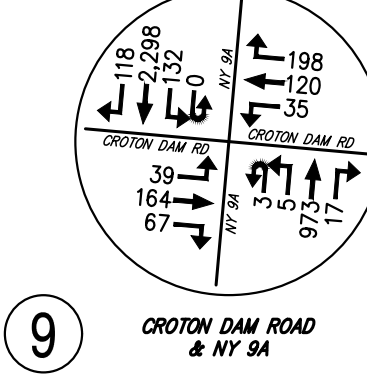
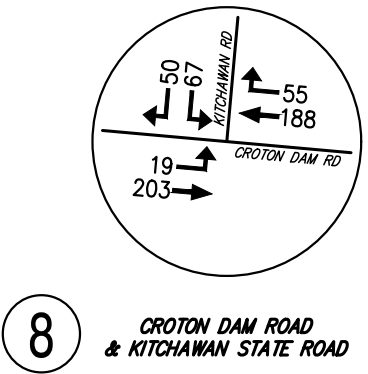
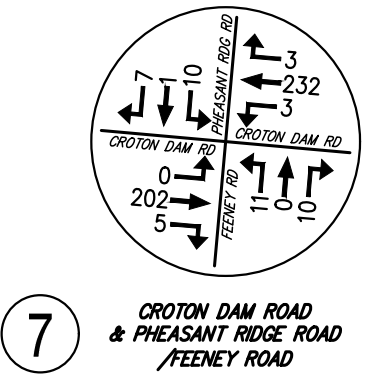
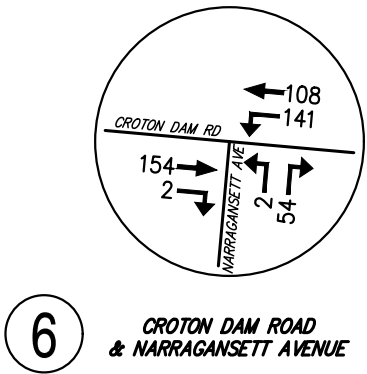
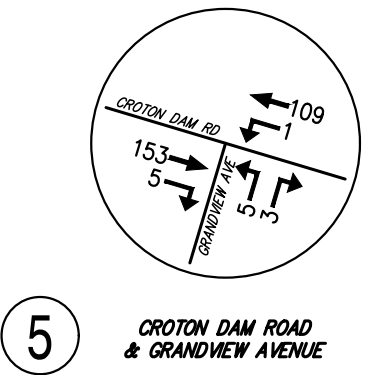
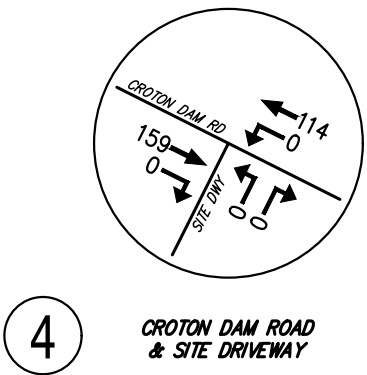
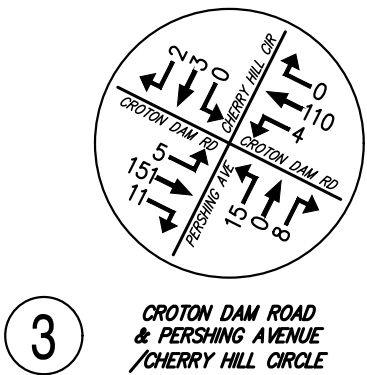
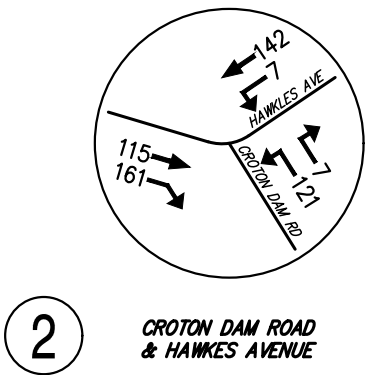
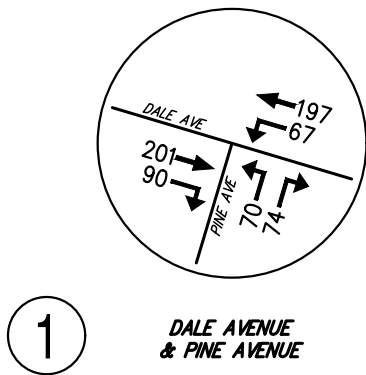
SCALE: 1" = 500'

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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

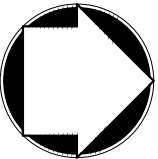
2025 GENERAL GROWTH VOLUMES PEAK WEEKDAY AM HOUR

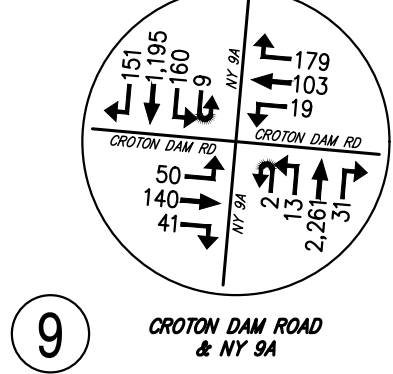
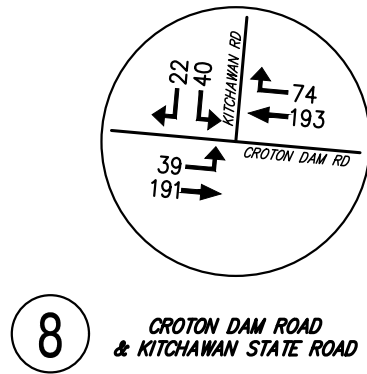
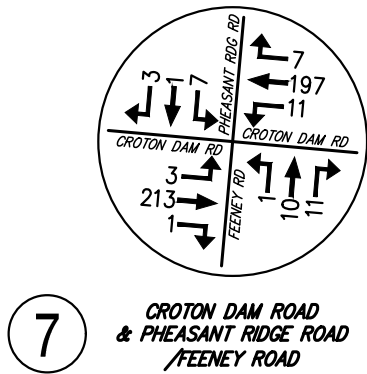
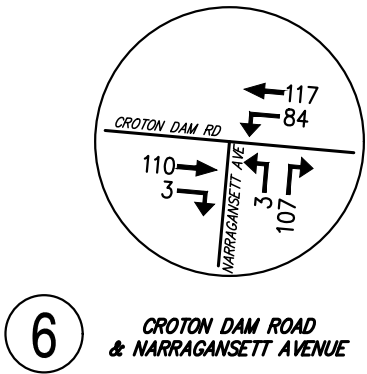
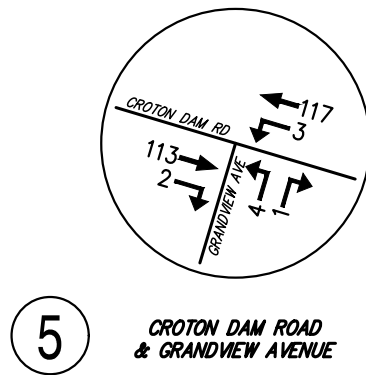
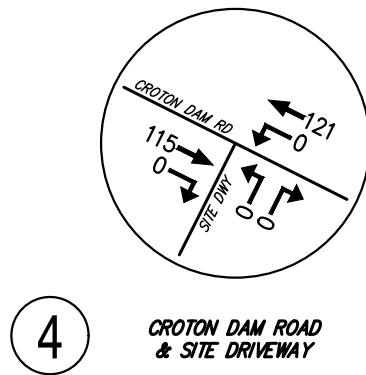
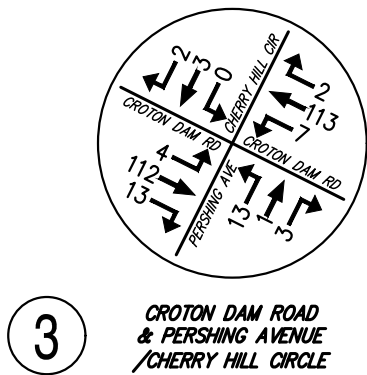
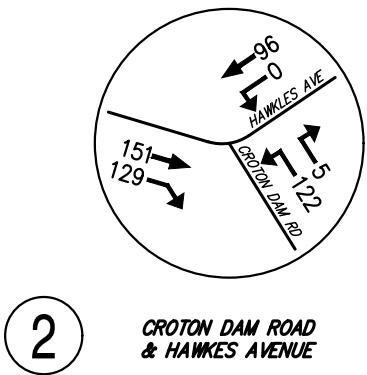
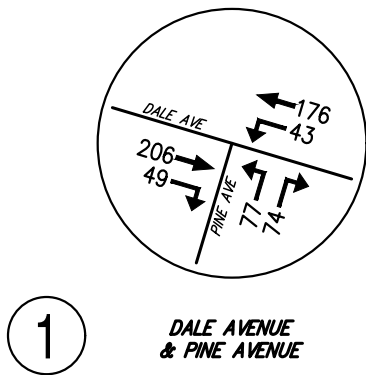
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FIGURE: 04

SCALE: 1" = 500'





RIVER KNOLL

TOWN OF OSSINING, NEW YORK

2025 GENERAL GROWTH VOLUMES
PEAK WEEKDAY PM HOUR

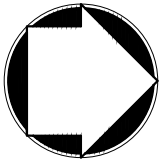
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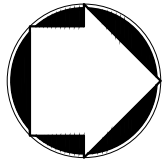
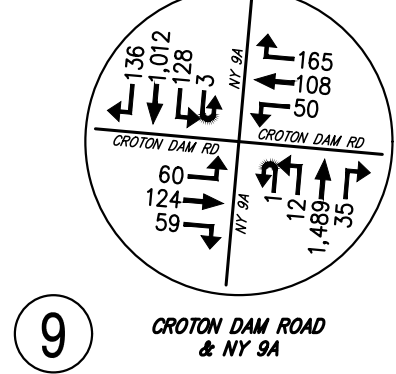
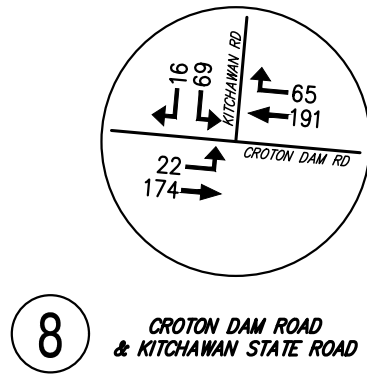
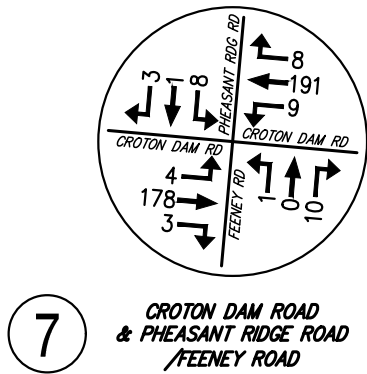
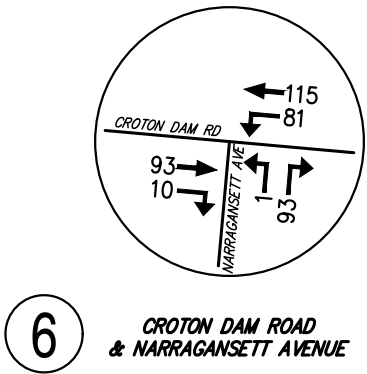
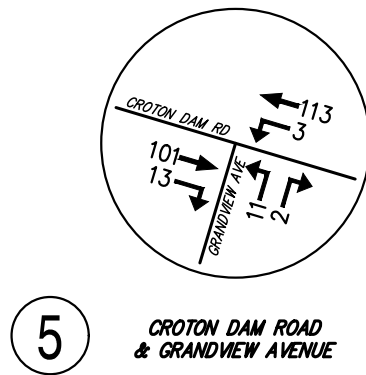
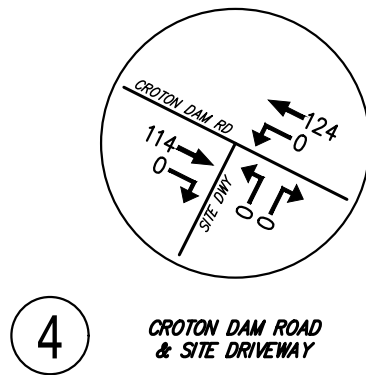
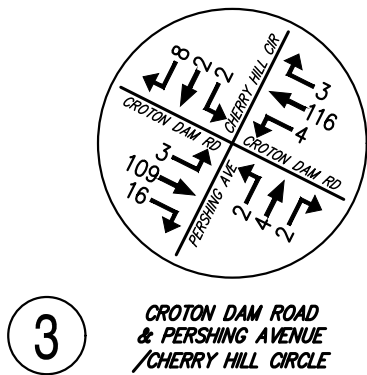
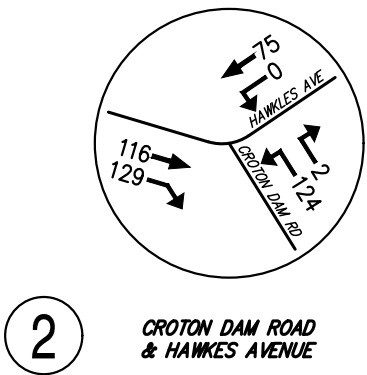
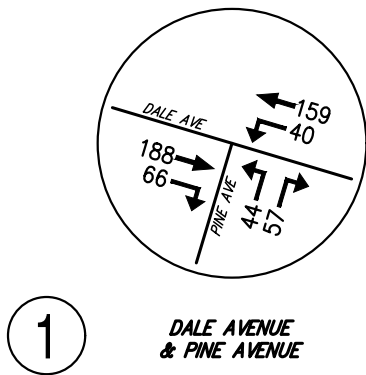
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FIGURE: 05

SCALE: 1" = 500'

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2025 GENERAL GROWTH VOLUMES

PEAK SATURDAY MIDDAY HOUR

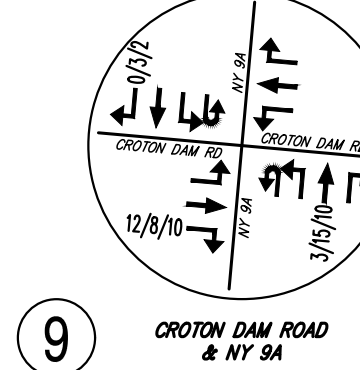
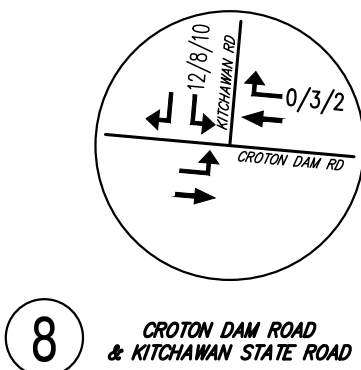
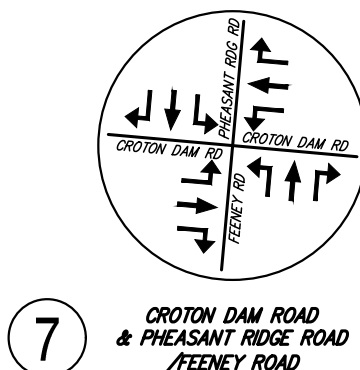
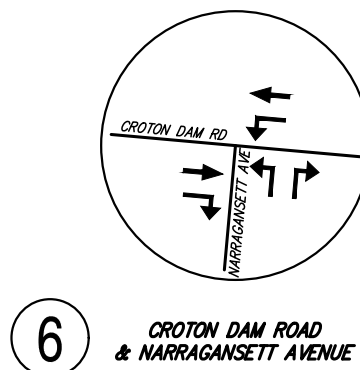
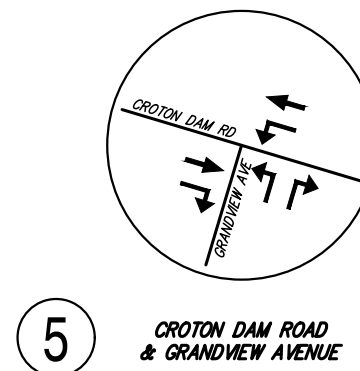
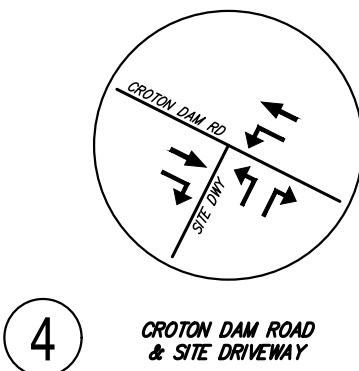
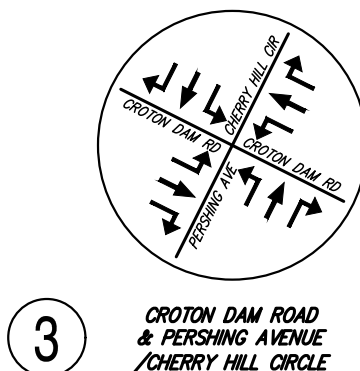
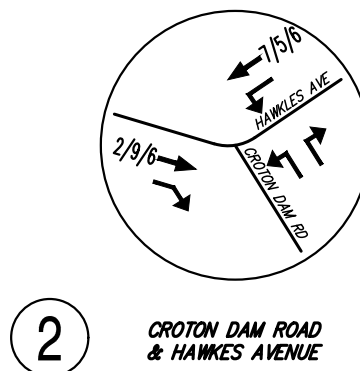
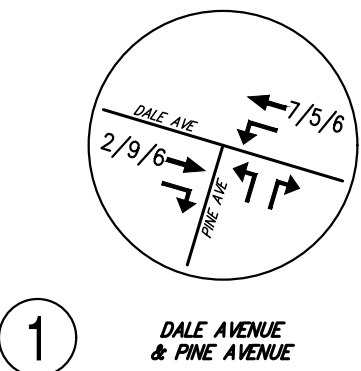
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SCALE: 1" = 500'

FIGURE: 06

LEGEND: PEAK WEEKDAY AM HOUR / PEAK WEEKDAY PM HOUR/ PEAK SATURDAY MIDDAY HOUR



RIVER KNOLL

TOWN OF OSSINING, NEW YORK

OTHER DEVELOPMENT VOLUMES

JMC PROJECT: 15064

PARTH KNOLLS LLC

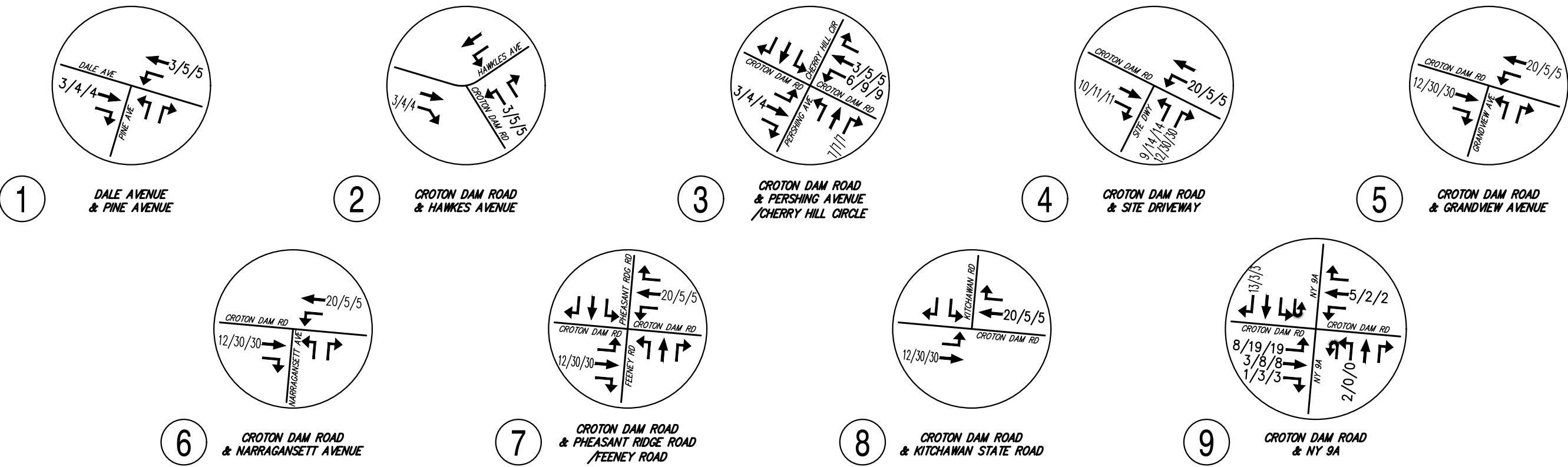
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SCALE: 1" = 500'

FIGURE: 07

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LEGEND: PEAK WEEKDAY AM HOUR / PEAK WEEKDAY PM HOUR/ PEAK SATURDAY MIDDAY HOUR



RIVER KNOLL

TOWN OF OSSINING, NEW YORK

RE-OCCUPIED VOLUMES

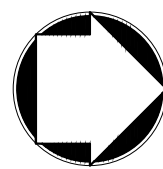
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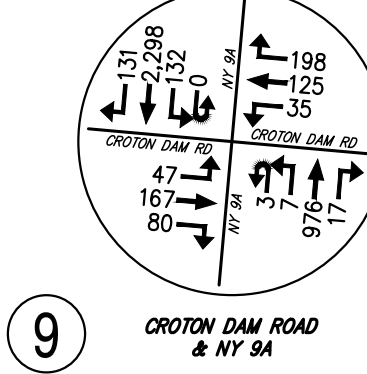
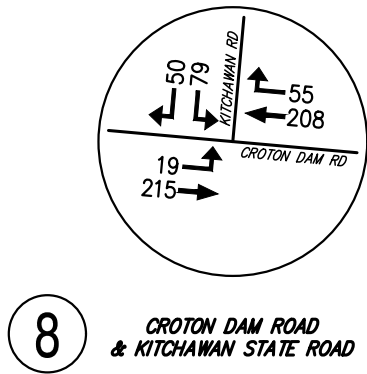
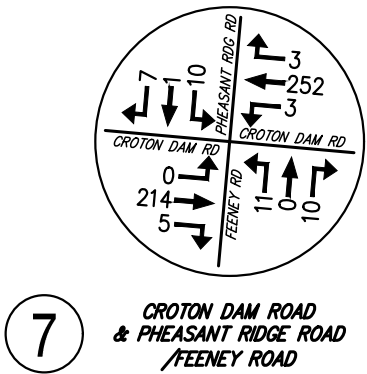
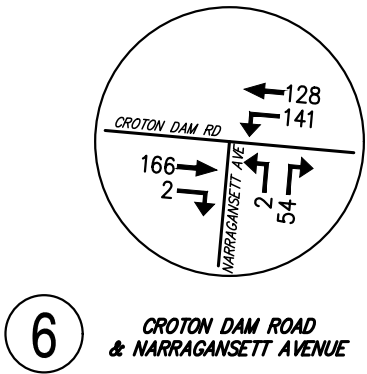
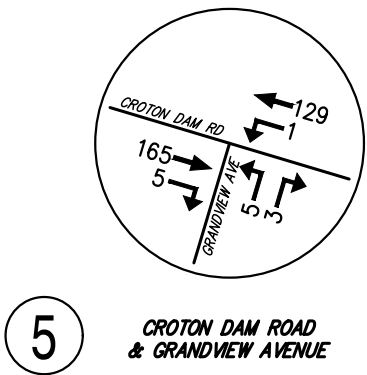
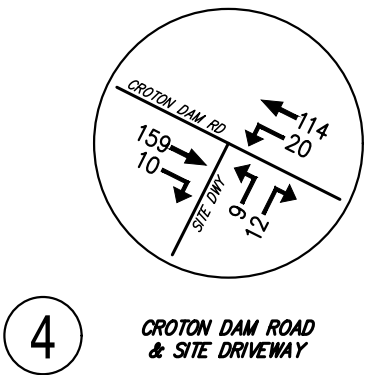
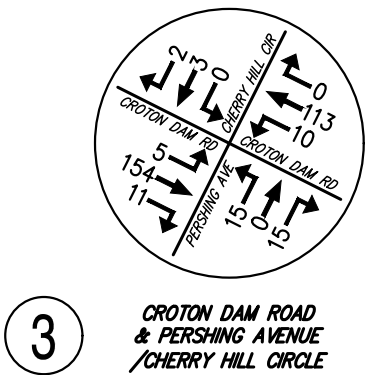
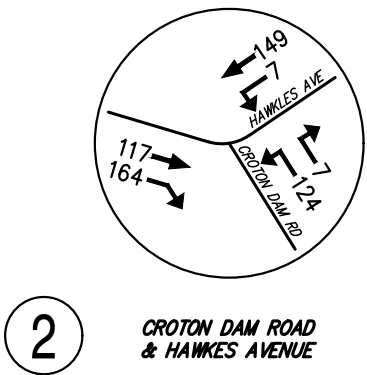
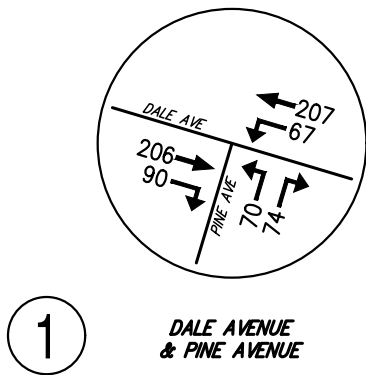
FIGURE: 08

SCALE: 1" = 500'

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2025 NO BUILD VOLUMES
PEAK WEEKDAY AM HOUR

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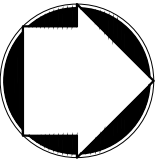
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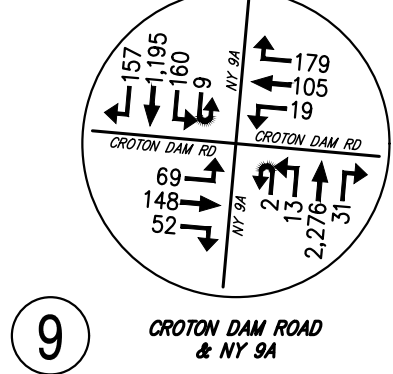
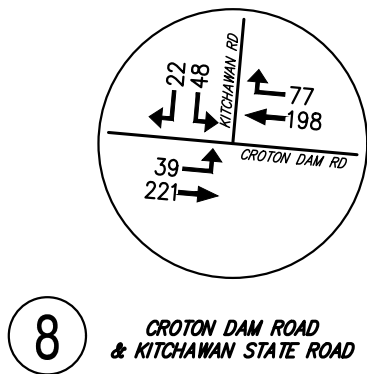
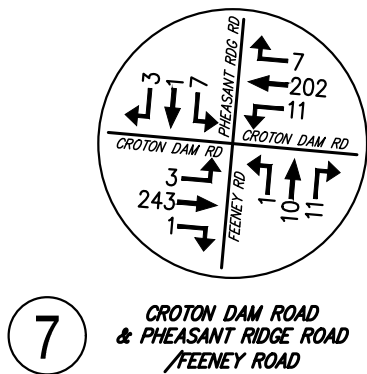
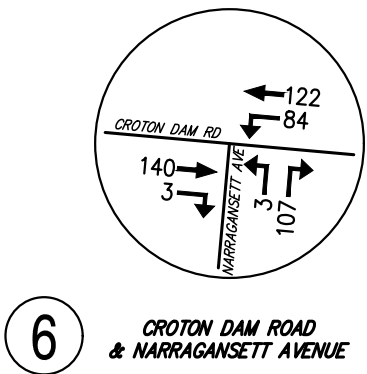
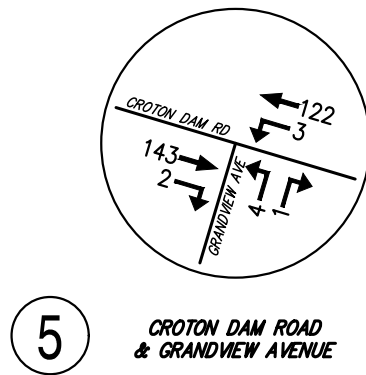
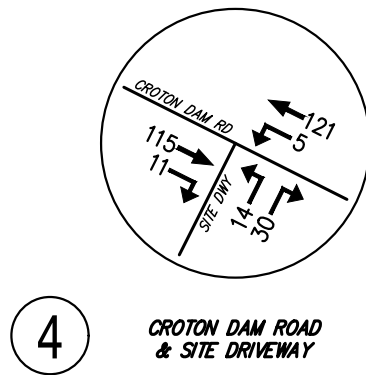
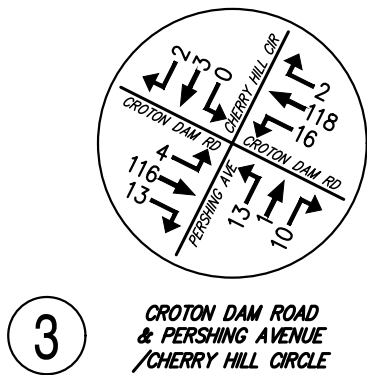
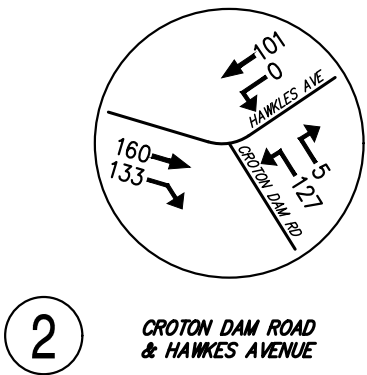
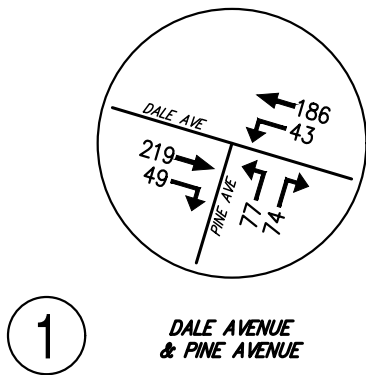
FIGURE: 09

SCALE: 1" = 500'

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RIVER KNOLL

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2025 NO BUILD VOLUMES PEAK WEEKDAY PM HOUR

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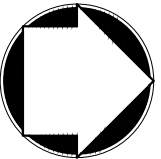
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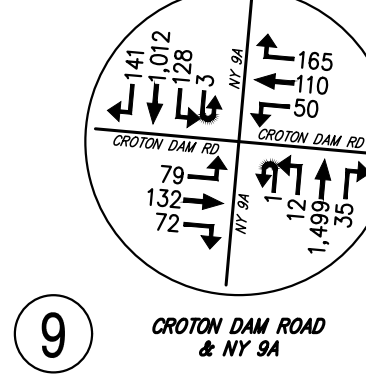
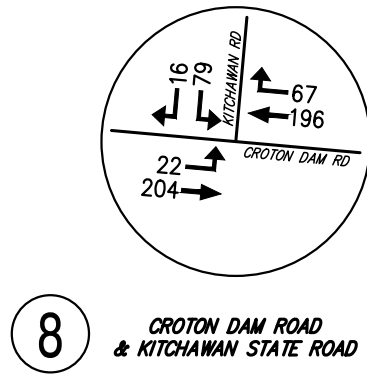
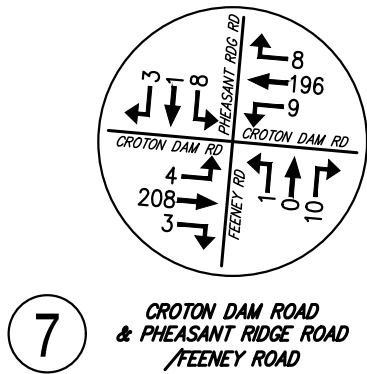
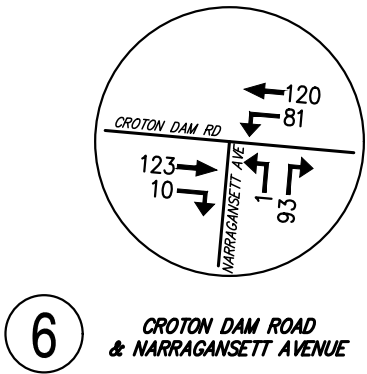
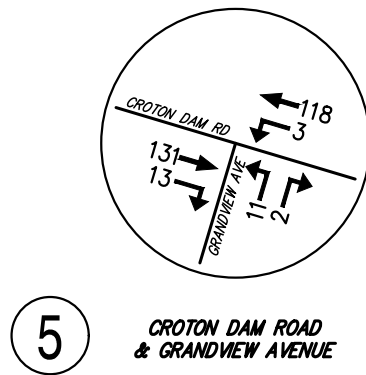
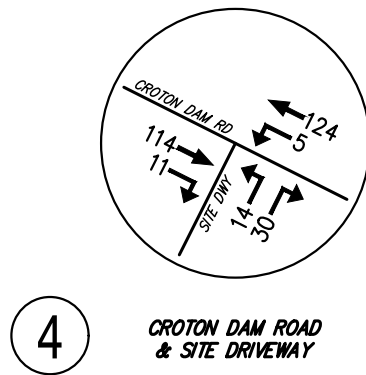
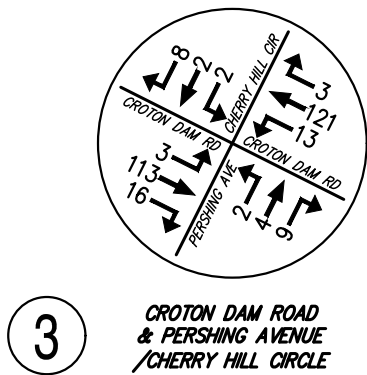
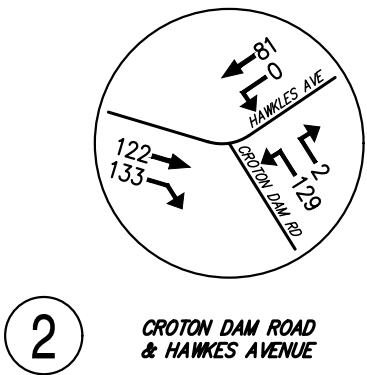
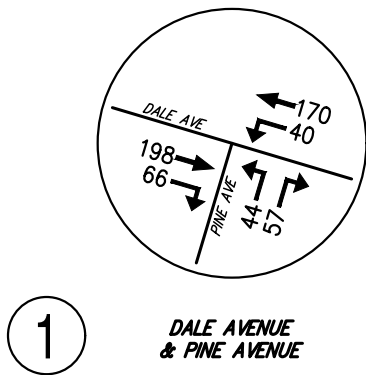
SCALE: 1" = 500'

FIGURE: 10

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RIVER KNOLL

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2025 NO BUILD VOLUMES
PEAK SATURDAY MIDDAY HOUR

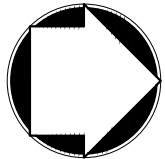
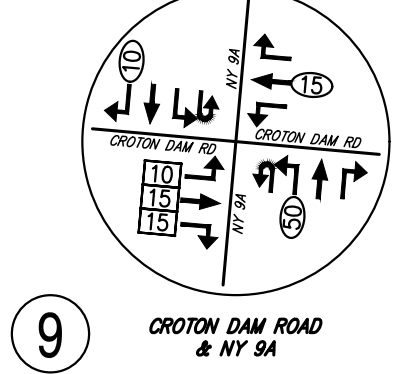
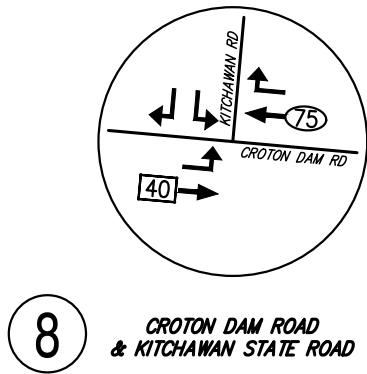
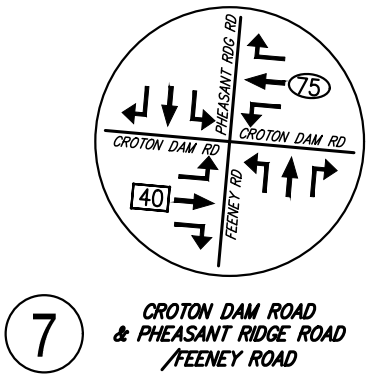
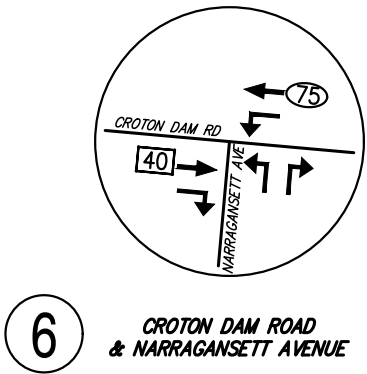
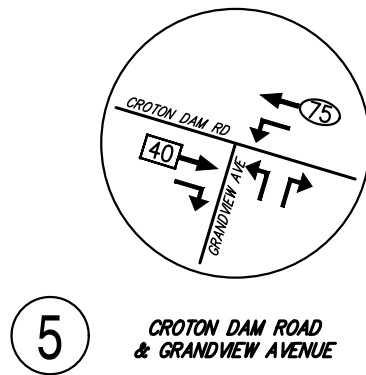
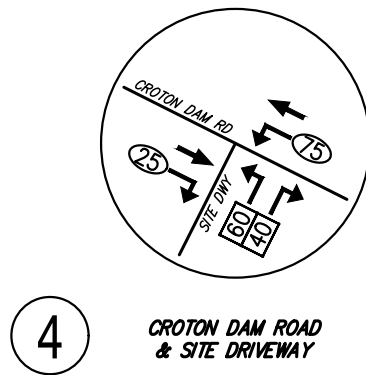
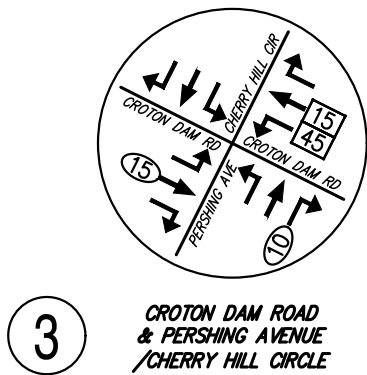
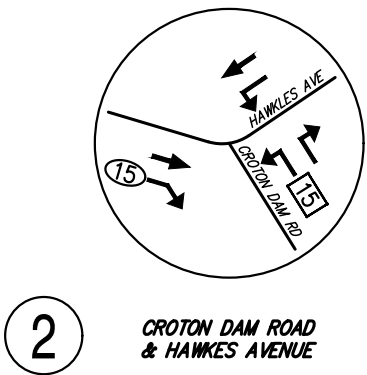
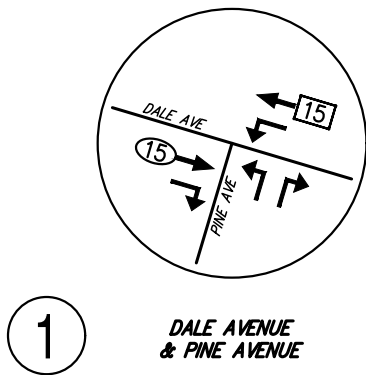
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FIGURE: 11

SCALE: 1" = 500'

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TOWN OF OSSINING, NEW YORK

RIVER KNOLL

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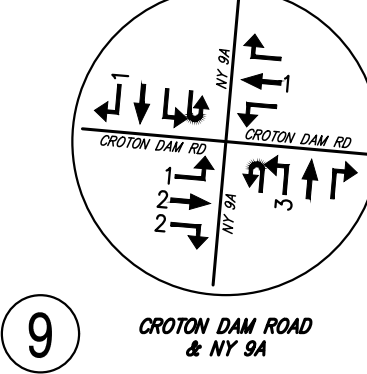
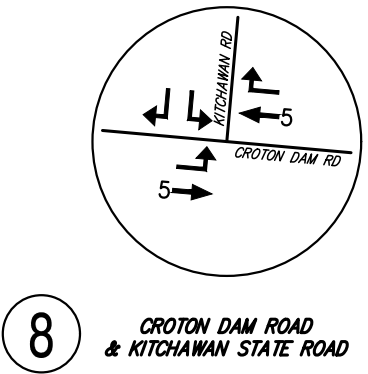
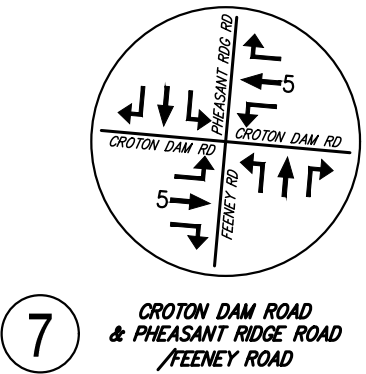
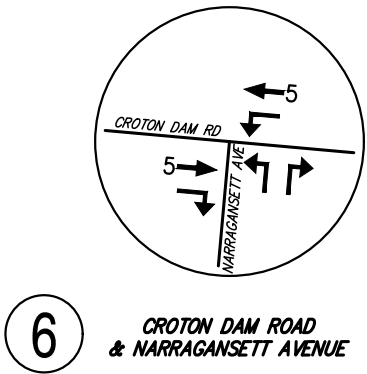
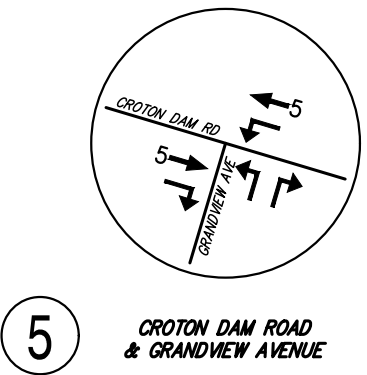
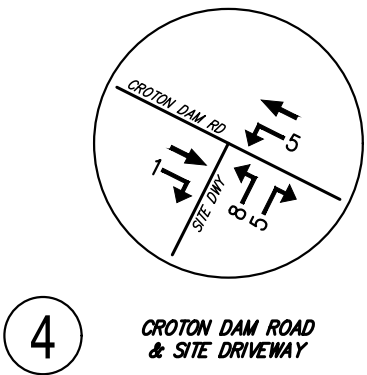
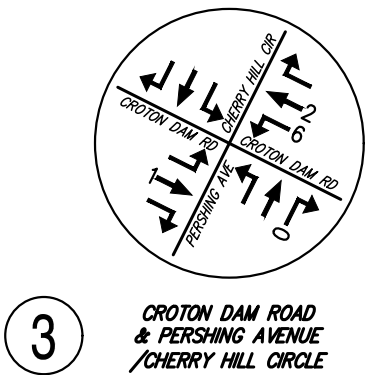
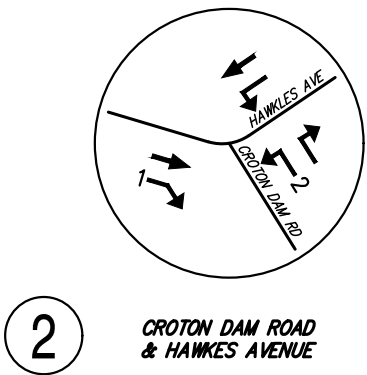
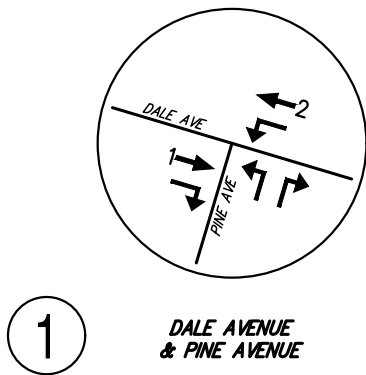
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SCALE: 1" = 500'

FIGURE: 12

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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

PRIMARY TRIP VOLUMES PEAK WEEKDAY AM HOUR

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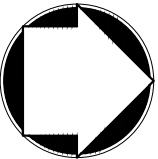
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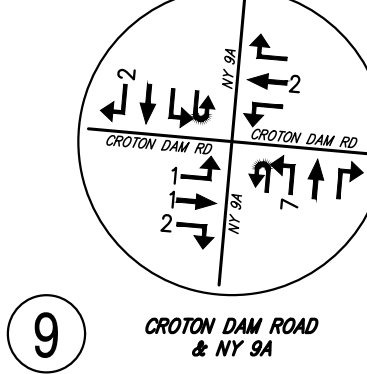
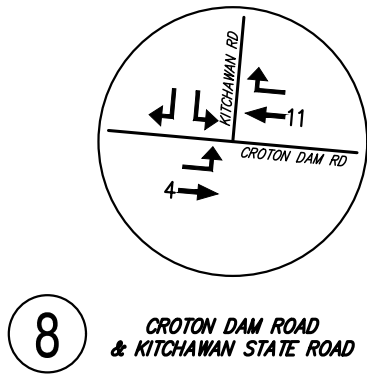
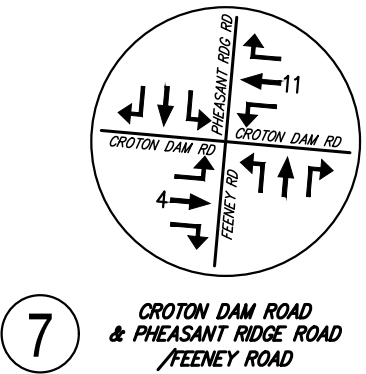
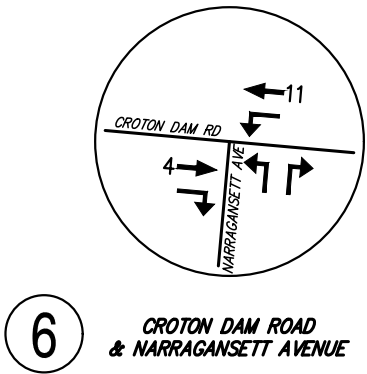
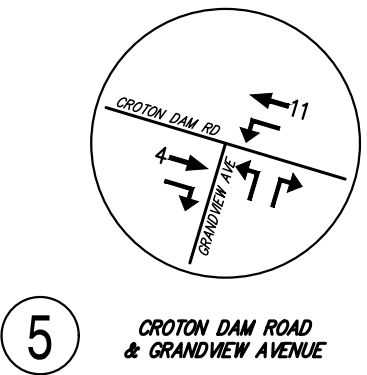
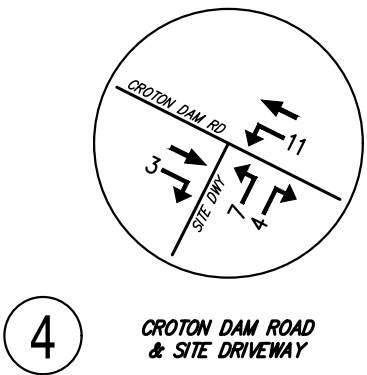
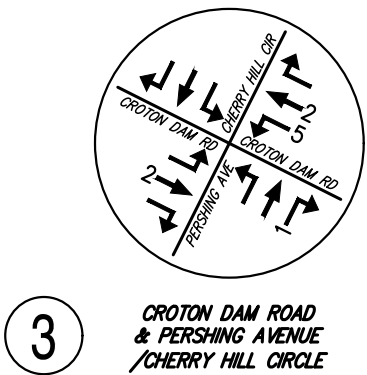
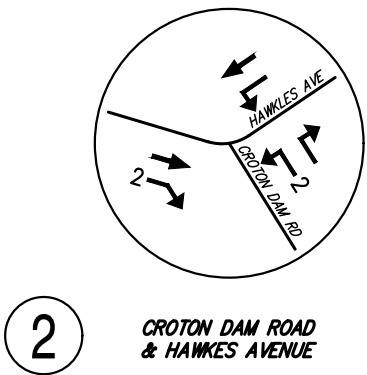
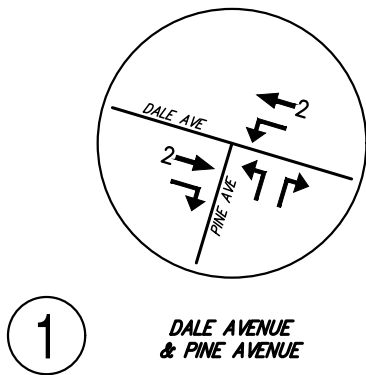
FIGURE: 13

SCALE: 1" = 500'

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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

PRIMARY TRIP VOLUMES
PEAK WEEKDAY PM HOUR

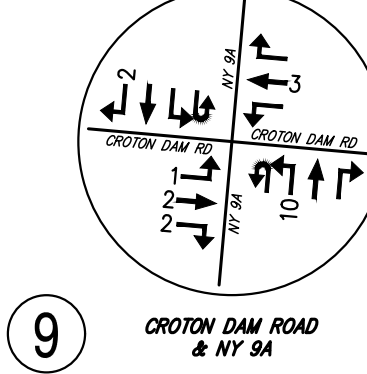
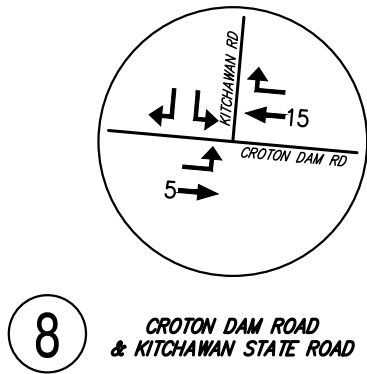
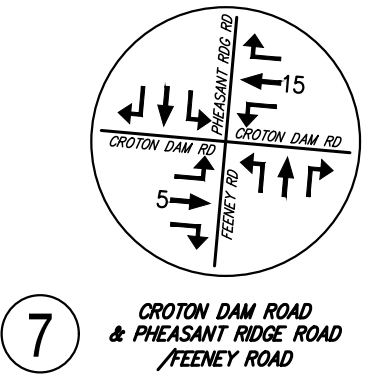
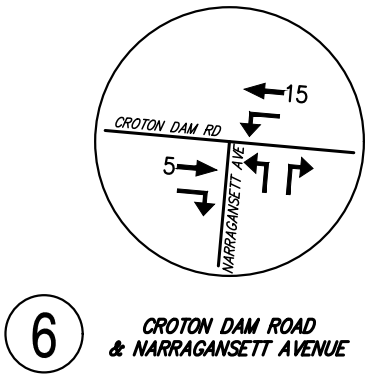
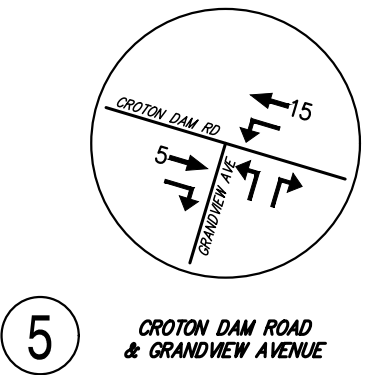
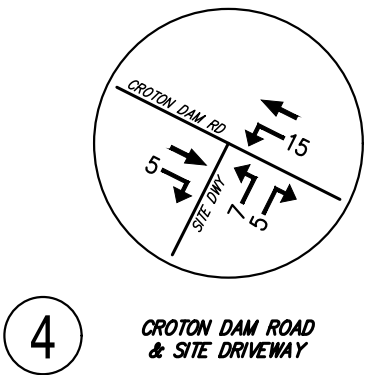
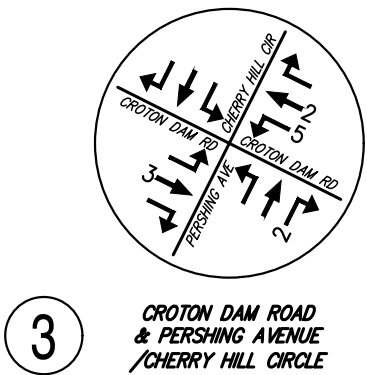
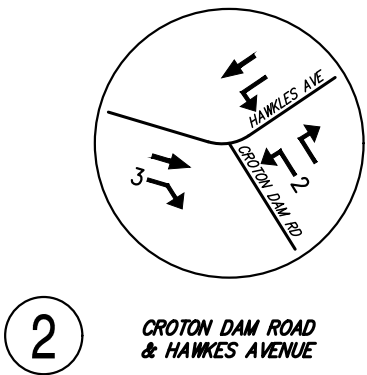
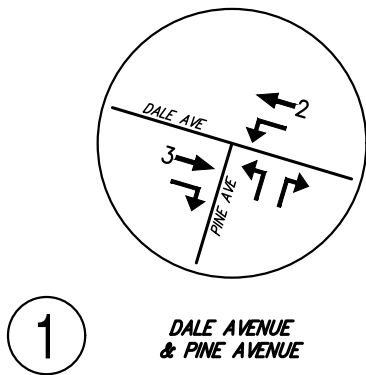
REVISED: 06/2021
DATE: 12/2016

JMC PROJECT: 15064

FIGURE: 14

SCALE: 1" = 500'

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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

PRIMARY TRIP VOLUMES PEAK SATURDAY MIDDAY HOUR

REVISED: 06/2021
DATE: 12/2016

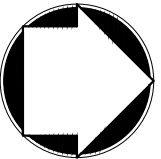
JMC PROJECT: 15064

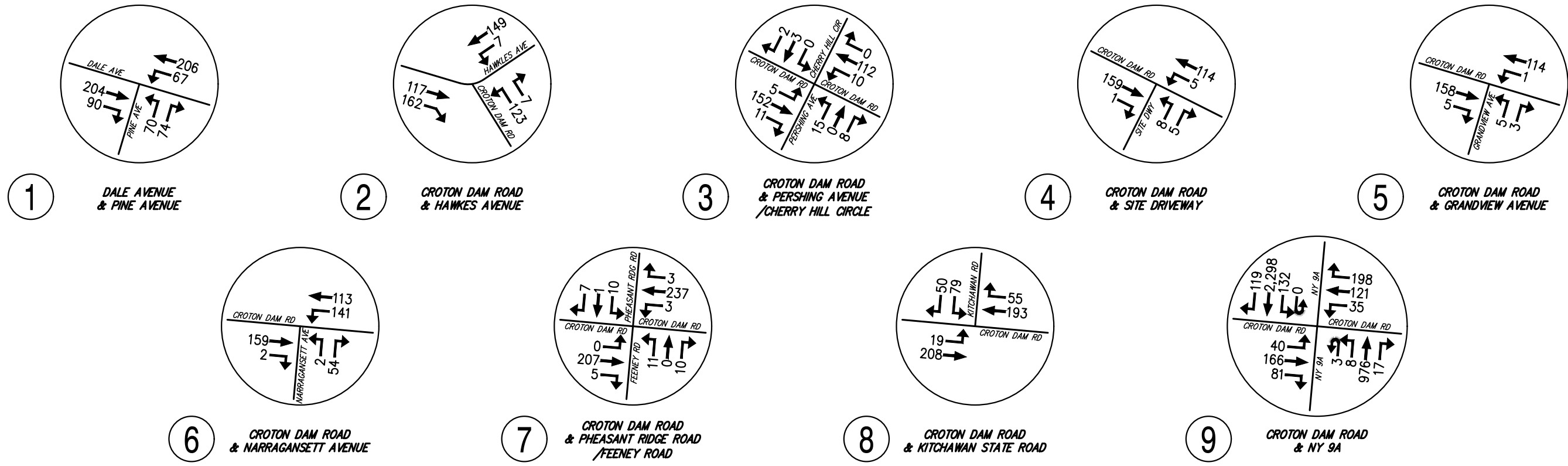
FIGURE: 15

SCALE: 1" = 500'

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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

2025 BUILD VOLUMES PEAK WEEKDAY AM HOUR

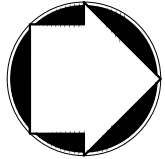
REVISED: 06/2021
DATE: 12/2016

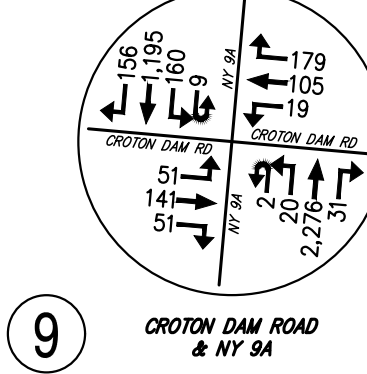
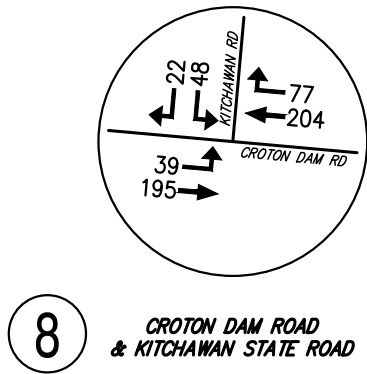
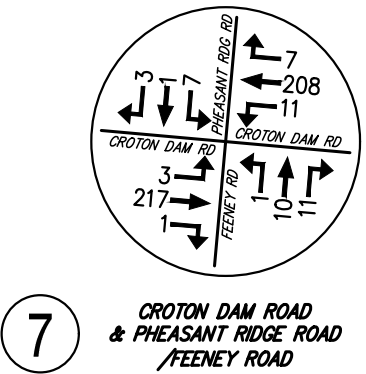
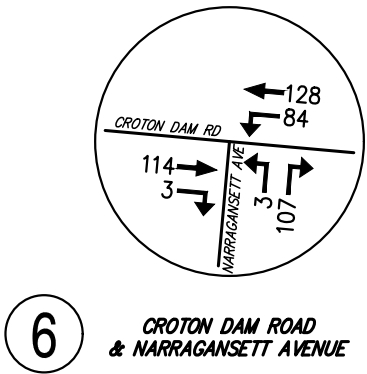
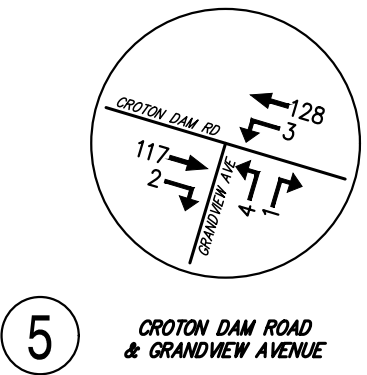
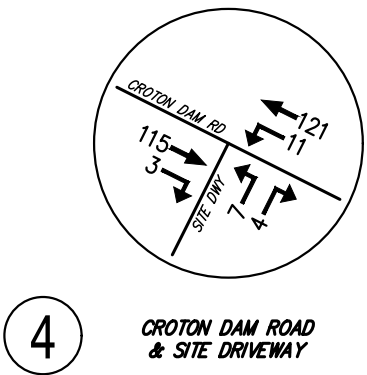
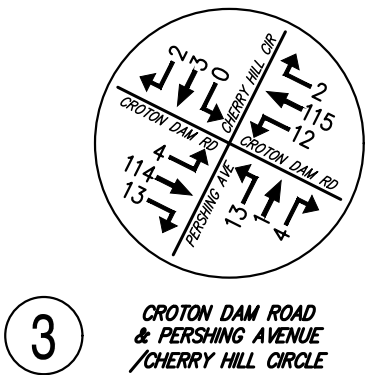
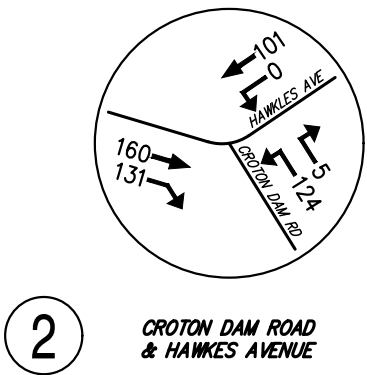
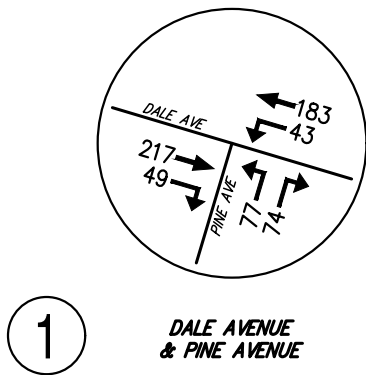
JMC PROJECT: 15064

FIGURE: 16

SCALE: 1" = 500'

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RIVER KNOLL

TOWN OF OSSINING, NEW YORK

2025 BUILD VOLUMES
PEAK WEEKDAY PM HOUR

REVISED: 06/2021
DATE: 12/2016

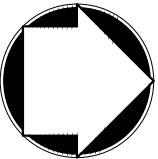
JMC PROJECT: 15064

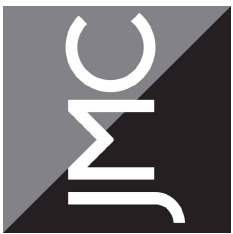
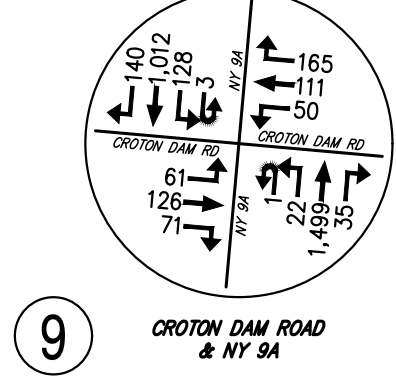
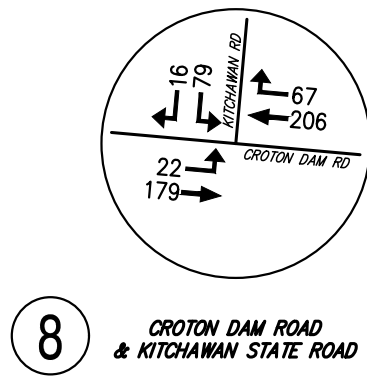
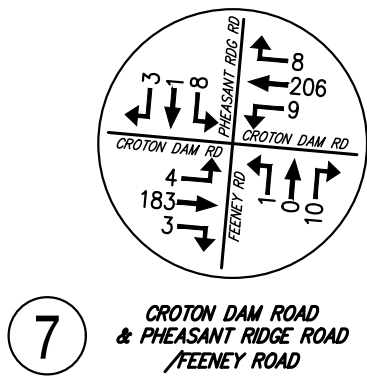
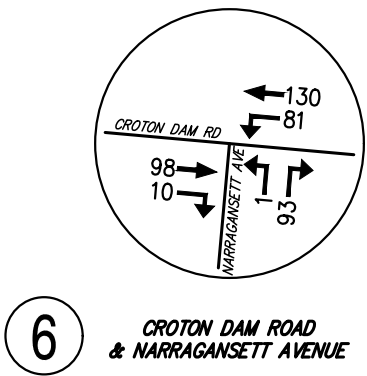
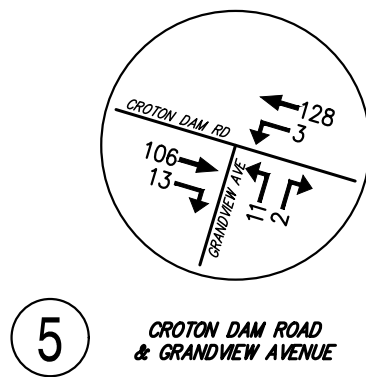
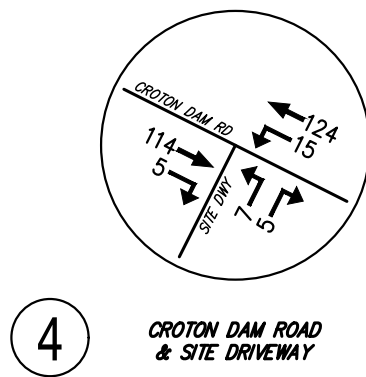
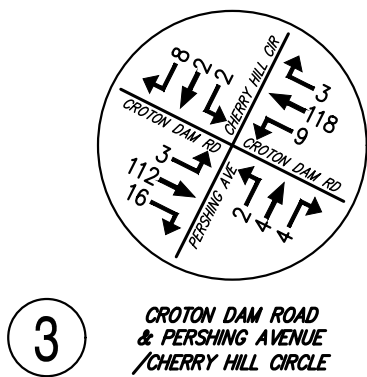
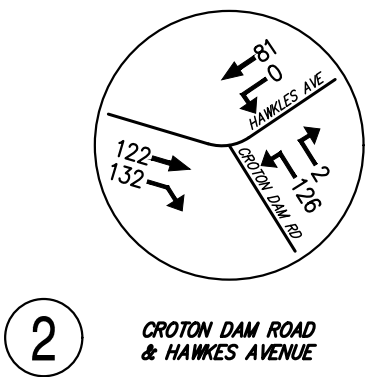
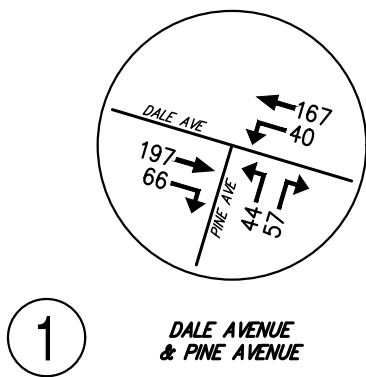
FIGURE: 17

SCALE: 1" = 500'

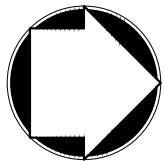
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TOWN OF OSSINING, NEW YORK

RIVER KNOLL

2025 BUILD VOLUMES
PEAK SATURDAY MIDDAY HOUR

JMC PROJECT: 15064

REVISED: 06/2021
DATE: 12/2016

SCALE: 1" = 500'

FIGURE: 18

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15064- TRAFFIC-FIG.dwg; TRAFFIC FIG. tab

APPENDIX C

TURNING MOVEMENT COUNTS

3:15 - 3:30 PM	TOTAL		39	9	10		12	8	37					115	3				3	
	TRUCK		4						1											
3:30 - 3:45 PM	TOTAL		48	7	11		15	10	38					129	1	2	4		7	
	TRUCK		1				1	2	3											
3:45 - 4:00 PM	TOTAL		26	10	16		13	17	38					120		1	3		4	
	TRUCK		1		1			2	1											
4:00 - 4:15 PM	TOTAL		42	6	10		13	14	41					126		4			4	
	TRUCK		2		1				1											
4:15 - 4:30 PM	TOTAL		36	7	11		21	7	36					118		1	2		3	
	TRUCK		1						1											
4:30 - 4:45 PM	TOTAL		43	8	13		9	18	52					143	4				4	
	TRUCK							2	1											
4:45 - 5:00 PM	TOTAL		47	12	19		17	7	46					148	2	1			3	
	TRUCK			2	1				2											
5:00 - 5:15 PM	TOTAL		40	6	17		21	12	50					146	1		3		4	
	TRUCK		2				1	1	3											
5:15 - 5:30 PM	TOTAL		31	13	19		23	8	40					134			1		1	
	TRUCK		1	1					1											
5:30 - 5:45 PM	TOTAL		40	5	23		21	19	35					143		1	1		2	
	TRUCK		2						1											
5:45 - 6:00 PM	TOTAL		42	11	16		14	15	52					150	1				1	
	TRUCK		1						1											
6:00 - 6:15 PM	TOTAL		41	5	15		19	14	50					144						
	TRUCK		1		1															
6:15 - 6:30 PM	TOTAL		46	9	6		14	14	50					139	1	2			3	
	TRUCK		2																	
6:30 - 6:45 PM	TOTAL		33	2	10		9	9	43					106						
	TRUCK				1															
6:45 - 7:00 PM	TOTAL		40	7	9		13	10	45					124		1	1		2	
	TRUCK		1						1											

1:
2: Dale Ave SB - Thru
3: Dale Ave SB - Left
4: Pine Ave WB - Right
5:
6: Pine Ave WB - Left

7: Dale Ave NB - Right
8: Dale Ave NB - Thru
9:
10:
11:
12:

A: Cross Dale Ave North side of int
B: Cross Pine Ave East side of int
C: Cross Dale Ave South side of int
D:

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Dale Avenue & Pine A

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	1

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		
6:00 - 7:00 AM	TOTAL		102	22	17		23	37	91					292	3	5	1		9	0.689
	TRUCK		1%	0%	0%		0%	0%	0%											
6:15 - 7:15 AM	TOTAL		134	30	27		34	59	119					403	3	8	1		12	0.685
	TRUCK		1%	3%	0%		0%	5%	2%											
6:30 - 7:30 AM	TOTAL		170	39	42		50	64	139					504	3	8	1		12	0.778
	TRUCK		2%	8%	7%		12%	5%	2%											
6:45 - 7:45 AM	TOTAL		184	46	61		56	78	173					598	3	6	1		10	0.817
	TRUCK		3%	7%	8%		11%	4%	3%											
7:00 - 8:00 AM	TOTAL		194	51	72		62	82	190					651		4			4	0.889
	TRUCK		3%	8%	7%		10%	5%	4%											
7:15 - 8:15 AM	TOTAL		180	61	68		64	82	184					639		1			1	0.873
	TRUCK		4%	7%	7%		9%	1%	3%											
7:30 - 8:30 AM	TOTAL		169	61	61		53	88	169					601	4	3	1		8	0.821
	TRUCK		4%	3%	3%		0%	1%	2%											
7:45 - 8:45 AM	TOTAL		155	58	44		51	95	145					548	9	5	5		19	0.862
	TRUCK		6%	5%	2%		4%	2%	1%											
8:00 - 9:00 AM	TOTAL		146	55	39		54	104	118					516	9	9	12		30	0.956
	TRUCK		8%	5%	5%		6%	2%	0%											
8:15 - 9:15 AM	TOTAL		145	42	41		53	98	117					496	9	9	12		30	0.954
	TRUCK		7%	5%	5%		6%	2%	2%											
8:30 - 9:30 AM	TOTAL		130	39	37		52	88	114					460	6	8	11		25	0.885
	TRUCK		6%	5%	5%		6%	2%	2%											
8:45 - 9:45 AM	TOTAL		119	32	36		44	65	107					403	2	7	8		17	0.793
	TRUCK		3%	3%	6%		2%	2%	4%											
9:00 - 10:00 AM	TOTAL		116	24	37		37	44	100					358	2	4	1		7	0.778
	TRUCK		2%	0%	5%		0%	0%	5%											
3:00 - 4:00 PM	TOTAL		141	34	48		55	46	144					468	4	8	8		20	0.907
	TRUCK		6%	6%	4%		7%	9%	5%											
3:15 - 4:15 PM	TOTAL		155	32	47		53	49	154					490	4	7	7		18	0.95
	TRUCK		5%	0%	4%		2%	8%	4%											
3:30 - 4:30 PM	TOTAL		152	30	48		62	48	153					493	1	8	9		18	0.955
	TRUCK		3%	0%	4%		2%	8%	4%											
3:45 - 4:45 PM	TOTAL		147	31	50		56	56	167					507	4	6	5		15	0.886
	TRUCK		3%	0%	4%		0%	7%	2%											

4:00 - 5:00 PM	TOTAL		168	33	53		60	46	175					535	6	6	2		14	0.904
	TRUCK		2%	6%	4%		0%	4%	3%											
4:15 - 5:15 PM	TOTAL		166	33	60		68	44	184					555	7	2	5		14	0.938
	TRUCK		2%	6%	2%		1%	7%	4%											
4:30 - 5:30 PM	TOTAL		161	39	68		70	45	188					571	7	1	4		12	0.965
	TRUCK		2%	8%	1%		1%	7%	4%											
4:45 - 5:45 PM	TOTAL		158	36	78		82	46	171					571	3	2	5		10	0.965
	TRUCK		3%	8%	1%		1%	2%	4%											
5:00 - 6:00 PM	TOTAL		153	35	75		79	54	177					573	2	1	5		8	0.955
	TRUCK		4%	3%	0%		1%	2%	3%											
5:15 - 6:15 PM	TOTAL		154	34	73		77	56	177					571	1	1	2		4	0.952
	TRUCK		3%	3%	1%		0%	0%	2%											
5:30 - 6:30 PM	TOTAL		169	30	60		68	62	187					576	2	3	1		6	0.96
	TRUCK		4%	0%	2%		0%	0%	1%											
5:45 - 6:45 PM	TOTAL		162	27	47		56	52	195					539	2	2			4	0.898
	TRUCK		2%	0%	4%		0%	0%	1%											
6:00 - 7:00 PM	TOTAL		160	23	40		55	47	188					513	1	3	1		5	0.891
	TRUCK		3%	0%	5%		0%	0%	1%											

1:
2: Dale Ave SB - Thru
3: Dale Ave SB - Left
4: Pine Ave WB - Right
5:
6: Pine Ave WB - Left

7: Dale Ave NB - Right
8: Dale Ave NB - Thru
9:
10:
11:
12:

A: Cross Dale Ave North side of int
B: Cross Pine Ave East side of int
C: Cross Dale Ave South side of int
D:

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	2

3:15 - 3:30 PM	TOTAL	1		27	23	23			18	0				92			2		2	
	TRUCK			2		1			2											
3:30 - 3:45 PM	TOTAL	1		31	24	23			23	0				102						
	TRUCK				1	2			1											
3:45 - 4:00 PM	TOTAL	0		22	26	30			14	1				93						
	TRUCK				2				1	1										
4:00 - 4:15 PM	TOTAL	1		26	25	24			22	0				98						
	TRUCK			1	1	1			1											
4:15 - 4:30 PM	TOTAL	1		25	25	23			21	0				95		1			1	
	TRUCK					1			1											
4:30 - 4:45 PM	TOTAL	0		27	34	28			17	0				106						
	TRUCK				1	1			1											
4:45 - 5:00 PM	TOTAL	3		36	23	40			22	0				124			1		1	
	TRUCK	1				4			1											
5:00 - 5:15 PM	TOTAL	0		22	28	35			22	0				107		3			3	
	TRUCK					2			1											
5:15 - 5:30 PM	TOTAL	2		21	27	27			23	0				100	1				1	
	TRUCK			2																
5:30 - 5:45 PM	TOTAL	1		26	20	37			21	0				105						
	TRUCK			1		1			1											
5:45 - 6:00 PM	TOTAL	0		26	30	37			24	0				117						
	TRUCK				1				1											
6:00 - 6:15 PM	TOTAL	2		29	29	35			17	0				112						
	TRUCK			1		1			1											
6:15 - 6:30 PM	TOTAL	0		31	28	28			23	2				112						
	TRUCK			1					2											
6:30 - 6:45 PM	TOTAL	0		29	26	28			8	0				91						
	TRUCK					1														
6:45 - 7:00 PM	TOTAL	2		30	26	28			18	0				104						
	TRUCK			1	1															

1: Croton Dam Rd WB - Right
 2:
 3: Croton Dam Rd WB - Left
 4: Dale Ave NB - Right
 5: Dale Ave NB - Thru
 6:

7:
 8: Hawkes Ave SB - Thru
 9: Hawkes Ave SB - Left
 10:
 11:
 12:

A: Cross Croton Dam East side of Int
 B: Cross Dale Ave South side of Int
 C: Cross Hawkes Ave North side of Int
 D:

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & D

JOB NO:	15064
NAME:	Traffic Databank
INT #:	2

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		
6:00 - 7:00 AM	TOTAL	2		63	73	32			61					231	4				4	0.642
	TRUCK	50%		2%	0%	0%			0%											
6:15 - 7:15 AM	TOTAL	2		74	89	52			85	2				304	4	1			5	0.76
	TRUCK	50%		1%	0%	4%			1%	50%										
6:30 - 7:30 AM	TOTAL	5		97	113	67			107	4				393	9	1			10	0.744
	TRUCK	20%		2%	1%	7%			5%	25%										
6:45 - 7:45 AM	TOTAL	6		103	137	93			124	4				467	13	1			14	0.805
	TRUCK	17%		2%	3%	10%			6%	25%										
7:00 - 8:00 AM	TOTAL	6		106	147	109			130	4				502	10	1			11	0.866
	TRUCK	0%		2%	3%	8%			6%	25%										
7:15 - 8:15 AM	TOTAL	6		109	145	103			127	6				496	11	1			12	0.855
	TRUCK	0%		3%	5%	7%			7%	33%										
7:30 - 8:30 AM	TOTAL	4		104	119	103			122	5				457	6	1			7	0.788
	TRUCK	0%		3%	6%	5%			6%	60%										
7:45 - 8:45 AM	TOTAL	3		98	100	83			110	5				399	1	1			2	0.798
	TRUCK	0%		5%	5%	1%			8%	60%										
8:00 - 9:00 AM	TOTAL	2		94	89	64			102	6				357	1	1			2	0.949
	TRUCK	0%		6%	6%	2%			9%	50%										
8:15 - 9:15 AM	TOTAL	6		87	89	67			95	2				346						0.93
	TRUCK	0%		7%	4%	1%			7%	50%										
8:30 - 9:30 AM	TOTAL	5		88	86	62			79	2				322						0.925
	TRUCK	0%		7%	3%	0%			8%	0%										
8:45 - 9:45 AM	TOTAL	6		79	81	57			67	3				293						0.883
	TRUCK	0%		4%	6%	0%			4%	0%										
9:00 - 10:00 AM	TOTAL	5		80	65	63			55	2				270			1		1	0.813
	TRUCK	0%		3%	6%	3%			4%	0%										
3:00 - 4:00 PM	TOTAL	2		99	96	95			71	3				366			2		2	0.897
	TRUCK	0%		3%	3%	6%			8%	100%										
3:15 - 4:15 PM	TOTAL	3		106	98	100			77	1				385			2		2	0.944
	TRUCK	0%		3%	4%	4%			6%	100%										
3:30 - 4:30 PM	TOTAL	3		104	100	100			80	1				388		1			1	0.951
	TRUCK	0%		1%	4%	4%			5%	100%										
3:45 - 4:45 PM	TOTAL	2		100	110	105			74	1				392		1			1	0.925
	TRUCK	0%		1%	4%	3%			5%	100%										

4:00 - 5:00 PM	TOTAL	5		114	107	115			82					423		1	1		2	0.853
	TRUCK	20%		1%	2%	6%			5%											
4:15 - 5:15 PM	TOTAL	4		110	110	126			82					432		4	1		5	0.871
	TRUCK	25%		0%	1%	6%			5%											
4:30 - 5:30 PM	TOTAL	5		106	112	130			84					437	1	3	1		5	0.881
	TRUCK	20%		2%	1%	5%			4%											
4:45 - 5:45 PM	TOTAL	6		105	98	139			88					436	1	3	1		5	0.879
	TRUCK	17%		3%	0%	5%			3%											
5:00 - 6:00 PM	TOTAL	3		95	105	136			90					429	1	3			4	0.917
	TRUCK	0%		3%	1%	2%			3%											
5:15 - 6:15 PM	TOTAL	5		102	106	136			85					434	1				1	0.927
	TRUCK	0%		4%	1%	1%			4%											
5:30 - 6:30 PM	TOTAL	3		112	107	137			85	2				446						0.953
	TRUCK	0%		3%	1%	1%			6%	0%										
5:45 - 6:45 PM	TOTAL	2		115	113	128			72	2				432						0.923
	TRUCK	0%		2%	1%	2%			6%	0%										
6:00 - 7:00 PM	TOTAL	4		119	109	119			66	2				419						0.935
	TRUCK	0%		3%	1%	2%			5%	0%										

1: Croton Dam Rd WB - Right
 2:
 3: Croton Dam Rd WB - Left
 4: Dale Ave NB - Right
 5: Dale Ave NB - Thru
 6:

7:
 8: Hawkes Ave SB - Thru
 9: Hawkes Ave SB - Left
 10:
 11:
 12:

A: Cross Croton Dam East side of Int
 B: Cross Dale Ave South side of Int
 C: Cross Hawkes Ave North side of Int
 D:

3:15 - 3:30 PM	TOTAL	0	27	1	1	0	1	3	16	1	0	1	0	51						
	TRUCK		2																	
3:30 - 3:45 PM	TOTAL	0	30	0	0	0	1	0	20	0	1	1	0	53						
	TRUCK								1											
3:45 - 4:00 PM	TOTAL	0	23	0	3	0	2	1	31	0	0	0	0	60						
	TRUCK				1				3											
4:00 - 4:15 PM	TOTAL	0	19	1	1	0	3	2	25	0	0	0	0	51						
	TRUCK						1		1											
4:15 - 4:30 PM	TOTAL	0	23	1	1	0	4	2	20	0	0	0	0	51						
	TRUCK																			
4:30 - 4:45 PM	TOTAL	0	24	0	1	0	4	2	30	1	0	0	0	62						
	TRUCK								1											
4:45 - 5:00 PM	TOTAL	1	36	4	0	1	2	3	22	1	1	1	0	72						
	TRUCK		1																	
5:00 - 5:15 PM	TOTAL	1	19	1	2	0	3	2	25	1	1	1	0	56						
	TRUCK							1												
5:15 - 5:30 PM	TOTAL	0	21	1	0	0	3	4	23	1	0	1	0	54						
	TRUCK		2																	
5:30 - 5:45 PM	TOTAL	0	26	3	1	1	2	1	20	0	0	0	0	54						
	TRUCK		1																	
5:45 - 6:00 PM	TOTAL	0	23	1	1	0	3	5	21	1	0	1	0	56						
	TRUCK								1											
6:00 - 6:15 PM	TOTAL	1	28	3	0	1	1	0	28	1	0	0	0	63						
	TRUCK		1																	
6:15 - 6:30 PM	TOTAL	0	29	0	0	1	2	2	22	1	0	0	0	57						
	TRUCK		1																	
6:30 - 6:45 PM	TOTAL	2	26	2	0	1	1	1	26	2	3	0	0	64						
	TRUCK																			
6:45 - 7:00 PM	TOTAL	0	29	2	0	0	2	5	19	1	0	0	1	59						
	TRUCK		1						1											

1: Croton Dam SB - Right
 2: Croton Dam SB - Thru
 3: Croton Damn SB - Left
 4: Pershing WB - Right
 5: Pershing WB -Thru
 6: Pershing WB - Left

7: Croton Dam NB - Right
 8: Croton Dam NB - Thru
 9: Croton Dam NB - Left
 10: Cherry Hill EB - Right
 11: Cherry Hill EB - Thru
 12: Cherry Hill EB - Left

A: Cross Croton North side of Int
 B: Cross Pershing East side of Int
 C: Cross Croton South side of Int
 D: Cross Cherry Hill West side of Int

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & P

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

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		
6:00 - 7:00 AM	TOTAL		59		3		3	2	73		1		2	143						0.73
	TRUCK		2%		0%		0%	0%	0%		0%		0%							
6:15 - 7:15 AM	TOTAL		71	1	2	1	2	7	87		1	3	1	176						0.863
	TRUCK		1%	100%	0%	100%	0%	14%	0%		0%	0%	0%							
6:30 - 7:30 AM	TOTAL		81	3		1	3	9	104	1	1	3	1	207				4	4	0.821
	TRUCK		1%	100%		100%	0%	22%	0%	0%	0%	0%	0%							
6:45 - 7:45 AM	TOTAL		85	3	2	1	5	11	131	2		4	1	245				4	4	0.747
	TRUCK		2%	100%	0%	100%	0%	18%	2%	0%		0%	0%							
7:00 - 8:00 AM	TOTAL		85	4	4	1	6	13	133	2	1	5		254				4	4	0.774
	TRUCK		1%	75%	0%	100%	0%	15%	2%	0%	0%	0%								
7:15 - 8:15 AM	TOTAL		89	4	7		8	10	136	5	1	3		263				4	4	0.802
	TRUCK		2%	50%	0%		0%	10%	5%	0%	0%	0%								
7:30 - 8:30 AM	TOTAL	1	94	3	9		9	9	118	4	1	3		251						0.765
	TRUCK	0%	3%	0%	0%		0%	0%	8%	0%	0%	0%								
7:45 - 8:45 AM	TOTAL	1	90	3	9		7	8	96	3	2	3	1	223						0.929
	TRUCK	0%	6%	0%	11%		0%	0%	8%	0%	0%	0%	0%							
8:00 - 9:00 AM	TOTAL	2	88	2	8		6	9	90	3	1	2	2	213		1			1	0.888
	TRUCK	0%	6%	0%	13%		17%	0%	10%	0%	0%	0%	0%							
8:15 - 9:15 AM	TOTAL	2	83	2	6		5	7	87		1	1	2	196		1			1	0.907
	TRUCK	0%	6%	0%	17%		20%	0%	7%		0%	0%	0%							
8:30 - 9:30 AM	TOTAL	1	83	2	6	1	3	7	81		1	1	2	188		1			1	0.87
	TRUCK	0%	5%	50%	17%	0%	33%	0%	6%		0%	0%	0%							
8:45 - 9:45 AM	TOTAL	1	73	3	5	1	4	8	77			1	1	174		1			1	0.906
	TRUCK	0%	1%	33%	0%	0%	25%	13%	9%			0%	0%			1			1	
9:00 - 10:00 AM	TOTAL		78	4	7	1	3	5	63			1	1	163						0.948
	TRUCK		1%	25%	0%	0%	0%	20%	10%			0%	0%							
3:00 - 4:00 PM	TOTAL		99	3	5	1	5	7	86	2	1	2	1	212						0.883
	TRUCK		3%	0%	20%	0%	0%	14%	6%	0%	0%	0%	0%							
3:15 - 4:15 PM	TOTAL		99	2	5		7	6	92	1	1	2		215						0.896
	TRUCK		2%	0%	20%		14%	0%	5%	0%	0%	0%								
3:30 - 4:30 PM	TOTAL		95	2	5		10	5	96		1	1		215						0.896
	TRUCK		0%	0%	20%		10%	0%	5%		0%	0%								
3:45 - 4:45 PM	TOTAL		89	2	6		13	7	106	1				224						0.903
	TRUCK		0%	0%	17%		8%	0%	5%	0%										

4:00 - 5:00 PM	TOTAL	1	102	6	3	1	13	9	97	2	1	1		236					
	TRUCK	0%	1%	0%	0%	0%	8%	0%	2%	0%	0%	0%							0.819
4:15 - 5:15 PM	TOTAL	2	102	6	4	1	13	9	97	3	2	2		241					
	TRUCK	0%	1%	0%	0%	0%	0%	11%	1%	0%	0%	0%							0.837
4:30 - 5:30 PM	TOTAL	2	100	6	3	1	12	11	100	4	2	3		244					
	TRUCK	0%	3%	0%	0%	0%	0%	9%	1%	0%	0%	0%							0.847
4:45 - 5:45 PM	TOTAL	2	102	9	3	2	10	10	90	3	2	3		236					
	TRUCK	0%	4%	0%	0%	0%	0%	10%	0%	0%	0%	0%							0.819
5:00 - 6:00 PM	TOTAL	1	89	6	4	1	11	12	89	3	1	3		220					
	TRUCK	0%	3%	0%	0%	0%	0%	8%	1%	0%	0%	0%							0.982
5:15 - 6:15 PM	TOTAL	1	98	8	2	2	9	10	92	3		2		227					
	TRUCK	0%	4%	0%	0%	0%	0%	0%	1%	0%		0%							0.901
5:30 - 6:30 PM	TOTAL	1	106	7	2	3	8	8	91	3		1		230					
	TRUCK	0%	3%	0%	0%	0%	0%	0%	1%	0%		0%							0.913
5:45 - 6:45 PM	TOTAL	3	106	6	1	3	7	8	97	5	3	1		240					
	TRUCK	0%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%							0.938
6:00 - 7:00 PM	TOTAL	3	112	7		3	6	8	95	5	3		1	243					
	TRUCK	0%	3%	0%		0%	0%	0%	1%	0%	0%		0%						0.949

1: Croton Dam SB - Right
 2: Croton Dam SB - Thru
 3: Croton Damn SB - Left
 4: Pershing WB - Right
 5: Pershing WB -Thru
 6: Pershing WB - Left

7: Croton Dam NB - Right
 8: Croton Dam NB - Thru
 9: Croton Dam NB - Left
 10: Cherry Hill EB - Right
 11: Cherry Hill EB - Thru
 12: Cherry Hill EB - Left

A: Cross Croton North side of Int
 B: Cross Pershing East side of Int
 C: Cross Croton South side of Int
 D: Cross Cherry Hill West side of Int

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

[illegible]

3:15 - 3:30 PM	TOTAL	29	0		0	0		0	21					50						
	TRUCK								2											
3:30 - 3:45 PM	TOTAL	29	0		0	0		0	29					58						
	TRUCK								3											
3:45 - 4:00 PM	TOTAL	24	0		0	0		0	25					49						
	TRUCK																			
4:00 - 4:15 PM	TOTAL	23	0		0	0		0	27					50						
	TRUCK																			
4:15 - 4:30 PM	TOTAL	24	0		0	0		0	23					47						
	TRUCK								1											
4:30 - 4:45 PM	TOTAL	39	0		0	0		0	24					63						
	TRUCK	1																		
4:45 - 5:00 PM	TOTAL	26	0		0	0		0	26					52						
	TRUCK																			
5:00 - 5:15 PM	TOTAL	19	0		0	0		0	26					45						
	TRUCK	2																		
5:15 - 5:30 PM	TOTAL	29	0		0	0		0	19					48						
	TRUCK	1																		
5:30 - 5:45 PM	TOTAL	23	0		0	0		0	23					46						
	TRUCK																			
5:45 - 6:00 PM	TOTAL	32	0		0	0		0	28					60						
	TRUCK	1							1											
6:00 - 6:15 PM	TOTAL	28	0		0	0		0	20					48						
	TRUCK	1																		
6:15 - 6:30 PM	TOTAL	29	0		0	0		0	28					57						
	TRUCK																			
6:30 - 6:45 PM	TOTAL	29	0		0	0		0	24					53						
	TRUCK	1							1											
6:45 - 7:00 PM	TOTAL	28	0		0	0		0	18					46						
	TRUCK																			

1: Croton Dam SB -Thru
 2: Croton Dam SB - Left
 3:
 4: Grandview WB - Right
 5: Grandview WB - Left
 6:

7: Croton Dam NB - Right
 8: Croton Dam NB - Thru
 9:
 10:
 11:
 12:

A: Cross Croton North side of Int
 B: Cross Grandview East side of Int
 C: Cross Croton South side of Int
 D:

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	4

[illegible]

4:00 - 5:00 PM	TOTAL	112							100						212						
	TRUCK	1%							1%												0.841
4:15 - 5:15 PM	TOTAL	108							99						207						
	TRUCK	3%							1%												0.821
4:30 - 5:30 PM	TOTAL	113							95						208						
	TRUCK	4%							0%												0.825
4:45 - 5:45 PM	TOTAL	97							94						191						
	TRUCK	3%							0%												0.918
5:00 - 6:00 PM	TOTAL	103							96						199						
	TRUCK	4%							1%												0.829
5:15 - 6:15 PM	TOTAL	112							90						202						
	TRUCK	3%							1%												0.842
5:30 - 6:30 PM	TOTAL	112							99						211						
	TRUCK	2%							1%												0.879
5:45 - 6:45 PM	TOTAL	118							100						218						
	TRUCK	3%							2%												0.908
6:00 - 7:00 PM	TOTAL	114							90						204						
	TRUCK	2%							1%												0.895

1: Croton Dam SB -Thru
 2: Croton Dam SB - Left
 3:
 4: Grandview WB - Right
 5: Grandview WB - Left
 6:

7: Croton Dam NB - Right
 8: Croton Dam NB - Thru
 9:
 10:
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A: Cross Croton North side of Int
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ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	5

3:15 - 3:30 PM	TOTAL	28	1		0	1		0	18					48						
	TRUCK	1				1														
3:30 - 3:45 PM	TOTAL	31	0		1	0		0	19					51						
	TRUCK								1											
3:45 - 4:00 PM	TOTAL	28	2		0	0		2	28					60						
	TRUCK							1	3											
4:00 - 4:15 PM	TOTAL	21	0		0	0		2	22					45						
	TRUCK								1											
4:15 - 4:30 PM	TOTAL	20	0		0	0		1	20					41						
	TRUCK																			
4:30 - 4:45 PM	TOTAL	28	1		0	0		1	27					57						
	TRUCK	1							1											
4:45 - 5:00 PM	TOTAL	36	1		1	2		0	24					64						
	TRUCK					1														
5:00 - 5:15 PM	TOTAL	21	1		0	0		1	25					48						
	TRUCK																			
5:15 - 5:30 PM	TOTAL	22	0		0	2		0	22					46						
	TRUCK	2																		
5:30 - 5:45 PM	TOTAL	26	2		0	0		2	19					49						
	TRUCK	1																		
5:45 - 6:00 PM	TOTAL	22	0		2	2		0	20					46						
	TRUCK								1											
6:00 - 6:15 PM	TOTAL	32	0		0	1		3	26					62						
	TRUCK	1																		
6:15 - 6:30 PM	TOTAL	27	1		2	2		0	23					55						
	TRUCK																			
6:30 - 6:45 PM	TOTAL	30	2		1	0		1	25					59						
	TRUCK																			
6:45 - 7:00 PM	TOTAL	31	1		0	0		1	20					53						
	TRUCK	1							1											

1: Croton Dam SB - Thru
 2: Croton Dam SB - Left
 3:
 4: Grandview WB - Right
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7: Croton Dam NB - Right
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A: Cross Croton Dam North side of Int
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DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & G

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	5

[illegible]

4:00 - 5:00 PM	TOTAL	105	2		1	2		4	93					207						
	TRUCK	1%	0%		0%	50%		0%	2%											0.809
4:15 - 5:15 PM	TOTAL	105	3		1	2		3	96					210						
	TRUCK	1%	0%		0%	50%		0%	1%											0.82
4:30 - 5:30 PM	TOTAL	107	3		1	4		2	98					215						
	TRUCK	3%	0%		0%	25%		0%	1%											0.84
4:45 - 5:45 PM	TOTAL	105	4		1	4		3	90					207						
	TRUCK	3%	0%		0%	25%		0%	0%											0.809
5:00 - 6:00 PM	TOTAL	91	3		2	4		3	86					189						
	TRUCK	3%	0%		0%	0%		0%	1%											0.964
5:15 - 6:15 PM	TOTAL	102	2		2	5		5	87					203						
	TRUCK	4%	0%		0%	0%		0%	1%											0.819
5:30 - 6:30 PM	TOTAL	107	3		4	5		5	88					212						
	TRUCK	2%	0%		0%	0%		0%	1%											0.855
5:45 - 6:45 PM	TOTAL	111	3		5	5		4	94					222						
	TRUCK	1%	0%		0%	0%		0%	1%											0.895
6:00 - 7:00 PM	TOTAL	120	4		3	3		5	94					229						
	TRUCK	2%	0%		0%	0%		0%	1%											0.923

1: Croton Dam SB - Thru
 2: Croton Dam SB - Left
 3:
 4: Grandview WB - Right
 5: Grandview WB - Left
 6:

7: Croton Dam NB - Right
 8: Croton Dam NB - Thru
 9:
 10:
 11:
 12:

A: Cross Croton Dam North side of Int
 B: Cross Grandview East side of Int
 C: Cross Croton Dam South side of Int
 D:

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

3:15 - 3:30 PM	TOTAL	25	21		20	0		0	18					84					
	TRUCK	1	1		1														
3:30 - 3:45 PM	TOTAL	29	18		21	0		0	19					87					
	TRUCK	1	1		2				1										
3:45 - 4:00 PM	TOTAL	29	20		19	1		0	32					101					
	TRUCK	1	1			1			3										
4:00 - 4:15 PM	TOTAL	21	21		27	0		0	22					91					
	TRUCK				2				1										
4:15 - 4:30 PM	TOTAL	21	20		20	0		1	19					81					
	TRUCK		1																
4:30 - 4:45 PM	TOTAL	29	16		32	1		2	25					105					
	TRUCK	1			1				1										
4:45 - 5:00 PM	TOTAL	36	20		28	0		1	23					108					
	TRUCK																		
5:00 - 5:15 PM	TOTAL	22	22		16	1		0	26					87		1		1	
	TRUCK																		
5:15 - 5:30 PM	TOTAL	21	19		22	1		0	22					85					
	TRUCK	2																	
5:30 - 5:45 PM	TOTAL	28	18		25	0		1	18					90					
	TRUCK	1	1																
5:45 - 6:00 PM	TOTAL	22	14		21	0		0	21					78					
	TRUCK								1										
6:00 - 6:15 PM	TOTAL	34	18		28	0		0	26					106					
	TRUCK	1																	
6:15 - 6:30 PM	TOTAL	31	24		19	0		3	21					98					
	TRUCK		1																
6:30 - 6:45 PM	TOTAL	28	19		19	1		0	27					94					
	TRUCK																		
6:45 - 7:00 PM	TOTAL	34	19		13	0		0	20					86					
	TRUCK	1							1										

1: Croton Dam SB - Thru
 2: Croton Dam SB - Left
 3:
 4: Narragansett WB- Right
 5: Narragansett WB- Left
 6:

7: Croton Dam NB- Right
 8: Croton Dam NB- Thru
 9:
 10:
 11:
 12:

A: Cross Croton North side of Int
 B: Cross Narragansett West side of Int
 C: Cross Croton South side of Int
 D:

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	6

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		
6:00 - 7:00 AM	TOTAL	56	29		29	1		3	74					192						0.716
	TRUCK	5%	0%		0%	0%		0%	0%											
6:15 - 7:15 AM	TOTAL	64	43		35	1		3	88					234		1			1	0.824
	TRUCK	3%	9%		0%	0%		0%	0%											
6:30 - 7:30 AM	TOTAL	84	63		39	1		2	102					291		1			1	0.72
	TRUCK	6%	11%		0%	0%		0%	0%											
6:45 - 7:45 AM	TOTAL	85	88		43	1		1	131					349		1			1	0.793
	TRUCK	6%	9%		0%	0%		0%	1%											
7:00 - 8:00 AM	TOTAL	84	120		49	1			134					388		1			1	0.882
	TRUCK	5%	14%		0%	0%			1%											
7:15 - 8:15 AM	TOTAL	88	129		49	1		2	138					407		3			3	0.925
	TRUCK	7%	12%		0%	0%		100%	3%											
7:30 - 8:30 AM	TOTAL	87	115		50	2		4	121					379		3			3	0.861
	TRUCK	5%	10%		0%	0%		50%	6%											
7:45 - 8:45 AM	TOTAL	93	102		57	2		4	102					360		3			3	0.849
	TRUCK	6%	11%		0%	0%		50%	9%											
8:00 - 9:00 AM	TOTAL	91	80		58	2		5	98					334		3			3	0.918
	TRUCK	7%	4%		2%	0%		40%	10%											
8:15 - 9:15 AM	TOTAL	92	68		56	2		3	93					314						0.863
	TRUCK	7%	1%		2%	0%		0%	8%											
8:30 - 9:30 AM	TOTAL	87	67		56	1		1	89					301						0.827
	TRUCK	7%	3%		2%	0%		0%	6%											
8:45 - 9:45 AM	TOTAL	75	60		51	1		2	81					270						0.844
	TRUCK	4%	3%		4%	0%		0%	5%											
9:00 - 10:00 AM	TOTAL	79	52		51	2		1	72					257						0.918
	TRUCK	4%	2%		2%	0%		0%	4%											
3:00 - 4:00 PM	TOTAL	101	74		79	1		1	87					343						0.849
	TRUCK	4%	8%		4%	100%		0%	6%											
3:15 - 4:15 PM	TOTAL	104	80		87	1			91					363						0.899
	TRUCK	3%	4%		6%	100%			5%											
3:30 - 4:30 PM	TOTAL	100	79		87	1		1	92					360						0.891
	TRUCK	2%	4%		5%	100%		0%	5%											
3:45 - 4:45 PM	TOTAL	100	77		98	2		3	98					378						0.9
	TRUCK	2%	3%		3%	50%		0%	5%											

4:00 - 5:00 PM	TOTAL	107	77		107	1		4	89					385						
	TRUCK	1%	1%		3%	0%		0%	2%											0.891
4:15 - 5:15 PM	TOTAL	108	78		96	2		4	93					381		1			1	
	TRUCK	1%	1%		1%	0%		0%	1%											0.882
4:30 - 5:30 PM	TOTAL	108	77		98	3		3	96					385		1			1	
	TRUCK	3%	0%		1%	0%		0%	1%											0.891
4:45 - 5:45 PM	TOTAL	107	79		91	2		2	89					370		1			1	
	TRUCK	3%	1%		0%	0%		0%	0%											0.856
5:00 - 6:00 PM	TOTAL	93	73		84	2		1	87					340		1			1	
	TRUCK	3%	1%		0%	0%		0%	1%											0.944
5:15 - 6:15 PM	TOTAL	105	69		96	1		1	87					359						
	TRUCK	4%	1%		0%	0%		0%	1%											0.847
5:30 - 6:30 PM	TOTAL	115	74		93			4	86					372						
	TRUCK	2%	3%		0%			0%	1%											0.877
5:45 - 6:45 PM	TOTAL	115	75		87	1		3	95					376						
	TRUCK	1%	1%		0%	0%		0%	1%											0.887
6:00 - 7:00 PM	TOTAL	127	80		79	1		3	94					384						
	TRUCK	2%	1%		0%	0%		0%	1%											0.906

1: Croton Dam SB - Thru
 2: Croton Dam SB - Left
 3:
 4: Narragansett WB- Right
 5: Narragansett WB- Left
 6:

7: Croton Dam NB- Right
 8: Croton Dam NB- Thru
 9:
 10:
 11:
 12:

A: Cross Croton North side of Int
 B: Cross Narragansett West side of Int
 C: Cross Croton South side of Int
 D:

JOB NO:	15064
NAME:	Traffic Databank
INT #:	7

3:15 - 3:30 PM	TOTAL	1	48	4	2	0	1	0	37	0	0	0	0	93						
	TRUCK		2						2											
3:30 - 3:45 PM	TOTAL	1	44	0	1	0	0	0	37	0	4	0	0	87						
	TRUCK				1				2											
3:45 - 4:00 PM	TOTAL	0	55	1	0	1	1	2	48	3	1	1	0	113	1					1
	TRUCK		2				1		4											
4:00 - 4:15 PM	TOTAL	0	35	2	0	0	0	0	48	1	0	0	1	87	1					1
	TRUCK		1						2											
4:15 - 4:30 PM	TOTAL	2	47	3	3	0	1	0	37	1	0	0	0	94						
	TRUCK																			
4:30 - 4:45 PM	TOTAL	0	44	1	3	1	0	1	61	0	2	0	2	115						
	TRUCK			1		1			2		1									
4:45 - 5:00 PM	TOTAL	1	58	2	0	0	1	1	45	0	0	1	3	112						
	TRUCK																			
5:00 - 5:15 PM	TOTAL	3	38	2	3	0	0	1	39	0	0	0	0	86						
	TRUCK			1	1															
5:15 - 5:30 PM	TOTAL	2	37	5	3	0	1	0	45	1	1	0	1	96						
	TRUCK		3																	
5:30 - 5:45 PM	TOTAL	2	45	2	2	0	1	0	40	0	1	0	0	93						
	TRUCK		1																	
5:45 - 6:00 PM	TOTAL	2	36	3	2	0	0	0	44	0	3	0	0	90						
	TRUCK								1											
6:00 - 6:15 PM	TOTAL	0	54	2	1	0	0	1	46	5	0	0	0	109	2					2
	TRUCK		1																	
6:15 - 6:30 PM	TOTAL	3	48	1	3	0	1	2	42	0	0	0	0	100						
	TRUCK		1																	
6:30 - 6:45 PM	TOTAL	0	51	5	3	1	1	1	40	5	0	0	0	107	1					1
	TRUCK																			
6:45 - 7:00 PM	TOTAL	3	46	4	2	0	2	0	31	0	2	0	0	90						
	TRUCK		1						1											

1: Croton Dam SB - Right
 2: Croton Dam SB - Thru
 3: Croton Dam SB - Left
 4: Feeney WB - Right
 5: Feeney WB - Thru
 6: Feeney WB - Left

7: Croton Dam NB - Right
 8: Croton Dam NB - Thru
 9: Croton Dam NB - Left
 10: Pheasant Ridge - Right
 11: Pheasant Ridge - Thru
 12: Pheasant Ridge - Left

A: Cross Croton North side of Int
 B: Cross Feeney East side of Int
 C: Cross Croton South side of Int
 D: Cross Pheasant West side of Int

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & P

JOB NO:	15064
NAME:	Traffic Databank
INT #:	7

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		
6:00 - 7:00 AM	TOTAL		82	1	7		4		105		2		3	204		1			1	0.718
	TRUCK		5%	0%	0%		0%		1%		0%		0%							
6:15 - 7:15 AM	TOTAL	1	106	1	9		3		126		1		3	250		1			1	0.762
	TRUCK	0%	6%	100%	0%		0%		1%		0%		0%							
6:30 - 7:30 AM	TOTAL	1	140	1	12		5	1	143		2		5	310		1			1	0.76
	TRUCK	0%	6%	100%	0%		40%	0%	1%		0%		0%							
6:45 - 7:45 AM	TOTAL	1	172	1	11		5	1	175		1		5	372		1			1	0.795
	TRUCK	0%	5%	100%	0%		40%	0%	2%		0%		0%							
7:00 - 8:00 AM	TOTAL	3	196	3	11		6	2	186		3		9	419						0.888
	TRUCK	0%	6%	67%	0%		33%	0%	2%		0%		0%							
7:15 - 8:15 AM	TOTAL	3	202	3	9		8	4	180		5	1	9	424		3			3	0.898
	TRUCK	0%	5%	33%	11%		50%	0%	3%		0%	0%	0%							
7:30 - 8:30 AM	TOTAL	3	196	5	6	1	5	4	170		6	1	8	405		3			3	0.858
	TRUCK	0%	5%	40%	17%	0%	40%	25%	5%		0%	0%	0%							
7:45 - 8:45 AM	TOTAL	4	179	7	8	1	4	4	157	1	8	1	7	381		3			3	0.807
	TRUCK	0%	7%	29%	13%	0%	50%	25%	5%	0%	0%	0%	0%							
8:00 - 9:00 AM	TOTAL	2	160	5	7	1	3	3	149	2	8	1	4	345		3			3	0.927
	TRUCK	0%	5%	20%	14%	0%	67%	33%	7%	0%	0%	0%	0%							
8:15 - 9:15 AM	TOTAL	1	153	5	9	1		1	149	2	6		4	331						0.89
	TRUCK	0%	6%	20%	0%	0%		100%	5%	0%	0%		0%							
8:30 - 9:30 AM	TOTAL	2	143	5	9				140	2	6		4	311						0.836
	TRUCK	0%	7%	0%	0%				4%	0%	0%		0%							
8:45 - 9:45 AM	TOTAL	1	130	4	11		1	1	127	1	4		6	286						0.872
	TRUCK	0%	5%	0%	0%		0%	0%	5%	0%	0%		0%							
9:00 - 10:00 AM	TOTAL	2	132	4	10		2	1	118	3	2		7	281						0.912
	TRUCK	0%	4%	0%	0%		0%	0%	3%	0%	0%		0%							
3:00 - 4:00 PM	TOTAL	4	179	9	3	1	2	3	160	4	7	1	2	375	1				1	0.83
	TRUCK	0%	4%	0%	33%	0%	50%	33%	5%	0%	0%	0%	0%							
3:15 - 4:15 PM	TOTAL	2	182	7	3	1	2	2	170	4	5	1	1	380	2				2	0.841
	TRUCK	0%	3%	0%	33%	0%	50%	0%	6%	0%	0%	0%	0%							
3:30 - 4:30 PM	TOTAL	3	181	6	4	1	2	2	170	5	5	1	1	381	2				2	0.843
	TRUCK	0%	2%	0%	25%	0%	50%	0%	5%	0%	0%	0%	0%							
3:45 - 4:45 PM	TOTAL	2	181	7	6	2	2	3	194	5	3	1	3	409	2				2	0.889
	TRUCK	0%	2%	14%	0%	50%	50%	0%	4%	0%	33%	0%	0%							

4:00 - 5:00 PM	TOTAL	3	184	8	6	1	2	2	191	2	2	1	6	408	1				1	0.887
	TRUCK	0%	1%	13%	0%	100%	0%	0%	2%	0%	50%	0%	0%							
4:15 - 5:15 PM	TOTAL	6	187	8	9	1	2	3	182	1	2	1	5	407						0.885
	TRUCK	0%	0%	25%	11%	100%	0%	0%	1%	0%	50%	0%	0%							
4:30 - 5:30 PM	TOTAL	6	177	10	9	1	2	3	190	1	3	1	6	409						0.889
	TRUCK	0%	2%	20%	11%	100%	0%	0%	1%	0%	33%	0%	0%							
4:45 - 5:45 PM	TOTAL	8	178	11	8		3	2	169	1	2	1	4	387						0.864
	TRUCK	0%	2%	9%	13%		0%	0%	0%	0%	0%	0%	0%							
5:00 - 6:00 PM	TOTAL	9	156	12	10		2	1	168	1	5		1	365						0.951
	TRUCK	0%	3%	8%	10%		0%	0%	1%	0%	0%		0%							
5:15 - 6:15 PM	TOTAL	6	172	12	8		2	1	175	6	5		1	388	2				2	0.89
	TRUCK	0%	3%	0%	0%		0%	0%	1%	0%	0%		0%							
5:30 - 6:30 PM	TOTAL	7	183	8	8		2	3	172	5	4			392	2				2	0.899
	TRUCK	0%	2%	0%	0%		0%	0%	1%	0%	0%									
5:45 - 6:45 PM	TOTAL	5	189	11	9	1	2	4	172	10	3			406	3				3	0.931
	TRUCK	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%									
6:00 - 7:00 PM	TOTAL	6	199	12	9	1	4	4	159	10	2			406	3				3	0.931
	TRUCK	0%	2%	0%	0%	0%	0%	0%	1%	0%	0%									

1: Croton Dam SB - Right
 2: Croton Dam SB - Thru
 3: Croton Dam SB - Left
 4: Feeney WB - Right
 5: Feeney WB - Thru
 6: Feeney WB - Left

7: Croton Dam NB - Right
 8: Croton Dam NB - Thru
 9: Croton Dam NB - Left
 10: Pheasant Ridge - Right
 11: Pheasant Ridge - Thru
 12: Pheasant Ridge - Left

A: Cross Croton North side of Int
 B: Cross Feeney East side of Int
 C: Cross Croton South side of Int
 D: Cross Pheasant West side of Int

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	8

3:15 - 3:30 PM	TOTAL	17	45		35	5		7	13					122					
	TRUCK	4	1		1	1		1											
3:30 - 3:45 PM	TOTAL	15	42		29	9		2	13					110					
	TRUCK	2	1		3	1													
3:45 - 4:00 PM	TOTAL	15	50		36	8		5	12					126					
	TRUCK	1			3			2	3										
4:00 - 4:15 PM	TOTAL	15	32		41	12		6	10					116					
	TRUCK				3			1	2										
4:15 - 4:30 PM	TOTAL	22	44		33	8		7	11					125					
	TRUCK	1																	
4:30 - 4:45 PM	TOTAL	25	41		50	13		5	6					140					
	TRUCK				2			1											
4:45 - 5:00 PM	TOTAL	15	53		38	9		7	11					133					
	TRUCK							2											
5:00 - 5:15 PM	TOTAL	18	42		38	3		1	9					111					
	TRUCK	1	1		1														
5:15 - 5:30 PM	TOTAL	10	38		42	10		6	11					117					
	TRUCK	1	2					1											
5:30 - 5:45 PM	TOTAL	14	47		35	9		2	8					115					
	TRUCK	1	1																
5:45 - 6:00 PM	TOTAL	19	41		40	7		1	7					115					
	TRUCK				1														
6:00 - 6:15 PM	TOTAL	19	52		36	11		5	13					136					
	TRUCK	1	1																
6:15 - 6:30 PM	TOTAL	20	47		35	7		4	13					126					
	TRUCK	2	1																
6:30 - 6:45 PM	TOTAL	11	57		41	3		1	10					123					
	TRUCK																		
6:45 - 7:00 PM	TOTAL	17	50		31	4		2	9					113					
	TRUCK		1		1														

1: Croton Dam SB - Right
 2: Croton Dam SB - Thru
 3:
 4: Croton Dam NB- Thru
 5: Croton Dam NB, Left
 6:

7: Kitchawan State EB- Right
 8: Kitchawan State EB- Left
 9:
 10:
 11:
 12:

A: Cross Croton North side of Int
 B: Cross Croton South side of Int
 C: Cross Kitchawan West side of Int
 D:

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & K

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	8

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		
6:00 - 7:00 AM	TOTAL	36	76		103	9		8	62					294						0.721
	TRUCK	0%	3%		1%	0%		25%	0%											
6:15 - 7:15 AM	TOTAL	51	92		124	13		16	77					373						0.777
	TRUCK	2%	3%		1%	0%		25%	0%											
6:30 - 7:30 AM	TOTAL	60	119		143	16		22	85					445						0.83
	TRUCK	2%	4%		1%	0%		18%	1%											
6:45 - 7:45 AM	TOTAL	57	147		172	16		28	76					496						0.886
	TRUCK	7%	3%		2%	0%		14%	3%											
7:00 - 8:00 AM	TOTAL	56	158		190	16		44	74					538						0.934
	TRUCK	11%	6%		2%	0%		7%	4%											
7:15 - 8:15 AM	TOTAL	51	165		183	15		43	61					518						0.899
	TRUCK	12%	5%		4%	0%		5%	5%											
7:30 - 8:30 AM	TOTAL	51	165		167	15		38	56					492						0.854
	TRUCK	18%	5%		5%	0%		5%	4%											
7:45 - 8:45 AM	TOTAL	52	148		153	17		40	63					473						0.821
	TRUCK	17%	7%		6%	0%		5%	5%											
8:00 - 9:00 AM	TOTAL	51	144		145	17		23	57					437						0.903
	TRUCK	14%	4%		7%	6%		9%	4%											
8:15 - 9:15 AM	TOTAL	47	142		144	18		19	61					431						0.89
	TRUCK	13%	6%		5%	6%		5%	3%											
8:30 - 9:30 AM	TOTAL	36	133		139	16		18	65					407						0.841
	TRUCK	8%	6%		4%	6%		6%	6%											
8:45 - 9:45 AM	TOTAL	35	125		133	15		12	55					375						0.868
	TRUCK	6%	4%		5%	7%		8%	4%											
9:00 - 10:00 AM	TOTAL	35	127		119	16		11	58					366						0.924
	TRUCK	6%	4%		4%	0%		0%	5%											
3:00 - 4:00 PM	TOTAL	63	173		137	26		15	55					469						0.931
	TRUCK	13%	5%		5%	8%		27%	9%											
3:15 - 4:15 PM	TOTAL	62	169		141	34		20	48					474						0.94
	TRUCK	11%	1%		7%	6%		20%	10%											
3:30 - 4:30 PM	TOTAL	67	168		139	37		20	46					477						0.946
	TRUCK	6%	1%		6%	3%		15%	11%											
3:45 - 4:45 PM	TOTAL	77	167		160	41		23	39					507						0.905
	TRUCK	3%	0%		5%	0%		17%	13%											

4:00 - 5:00 PM	TOTAL	77	170		162	42		25	38					514						
	TRUCK	1%	0%		3%	0%		16%	5%											0.918
4:15 - 5:15 PM	TOTAL	80	180		159	33		20	37					509						
	TRUCK	3%	1%		2%	0%		15%	0%											0.909
4:30 - 5:30 PM	TOTAL	68	174		168	35		19	37					501						
	TRUCK	3%	2%		2%	0%		21%	0%											0.895
4:45 - 5:45 PM	TOTAL	57	180		153	31		16	39					476						
	TRUCK	5%	2%		1%	0%		19%	0%											0.895
5:00 - 6:00 PM	TOTAL	61	168		155	29		10	35					458						
	TRUCK	5%	2%		1%	0%		10%	0%											0.979
5:15 - 6:15 PM	TOTAL	62	178		153	37		14	39					483						
	TRUCK	5%	2%		1%	0%		7%	0%											0.888
5:30 - 6:30 PM	TOTAL	72	187		146	34		12	41					492						
	TRUCK	6%	2%		1%	0%		0%	0%											0.904
5:45 - 6:45 PM	TOTAL	69	197		152	28		11	43					500						
	TRUCK	4%	1%		1%	0%		0%	0%											0.919
6:00 - 7:00 PM	TOTAL	67	206		143	25		12	45					498						
	TRUCK	4%	1%		1%	0%		0%	0%											0.915

1: Croton Dam SB - Right
 2: Croton Dam SB - Thru
 3:
 4: Croton Dam NB- Thru
 5: Croton Dam NB, Left
 6:

7: Kitchawan State EB- Right
 8: Kitchawan State EB- Left
 9:
 10:
 11:
 12:

A: Cross Croton North side of Int
 B: Cross Croton South side of Int
 C: Cross Kitchawan West side of Int
 D:

PEAK HOUR CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	15064
NAME:	Traffic Databank

[illegible]

[illegible]

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

3:15 - 3:30 PM	TOTAL	31	24	6		6	399	5	1					472					
	TRUCK	3	4	1			23												
3:30 - 3:45 PM	TOTAL	37	28	5		10	392	2	0					474					
	TRUCK	1					19												
3:45 - 4:00 PM	TOTAL	36	18	11		14	448	5	0					532					
	TRUCK	1				2	20												
4:00 - 4:15 PM	TOTAL	46	19	4		9	510	4	0					592					
	TRUCK	2					25												
4:15 - 4:30 PM	TOTAL	39	24	3		9	533	7	1					616					
	TRUCK	2				2	16												
4:30 - 4:45 PM	TOTAL	39	26	4		4	506	2	0					581					
	TRUCK	3		1			21												
4:45 - 5:00 PM	TOTAL	42	33	6		5	514	3	2					605					
	TRUCK	2					10												
5:00 - 5:15 PM	TOTAL	38	18	6		7	519	3	0					591					
	TRUCK	1	1				11												
5:15 - 5:30 PM	TOTAL	45	17	1		12	528	4	0					607					
	TRUCK	4	2				16												
5:30 - 5:45 PM	TOTAL	43	24	6		4	543	5	1					626					
	TRUCK	3					10												
5:45 - 6:00 PM	TOTAL	42	24	3		12	509	4	1					595					
	TRUCK	1		1			8		1										
6:00 - 6:15 PM	TOTAL	46	27	2		10	443	3	2					533					
	TRUCK						10												
6:15 - 6:30 PM	TOTAL	40	35	4		5	448	5	1					538					
	TRUCK		1				3												
6:30 - 6:45 PM	TOTAL	35	18	8		14	413	8	0					496					
	TRUCK	1					4												
6:45 - 7:00 PM	TOTAL	23	27	3		9	367	7	0					436					
	TRUCK						4												

1: Croton Dam SB - Right
 2: Croton Dam SB - Thru
 3: Croton Dam SB - Left
 4:
 5: NY 9A WB- Right
 6: NY 9A WB- Thru

7: NY 9A WB- Left
 8: NY 9A WB- U-Turn
 9:
 10:
 11:
 12:

A: Cross Croton North side of Int
 B: Cross NY 9A East side of Int
 C: Cross Croton South side of Int
 D: Cross NY 9A West side of Int

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & N

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

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		
6:00 - 7:00 AM	TOTAL	107	75	31		11	579	1	4					808						0.821
	TRUCK	2%	0%	0%		36%	10%	100%	0%											
6:15 - 7:15 AM	TOTAL	128	98	35		13	690	3	6					973						0.899
	TRUCK	5%	1%	0%		38%	11%	67%	0%											
6:30 - 7:30 AM	TOTAL	154	120	30		12	775	3	5					1,099						0.953
	TRUCK	5%	2%	0%		42%	11%	67%	0%											
6:45 - 7:45 AM	TOTAL	163	123	30		12	845	4	5					1,182						0.972
	TRUCK	6%	4%	0%		42%	10%	50%	20%											
7:00 - 8:00 AM	TOTAL	170	114	30		13	861	5	5					1,198						0.972
	TRUCK	8%	6%	0%		15%	10%	40%	20%											
7:15 - 8:15 AM	TOTAL	181	104	32		16	890	4	3					1,230						0.987
	TRUCK	7%	7%	0%		13%	9%	25%	33%											
7:30 - 8:30 AM	TOTAL	171	95	33		19	895	5	4					1,222						0.971
	TRUCK	7%	9%	0%		11%	9%	20%	25%											
7:45 - 8:45 AM	TOTAL	166	99	37		21	822	8	5					1,158						0.935
	TRUCK	7%	10%	0%		5%	9%	38%	0%											
8:00 - 9:00 AM	TOTAL	159	103	38		20	814	9	4					1,147						0.917
	TRUCK	6%	8%	5%		5%	10%	22%	0%											
8:15 - 9:15 AM	TOTAL	144	114	39		23	796	8	4					1,128						0.897
	TRUCK	7%	8%	8%		4%	10%	25%	0%											
8:30 - 9:30 AM	TOTAL	138	109	42		24	770	8	3					1,094						0.93
	TRUCK	6%	6%	7%		8%	10%	25%	0%											
8:45 - 9:45 AM	TOTAL	121	96	52		23	762	5	2					1,061						0.946
	TRUCK	7%	4%	6%		9%	10%	0%	0%											
9:00 - 10:00 AM	TOTAL	109	97	53		27	739	3	4					1,032						0.923
	TRUCK	8%	4%	2%		11%	11%	0%	0%											
3:00 - 4:00 PM	TOTAL	138	92	26		40	1,626	17	2					1,941						0.931
	TRUCK	5%	8%	4%		5%	5%	0%	0%											
3:15 - 4:15 PM	TOTAL	150	89	26		39	1,749	16	1					2,070						0.981
	TRUCK	5%	4%	4%		5%	5%	0%	0%											
3:30 - 4:30 PM	TOTAL	158	89	23		42	1,883	18	1					2,214						0.938
	TRUCK	4%	0%	0%		10%	4%	0%	0%											
3:45 - 4:45 PM	TOTAL	160	87	22		36	1,997	18	1					2,321						0.969
	TRUCK	5%	0%	5%		11%	4%	0%	0%											

4:00 - 5:00 PM	TOTAL	166	102	17		27	2,063	16	3					2,394						
	TRUCK	5%	0%	6%		7%	3%	0%	0%											0.98
4:15 - 5:15 PM	TOTAL	158	101	19		25	2,072	15	3					2,393						
	TRUCK	5%	1%	5%		8%	3%	0%	0%											0.974
4:30 - 5:30 PM	TOTAL	164	94	17		28	2,067	12	2					2,384						
	TRUCK	6%	3%	6%		0%	3%	0%	0%											0.969
4:45 - 5:45 PM	TOTAL	168	92	19		28	2,104	15	3					2,429						
	TRUCK	6%	3%	0%		0%	2%	0%	0%											0.966
5:00 - 6:00 PM	TOTAL	168	83	16		35	2,099	16	2					2,419						
	TRUCK	5%	4%	6%		0%	2%	0%	50%											0.953
5:15 - 6:15 PM	TOTAL	176	92	12		38	2,023	16	4					2,361						
	TRUCK	5%	2%	8%		0%	2%	0%	25%											0.954
5:30 - 6:30 PM	TOTAL	171	110	15		31	1,943	17	5					2,292						
	TRUCK	2%	1%	7%		0%	2%	0%	20%											0.939
5:45 - 6:45 PM	TOTAL	163	104	17		41	1,813	20	4					2,162						
	TRUCK	1%	1%	6%		0%	1%	0%	25%											0.956
6:00 - 7:00 PM	TOTAL	144	107	17		38	1,671	23	3					2,003						
	TRUCK	1%	1%	0%		0%	1%	0%	0%											0.931

1: Croton Dam SB - Right
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 4:
 5: NY 9A WB- Right
 6: NY 9A WB- Thru

7: NY 9A WB- Left
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 9:
 10:
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A: Cross Croton North side of Int
 B: Cross NY 9A East side of Int
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 D: Cross NY 9A West side of Int

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & N

3:15 - 3:30 PM	TOTAL	13	23	15		30	294	21	2						398						
	TRUCK		1			1	25														
3:30 - 3:45 PM	TOTAL	12	22	8		32	284	41	0						399						
	TRUCK	1	2			1	18	3													
3:45 - 4:00 PM	TOTAL	7	32	8		41	287	37	0						412						
	TRUCK	2	2			2	8	1													
4:00 - 4:15 PM	TOTAL	8	29	11		24	304	48	1						425						
	TRUCK	3	3				10	2													
4:15 - 4:30 PM	TOTAL	9	26	10		32	262	25	0						364						
	TRUCK					2	12														
4:30 - 4:45 PM	TOTAL	9	30	16		37	289	34	3						418						
	TRUCK	1	1				12	2													
4:45 - 5:00 PM	TOTAL	12	25	15		38	266	26	3						385						
	TRUCK						9	2													
5:00 - 5:15 PM	TOTAL	8	31	6		38	307	43	1						434						
	TRUCK	1				1	5														
5:15 - 5:30 PM	TOTAL	8	36	6		27	231	43	1						352						
	TRUCK					1	10														
5:30 - 5:45 PM	TOTAL	8	18	14		32	257	33	0						362						
	TRUCK					3	9														
5:45 - 6:00 PM	TOTAL	11	23	18		29	206	52	0						339						
	TRUCK		2				4														
6:00 - 6:15 PM	TOTAL	11	26	13		40	231	34	1						356						
	TRUCK					2	5	1													
6:15 - 6:30 PM	TOTAL	9	24	13		33	240	43	0						362						
	TRUCK					2	1														
6:30 - 6:45 PM	TOTAL	12	27	13		42	213	44	0						351						
	TRUCK						6														
6:45 - 7:00 PM	TOTAL	8	25	10		31	181	25	0						280						
	TRUCK		1			1	6	1													

1: Croton Dam NB - Right
2: Croton Dam NB - Thru
3: Croton Dam NB - Left
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5: NY 9A EB- Right
6: NY 9A EB- Thru

7: NY 9A EB - Left
8: NY 9A EB - U-Turn
9:
10:
11:
12:

A:
B:
C:
D:

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM
LOCATION:	Croton Dam Road & N

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	9B

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		
6:00 - 7:00 AM	TOTAL	81	63	17		35	2,097	65						2,358						-
	TRUCK	0%	0%	0%		3%	4%	5%												
6:15 - 7:15 AM	TOTAL	95	85	22		36	2,186	69						2,493						-
	TRUCK	0%	0%	0%		3%	4%	4%												
6:30 - 7:30 AM	TOTAL	90	111	24		53	2,215	83						2,576						-
	TRUCK	0%	1%	0%		4%	4%	4%												
6:45 - 7:45 AM	TOTAL	77	138	25		68	2,176	81						2,565						-
	TRUCK	0%	4%	0%		3%	5%	5%												
7:00 - 8:00 AM	TOTAL	76	152	33		86	2,105	96						2,548						-
	TRUCK	0%	4%	0%		8%	5%	8%												
7:15 - 8:15 AM	TOTAL	60	148	36		107	2,101	121						2,573						-
	TRUCK	0%	6%	0%		9%	5%	11%												
7:30 - 8:30 AM	TOTAL	57	129	35		107	2,057	133						2,518						-
	TRUCK	0%	8%	0%		9%	5%	12%												
7:45 - 8:45 AM	TOTAL	57	112	46		99	1,979	150						2,443						-
	TRUCK	2%	8%	2%		9%	5%	11%												
8:00 - 9:00 AM	TOTAL	56	103	43		82	1,818	147						2,249						-
	TRUCK	2%	8%	5%		5%	5%	11%												
8:15 - 9:15 AM	TOTAL	63	95	45		66	1,658	134	1					2,062						-
	TRUCK	2%	5%	4%		3%	5%	10%	0%											
8:30 - 9:30 AM	TOTAL	62	94	48		58	1,578	126	1					1,967						-
	TRUCK	5%	3%	4%		3%	4%	9%	0%											
8:45 - 9:45 AM	TOTAL	66	89	37		59	1,446	116	1					1,814						-
	TRUCK	3%	4%	3%		5%	5%	9%	0%											
9:00 - 10:00 AM	TOTAL	64	75	42		59	1,430	103	1					1,774						-
	TRUCK	3%	7%	0%		5%	5%	11%	0%											
3:00 - 4:00 PM	TOTAL	56	94	41		130	1,118	133	2					1,574						-
	TRUCK	7%	6%	0%		4%	7%	5%	0%											
3:15 - 4:15 PM	TOTAL	40	106	42		127	1,169	147	3					1,634						-
	TRUCK	15%	8%	0%		3%	5%	4%	0%											
3:30 - 4:30 PM	TOTAL	36	109	37		129	1,137	151	1					1,600						-
	TRUCK	17%	6%	0%		4%	4%	4%	0%											
3:45 - 4:45 PM	TOTAL	33	117	45		134	1,142	144	4					1,619						-
	TRUCK	18%	5%	0%		3%	4%	3%	0%											

4:00 - 5:00 PM	TOTAL	38	110	52		131	1,121	133	7					1,592						-
	TRUCK	11%	4%	0%		2%	4%	5%	0%											
4:15 - 5:15 PM	TOTAL	38	112	47		145	1,124	128	7					1,601						-
	TRUCK	5%	1%	0%		2%	3%	3%	0%											
4:30 - 5:30 PM	TOTAL	37	122	43		140	1,093	146	8					1,589						-
	TRUCK	5%	1%	0%		1%	3%	3%	0%											
4:45 - 5:45 PM	TOTAL	36	110	41		135	1,061	145	5					1,533						-
	TRUCK	3%	0%	0%		4%	3%	1%	0%											
5:00 - 6:00 PM	TOTAL	35	108	44		126	1,001	171	2					1,487						-
	TRUCK	3%	2%	0%		4%	3%	0%	0%											
5:15 - 6:15 PM	TOTAL	38	103	51		128	925	162	2					1,409						-
	TRUCK	0%	2%	0%		5%	3%	1%	0%											
5:30 - 6:30 PM	TOTAL	39	91	58		134	934	162	1					1,419						-
	TRUCK	0%	2%	0%		5%	2%	1%	0%											
5:45 - 6:45 PM	TOTAL	43	100	57		144	890	173	1					1,408						-
	TRUCK	0%	2%	0%		3%	2%	1%	0%											
6:00 - 7:00 PM	TOTAL	40	102	49		146	865	146	1					1,349						-
	TRUCK	0%	1%	0%		3%	2%	1%	0%											

1: Croton Dam NB - Right

2: Croton Dam NB - Thru

3: Croton Dam NB - Left

4:

5: NY 9A EB- Right

6: NY 9A EB- Thru

7: NY 9A EB - Left

8: NY 9A EB - U-Turn

9:

10:

11:

12:

A:

B:

C:

D:

DATE:	Weekday: 09/29/2016
PERIOD:	Weekday: 6-10AM & 3-7PM

**PEAK HOUR CALCULATIONS - DO NOT
EDIT THIS SHEET**

JOB NO:	15064
NAME:	Traffic Databank

TIME	CLASS	Sub-Total Int. 1 - 8	TOTAL INT. 9A	TOTAL INT. 9B	Sub-Total Int. 9	TOTAL
6:00 - 7:00 AM	TOTAL	1,649	808	2,358	3,166	4,815
6:15 - 7:15 AM	TOTAL	2,082	973	2,493	3,466	5,548
6:30 - 7:30 AM	TOTAL	2,562	1,099	2,576	3,675	6,237
6:45 - 7:45 AM	TOTAL	2,980	1,182	2,565	3,747	6,727
7:00 - 8:00 AM	TOTAL	3,221	1,198	2,548	3,746	6,967
7:15 - 8:15 AM	TOTAL	3,210	1,230	2,573	3,803	7,013
7:30 - 8:30 AM	TOTAL	3,014	1,222	2,518	3,740	6,754
7:45 - 8:45 AM	TOTAL	2,787	1,158	2,443	3,601	6,388
8:00 - 9:00 AM	TOTAL	2,584	1,147	2,249	3,396	5,980
8:15 - 9:15 AM	TOTAL	2,488	1,128	2,062	3,190	5,678
8:30 - 9:30 AM	TOTAL	2,332	1,094	1,967	3,061	5,393
8:45 - 9:45 AM	TOTAL	2,117	1,061	1,814	2,875	4,992
9:00 - 10:00 AM	TOTAL	1,990	1,032	1,774	2,806	4,796
3:00 - 4:00 PM	TOTAL	2,636	1,941	1,574	3,515	6,151
3:15 - 4:15 PM	TOTAL	2,718	2,070	1,634	3,704	6,422
3:30 - 4:30 PM	TOTAL	2,715	2,214	1,600	3,814	6,529
3:45 - 4:45 PM	TOTAL	2,829	2,321	1,619	3,940	6,769

4:00 - 5:00 PM	TOTAL	2,920	2,394	1,592	3,986	6,906
4:15 - 5:15 PM	TOTAL	2,942	2,393	1,601	3,994	6,936
4:30 - 5:30 PM	TOTAL	2,970	2,384	1,589	3,973	6,943
4:45 - 5:45 PM	TOTAL	2,874	2,429	1,533	3,962	6,836
5:00 - 6:00 PM	TOTAL	2,773	2,419	1,487	3,906	6,679
5:15 - 6:15 PM	TOTAL	2,867	2,361	1,409	3,770	6,637
5:30 - 6:30 PM	TOTAL	2,931	2,292	1,419	3,711	6,642
5:45 - 6:45 PM	TOTAL	2,933	2,162	1,408	3,570	6,503
6:00 - 7:00 PM	TOTAL	2,896	2,003	1,349	3,352	6,248

ENTER COUNT DATA ON THIS PAGE

NAME:	Traffic Databank
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[illegible]

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Dale Avenue & Pine Avenue

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	1

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		
9:00 - 10:00 AM	TOTAL	129	31		48	46		48	141					443		1	3		4	0.879
	TRUCK	1%	0%		0%	0%		0%	2%											
9:15 - 10:15 AM	TOTAL	137	32		46	45		48	144					452		1	3		4	0.897
	TRUCK	1%	0%		0%	0%		0%	2%											
9:30 - 10:30 AM	TOTAL	142	32		45	46		41	130					436		1	2		3	0.865
	TRUCK	3%	0%		0%	0%		0%	2%											
9:45 - 10:45 AM	TOTAL	158	40		48	45		59	157					507			1		1	0.845
	TRUCK	3%	0%		0%	0%		0%	1%											
10:00 - 11:00 AM	TOTAL	146	43		46	41		60	165					501		1	1		2	0.835
	TRUCK	3%	0%		2%	0%		0%	2%											
10:15 - 11:15 AM	TOTAL	148	39		52	41		58	161					499	1	2	1		4	0.832
	TRUCK	2%	0%		2%	0%		0%	4%											
10:30 - 11:30 AM	TOTAL	144	37		52	40		60	172					505	1	3	1		5	0.842
	TRUCK	1%	0%		2%	0%		0%	3%											
10:45 - 11:45 AM	TOTAL	150	30		48	44		39	169					480	2	3	1		6	0.96
	TRUCK	1%	0%		2%	0%		0%	4%											
11:00 - 12:00 AM	TOTAL	155	27		51	39		42	170					484	2	2	1		5	0.968
	TRUCK	1%	0%		0%	0%		0%	4%											
11:15 - 12:15 AM	TOTAL	154	31		46	41		50	167					489	2	3	3		8	0.978
	TRUCK	2%	0%		0%	0%		0%	2%											
11:30 - 12:30 AM	TOTAL	153	30		53	50		52	155					493	4	2	2		8	0.986
	TRUCK	3%	0%		4%	2%		0%	3%											
11:45 - 12:45 PM	TOTAL	144	31		57	53		55	144					484	3	4	2		9	0.968
	TRUCK	1%	0%		4%	4%		0%	3%											
12:00 - 1:00 PM	TOTAL	141	31		57	53		57	146					485	5	4	2		11	0.97
	TRUCK	2%	3%		4%	6%		0%	1%											

1: Dale Ave SB- Thru
2: Dale Ave SB - Left
3:
4: Pine Ave WB- Right
5: Pine Ave WB- Left
6:

7: Dale Ave NB - Right
8: Dale Ave NB - Thru
9:
10:
11:
12:

A: Cross Dale Ave North side of int
B: Cross Pine Ave East side of int
C: Cross Dale Ave South side of int
D:

ENTER COUNT DATA ON THIS PAGE

NAME:	Traffic Databank
-------	------------------

[illegible]

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & Dale Ave/Hawkes Ave

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	2

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		
9:00 - 10:00 AM	TOTAL	2	98		102	83		55	1					341						0.836
	TRUCK	0%	0%		1%	2%		0%	0%											
9:15 - 10:15 AM	TOTAL	3	89		98	92		75	1					358						0.877
	TRUCK	0%	0%		1%	2%		0%	0%											
9:30 - 10:30 AM	TOTAL	3	82		92	85		86						348						0.861
	TRUCK	0%	0%		0%	1%		1%												
9:45 - 10:45 AM	TOTAL	3	98		111	95		94						401						0.911
	TRUCK	0%	0%		0%	0%		1%												
10:00 - 11:00 AM	TOTAL	2	92		110	99		90						393						0.893
	TRUCK	0%	0%		1%	0%		1%												
10:15 - 11:15 AM	TOTAL	1	106		110	100		74						391						0.889
	TRUCK	0%	0%		1%	1%		1%												
10:30 - 11:30 AM	TOTAL	2	109		113	101		65						390						0.886
	TRUCK	0%	0%		1%	2%		0%												
10:45 - 11:45 AM	TOTAL	1	106		105	101		66						379		1			1	0.957
	TRUCK	0%	1%		2%	2%		2%												
11:00 - 12:00 AM	TOTAL	2	104		106	105		69						386		1			1	0.965
	TRUCK	0%	1%		2%	3%		1%												
11:15 - 12:15 AM	TOTAL	6	92		102	102		84						386		1			1	0.965
	TRUCK	0%	2%		2%	2%		1%												
11:30 - 12:30 AM	TOTAL	5	91		93	111		81						381		1			1	0.953
	TRUCK	0%	2%		2%	2%		1%												
11:45 - 12:45 PM	TOTAL	8	89		96	103		79	1					376						0.94
	TRUCK	0%	1%		1%	2%		0%	0%											
12:00 - 1:00 PM	TOTAL	9	92		92	110		73	1					377						0.933
	TRUCK	0%	2%		0%	1%		1%	0%											

1: Croton Dam Rd WB - Right
2: Croton Dam Rd WB- Thru
3:
4: Dale Ave NB - Thru
5: Dale Ave NB - Left
6:

7: Hawkes Ave SB- Right
8: Hawkes Ave SB - Left
9:
10:
11:
12:

A: Cross Croton Dam East side of Int
B: Cross Dale Ave South side of Int
C: Cross Hawkes Ave North side of Int
D:

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	3

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & Pershing Avenue/Cherry Hill Circle

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	3

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		
9:00 - 10:00 AM	TOTAL	3	92	4	5	2	7	7	92	2		3	2	219						0.855
	TRUCK	0%	0%	0%	0%	0%	0%	0%	1%	0%		0%	0%							
9:15 - 10:15 AM	TOTAL	1	82	3	3	3	6	5	90	1		3	3	200						0.781
	TRUCK	0%	0%	0%	0%	0%	0%	0%	2%	0%		0%	0%							
9:30 - 10:30 AM	TOTAL	2	77	6	3	3	6	4	84			3	3	191						0.746
	TRUCK	0%	0%	0%	0%	0%	0%	0%	2%			0%	33%							
9:45 - 10:45 AM	TOTAL	4	91	7	5	4	5	7	99		1	3	3	229						0.818
	TRUCK	0%	0%	0%	0%	0%	0%	0%	2%		0%	0%	67%							
10:00 - 11:00 AM	TOTAL	4	83	8	4	3	2	9	97	1	3	4	4	222						0.793
	TRUCK	0%	0%	0%	0%	0%	0%	0%	2%	100%	0%	0%	50%							
10:15 - 11:15 AM	TOTAL	4	100	7	3	2	3	11	97	2	3	3	3	238						0.85
	TRUCK	0%	0%	0%	0%	0%	0%	0%	2%	50%	0%	0%	67%							
10:30 - 11:30 AM	TOTAL	3	101	4	3	4	2	14	97	3	5	2	2	240	2				2	0.857
	TRUCK	0%	0%	0%	0%	0%	0%	0%	1%	67%	0%	0%	50%							
10:45 - 11:45 AM	TOTAL	1	99	4	1	2	3	12	93	4	7	1	1	228	2				2	0.983
	TRUCK	0%	0%	0%	0%	0%	0%	0%	1%	50%	14%	0%	0%							
11:00 - 12:00 AM	TOTAL	1	101	2	1	2	6	9	91	4	5		1	223	2	1			3	0.961
	TRUCK	0%	0%	0%	0%	0%	0%	0%	1%	25%	20%		0%							
11:15 - 12:15 AM	TOTAL	1	85	3	2	2	7	6	89	4	6		3	208	2	1			3	0.897
	TRUCK	0%	1%	33%	0%	0%	0%	0%	0%	25%	17%		0%							
11:30 - 12:30 AM	TOTAL	2	85	2	2		7	8	80	4	5	1	3	199		1			1	0.858
	TRUCK	0%	1%	50%	0%		0%	0%	0%	0%	20%	0%	0%							
11:45 - 12:45 PM	TOTAL	2	86	3	5		7	13	76	5	3	1	3	204		1			1	0.81
	TRUCK	0%	1%	33%	0%		0%	0%	0%	0%	0%	0%	0%							
12:00 - 1:00 PM	TOTAL	3	88	4	7		5	13	73	5	3	3	4	208						0.825
	TRUCK	0%	2%	25%	0%		0%	0%	0%	0%	0%	0%	0%							

1: Croton Dam SB - Right
2: Croton Dam SB - Thru
3: Croton Dam SB - Left
4: Pershing WB - Right
5: Pershing WB - Thru
6: Pershing WB - Left

7: Croton Dam NB - Right
8: Croton Dam NB - Thru
9: Croton Dam NB - Left
10: Cherry Hill EB - Right
11: Cherry Hill EB - Thru
12: Cherry Hill EB - Left

A: Cross Croton North side of Int
B: Cross Pershing East side of Int
C: Cross Croton South side of Int
D: Cross Cherry Hill West side of Int

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & Site Driveway

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	4

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		
9:00 - 10:00 AM	TOTAL	99				1			102					202						0.871
	TRUCK	1%				0%			3%											
9:15 - 10:15 AM	TOTAL	85				1			98					184						0.793
	TRUCK	0%				0%			3%											
9:30 - 10:30 AM	TOTAL	86				1			97					184						0.793
	TRUCK	1%				0%			4%											
9:45 - 10:45 AM	TOTAL	97							106					203		1			1	0.875
	TRUCK	1%							5%											
10:00 - 11:00 AM	TOTAL	97						1	100					198		1			1	0.868
	TRUCK	1%						0%	4%											
10:15 - 11:15 AM	TOTAL	113						1	101					215		1			1	0.943
	TRUCK	2%						0%	4%											
10:30 - 11:30 AM	TOTAL	110						1	100					211		1			1	0.977
	TRUCK	1%						0%	2%											
10:45 - 11:45 AM	TOTAL	107						1	98					206						0.972
	TRUCK	1%						0%	1%											
11:00 - 12:00 AM	TOTAL	99							97					196						0.925
	TRUCK	1%							0%											
11:15 - 12:15 AM	TOTAL	86							100					186						0.877
	TRUCK	2%							0%											
11:30 - 12:30 AM	TOTAL	85							86					171						0.872
	TRUCK	2%							0%											
11:45 - 12:45 PM	TOTAL	88			1				84					173						0.848
	TRUCK	2%			0%				0%											
12:00 - 1:00 PM	TOTAL	94			2				84					180						0.882
	TRUCK	3%			0%				0%											

1: Croton Dam SB -Thru
2: Croton Dam SB - Left
3:
4: Site Driveway WB - Right
5: Site Driveway WB- Left
6:

7: Croton Dam NB - Right
8: Croton Dam NB - Thru
9:
10:
11:
12:

A: Cross Croton North side of Int
B: Cross Site Driveway East side of Int
C: Cross Croton South side of Int
D:

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & Grandview Avenue

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	5

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		
9:00 - 10:00 AM	TOTAL	88	2		5	10		12	90					207						0.877
	TRUCK	1%	0%		0%	0%		0%	4%											
9:15 - 10:15 AM	TOTAL	74	2		3	9		8	90					186						0.788
	TRUCK	0%	0%		0%	0%		0%	3%											
9:30 - 10:30 AM	TOTAL	72	4		3	11		7	85					182						0.784
	TRUCK	0%	0%		0%	0%		0%	4%											
9:45 - 10:45 AM	TOTAL	87	3		2	11		9	95					207		1			1	0.892
	TRUCK	1%	0%		0%	0%		0%	2%											
10:00 - 11:00 AM	TOTAL	85	4		1	11		9	93					203		1			1	0.89
	TRUCK	1%	0%		0%	0%		11%	2%											
10:15 - 11:15 AM	TOTAL	102	4		1	10		10	92					219		1			1	0.961
	TRUCK	1%	0%		0%	0%		10%	3%											
10:30 - 11:30 AM	TOTAL	102	3		2	9		11	89					216		1			1	0.947
	TRUCK	1%	0%		0%	0%		9%	2%											
10:45 - 11:45 AM	TOTAL	100	3		2	7		8	90					210						0.972
	TRUCK	0%	0%		0%	0%		13%	1%											
11:00 - 12:00 AM	TOTAL	96	3		3	4		8	91					205						0.967
	TRUCK	0%	0%		0%	0%		0%	1%											
11:15 - 12:15 AM	TOTAL	86	2		3	4		11	86					192						0.923
	TRUCK	2%	0%		0%	0%		0%	0%											
11:30 - 12:30 AM	TOTAL	84	3		3	5		9	79					183						0.897
	TRUCK	2%	0%		0%	0%		0%	0%											
11:45 - 12:45 PM	TOTAL	85	3		3	6		12	76					185						0.873
	TRUCK	2%	0%		0%	0%		0%	0%											
12:00 - 1:00 PM	TOTAL	92	2		3	6		11	75					189						0.892
	TRUCK	2%	0%		0%	0%		0%	0%											

1: Croton Dam SB - Thru
2: Croton Dam SB - Left
3:
4: Grandview WB - Right
5: Grandview WB - Left
6:

7: Croton Dam NB - Right
8: Croton Dam NB - Thru
9:
10:
11:
12:

A: Cross Croton Dam North side of Int
B: Cross Grandview East side of Int
C: Cross Croton Dam South side of Int
D:

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & Narragansett Avenue

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	6

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		
9:00 - 10:00 AM	TOTAL	89	69		89	1		9	85					342						0.919
	TRUCK	0%	0%		0%	0%		0%	1%											
9:15 - 10:15 AM	TOTAL	76	65		86	3		5	91					326						0.876
	TRUCK	0%	0%		0%	0%		0%	1%											
9:30 - 10:30 AM	TOTAL	74	59		81	3		5	84					306						0.823
	TRUCK	0%	2%		0%	0%		0%	0%											
9:45 - 10:45 AM	TOTAL	86	58		77	3		9	82					315		1			1	0.847
	TRUCK	0%	2%		0%	0%		0%	0%											
10:00 - 11:00 AM	TOTAL	85	62		72	3		8	85					315		1			1	0.847
	TRUCK	0%	3%		0%	0%		0%	0%											
10:15 - 11:15 AM	TOTAL	100	68		84	1		9	83					345		1			1	0.898
	TRUCK	0%	4%		1%	0%		0%	0%											
10:30 - 11:30 AM	TOTAL	99	74		85	1		8	81					348		1			1	0.906
	TRUCK	0%	3%		1%	0%		0%	0%											
10:45 - 11:45 AM	TOTAL	97	79		85	3		7	85					356						0.927
	TRUCK	0%	4%		1%	0%		0%	0%											
11:00 - 12:00 AM	TOTAL	96	88		75	2		6	84					351						0.914
	TRUCK	0%	2%		1%	0%		0%	0%											
11:15 - 12:15 AM	TOTAL	83	83		76	3		5	80					330						0.868
	TRUCK	2%	1%		1%	0%		0%	0%											
11:30 - 12:30 AM	TOTAL	84	91		80	3		5	77					340						0.895
	TRUCK	2%	3%		1%	0%		0%	0%											
11:45 - 12:45 PM	TOTAL	87	85		84	2		2	78					338						0.909
	TRUCK	2%	2%		4%	0%		0%	0%											
12:00 - 1:00 PM	TOTAL	91	91		85	4		4	75					350						0.875
	TRUCK	3%	3%		4%	0%		0%	0%											

1: Croton Dam SB - Thru
2: Croton Dam SB - Left
3:
4: Narragansett WB - Right
5: Narragansett WB- Left
6:

7: Croton Dam NB- Right
8: Croton Dam NB- Thru
9:
10:
11:
12:

A: Cross Croton North side of Int
B: Cross Narragansett West side of Int
C: Cross Croton South side of Int
D:

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	7

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & Pheasant Ridge Road/Feeney Road

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	7

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		
9:00 - 10:00 AM	TOTAL	4	156	7	9		1	2	170	3	2		8	362			1		1	0.943
	TRUCK	0%	1%	0%	11%		0%	0%	1%	0%	0%		0%							
9:15 - 10:15 AM	TOTAL	5	134	7	10		1	1	173	2	1		9	343			1		1	0.893
	TRUCK	0%	0%	0%	10%		0%	0%	2%	0%	0%		0%							
9:30 - 10:30 AM	TOTAL	6	126	8	14			2	159	3	1		9	328						0.854
	TRUCK	0%	1%	0%	7%			0%	3%	0%	0%		0%							
9:45 - 10:45 AM	TOTAL	6	140	7	15			1	157	2	1	1	4	334						0.87
	TRUCK	17%	1%	0%	7%			0%	3%	0%	0%	100%	0%							
10:00 - 11:00 AM	TOTAL	4	145	6	14			1	154	1		1	3	329						0.875
	TRUCK	25%	1%	0%	7%			0%	3%	0%		100%	0%							
10:15 - 11:15 AM	TOTAL	6	166	6	12			3	159	4	3	1	6	366						0.855
	TRUCK	17%	1%	0%	8%			0%	3%	25%	33%	100%	0%							
10:30 - 11:30 AM	TOTAL	7	175	8	9		1	3	159	4	3	1	7	377						0.881
	TRUCK	14%	1%	0%	11%		0%	0%	3%	25%	33%	100%	0%							
10:45 - 11:45 AM	TOTAL	6	167	9	8		3	5	158	5	3		7	371						0.867
	TRUCK	0%	2%	0%	0%		0%	0%	3%	20%	33%		0%							
11:00 - 12:00 AM	TOTAL	6	172	11	8	1	3	6	150	5	3		7	372						0.869
	TRUCK	0%	1%	9%	0%	0%	0%	0%	3%	20%	33%		0%							
11:15 - 12:15 AM	TOTAL	4	159	11	10	1	3	5	149	4	1		4	351						0.954
	TRUCK	0%	3%	9%	0%	0%	0%	0%	2%	0%	0%		0%							
11:30 - 12:30 AM	TOTAL	4	161	8	12	1	2	5	144	4	1		4	346		1			1	0.94
	TRUCK	0%	4%	13%	8%	0%	0%	0%	1%	0%	0%		0%							
11:45 - 12:45 PM	TOTAL	4	165	7	10	1		6	152	3	3		7	358		1			1	0.895
	TRUCK	0%	3%	14%	10%	0%		0%	1%	0%	0%		0%							
12:00 - 1:00 PM	TOTAL	4	176	5	11			6	148	3	4		7	364	2	1			3	0.91
	TRUCK	0%	4%	0%	9%			0%	1%	0%	0%		0%							

1: Croton Dam SB - Right
2: Croton Dam SB - Thru
3: Croton Dam SB - Left
4: Feeney WB - Right
5: Feeney WB - Thru
6: Feeney WB - Left

7: Croton Dam NB - Right
8: Croton Dam NB - Thru
9: Croton Dam NB - Left
10: Pheasant Ridge - Right
11: Pheasant Ridge - Thru
12: Pheasant Ridge - Left

A: Cross Croton North side of Int
B: Cross Feeney East side of Int
C: Cross Croton South side of Int
D: Cross Pheasant West side of Int

ENTER COUNT DATA ON THIS PAGE

JOB NO:	15064
NAME:	Traffic Databank
INT #:	
	8

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & Kitchawan State Road (NY 134)

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	8

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		
9:00 - 10:00 AM	TOTAL	45	144		167	28		21	57					462						0.924
	TRUCK	7%	1%		2%	0%		0%	0%											
9:15 - 10:15 AM	TOTAL	62	126		171	25		19	54					457						0.914
	TRUCK	2%	0%		2%	0%		0%	0%											
9:30 - 10:30 AM	TOTAL	68	123		155	21		18	54					439						0.878
	TRUCK	1%	1%		3%	0%		0%	0%											
9:45 - 10:45 AM	TOTAL	72	139		159	20		15	57					462						0.909
	TRUCK	3%	1%		3%	0%		0%	0%											
10:00 - 11:00 AM	TOTAL	75	143		155	18		10	59					460						0.906
	TRUCK	3%	2%		4%	0%		0%	0%											
10:15 - 11:15 AM	TOTAL	60	166		158	19		10	57					470						0.925
	TRUCK	2%	2%		4%	0%		0%	0%											
10:30 - 11:30 AM	TOTAL	59	175		162	21		16	63					496						0.976
	TRUCK	2%	2%		4%	0%		0%	0%											
10:45 - 11:45 AM	TOTAL	60	169		156	22		14	68					489						0.986
	TRUCK	2%	2%		4%	0%		0%	0%											
11:00 - 12:00 AM	TOTAL	61	178		148	19		16	73					495						0.959
	TRUCK	2%	2%		3%	0%		0%	0%											
11:15 - 12:15 AM	TOTAL	68	160		141	20		15	96					500						0.969
	TRUCK	1%	3%		2%	5%		0%	0%											
11:30 - 12:30 AM	TOTAL	64	149		138	20		18	88					477		1			1	0.924
	TRUCK	2%	3%		1%	5%		0%	0%											
11:45 - 12:45 PM	TOTAL	64	153		144	21		18	91					491		1			1	0.916
	TRUCK	0%	3%		1%	5%		0%	0%											
12:00 - 1:00 PM	TOTAL	61	163		138	27		17	85					491		1			1	0.916
	TRUCK	2%	4%		1%	4%		0%	0%											

1: Croton Dam SB - Right
2: Croton Dam SB - Thru
3:
4: Croton Dam NB - Thru
5: Croton Dam NB- Left
6:

7: Kitchawan State EB- Right
8: Kitchawan State EB- Right
9:
10:
11:
12:

A: Cross Croton North side of Int
B: Cross Croton South side of Int
C: Cross Kitchawan West side of Int
D:

PEAK HOUR CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	15064
NAME:	Traffic Databank

[illegible]

ENTER COUNT DATA ON THIS PAGE

NAME:	Traffic Databank
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[illegible]

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & NY 9A (Sheet A)

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	9A

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		
9:00 - 10:00 AM	TOTAL	140	78	34		33	1,107	20						1,412		1			1	0.946
	TRUCK	6%	3%	3%		6%	3%	0%												
9:15 - 10:15 AM	TOTAL	141	68	37		29	1,140	21						1,436		1			1	0.955
	TRUCK	3%	3%	0%		7%	3%	0%												
9:30 - 10:30 AM	TOTAL	150	72	41		30	1,175	23						1,491						0.96
	TRUCK	3%	1%	0%		7%	3%	0%												
9:45 - 10:45 AM	TOTAL	149	87	38		24	1,246	18	1					1,563						0.952
	TRUCK	3%	1%	0%		0%	3%	0%	0%											
10:00 - 11:00 AM	TOTAL	163	83	43		24	1,269	19	1					1,602						0.92
	TRUCK	2%	0%	0%		0%	3%	0%	0%											
10:15 - 11:15 AM	TOTAL	159	95	44		30	1,321	13	1					1,663						0.945
	TRUCK	3%	0%	0%		0%	3%	0%	0%											
10:30 - 11:30 AM	TOTAL	151	94	46		32	1,361	12	1					1,697						0.968
	TRUCK	2%	0%	2%		0%	3%	0%	0%											
10:45 - 11:45 AM	TOTAL	152	87	43		38	1,382	17						1,719						0.98
	TRUCK	2%	1%	2%		0%	2%	0%												
11:00 - 12:00 AM	TOTAL	146	88	32		43	1,374	22						1,705						0.975
	TRUCK	1%	1%	3%		0%	2%	0%												
11:15 - 12:15 AM	TOTAL	159	82	21		43	1,389	26						1,720						0.975
	TRUCK	1%	2%	5%		0%	2%	0%												
11:30 - 12:30 AM	TOTAL	175	72	20		39	1,378	28						1,712						0.976
	TRUCK	1%	3%	0%		0%	2%	0%												
11:45 - 12:45 PM	TOTAL	169	75	21		45	1,361	24						1,695						0.98
	TRUCK	1%	1%	0%		2%	3%	0%												
12:00 - 1:00 PM	TOTAL	166	86	22		40	1,340	19						1,673		1			1	0.973
	TRUCK	2%	5%	0%		3%	3%	0%												

1: Croton Dam SB - Right
2: Croton Dam SB - Thru
3: Croton Dam SB - Left
4:
5: NY 9A WB - Right
6: NY 9A WB - Thru

7: NY 9A WB - Left
8: NY 9A WB - U-Turn
9:
10:
11:
12:

A: Cross Croton North side of Int
B: Cross NY 9A East side of Int
C:
D:

ENTER COUNT DATA ON THIS PAGE

NAME:	Traffic Databank
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[illegible]

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM
LOCATION:	Croton Dam Road & NY 9A (Sheet B)

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

JOB NO:	15064
NAME:	Traffic Databank
INT #:	9B

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		
9:00 - 10:00 AM	TOTAL	56	102	52		94	900	89						1,293						-
	TRUCK	0%	3%	4%		4%	3%	0%												
9:15 - 10:15 AM	TOTAL	48	109	54		93	902	89						1,295						-
	TRUCK	0%	3%	4%		1%	3%	0%												
9:30 - 10:30 AM	TOTAL	43	100	54		87	873	97						1,254						-
	TRUCK	0%	2%	4%		2%	2%	1%												
9:45 - 10:45 AM	TOTAL	46	100	56		99	874	100	2					1,277						-
	TRUCK	0%	0%	4%		3%	2%	2%	0%											
10:00 - 11:00 AM	TOTAL	53	99	54		104	893	110	3					1,316						-
	TRUCK	0%	0%	4%		3%	2%	2%	0%											
10:15 - 11:15 AM	TOTAL	52	104	51		111	892	121	3					1,334						-
	TRUCK	0%	1%	2%		3%	2%	2%	0%											
10:30 - 11:30 AM	TOTAL	52	108	51		119	925	117	3					1,375						-
	TRUCK	0%	2%	4%		3%	2%	2%	0%											
10:45 - 11:45 AM	TOTAL	57	111	50		114	953	116	3					1,404						-
	TRUCK	0%	3%	4%		3%	3%	1%	0%											
11:00 - 12:00 AM	TOTAL	58	111	44		117	987	110	2					1,429						-
	TRUCK	0%	3%	5%		3%	3%	1%	0%											
11:15 - 12:15 AM	TOTAL	73	115	48		108	1,029	98	3					1,474						-
	TRUCK	0%	2%	4%		4%	2%	1%	0%											
11:30 - 12:30 AM	TOTAL	75	99	52		104	1,047	104	4					1,485						-
	TRUCK	1%	1%	2%		5%	2%	1%	0%											
11:45 - 12:45 PM	TOTAL	75	101	54		103	1,060	120	3					1,516						-
	TRUCK	1%	1%	0%		4%	2%	2%	0%											
12:00 - 1:00 PM	TOTAL	74	93	52		110	1,058	122	4					1,513						-
	TRUCK	1%	1%	0%		3%	2%	3%	0%											

1: Croton Dam NB - Right
2: Croton Dam NB - Thru
3: Croton Dam NB - Left
4:
5: NY 9A EB - Right
6: NY 9A EB - Thru

7: NY 9A EB - Left
8: NY 9A EB - U-Turn
9:
10:
11:
12:

A: Cross Croton South side of Int
B: Cross NY 9A West side of Int
C:
D:

DATE:	Saturday: 10/15/2016
PERIOD:	Saturday: 9AM-1PM

**PEAK HOUR CALCULATIONS - DO NOT
EDIT THIS SHEET**

JOB NO:	15064
NAME:	Traffic Databank

TIME	CLASS	Sub-Total Int. 1 - 8	TOTAL INT. 9A	TOTAL INT. 9B	Sub-Total Int. 9	TOTAL
9:00 - 10:00 AM	TOTAL	2,578	1,412	1,293	2,705	5,283
9:15 - 10:15 AM	TOTAL	2,506	1,436	1,295	2,731	5,237
9:30 - 10:30 AM	TOTAL	2,414	1,491	1,254	2,745	5,159
9:45 - 10:45 AM	TOTAL	2,658	1,563	1,277	2,840	5,498
10:00 - 11:00 AM	TOTAL	2,621	1,602	1,316	2,918	5,539
10:15 - 11:15 AM	TOTAL	2,743	1,663	1,334	2,997	5,740
10:30 - 11:30 AM	TOTAL	2,783	1,697	1,375	3,072	5,855
10:45 - 11:45 AM	TOTAL	2,719	1,719	1,404	3,123	5,842
11:00 - 12:00 AM	TOTAL	2,712	1,705	1,429	3,134	5,846
11:15 - 12:15 AM	TOTAL	2,642	1,720	1,474	3,194	5,836
11:30 - 12:30 AM	TOTAL	2,590	1,712	1,485	3,197	5,787
11:45 - 12:45 PM	TOTAL	2,609	1,695	1,516	3,211	5,820
12:00 - 1:00 PM	TOTAL	2,644	1,673	1,513	3,186	5,830



the following table.

**TABLE I
TRIP GENERATION**

66 Senior Adult Housing - Detached	AM PEAK HOUR			PM PEAK HOUR		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Using ITE Rates	7	12	19	22	14	36

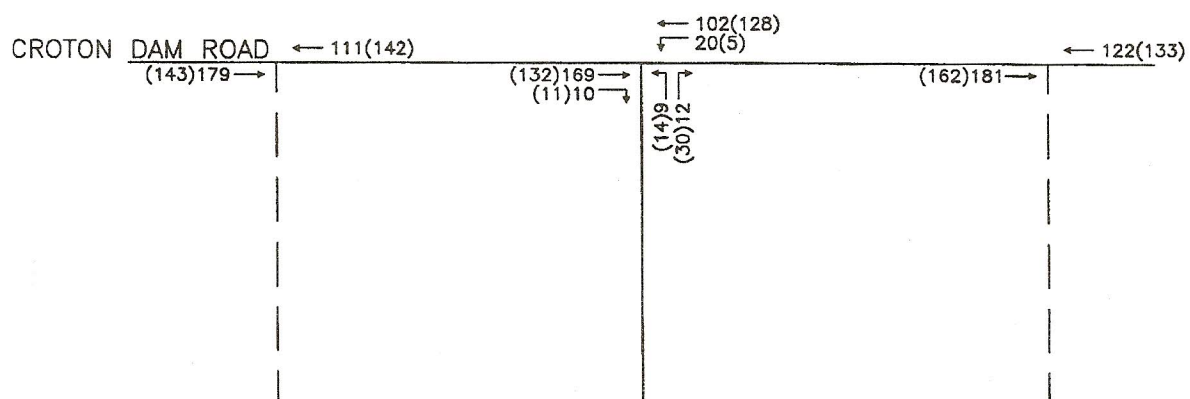
Trip generation estimates for The Project were made utilizing data as published under the Land Use Code 251 – Senior Adult Housing - Detached in the Institute of Transportation Engineers' (ITE) Publication, *Trip Generation, Seventh Edition*. This publication sets forth trip generation rates based on traffic counts conducted at research sites throughout the country. A comparison of the projected trip generation to the existing trip generation of the hospital, as counted, is shown in Table II.

**TABLE II
TRAFFIC GENERATED BY THE PROPOSED SITE**

	AM PEAK HOUR			PM PEAK HOUR		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Using ITE Rates	7	12	19	22	14	36
Current Traffic at Stony Lodge Hospital	30	21	51	16	44	60
Difference	-23	-9	-32	6	-30	-24

As can be seen above, The Project will generate 32 less trips during the morning peak hour and 24 less trips during the evening peak hour than the existing hospital use.

4. Access to The Project is proposed to be provided via two site driveways forming T-intersections with Croton Dam Road, with each of the site driveway approaches under stop control. The existing Stony Lodge Hospital driveway is to be eliminated.
5. Once the magnitude of traffic to be generated by the site is known, it is necessary to assign



LEGEND

- EXISTING ROADWAY
- - - PROPOSED DRIVEWAY
- ← AM PSH (PM PSH)

FIGURE 2



SCHOOR DEPALMA
Engineers and Consultants

200 STATE HIGHWAY NINE
P.O. BOX 900
MANALAPAN, NJ 07726-0900
TEL. (732)577-9000
FAX. (732)462-9888

Stony Lodge Hospital
2006 EXISTING VOLUMES

DATE	DWN BY	FILE NUMBER
3/30/06	JPT	060075501

APPENDIX D

CAPACITY ANALYSES

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2016-EX-AM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	64	68	184	82	61	180
Future Volume (vph)	64	68	184	82	61	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.931		0.958			
Flt Protected	0.976					0.988
Satd. Flow (prot)	1489	0	1684	0	0	1441
Flt Permitted	0.976					0.988
Satd. Flow (perm)	1489	0	1684	0	0	1441
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	7%	3%	1%	7%	4%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	74	78	211	94	70	207
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	0	305	0	0	277
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	64	68	184	82	61	180
Future Vol, veh/h	64	68	184	82	61	180
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	9	7	3	1	7	4
Mvmt Flow	74	78	211	94	70	207

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	606	259	0
Stage 1	259	-	-
Stage 2	347	-	-
Critical Hdwy	5.29	5.67	-
Critical Hdwy Stg 1	4.29	-	-
Critical Hdwy Stg 2	4.29	-	-
Follow-up Hdwy	3.581	3.363	-
Pot Cap-1 Maneuver	549	801	-
Stage 1	838	-	-
Stage 2	786	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	513	800	-
Mov Cap-2 Maneuver	513	-	-
Stage 1	837	-	-
Stage 2	735	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	629	1226
HCM Lane V/C Ratio	-	-	0.241	0.057
HCM Control Delay (s)	-	-	12.5	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.2

Lanes, Volumes, Timings
2: Dale Ave/Hawkes Ave & Croton Dam Rd

2016-EX-AM
06/28/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	111	6	105	147	6	130
Future Volume (vph)	111	6	105	147	6	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993		0.921			
Flt Protected	0.955					0.998
Satd. Flow (prot)	1796	0	1558	0	0	1677
Flt Permitted	0.955					0.998
Satd. Flow (perm)	1796	0	1558	0	0	1677
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	1			11	11	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	0%	7%	6%	33%	7%
Adj. Flow (vph)	129	7	122	171	7	151
Shared Lane Traffic (%)						
Lane Group Flow (vph)	136	0	293	0	0	158
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	6	105	147	6	130
Future Vol, veh/h	111	6	105	147	6	130
Conflicting Peds, #/hr	1	0	0	11	11	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	0	7	6	33	7
Mvmt Flow	129	7	122	171	7	151

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	385	219	0
Stage 1	219	-	-
Stage 2	166	-	-
Critical Hdwy	5.43	5.7	-
Critical Hdwy Stg 1	4.43	-	-
Critical Hdwy Stg 2	4.43	-	-
Follow-up Hdwy	3.527	3.3	-
Pot Cap-1 Maneuver	686	851	-
Stage 1	866	-	-
Stage 2	902	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	674	843	-
Mov Cap-2 Maneuver	674	-	-
Stage 1	858	-	-
Stage 2	895	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	681	1090
HCM Lane V/C Ratio	-	-	0.2	0.006
HCM Control Delay (s)	-	-	11.6	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2016-EX-AM

06/28/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	14	0	7	5	138	10	4	101	0
Future Volume (vph)	0	3	2	14	0	7	5	138	10	4	101	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.942			0.955			0.991				
Flt Protected					0.968			0.998			0.998	
Satd. Flow (prot)	0	1852	0	0	1500	0	0	1692	0	0	1801	0
Flt Permitted					0.968			0.998			0.998	
Satd. Flow (perm)	0	1852	0	0	1500	0	0	1692	0	0	1801	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	8%	0%	0%	0%	5%	10%	50%	2%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	3	18	0	9	6	173	13	5	126	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	27	0	0	192	0	0	131	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	2	14	0	7	5	138	10	4	101	0
Future Vol, veh/h	0	3	2	14	0	7	5	138	10	4	101	0
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	8	0	0	0	5	10	50	2	0
Mvmt Flow	0	4	3	18	0	9	6	173	13	5	126	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	336	338	130	332	332	180	130	0	0	186	0	0
Stage 1	140	140	-	192	192	-	-	-	-	-	-	-
Stage 2	196	198	-	140	140	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.38	6.7	6.3	4.1	-	-	4.6	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.572	4	3.3	2.2	-	-	2.65	-	-
Pot Cap-1 Maneuver	822	777	977	599	580	864	1468	-	-	1146	-	-
Stage 1	975	882	-	788	737	-	-	-	-	-	-	-
Stage 2	954	874	-	842	779	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	804	766	973	591	572	864	1462	-	-	1146	-	-
Mov Cap-2 Maneuver	804	766	-	591	572	-	-	-	-	-	-	-
Stage 1	966	874	-	784	733	-	-	-	-	-	-	-
Stage 2	940	870	-	832	772	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	10.7	0.2	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1462	-	-	837	661	1146	-
HCM Lane V/C Ratio	0.004	-	-	0.007	0.04	0.004	-
HCM Control Delay (s)	7.5	0	-	9.3	10.7	8.2	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2016-EX-AM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	145	0	0	105
Future Volume (vph)	0	0	145	0	0	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frnt						
Flt Protected						
Satd. Flow (prot)	1818	0	1641	0	0	1864
Flt Permitted						
Satd. Flow (perm)	1818	0	1641	0	0	1864
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Adj. Flow (vph)	0	0	179	0	0	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	179	0	0	130
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	145	0	0	105
Future Vol, veh/h	0	0	145	0	0	105
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, %	-5	-	7	-	-	-7
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	0	0	179	0	0	130

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	309	179	0
Stage 1	179	-	-
Stage 2	130	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	749	891	-
Stage 1	900	-	-
Stage 2	934	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	749	891	-
Mov Cap-2 Maneuver	749	-	-
Stage 1	900	-	-
Stage 2	934	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1409
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
5: Croton Dam Rd & Grandview Avenue

2016-EX-AM

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	3	140	5	1	100
Future Volume (vph)	5	3	140	5	1	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.946		0.995			
Flt Protected	0.971					
Satd. Flow (prot)	1501	0	1778	0	0	1668
Flt Permitted	0.971					
Satd. Flow (perm)	1501	0	1778	0	0	1668
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	33%	0%	5%	0%	100%	6%
Adj. Flow (vph)	6	4	169	6	1	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	175	0	0	121
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	3	140	5	1	100
Future Vol, veh/h	5	3	140	5	1	100
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, %	-6	-	-4	-	-	6
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	33	0	5	0	100	6
Mvmt Flow	6	4	169	6	1	120

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	294	172	0
Stage 1	172	-	-
Stage 2	122	-	-
Critical Hdwy	5.53	5.6	-
Critical Hdwy Stg 1	4.53	-	-
Critical Hdwy Stg 2	4.53	-	-
Follow-up Hdwy	3.797	3.3	-
Pot Cap-1 Maneuver	702	902	-
Stage 1	835	-	-
Stage 2	867	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	701	902	-
Mov Cap-2 Maneuver	701	-	-
Stage 1	835	-	-
Stage 2	866	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	765	976
HCM Lane V/C Ratio	-	-	0.013	0.001
HCM Control Delay (s)	-	-	9.8	8.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2016-EX-AM

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	49	141	2	129	99
Future Volume (vph)	2	49	141	2	129	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.870		0.998			
Flt Protected	0.998					0.972
Satd. Flow (prot)	1643	0	1793	0	0	1593
Flt Permitted	0.998					0.972
Satd. Flow (perm)	1643	0	1793	0	0	1593
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				3	3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	3%	100%	12%	7%
Adj. Flow (vph)	2	53	152	2	139	106
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	0	154	0	0	245
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	49	141	2	129	99
Future Vol, veh/h	2	49	141	2	129	99
Conflicting Peds, #/hr	0	0	0	3	3	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, %	-6	-	-4	-	-	4
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	3	100	12	7
Mvmt Flow	2	53	152	2	139	106

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	540	156	0
Stage 1	156	-	-
Stage 2	384	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	606	919	-
Stage 1	924	-	-
Stage 2	787	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	539	917	-
Mov Cap-2 Maneuver	539	-	-
Stage 1	922	-	-
Stage 2	701	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	4.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	892	1361
HCM Lane V/C Ratio	-	-	0.061	0.102
HCM Control Delay (s)	-	-	9.3	7.9
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1	6	10	0	9	0	185	5	3	212	3
Future Volume (vph)	9	1	6	10	0	9	0	185	5	3	212	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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
Ped Bike Factor												
Frt		0.947			0.936			0.996			0.998	
Flt Protected		0.973			0.974						0.999	
Satd. Flow (prot)	0	1945	0	0	1457	0	0	1795	0	0	1722	0
Flt Permitted		0.973			0.974						0.999	
Satd. Flow (perm)	0	1945	0	0	1457	0	0	1795	0	0	1722	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Confl. Peds. (#/hr)									3	3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	50%	0%	11%	0%	3%	0%	33%	5%	0%
Adj. Flow (vph)	10	1	7	11	0	10	0	206	6	3	236	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	21	0	0	212	0	0	242	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	1	6	10	0	9	0	185	5	3	212	3
Future Vol, veh/h	9	1	6	10	0	9	0	185	5	3	212	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	50	0	11	0	3	0	33	5	0
Mvmt Flow	10	1	7	11	0	10	0	206	6	3	236	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	458	459	238	460	457	212	239	0	0	215	0	0
Stage 1	244	244	-	212	212	-	-	-	-	-	-	-
Stage 2	214	215	-	248	245	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6	7.4	6.3	6.21	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.95	4	3.399	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	543	528	817	451	516	811	1340	-	-	1191	-	-
Stage 1	785	727	-	701	739	-	-	-	-	-	-	-
Stage 2	812	746	-	670	717	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	535	525	817	444	513	808	1340	-	-	1187	-	-
Mov Cap-2 Maneuver	535	525	-	444	513	-	-	-	-	-	-	-
Stage 1	785	725	-	699	737	-	-	-	-	-	-	-
Stage 2	802	744	-	662	715	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	11.6	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1340	-	-	614	564	1187	-
HCM Lane V/C Ratio	-	-	-	0.029	0.037	0.003	-
HCM Control Delay (s)	0	-	-	11	11.6	8	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	61	46	17	186	172	51
Future Volume (vph)	61	46	17	186	172	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942				0.969	
Flt Protected	0.972			0.996		
Satd. Flow (prot)	1618	0	0	1765	1727	0
Flt Permitted	0.972			0.996		
Satd. Flow (perm)	1618	0	0	1765	1727	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	0%	4%	5%	12%
Adj. Flow (vph)	68	51	19	207	191	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	0	0	226	248	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	61	46	17	186	172	51
Future Vol, veh/h	61	46	17	186	172	51
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	0	4	5	12
Mvmt Flow	68	51	19	207	191	57
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	465	220	248	0	-	0
Stage 1	220	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.05	6.05	4.1	-	-	-
Critical Hdwy Stg 1	5.05	-	-	-	-	-
Critical Hdwy Stg 2	5.05	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.2	-	-	-
Pot Cap-1 Maneuver	579	822	1330	-	-	-
Stage 1	830	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	570	822	1330	-	-	-
Mov Cap-2 Maneuver	570	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.7	0.6		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1330	-	657	-	-	
HCM Lane V/C Ratio	0.014	-	0.181	-	-	
HCM Control Delay (s)	7.7	0	11.7	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile O(veh)	0	-	0.7	-	-	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2016-EX-AM

06/28/2021

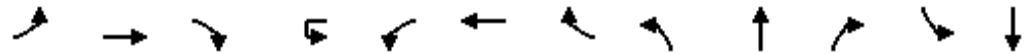
												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	121	2101	108	3	5	890	16	36	150	61	32	110
Future Volume (vph)	121	2101	108	3	5	890	16	36	150	61	32	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	11	11	13	13	13	11	11
Grade (%)		-2%				1%			0%			-4%
Storage Length (ft)	110		190		150		0	0		0	0	
Storage Lanes	1		1		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.997			0.967			0.924
Flt Protected	0.950				0.950				0.993			0.995
Satd. Flow (prot)	1588	3357	1447	0	1356	3174	0	0	1819	0	0	1620
Flt Permitted	0.950				0.950				0.692			0.863
Satd. Flow (perm)	1588	3357	1447	0	1356	3174	0	0	1268	0	0	1405
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)						2						
Link Speed (mph)		40				40			30			30
Link Distance (ft)		1697				1673			161			419
Travel Time (s)		28.9				28.5			3.7			9.5
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	11%	5%	9%	33%	25%	9%	13%	0%	6%	0%	0%	7%
Adj. Flow (vph)	122	2122	109	3	5	899	16	36	152	62	32	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	122	2122	109	0	8	915	0	0	250	0	0	326
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Median Width(ft)		11				11			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02	1.02
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	2	2	2	1	2	2		1	2		1	2
Detector Template				Left				Left			Left	
Leading Detector (ft)	83	83	83	20	83	83		20	83		20	83
Trailing Detector (ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Position(ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Size(ft)	40	40	40	20	40	40		20	40		20	40
Detector 1 Type	Cl+Ex	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)	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0	3.0
Detector 1 Queue (s)	0.0	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	4.0		0.0	4.0
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

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	181
Future Volume (vph)	181
Ideal Flow (vphpl)	1900
Lane Width (ft)	11
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	7%
Adj. Flow (vph)	183
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	R NA
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.02
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

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06/28/2021



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2					8			4	
Detector Phase	5	2	2	1	1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0	11.0
Total Split (s)	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0	31.0
Total Split (%)	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%	20.7%
Maximum Green (s)	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0	25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	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)	7.0	7.0	7.0		7.0	7.0			6.0			6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	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	3.0
Recall Mode	None	Min	Min	None	None	Min		None	None		None	None
v/c Ratio	0.67	0.94	0.11		0.12	0.55			1.00			1.17
Control Delay	71.3	27.9	8.3		62.5	21.7			106.1			152.1
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0			0.0
Total Delay	71.3	27.9	8.3		62.5	21.7			106.1			152.1
Queue Length 50th (ft)	94	675	26		6	251			199			~303
Queue Length 95th (ft)	172	#1201	66		26	338			#429			#564
Internal Link Dist (ft)		1617				1593			81			339
Turn Bay Length (ft)	110		190		150							
Base Capacity (vph)	252	2268	977		215	2146			251			279
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	0.48	0.94	0.11		0.04	0.43			1.00			1.17

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 126

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Weekday AM Hour (7:15 - 8:15)
JMC 15064

Synchro 10 Report
Page 19



Lane Group	SBR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2016-EX-AM
06/28/2021

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	121	2101	108	3	5	890	16	36	150	61	32	110
Future Volume (veh/h)	121	2101	108	3	5	890	16	36	150	61	32	110
Initial Q (Qb), veh	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	
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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1814	1904	1844		1524	1761	1701	1976	1884	1976	2057	1952
Adj Flow Rate, veh/h	122	2122	109		5	899	16	36	152	62	32	111
Peak Hour Factor	0.99	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	11	5	9		25	9	13	0	6	0	0	7
Cap, veh/h	149	2315	1000		6	1874	33	60	192	72	53	125
Arrive On Green	0.09	0.64	0.64		0.00	0.56	0.56	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1727	3617	1562		1451	3363	60	137	972	366	111	632
Grp Volume(v), veh/h	122	2122	109		5	447	468	250	0	0	326	0
Grp Sat Flow(s),veh/h/ln	1727	1808	1562		1451	1673	1750	1475	0	0	1694	0
Q Serve(g_s), s	8.8	64.6	3.4		0.4	20.4	20.4	0.0	0.0	0.0	3.8	0.0
Cycle Q Clear(g_c), s	8.8	64.6	3.4		0.4	20.4	20.4	20.3	0.0	0.0	24.1	0.0
Prop In Lane	1.00		1.00		1.00		0.03	0.14		0.25	0.10	
Lane Grp Cap(c), veh/h	149	2315	1000		6	932	975	325	0	0	367	0
V/C Ratio(X)	0.82	0.92	0.11		0.90	0.48	0.48	0.77	0.00	0.00	0.89	0.00
Avail Cap(c_a), veh/h	273	2434	1051		230	1125	1177	325	0	0	367	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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	56.7	19.8	8.8		62.9	16.9	16.9	48.1	0.0	0.0	50.2	0.0
Incr Delay (d2), s/veh	10.4	5.9	0.0		148.0	0.4	0.4	10.8	0.0	0.0	22.5	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
%ile BackOfQ(50%),veh/ln	4.2	25.7	1.1		0.4	7.5	7.9	8.5	0.0	0.0	12.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	25.7	8.8		210.9	17.3	17.3	58.9	0.0	0.0	72.6	0.0
LnGrp LOS	E	C	A		F	B	B	E	A	A	E	A
Approach Vol, veh/h		2353				920			250			326
Approach Delay, s/veh		27.1				18.3			58.9			72.6
Approach LOS		C				B			E			E
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	87.8		31.0	17.9	77.4		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	2.4	66.6		26.1	10.8	22.4		22.3				
Green Ext Time (p_c), s	0.0	14.3		0.0	0.3	5.6		0.3				

Intersection Summary

HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2016-EX-AM
06/28/2021

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	181
Future Volume (veh/h)	181
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1952
Adj Flow Rate, veh/h	183
Peak Hour Factor	0.99
Percent Heavy Veh, %	7
Cap, veh/h	188
Arrive On Green	0.20
Sat Flow, veh/h	951
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.56
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2016-EX-PM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	68	188	45	39	161
Future Volume (vph)	70	68	188	45	39	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.933		0.974			
Flt Protected	0.975					0.990
Satd. Flow (prot)	1594	0	1676	0	0	1467
Flt Permitted	0.975					0.990
Satd. Flow (perm)	1594	0	1676	0	0	1467
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	4	7		1	1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	4%	7%	8%	2%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	72	70	194	46	40	166
Shared Lane Traffic (%)						
Lane Group Flow (vph)	142	0	240	0	0	206
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	68	188	45	39	161
Future Vol, veh/h	70	68	188	45	39	161
Conflicting Peds, #/hr	4	7	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	4	7	8	2
Mvmt Flow	72	70	194	46	40	166

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	468	225	0
Stage 1	218	-	-
Stage 2	250	-	-
Critical Hdwy	5.21	5.61	-
Critical Hdwy Stg 1	4.21	-	-
Critical Hdwy Stg 2	4.21	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	649	848	-
Stage 1	883	-	-
Stage 2	863	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	624	843	-
Mov Cap-2 Maneuver	624	-	-
Stage 1	882	-	-
Stage 2	831	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	716	1290
HCM Lane V/C Ratio	-	-	0.199	0.031
HCM Control Delay (s)	-	-	11.3	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkes Ave & Croton Dam Rd

2016-EX-PM
06/28/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	112	5	138	118	0	88
Future Volume (vph)	112	5	138	118	0	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.994		0.938			
Flt Protected	0.954					
Satd. Flow (prot)	1796	0	1637	0	0	1748
Flt Permitted	0.954					
Satd. Flow (perm)	1796	0	1637	0	0	1748
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	3	1		1	1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	20%	5%	1%	0%	4%
Adj. Flow (vph)	127	6	157	134	0	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	133	0	291	0	0	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	112	5	138	118	0	88
Future Vol, veh/h	112	5	138	118	0	88
Conflicting Peds, #/hr	3	1	0	1	1	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	20	5	1	0	4
Mvmt Flow	127	6	157	134	0	100
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	328	226	0	0	292	0
Stage 1	225	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	5.42	5.9	-	-	4.1	-
Critical Hdwy Stg 1	4.42	-	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.48	-	-	2.2	-
Pot Cap-1 Maneuver	730	795	-	-	1281	-
Stage 1	865	-	-	-	-	-
Stage 2	948	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	728	794	-	-	1280	-
Mov Cap-2 Maneuver	728	-	-	-	-	-
Stage 1	864	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 731		1280	-	
HCM Lane V/C Ratio	-	- 0.182		-	-	
HCM Control Delay (s)	-	- 11		0	-	
HCM Lane LOS	-	- B		A	-	
HCM 95th %tile Q(veh)	-	- 0.7		0	-	

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

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06/28/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	12	1	3	4	102	12	6	103	2
Future Volume (vph)	0	3	2	12	1	3	4	102	12	6	103	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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		0.955			0.972			0.986			0.998	
Flt Protected					0.964			0.998			0.997	
Satd. Flow (prot)	0	1877	0	0	1602	0	0	1740	0	0	1813	0
Flt Permitted					0.964			0.998			0.997	
Satd. Flow (perm)	0	1877	0	0	1602	0	0	1740	0	0	1813	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	9%	0%	3%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	2	14	1	4	5	120	14	7	121	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	19	0	0	139	0	0	130	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	2	12	1	3	4	102	12	6	103	2
Future Vol, veh/h	0	3	2	12	1	3	4	102	12	6	103	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	1	9	0	3	0
Mvmt Flow	0	4	2	14	1	4	5	120	14	7	121	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	276	280	122	276	274	127	123	0	0	134	0	0
Stage 1	136	136	-	137	137	-	-	-	-	-	-	-
Stage 2	140	144	-	139	137	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.3	6.7	6.3	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	856	798	983	670	627	925	1477	-	-	1463	-	-
Stage 1	977	882	-	864	781	-	-	-	-	-	-	-
Stage 2	975	881	-	862	781	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	846	791	983	661	621	925	1477	-	-	1463	-	-
Mov Cap-2 Maneuver	846	791	-	661	621	-	-	-	-	-	-	-
Stage 1	973	878	-	861	778	-	-	-	-	-	-	-
Stage 2	966	877	-	852	777	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	10.3	0.3	0.4
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1477	-	-	858 695	1463	-	-
HCM Lane V/C Ratio	0.003	-	-	0.007 0.027	0.005	-	-
HCM Control Delay (s)	7.4	0	-	9.2 10.3	7.5	0	-
HCM Lane LOS	A	A	-	A B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0 0.1	0	-	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2016-EX-PM

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	105	0	0	111
Future Volume (vph)	0	0	105	0	0	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frnt						
Flt Protected						
Satd. Flow (prot)	1818	0	1772	0	0	1828
Flt Permitted						
Satd. Flow (perm)	1818	0	1772	0	0	1828
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%
Adj. Flow (vph)	0	0	127	0	0	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	127	0	0	134
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	105	0	0	111
Future Vol, veh/h	0	0	105	0	0	111
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, %	-5	-	7	-	-	-7
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	4
Mvmt Flow	0	0	127	0	0	134

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	261	127	0
Stage 1	127	-	-
Stage 2	134	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	787	945	-
Stage 1	936	-	-
Stage 2	931	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	787	945	-
Mov Cap-2 Maneuver	787	-	-
Stage 1	936	-	-
Stage 2	931	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1472
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
5: Croton Dam Rd & Grandview Avenue

2016-EX-PM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	1	103	2	3	107
Future Volume (vph)	4	1	103	2	3	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977		0.998			
Flt Protected	0.960					0.998
Satd. Flow (prot)	1519	0	1851	0	0	1728
Flt Permitted	0.960					0.998
Satd. Flow (perm)	1519	0	1851	0	0	1728
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	25%	0%	1%	0%	0%	3%
Adj. Flow (vph)	5	1	123	2	4	127
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	125	0	0	131
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	103	2	3	107
Future Vol, veh/h	4	1	103	2	3	107
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, %	-6	-	-4	-	-	6
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	25	0	1	0	0	3
Mvmt Flow	5	1	123	2	4	127
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	259	124	0	0	125	0
Stage 1	124	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	5.45	5.6	-	-	4.1	-
Critical Hdwy Stg 1	4.45	-	-	-	-	-
Critical Hdwy Stg 2	4.45	-	-	-	-	-
Follow-up Hdwy	3.725	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	744	952	-	-	1474	-
Stage 1	883	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	742	952	-	-	1474	-
Mov Cap-2 Maneuver	742	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.7	0	0.2			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	776	1474	-	
HCM Lane V/C Ratio	-	-	0.008	0.002	-	
HCM Control Delay (s)	-	-	9.7	7.4	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

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06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	98	101	3	77	107
Future Volume (vph)	3	98	101	3	77	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.869		0.997			
Flt Protected	0.999					0.979
Satd. Flow (prot)	1626	0	1850	0	0	1732
Flt Permitted	0.999					0.979
Satd. Flow (perm)	1626	0	1850	0	0	1732
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	1%	0%	0%	3%
Adj. Flow (vph)	3	110	113	3	87	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	113	0	116	0	0	207
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	98	101	3	77	107
Future Vol, veh/h	3	98	101	3	77	107
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	1	0	0	3
Mvmt Flow	3	110	113	3	87	120

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	410	116	0
Stage 1	116	-	-
Stage 2	294	-	-
Critical Hdwy	5.2	5.61	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.309	-
Pot Cap-1 Maneuver	690	957	-
Stage 1	950	-	-
Stage 2	839	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	646	956	-
Mov Cap-2 Maneuver	646	-	-
Stage 1	949	-	-
Stage 2	786	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	3.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	943	1483
HCM Lane V/C Ratio	-	-	0.12	0.058
HCM Control Delay (s)	-	-	9.3	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1	3	1	9	10	3	195	1	10	180	6
Future Volume (vph)	6	1	3	1	9	10	3	195	1	10	180	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.963			0.932			0.999			0.996	
Flt Protected		0.969			0.998			0.999			0.998	
Satd. Flow (prot)	0	1807	0	0	1775	0	0	1833	0	0	1758	0
Flt Permitted		0.969			0.998			0.999			0.998	
Satd. Flow (perm)	0	1807	0	0	1775	0	0	1833	0	0	1758	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	33%	100%	0%	11%	0%	1%	0%	20%	2%	0%
Adj. Flow (vph)	7	1	3	1	10	11	3	219	1	11	202	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	22	0	0	223	0	0	220	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	1	3	1	9	10	3	195	1	10	180	6
Future Vol, veh/h	6	1	3	1	9	10	3	195	1	10	180	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	33	100	0	11	0	1	0	20	2	0
Mvmt Flow	7	1	3	1	10	11	3	219	1	11	202	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	464	454	206	456	457	220	209	0	0	220	0	0
Stage 1	228	228	-	226	226	-	-	-	-	-	-	-
Stage 2	236	226	-	230	231	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6.33	7.9	6.3	6.21	4.1	-	-	4.3	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.597	4.4	4	3.399	2.2	-	-	2.38	-	-
Pot Cap-1 Maneuver	539	531	771	392	516	803	1374	-	-	1250	-	-
Stage 1	799	738	-	607	730	-	-	-	-	-	-	-
Stage 2	792	739	-	604	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	519	525	771	386	510	803	1374	-	-	1250	-	-
Mov Cap-2 Maneuver	519	525	-	386	510	-	-	-	-	-	-	-
Stage 1	797	731	-	606	729	-	-	-	-	-	-	-
Stage 2	769	738	-	594	719	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.4		11.1		0.1		0.4					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1374	-	-	576	612	1250	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.02	0.037	0.009	-	-				
HCM Control Delay (s)	7.6	0	-	11.4	11.1	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile O(veh)	0	-	-	0.1	0.1	0	-	-				

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2016-EX-PM

06/28/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	20	36	175	176	68
Future Volume (vph)	37	20	36	175	176	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.953				0.962	
Flt Protected	0.968			0.992		
Satd. Flow (prot)	1594	0	0	1792	1787	0
Flt Permitted	0.968			0.992		
Satd. Flow (perm)	1594	0	0	1792	1787	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	21%	0%	2%	2%	3%
Adj. Flow (vph)	41	22	40	194	196	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	234	272	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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 1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	20	36	175	176	68
Future Vol, veh/h	37	20	36	175	176	68
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	21	0	2	2	3
Mvmt Flow	41	22	40	194	196	76

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	508	234	272
Stage 1	234	-	-
Stage 2	274	-	-
Critical Hdwy	6	6.21	4.1
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.489	2.2
Pot Cap-1 Maneuver	559	770	1303
Stage 1	831	-	-
Stage 2	801	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	540	770	1303
Mov Cap-2 Maneuver	540	-	-
Stage 1	803	-	-
Stage 2	801	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1303	-	603	-	-
HCM Lane V/C Ratio	0.031	-	0.105	-	-
HCM Control Delay (s)	7.8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2016-EX-PM

06/28/2021

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	146	1093	138	2	12	2067	28	46	128	38	17
Future Volume (vph)	8	146	1093	138	2	12	2067	28	46	128	38	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.998			0.976		
Flt Protected		0.950				0.950				0.989		
Satd. Flow (prot)	0	1713	3422	1561	0	1736	3366	0	0	1867	0	0
Flt Permitted		0.950				0.950				0.493		
Satd. Flow (perm)	0	1713	3422	1561	0	1736	3366	0	0	931	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							1					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	3%	1%	0%	0%	3%	0%	0%	1%	5%	6%
Adj. Flow (vph)	8	151	1127	142	2	12	2131	29	47	132	39	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	1127	142	0	14	2160	0	0	218	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2016-EX-PM
06/28/2021



Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	94	164
Future Volume (vph)	94	164
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.920	
Flt Protected	0.997	
Satd. Flow (prot)	1637	0
Flt Permitted	0.934	
Satd. Flow (perm)	1533	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	3%	6%
Adj. Flow (vph)	97	169
Shared Lane Traffic (%)		
Lane Group Flow (vph)	284	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	CI+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	CI+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2016-EX-PM
06/28/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	27.0	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0
Total Split (%)	18.0%	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%
Maximum Green (s)	20.0	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.78	0.47	0.13		0.17	1.11			1.39		
Control Delay		88.6	11.4	8.6		72.9	89.8			252.0		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		88.6	11.4	8.6		72.9	89.8			252.0		
Queue Length 50th (ft)		151	196	35		13	~1280			~283		
Queue Length 95th (ft)		#245	347	82		38	#1423			#457		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		232	2402	1095		235	1939			157		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.69	0.47	0.13		0.06	1.11			1.39		

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 147.6

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Weekday PM Hour (4:30 - 5:30)
JMC 15064

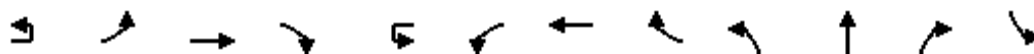
Synchro 10 Report
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Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	20.7%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	1.10	
Control Delay	139.1	
Queue Delay	0.0	
Total Delay	139.1	
Queue Length 50th (ft)	~314	
Queue Length 95th (ft)	#508	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	259	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.10	
Intersection Summary		

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2016-EX-PM
06/28/2021



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	8	146	1093	138	2	12	2067	28	46	128	38	17
Future Volume (veh/h)	8	146	1093	138	2	12	2067	28	46	128	38	17
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1934	1934	1964		1894	1850	1894	1976	1961	1899	1967
Adj Flow Rate, veh/h		151	1127	142		12	2131	29	47	132	39	18
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		3	3	1		0	3	0	0	1	5	6
Cap, veh/h		178	2496	1130		14	2097	28	68	158	43	38
Arrive On Green		0.10	0.68	0.68		0.01	0.59	0.59	0.17	0.17	0.17	0.17
Sat Flow, veh/h		1842	3674	1664		1804	3550	48	213	909	245	67
Grp Volume(v), veh/h		151	1127	142		12	1052	1108	218	0	0	284
Grp Sat Flow(s),veh/h/ln		1842	1837	1664		1804	1757	1841	1367	0	0	1815
Q Serve(g_s), s		11.6	20.4	4.3		1.0	85.0	85.0	1.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s		11.6	20.4	4.3		1.0	85.0	85.0	23.1	0.0	0.0	22.0
Prop In Lane		1.00		1.00		1.00		0.03	0.22		0.18	0.06
Lane Grp Cap(c), veh/h		178	2496	1130		14	1038	1088	268	0	0	342
V/C Ratio(X)		0.85	0.45	0.13		0.84	1.01	1.02	0.81	0.00	0.00	0.83
Avail Cap(c_a), veh/h		256	2496	1130		251	1038	1088	268	0	0	342
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		64.0	10.7	8.1		71.3	29.4	29.4	57.8	0.0	0.0	58.2
Incr Delay (d2), s/veh		16.5	0.1	0.0		71.0	31.4	32.0	17.2	0.0	0.0	15.7
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
%ile BackOfQ(50%),veh/ln		6.2	7.8	1.5		0.7	42.1	44.3	9.1	0.0	0.0	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		80.5	10.8	8.1		142.2	60.8	61.4	75.0	0.0	0.0	73.9
LnGrp LOS		F	B	A		F	F	F	E	A	A	E
Approach Vol, veh/h			1420				2172			218		
Approach Delay, s/veh			17.9				61.6			75.0		
Approach LOS			B				E			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	104.7		31.0	20.9	92.0		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	3.0	22.4		24.0	13.6	87.0		25.1				
Green Ext Time (p_c), s	0.0	10.3		0.2	0.3	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2016-EX-PM
06/28/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	94	164
Future Volume (veh/h)	94	164
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2012	1967
Adj Flow Rate, veh/h	97	169
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	3	6
Cap, veh/h	116	188
Arrive On Green	0.17	0.17
Sat Flow, veh/h	668	1080
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.60
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	284	
Approach Delay, s/veh	73.9	
Approach LOS	E	
Timer - Assigned Phs		

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2016-EX-SAT
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	52	172	60	37	145
Future Volume (vph)	40	52	172	60	37	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.924		0.965			
Flt Protected	0.979					0.990
Satd. Flow (prot)	1809	0	1699	0	0	1501
Flt Permitted	0.979					0.990
Satd. Flow (perm)	1809	0	1699	0	0	1501
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	1	1		3	3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	2%	3%	0%	0%	1%
Parking (#/hr)		5				5
Adj. Flow (vph)	48	62	205	71	44	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	110	0	276	0	0	217
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.07	1.07	1.11	1.32
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 2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	52	172	60	37	145
Future Vol, veh/h	40	52	172	60	37	145
Conflicting Peds, #/hr	1	1	0	3	3	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, %	-6	-	-3	-	-	3
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	2	3	0	0	1
Mvmt Flow	48	62	205	71	44	173

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	506	245	0
Stage 1	244	-	-
Stage 2	262	-	-
Critical Hdwy	5.2	5.62	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.318	-
Pot Cap-1 Maneuver	627	827	-
Stage 1	869	-	-
Stage 2	858	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	601	824	-
Mov Cap-2 Maneuver	601	-	-
Stage 1	866	-	-
Stage 2	825	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	710	1291
HCM Lane V/C Ratio	-	-	0.154	0.034
HCM Control Delay (s)	-	-	11	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkles Ave & Croton Dam Rd

2016-EX-SAT
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	113	2	106	118	0	69
Future Volume (vph)	113	2	106	118	0	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998		0.929			
Flt Protected	0.953					
Satd. Flow (prot)	1852	0	1648	0	0	1818
Flt Permitted	0.953					
Satd. Flow (perm)	1852	0	1648	0	0	1818
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%
Adj. Flow (vph)	127	2	119	133	0	78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	129	0	252	0	0	78
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	113	2	106	118	0	69
Future Vol, veh/h	113	2	106	118	0	69
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, %	-5	-	-3	-	-	-5
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	1	0	0
Mvmt Flow	127	2	119	133	0	78

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	264	186	0
Stage 1	186	-	-
Stage 2	78	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	785	884	-
Stage 1	896	-	-
Stage 2	971	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	785	884	-
Mov Cap-2 Maneuver	785	-	-
Stage 1	896	-	-
Stage 2	971	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	787	1325
HCM Lane V/C Ratio	-	-	0.164	-
HCM Control Delay (s)	-	-	10.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2016-EX-SAT

06/28/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	7	2	4	2	3	100	15	4	106	3
Future Volume (vph)	2	2	7	2	4	2	3	100	15	4	106	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.910			0.970			0.983			0.997	
Flt Protected		0.992			0.989			0.999			0.998	
Satd. Flow (prot)	0	1638	0	0	1640	0	0	1727	0	0	1864	0
Flt Permitted		0.992			0.989			0.999			0.998	
Satd. Flow (perm)	0	1638	0	0	1640	0	0	1727	0	0	1864	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	67%	1%	0%	0%	0%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	2	2	8	2	5	2	3	116	17	5	123	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	9	0	0	136	0	0	131	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	2	7	2	4	2	3	100	15	4	106	3
Future Vol, veh/h	2	2	7	2	4	2	3	100	15	4	106	3
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	50	0	0	0	0	0	67	1	0	0	0	0
Mvmt Flow	2	2	8	2	5	2	3	116	17	5	123	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	271	274	125	271	267	127	126	0	0	133	0	0
Stage 1	135	135	-	131	131	-	-	-	-	-	-	-
Stage 2	136	139	-	140	136	-	-	-	-	-	-	-
Critical Hdwy	4.6	3.5	4.7	7.3	6.7	6.3	4.77	-	-	4.1	-	-
Critical Hdwy Stg 1	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.95	4	3.3	3.5	4	3.3	2.803	-	-	2.2	-	-
Pot Cap-1 Maneuver	745	800	981	675	633	925	1141	-	-	1464	-	-
Stage 1	857	882	-	871	786	-	-	-	-	-	-	-
Stage 2	856	882	-	861	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	734	794	981	664	629	924	1141	-	-	1464	-	-
Mov Cap-2 Maneuver	734	794	-	664	629	-	-	-	-	-	-	-
Stage 1	854	878	-	868	784	-	-	-	-	-	-	-
Stage 2	845	879	-	848	779	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.1		10.3		0.2		0.3	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	889 693	1464	-	-
HCM Lane V/C Ratio	0.003	-	-	0.014 0.013	0.003	-	-
HCM Control Delay (s)	8.2	0	-	9.1 10.3	7.5	0	-
HCM Lane LOS	A	A	-	A B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0 0	0	-	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2016-EX-SAT

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	104	0	0	113
Future Volume (vph)	0	0	104	0	0	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1818	0	1738	0	0	1882
Flt Permitted						
Satd. Flow (perm)	1818	0	1738	0	0	1882
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	0	0	106	0	0	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	106	0	0	115
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	104	0	0	113
Future Vol, veh/h	0	0	104	0	0	113
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-5	-	7	-	-	-7
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	0	106	0	0	115

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	222	107	0
Stage 1	107	-	-
Stage 2	115	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	820	967	-
Stage 1	950	-	-
Stage 2	945	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	819	966	-
Mov Cap-2 Maneuver	819	-	-
Stage 1	949	-	-
Stage 2	945	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1496
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
5: Croton Dam Rd & Grandview Avenue

2016-EX-SAT
06/28/2021

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	2	92	12	3	103
Future Volume (vph)	10	2	92	12	3	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.979		0.984			
Flt Protected	0.959					0.999
Satd. Flow (prot)	1837	0	1793	0	0	1763
Flt Permitted	0.959					0.999
Satd. Flow (perm)	1837	0	1793	0	0	1763
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	2%	9%	0%	1%
Adj. Flow (vph)	11	2	97	13	3	108
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	110	0	0	111
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	2	92	12	3	103
Future Vol, veh/h	10	2	92	12	3	103
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, %	-6	-	-4	-	-	6
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	9	0	1
Mvmt Flow	11	2	97	13	3	108
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	218	104	0	0	110	0
Stage 1	104	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	5.2	5.6	-	-	4.1	-
Critical Hdwy Stg 1	4.2	-	-	-	-	-
Critical Hdwy Stg 2	4.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	833	973	-	-	1493	-
Stage 1	958	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	831	973	-	-	1493	-
Mov Cap-2 Maneuver	831	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.3	0		0.2		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	852	1493	-	
HCM Lane V/C Ratio	-	-	0.015	0.002	-	
HCM Control Delay (s)	-	-	9.3	7.4	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2016-EX-SAT
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	85	85	9	74	105
Future Volume (vph)	1	85	85	9	74	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.866		0.987			
Flt Protected	0.999					0.980
Satd. Flow (prot)	1637	0	1832	0	0	1742
Flt Permitted	0.999					0.980
Satd. Flow (perm)	1637	0	1832	0	0	1742
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	1%	0%	3%	0%
Adj. Flow (vph)	1	93	93	10	81	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	103	0	0	196
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	85	85	9	74	105
Future Vol, veh/h	1	85	85	9	74	105
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	3	0
Mvmt Flow	1	93	93	10	81	115

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	376	99	0
Stage 1	99	-	-
Stage 2	277	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	713	978	-
Stage 1	961	-	-
Stage 2	849	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	671	977	-
Mov Cap-2 Maneuver	671	-	-
Stage 1	960	-	-
Stage 2	800	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	3.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	972	1480
HCM Lane V/C Ratio	-	-	0.097	0.055
HCM Control Delay (s)	-	-	9.1	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1	3	1	0	9	4	163	3	8	175	7
Future Volume (vph)	7	1	3	1	0	9	4	163	3	8	175	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.966			0.877			0.998			0.995	
Flt Protected		0.968			0.995			0.999			0.998	
Satd. Flow (prot)	0	1628	0	0	1666	0	0	1787	0	0	1780	0
Flt Permitted		0.968			0.995			0.999			0.998	
Satd. Flow (perm)	0	1628	0	0	1666	0	0	1787	0	0	1780	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	7%	100%	33%	0%	0%	11%	25%	3%	0%	0%	1%	14%
Adj. Flow (vph)	8	1	3	1	0	10	5	185	3	9	199	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	11	0	0	193	0	0	216	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	1	3	1	0	9	4	163	3	8	175	7
Future Vol, veh/h	7	1	3	1	0	9	4	163	3	8	175	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	7	100	33	0	0	11	25	3	0	0	1	14
Mvmt Flow	8	1	3	1	0	10	5	185	3	9	199	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	423	419	203	420	422	187	207	0	0	188	0	0
Stage 1	221	221	-	197	197	-	-	-	-	-	-	-
Stage 2	202	198	-	223	225	-	-	-	-	-	-	-
Critical Hdwy	6.77	7.1	6.33	6.9	6.3	6.21	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.9	3.597	3.5	4	3.399	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	558	422	774	560	539	837	1238	-	-	1398	-	-
Stage 1	789	585	-	818	750	-	-	-	-	-	-	-
Stage 2	806	599	-	794	730	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	546	417	774	551	533	837	1238	-	-	1398	-	-
Mov Cap-2 Maneuver	546	417	-	551	533	-	-	-	-	-	-	-
Stage 1	785	581	-	814	746	-	-	-	-	-	-	-
Stage 2	792	596	-	783	725	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		9.6		0.2		0.3	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1238	-	-	576	796	1398	-
HCM Lane V/C Ratio	0.004	-	-	0.022	0.014	0.007	-
HCM Control Delay (s)	7.9	0	-	11.4	9.6	7.6	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2016-EX-SAT
06/28/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	15	20	159	175	59
Future Volume (vph)	63	15	20	159	175	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.974				0.966	
Flt Protected	0.961			0.995		
Satd. Flow (prot)	1736	0	0	1765	1799	0
Flt Permitted	0.961			0.995		
Satd. Flow (perm)	1736	0	0	1765	1799	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	4%	2%	2%
Adj. Flow (vph)	64	15	20	162	179	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	0	0	182	239	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	15	20	159	175	59
Future Vol, veh/h	63	15	20	159	175	59
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	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	4	2	2
Mvmt Flow	64	15	20	162	179	60

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	411	209	239
Stage 1	209	-	-
Stage 2	202	-	-
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	629	846	1340
Stage 1	850	-	-
Stage 2	856	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	619	846	1340
Mov Cap-2 Maneuver	619	-	-
Stage 1	836	-	-
Stage 2	856	-	-

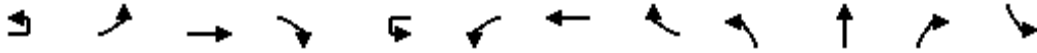
Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1340	-	653	-	-
HCM Lane V/C Ratio	0.015	-	0.122	-	-
HCM Control Delay (s)	7.7	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2016-EX-SAT

06/28/2021

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	117	925	124	1	11	1361	32	55	113	54	46
Future Volume (vph)	3	117	925	124	1	11	1361	32	55	113	54	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.997			0.967		
Flt Protected		0.950				0.950				0.988		
Satd. Flow (prot)	0	1729	3455	1531	0	1736	3363	0	0	1839	0	0
Flt Permitted		0.950				0.950				0.661		
Satd. Flow (perm)	0	1729	3455	1531	0	1736	3363	0	0	1230	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							3					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	3%	0%	0%	3%	0%	4%	2%	0%	2%
Adj. Flow (vph)	3	121	954	128	1	11	1403	33	57	116	56	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	954	128	0	12	1436	0	0	229	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Peak Saturday Midday Hour (10:30 - 11:30)
JMC 15064

Synchro 10 Report
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Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

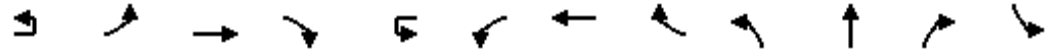
2016-EX-SAT
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Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	99	151
Future Volume (vph)	99	151
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.931	
Flt Protected	0.992	
Satd. Flow (prot)	1707	0
Flt Permitted	0.860	
Satd. Flow (perm)	1480	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	0%	2%
Adj. Flow (vph)	102	156
Shared Lane Traffic (%)		
Lane Group Flow (vph)	305	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	CI+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	CI+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2016-EX-SAT
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Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	22.0	22.0	67.0	67.0	22.0	22.0	67.0		31.0	31.0		31.0
Total Split (%)	18.3%	18.3%	55.8%	55.8%	18.3%	18.3%	55.8%		25.8%	25.8%		25.8%
Maximum Green (s)	15.0	15.0	60.0	60.0	15.0	15.0	60.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.64	0.46	0.14		0.12	0.89			0.82		
Control Delay		64.6	13.4	10.9		55.8	34.2			67.3		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		64.6	13.4	10.9		55.8	34.2			67.3		
Queue Length 50th (ft)		90	154	31		9	482			169		
Queue Length 95th (ft)		157	280	78		29	601			#324		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		235	2136	946		236	1832			279		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.53	0.45	0.14		0.05	0.78			0.82		

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 111.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Croton Dam Rd & NYS Route 9A



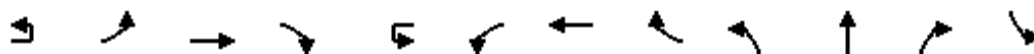


Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	25.8%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	0.91	
Control Delay	75.4	
Queue Delay	0.0	
Total Delay	75.4	
Queue Length 50th (ft)	230	
Queue Length 95th (ft)	#422	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	335	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.91	
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2016-EX-SAT
06/28/2021



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	3	117	925	124	1	11	1361	32	55	113	54	46
Future Volume (veh/h)	3	117	925	124	1	11	1361	32	55	113	54	46
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1949	1949	1934		1894	1850	1894	1914	1945	1976	2027
Adj Flow Rate, veh/h		121	954	128		11	1403	33	57	116	56	47
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	3		0	3	0	4	2	0	2
Cap, veh/h		158	2082	922		15	1704	40	108	178	76	88
Arrive On Green		0.09	0.56	0.56		0.01	0.49	0.49	0.20	0.20	0.20	0.20
Sat Flow, veh/h		1856	3702	1639		1804	3510	82	285	909	386	202
Grp Volume(v), veh/h		121	954	128		11	702	734	229	0	0	305
Grp Sat Flow(s),veh/h/ln		1856	1851	1639		1804	1757	1835	1580	0	0	1832
Q Serve(g_s), s		5.5	13.0	3.2		0.5	29.2	29.3	0.0	0.0	0.0	2.0
Cycle Q Clear(g_c), s		5.5	13.0	3.2		0.5	29.2	29.3	11.5	0.0	0.0	13.6
Prop In Lane		1.00		1.00		1.00		0.04	0.25		0.24	0.15
Lane Grp Cap(c), veh/h		158	2082	922		15	853	891	362	0	0	407
V/C Ratio(X)		0.77	0.46	0.14		0.76	0.82	0.82	0.63	0.00	0.00	0.75
Avail Cap(c_a), veh/h		326	2600	1151		317	1234	1288	518	0	0	577
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		38.3	11.0	8.9		42.3	18.8	18.9	32.0	0.0	0.0	33.0
Incr Delay (d2), s/veh		7.6	0.2	0.1		55.1	3.1	3.0	1.8	0.0	0.0	3.4
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
%ile BackOfQ(50%),veh/ln		2.7	4.6	1.0		0.4	11.1	11.6	4.5	0.0	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		45.8	11.2	8.9		97.4	21.9	21.8	33.8	0.0	0.0	36.4
LnGrp LOS		D	B	A		F	C	C	C	A	A	D
Approach Vol, veh/h			1203				1447			229		
Approach Delay, s/veh			14.4				22.4			33.8		
Approach LOS			B				C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	55.1		22.7	14.3	48.5		22.7				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		25.0	15.0	60.0		25.0				
Max Q Clear Time (g_c+I1), s	2.5	15.0		15.6	7.5	31.3		13.5				
Green Ext Time (p_c), s	0.0	7.9		1.1	0.2	10.2		0.9				

Intersection Summary

HCM 6th Ctrl Delay 21.6
HCM 6th LOS C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2016-EX-SAT
06/28/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	99	151
Future Volume (veh/h)	99	151
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2057	2027
Adj Flow Rate, veh/h	102	156
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	0	2
Cap, veh/h	136	183
Arrive On Green	0.20	0.20
Sat Flow, veh/h	693	937
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.51
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	305	
Approach Delay, s/veh	36.4	
Approach LOS	D	
Timer - Assigned Phs		

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-NB-AM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	74	206	90	67	207
Future Volume (vph)	70	74	206	90	67	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.930		0.959			
Flt Protected	0.976					0.988
Satd. Flow (prot)	1488	0	1686	0	0	1442
Flt Permitted	0.976					0.988
Satd. Flow (perm)	1488	0	1686	0	0	1442
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	7%	3%	1%	7%	4%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	80	85	237	103	77	238
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	340	0	0	315
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	74	206	90	67	207
Future Vol, veh/h	70	74	206	90	67	207
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	9	7	3	1	7	4
Mvmt Flow	80	85	237	103	77	238

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	682	290	0
Stage 1	290	-	-
Stage 2	392	-	-
Critical Hdwy	5.29	5.67	-
Critical Hdwy Stg 1	4.29	-	-
Critical Hdwy Stg 2	4.29	-	-
Follow-up Hdwy	3.581	3.363	-
Pot Cap-1 Maneuver	508	774	-
Stage 1	819	-	-
Stage 2	761	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	469	773	-
Mov Cap-2 Maneuver	469	-	-
Stage 1	818	-	-
Stage 2	704	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	588	1190
HCM Lane V/C Ratio	-	-	0.281	0.065
HCM Control Delay (s)	-	-	13.5	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0.2

Lanes, Volumes, Timings
2: Dale Ave/Hawkles Ave & Croton Dam Rd

2025-NB-AM

06/28/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	124	7	117	164	7	149
Future Volume (vph)	124	7	117	164	7	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993		0.921			
Flt Protected	0.955					0.998
Satd. Flow (prot)	1796	0	1558	0	0	1677
Flt Permitted	0.955					0.998
Satd. Flow (perm)	1796	0	1558	0	0	1677
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	1			11	11	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	0%	7%	6%	33%	7%
Adj. Flow (vph)	144	8	136	191	8	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	0	327	0	0	181
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	124	7	117	164	7	149
Future Vol, veh/h	124	7	117	164	7	149
Conflicting Peds, #/hr	1	0	0	11	11	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	0	7	6	33	7
Mvmt Flow	144	8	136	191	8	173

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	433	243	0
Stage 1	243	-	-
Stage 2	190	-	-
Critical Hdwy	5.43	5.7	-
Critical Hdwy Stg 1	4.43	-	-
Critical Hdwy Stg 2	4.43	-	-
Follow-up Hdwy	3.527	3.3	-
Pot Cap-1 Maneuver	652	828	-
Stage 1	851	-	-
Stage 2	885	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	640	820	-
Mov Cap-2 Maneuver	640	-	-
Stage 1	843	-	-
Stage 2	877	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	648	1057
HCM Lane V/C Ratio	-	-	0.235	0.008
HCM Control Delay (s)	-	-	12.3	8.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-NB-AM

06/28/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	15	0	15	5	154	11	10	113	0
Future Volume (vph)	0	3	2	15	0	15	5	154	11	10	113	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.942			0.932			0.991				
Flt Protected					0.976			0.999			0.996	
Satd. Flow (prot)	0	1852	0	0	1495	0	0	1694	0	0	1759	0
Flt Permitted					0.976			0.999			0.996	
Satd. Flow (perm)	0	1852	0	0	1495	0	0	1694	0	0	1759	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	8%	0%	0%	0%	5%	10%	50%	2%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	3	19	0	19	6	193	14	13	141	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	38	0	0	213	0	0	154	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	2	15	0	15	5	154	11	10	113	0
Future Vol, veh/h	0	3	2	15	0	15	5	154	11	10	113	0
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	8	0	0	0	5	10	50	2	0
Mvmt Flow	0	4	3	19	0	19	6	193	14	13	141	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	393	390	145	383	383	200	145	0	0	207	0	0
Stage 1	171	171	-	212	212	-	-	-	-	-	-	-
Stage 2	222	219	-	171	171	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.38	6.7	6.3	4.1	-	-	4.6	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.572	4	3.3	2.2	-	-	2.65	-	-
Pot Cap-1 Maneuver	791	759	964	552	542	841	1450	-	-	1124	-	-
Stage 1	964	878	-	768	722	-	-	-	-	-	-	-
Stage 2	945	871	-	809	754	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	759	742	960	541	530	841	1444	-	-	1124	-	-
Mov Cap-2 Maneuver	759	742	-	541	530	-	-	-	-	-	-	-
Stage 1	955	863	-	764	718	-	-	-	-	-	-	-
Stage 2	919	867	-	793	741	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.4		10.8		0.2		0.7					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1444	-	-	816	658	1124	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.008	0.057	0.011	-	-				
HCM Control Delay (s)	7.5	0	-	9.4	10.8	8.2	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile O(veh)	0	-	-	0	0.2	0	-	-				

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-NB-AM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	12	159	10	20	114
Future Volume (vph)	9	12	159	10	20	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.922		0.992			
Flt Protected	0.979					0.993
Satd. Flow (prot)	1641	0	1635	0	0	1856
Flt Permitted	0.979					0.993
Satd. Flow (perm)	1641	0	1635	0	0	1856
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Adj. Flow (vph)	11	15	196	12	25	141
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	0	208	0	0	166
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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 1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	12	159	10	20	114
Future Vol, veh/h	9	12	159	10	20	114
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, %	-5	-	7	-	-	-7
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	11	15	196	12	25	141

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	393	202	0
Stage 1	202	-	-
Stage 2	191	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	686	868	-
Stage 1	885	-	-
Stage 2	892	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	672	868	-
Mov Cap-2 Maneuver	672	-	-
Stage 1	885	-	-
Stage 2	874	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	772	1375
HCM Lane V/C Ratio	-	-	0.034	0.018
HCM Control Delay (s)	-	-	9.8	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-NB-AM

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	3	165	5	1	129
Future Volume (vph)	5	3	165	5	1	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.946		0.996			
Flt Protected	0.971					
Satd. Flow (prot)	1501	0	1780	0	0	1671
Flt Permitted	0.971					
Satd. Flow (perm)	1501	0	1780	0	0	1671
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	33%	0%	5%	0%	100%	6%
Adj. Flow (vph)	6	4	199	6	1	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	205	0	0	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	3	165	5	1	129
Future Vol, veh/h	5	3	165	5	1	129
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, %	-6	-	-4	-	-	6
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	33	0	5	0	100	6
Mvmt Flow	6	4	199	6	1	155
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	359	202	0	0	205	0
Stage 1	202	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	5.53	5.6	-	-	5.1	-
Critical Hdwy Stg 1	4.53	-	-	-	-	-
Critical Hdwy Stg 2	4.53	-	-	-	-	-
Follow-up Hdwy	3.797	3.3	-	-	3.1	-
Pot Cap-1 Maneuver	656	873	-	-	948	-
Stage 1	816	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	655	873	-	-	948	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10	0		0.1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	723		948	-	
HCM Lane V/C Ratio	-	0.013		0.001	-	
HCM Control Delay (s)	-	10		8.8	0	
HCM Lane LOS	-	B		A	A	
HCM 95th %tile Q(veh)	-	0		0	-	

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-NB-AM

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	54	166	2	141	128
Future Volume (vph)	2	54	166	2	141	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.869		0.998			
Flt Protected	0.998					0.974
Satd. Flow (prot)	1641	0	1796	0	0	1599
Flt Permitted	0.998					0.974
Satd. Flow (perm)	1641	0	1796	0	0	1599
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				3	3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	3%	100%	12%	7%
Adj. Flow (vph)	2	58	178	2	152	138
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	180	0	0	290
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	54	166	2	141	128
Future Vol, veh/h	2	54	166	2	141	128
Conflicting Peds, #/hr	0	0	0	3	3	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, %	-6	-	-4	-	-	4
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	3	100	12	7
Mvmt Flow	2	58	178	2	152	138

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	624	182	0
Stage 1	182	-	-
Stage 2	442	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	557	892	-
Stage 1	908	-	-
Stage 2	756	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	487	890	-
Mov Cap-2 Maneuver	487	-	-
Stage 1	906	-	-
Stage 2	662	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	4.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	864	1331
HCM Lane V/C Ratio	-	-	0.07	0.114
HCM Control Delay (s)	-	-	9.5	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.4

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1	7	11	0	10	0	214	5	3	252	3
Future Volume (vph)	10	1	7	11	0	10	0	214	5	3	252	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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
Ped Bike Factor												
Frt		0.946			0.935			0.997			0.999	
Flt Protected		0.973			0.975						0.999	
Satd. Flow (prot)	0	1943	0	0	1458	0	0	1797	0	0	1724	0
Flt Permitted		0.973			0.975						0.999	
Satd. Flow (perm)	0	1943	0	0	1458	0	0	1797	0	0	1724	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Confl. Peds. (#/hr)									3	3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	50%	0%	11%	0%	3%	0%	33%	5%	0%
Adj. Flow (vph)	11	1	8	12	0	11	0	238	6	3	280	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	23	0	0	244	0	0	286	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1	7	11	0	10	0	214	5	3	252	3
Future Vol, veh/h	10	1	7	11	0	10	0	214	5	3	252	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	50	0	11	0	3	0	33	5	0
Mvmt Flow	11	1	8	12	0	11	0	238	6	3	280	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	535	535	282	536	533	244	283	0	0	247	0	0
Stage 1	288	288	-	244	244	-	-	-	-	-	-	-
Stage 2	247	247	-	292	289	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6	7.4	6.3	6.21	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.95	4	3.399	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	487	482	774	401	469	778	1291	-	-	1158	-	-
Stage 1	747	699	-	673	717	-	-	-	-	-	-	-
Stage 2	783	725	-	634	688	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	479	479	774	394	466	776	1291	-	-	1154	-	-
Mov Cap-2 Maneuver	479	479	-	394	466	-	-	-	-	-	-	-
Stage 1	747	697	-	671	715	-	-	-	-	-	-	-
Stage 2	772	723	-	625	686	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		12.3		0		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1291	-	-	562 515	1154	-	-
HCM Lane V/C Ratio	-	-	-	0.036 0.045	0.003	-	-
HCM Control Delay (s)	0	-	-	11.6 12.3	8.1	0	-
HCM Lane LOS	A	-	-	B B	A A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1 0.1	0	-	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-NB-AM

06/28/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	79	50	19	215	208	55
Future Volume (vph)	79	50	19	215	208	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.972	
Flt Protected	0.970			0.996		
Satd. Flow (prot)	1623	0	0	1764	1735	0
Flt Permitted	0.970			0.996		
Satd. Flow (perm)	1623	0	0	1764	1735	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	0%	4%	5%	12%
Adj. Flow (vph)	88	56	21	239	231	61
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	0	260	292	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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 2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	50	19	215	208	55
Future Vol, veh/h	79	50	19	215	208	55
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	0	4	5	12
Mvmt Flow	88	56	21	239	231	61

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	543	262	292
Stage 1	262	-	-
Stage 2	281	-	-
Critical Hdwy	6.05	6.05	4.1
Critical Hdwy Stg 1	5.05	-	-
Critical Hdwy Stg 2	5.05	-	-
Follow-up Hdwy	3.545	3.345	2.2
Pot Cap-1 Maneuver	526	781	1281
Stage 1	798	-	-
Stage 2	784	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	516	781	1281
Mov Cap-2 Maneuver	516	-	-
Stage 1	783	-	-
Stage 2	784	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1281	-	594	-	-
HCM Lane V/C Ratio	0.016	-	0.241	-	-
HCM Control Delay (s)	7.9	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-AM

06/28/2021

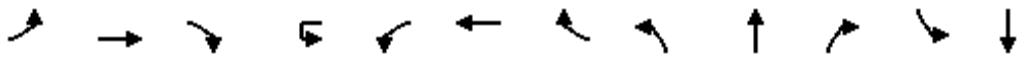
												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	132	2298	131	3	7	976	17	47	167	80	35	125
Future Volume (vph)	132	2298	131	3	7	976	17	47	167	80	35	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	11	11	13	13	13	11	11
Grade (%)		-2%				1%			0%			-4%
Storage Length (ft)	110		190		150		0	0		0	0	
Storage Lanes	1		1		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.997			0.963			0.925
Flt Protected	0.950				0.950				0.992			0.995
Satd. Flow (prot)	1588	3357	1447	0	1363	3174	0	0	1814	0	0	1622
Flt Permitted	0.950				0.950				0.591			0.823
Satd. Flow (perm)	1588	3357	1447	0	1363	3174	0	0	1081	0	0	1341
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)						2						
Link Speed (mph)		40				40			30			30
Link Distance (ft)		1697				1673			161			419
Travel Time (s)		28.9				28.5			3.7			9.5
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	11%	5%	9%	33%	25%	9%	13%	0%	6%	0%	0%	7%
Adj. Flow (vph)	133	2321	132	3	7	986	17	47	169	81	35	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	2321	132	0	10	1003	0	0	297	0	0	361
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Median Width(ft)		11				11			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02	1.02
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	2	2	2	1	2	2		1	2		1	2
Detector Template				Left				Left			Left	
Leading Detector (ft)	83	83	83	20	83	83		20	83		20	83
Trailing Detector (ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Position(ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Size(ft)	40	40	40	20	40	40		20	40		20	40
Detector 1 Type	Cl+Ex	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)	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0	3.0
Detector 1 Queue (s)	0.0	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	4.0		0.0	4.0
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

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width (ft)	11
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	7%
Adj. Flow (vph)	200
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	R NA
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.02
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-AM

06/28/2021

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2					8			4	
Detector Phase	5	2	2	1	1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0	11.0
Total Split (s)	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0	31.0
Total Split (%)	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%	20.7%
Maximum Green (s)	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0	25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	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)	7.0	7.0	7.0		7.0	7.0			6.0			6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	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	3.0
Recall Mode	None	Min	Min	None	None	Min		None	None		None	None
v/c Ratio	0.70	1.02	0.14		0.14	0.61			1.39			1.36
Control Delay	72.7	46.4	8.5		63.1	23.3			238.4			222.2
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0			0.0
Total Delay	72.7	46.4	8.5		63.1	23.3			238.4			222.2
Queue Length 50th (ft)	103	~882	32		8	291			~309			~372
Queue Length 95th (ft)	186	#1399	79		29	384			#561			#648
Internal Link Dist (ft)		1617				1593			81			339
Turn Bay Length (ft)	110		190		150							
Base Capacity (vph)	252	2267	977		216	2145			214			266
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	0.53	1.02	0.14		0.05	0.47			1.39			1.36

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 126.1

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A





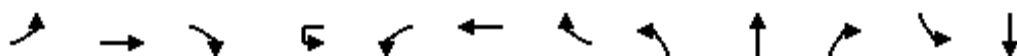
Lane Group	SBR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-NB-AM

06/28/2021



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	132	2298	131	3	7	976	17	47	167	80	35	125
Future Volume (veh/h)	132	2298	131	3	7	976	17	47	167	80	35	125
Initial Q (Qb), veh	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	
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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1814	1904	1844		1524	1761	1701	1976	1884	1976	2057	1952
Adj Flow Rate, veh/h	133	2321	132		7	986	17	47	169	81	35	126
Peak Hour Factor	0.99	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	11	5	9		25	9	13	0	6	0	0	7
Cap, veh/h	160	2352	1016		7	1894	33	61	159	71	51	118
Arrive On Green	0.09	0.65	0.65		0.01	0.56	0.56	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1727	3617	1562		1451	3365	58	151	832	369	107	615
Grp Volume(v), veh/h	133	2321	132		7	490	513	297	0	0	361	0
Grp Sat Flow(s),veh/h/ln	1727	1808	1562		1451	1673	1750	1353	0	0	1619	0
Q Serve(g_s), s	9.9	81.8	4.2		0.6	23.7	23.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.9	81.8	4.2		0.6	23.7	23.7	25.0	0.0	0.0	25.0	0.0
Prop In Lane	1.00		1.00		1.00		0.03	0.16		0.27	0.10	
Lane Grp Cap(c), veh/h	160	2352	1016		7	942	985	291	0	0	340	0
V/C Ratio(X)	0.83	0.99	0.13		0.94	0.52	0.52	1.02	0.00	0.00	1.06	0.00
Avail Cap(c_a), veh/h	264	2354	1017		222	1088	1139	291	0	0	340	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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	58.3	22.3	8.7		65.0	17.6	17.6	53.4	0.0	0.0	53.6	0.0
Incr Delay (d2), s/veh	10.8	15.5	0.1		134.5	0.4	0.4	58.3	0.0	0.0	65.9	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
%ile BackOfQ(50%),veh/ln	4.7	35.3	1.4		0.5	8.8	9.2	14.4	0.0	0.0	17.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	37.8	8.8		199.4	18.1	18.1	111.7	0.0	0.0	119.5	0.0
LnGrp LOS	E	D	A		F	B	B	F	A	A	F	A
Approach Vol, veh/h		2586				1010			297			361
Approach Delay, s/veh		37.9				19.3			111.7			119.5
Approach LOS		D				B			F			F
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	91.9		31.0	19.1	80.5		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	2.6	83.8		27.0	11.9	25.7		27.0				
Green Ext Time (p_c), s	0.0	1.1		0.0	0.3	6.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay 45.6

HCM 6th LOS D

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-NB-AM
06/28/2021

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	198
Future Volume (veh/h)	198
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1952
Adj Flow Rate, veh/h	200
Peak Hour Factor	0.99
Percent Heavy Veh, %	7
Cap, veh/h	172
Arrive On Green	0.19
Sat Flow, veh/h	897
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.55
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-NB-PM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	77	74	219	49	43	186
Future Volume (vph)	77	74	219	49	43	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.934		0.975			
Flt Protected	0.975					0.991
Satd. Flow (prot)	1595	0	1679	0	0	1469
Flt Permitted	0.975					0.991
Satd. Flow (perm)	1595	0	1679	0	0	1469
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	4	7		1	1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	4%	7%	8%	2%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	79	76	226	51	44	192
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	277	0	0	236
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	77	74	219	49	43	186
Future Vol, veh/h	77	74	219	49	43	186
Conflicting Peds, #/hr	4	7	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	4	7	8	2
Mvmt Flow	79	76	226	51	44	192

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	537	260	0
Stage 1	253	-	-
Stage 2	284	-	-
Critical Hdwy	5.21	5.61	-
Critical Hdwy Stg 1	4.21	-	-
Critical Hdwy Stg 2	4.21	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	606	816	-
Stage 1	861	-	-
Stage 2	843	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	580	811	-
Mov Cap-2 Maneuver	580	-	-
Stage 1	860	-	-
Stage 2	808	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	674	1250
HCM Lane V/C Ratio	-	-	0.231	0.035
HCM Control Delay (s)	-	-	11.9	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkes Ave & Croton Dam Rd

2025-NB-PM

06/28/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	127	5	160	133	0	101
Future Volume (vph)	127	5	160	133	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995		0.939			
Flt Protected	0.954					
Satd. Flow (prot)	1800	0	1638	0	0	1748
Flt Permitted	0.954					
Satd. Flow (perm)	1800	0	1638	0	0	1748
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	3	1		1	1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	20%	5%	1%	0%	4%
Adj. Flow (vph)	144	6	182	151	0	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	150	0	333	0	0	115
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	127	5	160	133	0	101
Future Vol, veh/h	127	5	160	133	0	101
Conflicting Peds, #/hr	3	1	0	1	1	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	20	5	1	0	4
Mvmt Flow	144	6	182	151	0	115

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	377	260	0
Stage 1	259	-	-
Stage 2	118	-	-
Critical Hdwy	5.42	5.9	4.1
Critical Hdwy Stg 1	4.42	-	-
Critical Hdwy Stg 2	4.42	-	-
Follow-up Hdwy	3.518	3.48	2.2
Pot Cap-1 Maneuver	694	764	1237
Stage 1	843	-	-
Stage 2	937	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	692	763	1236
Mov Cap-2 Maneuver	692	-	-
Stage 1	842	-	-
Stage 2	935	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	694	1236
HCM Lane V/C Ratio	-	-	0.216	-
HCM Control Delay (s)	-	-	11.6	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-NB-PM

06/28/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	13	1	10	4	116	13	16	118	2
Future Volume (vph)	0	3	2	13	1	10	4	116	13	16	118	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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		0.955			0.942			0.987			0.998	
Flt Protected					0.974			0.998			0.994	
Satd. Flow (prot)	0	1877	0	0	1568	0	0	1743	0	0	1811	0
Flt Permitted					0.974			0.998			0.994	
Satd. Flow (perm)	0	1877	0	0	1568	0	0	1743	0	0	1811	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	9%	0%	3%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	2	15	1	12	5	136	15	19	139	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	28	0	0	156	0	0	160	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th TWSC
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-NB-PM
06/28/2021

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	2	13	1	10	4	116	13	16	118	2
Future Vol, veh/h	0	3	2	13	1	10	4	116	13	16	118	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	1	9	0	3	0
Mvmt Flow	0	4	2	15	1	12	5	136	15	19	139	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	338	339	140	335	333	144	141	0	0	151	0	0
Stage 1	178	178	-	154	154	-	-	-	-	-	-	-
Stage 2	160	161	-	181	179	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.3	6.7	6.3	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	821	777	968	611	579	905	1455	-	-	1442	-	-
Stage 1	961	877	-	846	767	-	-	-	-	-	-	-
Stage 2	968	879	-	817	748	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	798	763	968	599	569	905	1455	-	-	1442	-	-
Mov Cap-2 Maneuver	798	763	-	599	569	-	-	-	-	-	-	-
Stage 1	957	865	-	843	764	-	-	-	-	-	-	-
Stage 2	950	875	-	800	738	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	10.4	0.2	0.9
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1455	-	-	834 695	1442	-	-
HCM Lane V/C Ratio	0.003	-	-	0.007 0.041 0.013		-	-
HCM Control Delay (s)	7.5	0	-	9.3 10.4 7.5	0	-	-
HCM Lane LOS	A	A	-	A B A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0 0.1 0	-	-	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-NB-PM
06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	30	115	11	5	121
Future Volume (vph)	14	30	115	11	5	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.908		0.988			
Flt Protected	0.984					0.998
Satd. Flow (prot)	1624	0	1751	0	0	1827
Flt Permitted	0.984					0.998
Satd. Flow (perm)	1624	0	1751	0	0	1827
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%
Adj. Flow (vph)	17	36	139	13	6	146
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	0	152	0	0	152
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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 1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	30	115	11	5	121
Future Vol, veh/h	14	30	115	11	5	121
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, %	-5	-	7	-	-	-7
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	4
Mvmt Flow	17	36	139	13	6	146

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	304	146	0
Stage 1	146	-	-
Stage 2	158	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	753	925	-
Stage 1	923	-	-
Stage 2	915	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	749	925	-
Mov Cap-2 Maneuver	749	-	-
Stage 1	923	-	-
Stage 2	910	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1441
HCM Lane V/C Ratio	-	-	0.062	0.004
HCM Control Delay (s)	-	-	9.5	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-NB-PM

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	1	143	2	3	122
Future Volume (vph)	4	1	143	2	3	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977		0.998			
Flt Protected	0.960					0.999
Satd. Flow (prot)	1519	0	1851	0	0	1729
Flt Permitted	0.960					0.999
Satd. Flow (perm)	1519	0	1851	0	0	1729
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	25%	0%	1%	0%	0%	3%
Adj. Flow (vph)	5	1	170	2	4	145
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	172	0	0	149
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	143	2	3	122
Future Vol, veh/h	4	1	143	2	3	122
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, %	-6	-	-4	-	-	6
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	25	0	1	0	0	3
Mvmt Flow	5	1	170	2	4	145

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	324	171	0
Stage 1	171	-	-
Stage 2	153	-	-
Critical Hdwy	5.45	5.6	-
Critical Hdwy Stg 1	4.45	-	-
Critical Hdwy Stg 2	4.45	-	-
Follow-up Hdwy	3.725	3.3	-
Pot Cap-1 Maneuver	697	903	-
Stage 1	854	-	-
Stage 2	865	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	695	903	-
Mov Cap-2 Maneuver	695	-	-
Stage 1	854	-	-
Stage 2	862	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	729	1417
HCM Lane V/C Ratio	-	-	0.008	0.003
HCM Control Delay (s)	-	-	10	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-NB-PM

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	107	140	3	84	122
Future Volume (vph)	3	107	140	3	84	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.868		0.997			
Flt Protected	0.999					0.980
Satd. Flow (prot)	1625	0	1850	0	0	1733
Flt Permitted	0.999					0.980
Satd. Flow (perm)	1625	0	1850	0	0	1733
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	1%	0%	0%	3%
Adj. Flow (vph)	3	120	157	3	94	137
Shared Lane Traffic (%)						
Lane Group Flow (vph)	123	0	160	0	0	231
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	107	140	3	84	122
Future Vol, veh/h	3	107	140	3	84	122
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	1	0	0	3
Mvmt Flow	3	120	157	3	94	137

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	485	160	0
Stage 1	160	-	-
Stage 2	325	-	-
Critical Hdwy	5.2	5.61	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.309	-
Pot Cap-1 Maneuver	640	912	-
Stage 1	922	-	-
Stage 2	821	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	594	911	-
Mov Cap-2 Maneuver	594	-	-
Stage 1	921	-	-
Stage 2	763	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	3.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	898	1429
HCM Lane V/C Ratio	-	-	0.138	0.066
HCM Control Delay (s)	-	-	9.6	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1	3	1	10	11	3	243	1	11	202	7
Future Volume (vph)	7	1	3	1	10	11	3	243	1	11	202	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.966			0.932						0.996	
Flt Protected		0.968			0.998			0.999			0.998	
Satd. Flow (prot)	0	1823	0	0	1781	0	0	1835	0	0	1758	0
Flt Permitted		0.968			0.998			0.999			0.998	
Satd. Flow (perm)	0	1823	0	0	1781	0	0	1835	0	0	1758	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	33%	100%	0%	11%	0%	1%	0%	20%	2%	0%
Adj. Flow (vph)	8	1	3	1	11	12	3	273	1	12	227	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	24	0	0	277	0	0	247	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	1	3	1	10	11	3	243	1	11	202	7
Future Vol, veh/h	7	1	3	1	10	11	3	243	1	11	202	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	33	100	0	11	0	1	0	20	2	0
Mvmt Flow	8	1	3	1	11	12	3	273	1	12	227	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	546	535	231	537	539	274	235	0	0	274	0	0
Stage 1	255	255	-	280	280	-	-	-	-	-	-	-
Stage 2	291	280	-	257	259	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6.33	7.9	6.3	6.21	4.1	-	-	4.3	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.597	4.4	4	3.399	2.2	-	-	2.38	-	-
Pot Cap-1 Maneuver	480	482	747	343	466	749	1344	-	-	1192	-	-
Stage 1	776	720	-	565	693	-	-	-	-	-	-	-
Stage 2	745	704	-	583	707	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	458	475	747	337	459	749	1344	-	-	1192	-	-
Mov Cap-2 Maneuver	458	475	-	337	459	-	-	-	-	-	-	-
Stage 1	774	711	-	563	691	-	-	-	-	-	-	-
Stage 2	719	702	-	572	699	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.2		11.8		0.1		0.4					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1344	-	-	514	558	1192	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.024	0.044	0.01	-	-				
HCM Control Delay (s)	7.7	0	-	12.2	11.8	8.1	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile O(veh)	0	-	-	0.1	0.1	0	-	-				

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-NB-PM

06/28/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	22	39	221	198	77
Future Volume (vph)	48	22	39	221	198	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.958				0.962	
Flt Protected	0.967			0.993		
Satd. Flow (prot)	1613	0	0	1793	1787	0
Flt Permitted	0.967			0.993		
Satd. Flow (perm)	1613	0	0	1793	1787	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	21%	0%	2%	2%	3%
Adj. Flow (vph)	53	24	43	246	220	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	0	289	306	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	48	22	39	221	198	77
Future Vol, veh/h	48	22	39	221	198	77
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	21	0	2	2	3
Mvmt Flow	53	24	43	246	220	86

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	595	263	306
Stage 1	263	-	-
Stage 2	332	-	-
Critical Hdwy	6	6.21	4.1
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.489	2.2
Pot Cap-1 Maneuver	502	743	1266
Stage 1	809	-	-
Stage 2	759	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	482	743	1266
Mov Cap-2 Maneuver	482	-	-
Stage 1	777	-	-
Stage 2	759	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1266	-	542	-	-
HCM Lane V/C Ratio	0.034	-	0.144	-	-
HCM Control Delay (s)	7.9	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-PM

06/28/2021

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	9	160	1195	157	2	13	2276	31	69	148	52	19
Future Volume (vph)	9	160	1195	157	2	13	2276	31	69	148	52	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.998			0.974		
Flt Protected		0.950				0.950				0.987		
Satd. Flow (prot)	0	1714	3422	1561	0	1736	3366	0	0	1859	0	0
Flt Permitted		0.950				0.950				0.377		
Satd. Flow (perm)	0	1714	3422	1561	0	1736	3366	0	0	710	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							1					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	3%	1%	0%	0%	3%	0%	0%	1%	5%	6%
Adj. Flow (vph)	9	165	1232	162	2	13	2346	32	71	153	54	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	1232	162	0	15	2378	0	0	278	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-PM

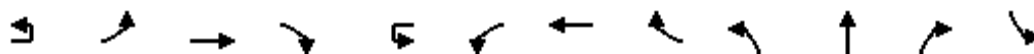
06/28/2021



Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	105	179
Future Volume (vph)	105	179
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.920	
Flt Protected	0.997	
Satd. Flow (prot)	1637	0
Flt Permitted	0.907	
Satd. Flow (perm)	1489	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	3%	6%
Adj. Flow (vph)	108	185
Shared Lane Traffic (%)		
Lane Group Flow (vph)	313	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	CI+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	CI+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-PM
06/28/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	27.0	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0
Total Split (%)	18.0%	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%
Maximum Green (s)	20.0	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.82	0.51	0.15		0.19	1.23			2.34		
Control Delay		92.8	12.0	8.7		73.2	139.4			650.9		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		92.8	12.0	8.7		73.2	139.4			650.9		
Queue Length 50th (ft)		167	225	40		14	~1526			~444		
Queue Length 95th (ft)		#279	397	94		39	#1652			#633		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		231	2405	1097		234	1929			119		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.75	0.51	0.15		0.06	1.23			2.34		

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 148.3

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Weekday PM Hour (4:30 - 5:30)
JMC 15064

Synchro 10 Report
Page 19



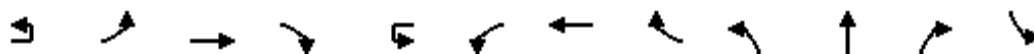
Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	20.7%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	1.25	
Control Delay	189.2	
Queue Delay	0.0	
Total Delay	189.2	
Queue Length 50th (ft)	~383	
Queue Length 95th (ft)	#580	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	251	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.25	
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-NB-PM

06/28/2021



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	9	160	1195	157	2	13	2276	31	69	148	52	19
Future Volume (veh/h)	9	160	1195	157	2	13	2276	31	69	148	52	19
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1934	1934	1964		1894	1850	1894	1976	1961	1899	1967
Adj Flow Rate, veh/h		165	1232	162		13	2346	32	71	153	54	20
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		3	3	1		0	3	0	0	1	5	6
Cap, veh/h		191	2503	1134		16	2080	28	68	108	35	38
Arrive On Green		0.10	0.68	0.68		0.01	0.59	0.59	0.17	0.17	0.17	0.17
Sat Flow, veh/h		1842	3674	1664		1804	3550	48	214	627	203	70
Grp Volume(v), veh/h		165	1232	162		13	1159	1219	278	0	0	313
Grp Sat Flow(s),veh/h/ln		1842	1837	1664		1804	1757	1841	1044	0	0	1811
Q Serve(g_s), s		12.8	23.3	5.0		1.0	85.0	85.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		12.8	23.3	5.0		1.0	85.0	85.0	25.0	0.0	0.0	25.0
Prop In Lane		1.00		1.00		1.00		0.03	0.26		0.19	0.06
Lane Grp Cap(c), veh/h		191	2503	1134		16	1030	1079	211	0	0	339
V/C Ratio(X)		0.86	0.49	0.14		0.84	1.13	1.13	1.32	0.00	0.00	0.92
Avail Cap(c_a), veh/h		254	2503	1134		249	1030	1079	211	0	0	339
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		64.0	11.1	8.2		71.8	30.0	30.0	60.9	0.0	0.0	60.0
Incr Delay (d2), s/veh		20.1	0.2	0.1		67.5	69.1	70.7	171.9	0.0	0.0	30.4
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
%ile BackOfQ(50%),veh/ln		7.0	8.9	1.7		0.8	53.0	56.0	18.0	0.0	0.0	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		84.1	11.2	8.2		139.3	99.2	100.8	232.8	0.0	0.0	90.4
LnGrp LOS		F	B	A		F	F	F	F	A	A	F
Approach Vol, veh/h			1559				2391			278		
Approach Delay, s/veh			18.6				100.2			232.8		
Approach LOS			B				F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	105.8		31.0	22.1	92.0		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	3.0	25.3		27.0	14.8	87.0		27.0				
Green Ext Time (p_c), s	0.0	12.0		0.0	0.3	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay 79.6

HCM 6th LOS E

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-NB-PM
06/28/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	105	179
Future Volume (veh/h)	105	179
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2012	1967
Adj Flow Rate, veh/h	108	185
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	3	6
Cap, veh/h	116	184
Arrive On Green	0.17	0.17
Sat Flow, veh/h	670	1070
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.59
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	313	
Approach Delay, s/veh	90.4	
Approach LOS	F	
Timer - Assigned Phs		

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-NB-SAT

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	57	198	66	40	170
Future Volume (vph)	44	57	198	66	40	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.923		0.966			
Flt Protected	0.979					0.990
Satd. Flow (prot)	1807	0	1701	0	0	1501
Flt Permitted	0.979					0.990
Satd. Flow (perm)	1807	0	1701	0	0	1501
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	1	1		3	3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	2%	3%	0%	0%	1%
Parking (#/hr)		5				5
Adj. Flow (vph)	52	68	236	79	48	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	315	0	0	250
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.07	1.07	1.11	1.32
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 2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	44	57	198	66	40	170
Future Vol, veh/h	44	57	198	66	40	170
Conflicting Peds, #/hr	1	1	0	3	3	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, %	-6	-	-3	-	-	3
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	2	3	0	0	1
Mvmt Flow	52	68	236	79	48	202

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	578	280	0
Stage 1	279	-	-
Stage 2	299	-	-
Critical Hdwy	5.2	5.62	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.318	-
Pot Cap-1 Maneuver	583	795	-
Stage 1	848	-	-
Stage 2	836	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	556	792	-
Mov Cap-2 Maneuver	556	-	-
Stage 1	845	-	-
Stage 2	799	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	668	1250
HCM Lane V/C Ratio	-	-	0.18	0.038
HCM Control Delay (s)	-	-	11.6	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkles Ave & Croton Dam Rd

2025-NB-SAT

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	129	2	122	133	0	81
Future Volume (vph)	129	2	122	133	0	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998		0.930			
Flt Protected	0.953					
Satd. Flow (prot)	1852	0	1650	0	0	1818
Flt Permitted	0.953					
Satd. Flow (perm)	1852	0	1650	0	0	1818
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%
Adj. Flow (vph)	145	2	137	149	0	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	286	0	0	91
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	2	122	133	0	81
Future Vol, veh/h	129	2	122	133	0	81
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, %	-5	-	-3	-	-	-5
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	1	0	0
Mvmt Flow	145	2	137	149	0	91

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	303	212	0
Stage 1	212	-	-
Stage 2	91	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	754	858	-
Stage 1	878	-	-
Stage 2	962	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	754	858	-
Mov Cap-2 Maneuver	754	-	-
Stage 1	878	-	-
Stage 2	962	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	755	1288
HCM Lane V/C Ratio	-	-	0.195	-
HCM Control Delay (s)	-	-	10.9	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-NB-SAT
06/28/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	8	2	4	9	3	113	16	13	121	3
Future Volume (vph)	2	2	8	2	4	9	3	113	16	13	121	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.907			0.921			0.983			0.997	
Flt Protected		0.992			0.994			0.999			0.995	
Satd. Flow (prot)	0	1642	0	0	1565	0	0	1730	0	0	1858	0
Flt Permitted		0.992			0.994			0.999			0.995	
Satd. Flow (perm)	0	1642	0	0	1565	0	0	1730	0	0	1858	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	67%	1%	0%	0%	0%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	2	2	9	2	5	10	3	131	19	15	141	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	17	0	0	153	0	0	159	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	2	2	8	2	4	9	3	113	16	13	121	3
Future Vol, veh/h	2	2	8	2	4	9	3	113	16	13	121	3
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	50	0	0	0	0	0	67	1	0	0	0	0
Mvmt Flow	2	2	9	2	5	10	3	131	19	15	141	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	329	329	143	325	321	143	144	0	0	150	0	0
Stage 1	173	173	-	147	147	-	-	-	-	-	-	-
Stage 2	156	156	-	178	174	-	-	-	-	-	-	-
Critical Hdwy	4.6	3.5	4.7	7.3	6.7	6.3	4.77	-	-	4.1	-	-
Critical Hdwy Stg 1	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.95	4	3.3	3.5	4	3.3	2.803	-	-	2.2	-	-
Pot Cap-1 Maneuver	713	780	966	621	589	906	1122	-	-	1444	-	-
Stage 1	842	877	-	853	773	-	-	-	-	-	-	-
Stage 2	848	880	-	820	751	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	692	769	966	607	581	905	1122	-	-	1444	-	-
Mov Cap-2 Maneuver	692	769	-	607	581	-	-	-	-	-	-	-
Stage 1	839	867	-	850	771	-	-	-	-	-	-	-
Stage 2	829	877	-	801	743	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.2		9.9		0.2		0.7	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1122	-	-	871 745	1444	-	-
HCM Lane V/C Ratio	0.003	-	-	0.016 0.023	0.01	-	-
HCM Control Delay (s)	8.2	0	-	9.2 9.9	7.5	0	-
HCM Lane LOS	A	A	-	A A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0 0.1	0	-	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-NB-SAT

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	30	114	11	5	124
Future Volume (vph)	14	30	114	11	5	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.907		0.988			
Flt Protected	0.985					0.998
Satd. Flow (prot)	1624	0	1720	0	0	1879
Flt Permitted	0.985					0.998
Satd. Flow (perm)	1624	0	1720	0	0	1879
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	14	31	116	11	5	127
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	127	0	0	132
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	30	114	11	5	124
Future Vol, veh/h	14	30	114	11	5	124
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-5	-	7	-	-	-7
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	14	31	116	11	5	127
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	260	123	0	0	128	0
Stage 1	123	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	5.4	5.7	-	-	4.1	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	788	949	-	-	1470	-
Stage 1	939	-	-	-	-	-
Stage 2	929	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	784	948	-	-	1469	-
Mov Cap-2 Maneuver	784	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.3	0	0.3			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	889	1469	-	
HCM Lane V/C Ratio	-	-	0.051	0.003	-	
HCM Control Delay (s)	-	-	9.3	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-NB-SAT

06/28/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	2	131	13	3	118
Future Volume (vph)	11	2	131	13	3	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981		0.988			
Flt Protected	0.959					0.999
Satd. Flow (prot)	1841	0	1803	0	0	1763
Flt Permitted	0.959					0.999
Satd. Flow (perm)	1841	0	1803	0	0	1763
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	2%	9%	0%	1%
Adj. Flow (vph)	12	2	138	14	3	124
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	152	0	0	127
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	2	131	13	3	118
Future Vol, veh/h	11	2	131	13	3	118
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, %	-6	-	-4	-	-	6
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	9	0	1
Mvmt Flow	12	2	138	14	3	124

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	275	145	0
Stage 1	145	-	-
Stage 2	130	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	788	930	-
Stage 1	931	-	-
Stage 2	941	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	786	930	-
Mov Cap-2 Maneuver	786	-	-
Stage 1	931	-	-
Stage 2	939	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	805	1441
HCM Lane V/C Ratio	-	-	0.017	0.002
HCM Control Delay (s)	-	-	9.5	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-NB-SAT

06/28/2021

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	93	123	10	81	120
Future Volume (vph)	1	93	123	10	81	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.866		0.990			
Flt Protected						0.980
Satd. Flow (prot)	1638	0	1838	0	0	1743
Flt Permitted						0.980
Satd. Flow (perm)	1638	0	1838	0	0	1743
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	1%	0%	3%	0%
Adj. Flow (vph)	1	102	135	11	89	132
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	0	146	0	0	221
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	93	123	10	81	120
Future Vol, veh/h	1	93	123	10	81	120
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	3	0
Mvmt Flow	1	102	135	11	89	132

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	452	142	0
Stage 1	142	-	-
Stage 2	310	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	662	933	-
Stage 1	933	-	-
Stage 2	830	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	617	932	-
Mov Cap-2 Maneuver	617	-	-
Stage 1	932	-	-
Stage 2	774	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	3.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	927	1428
HCM Lane V/C Ratio	-	-	0.111	0.062
HCM Control Delay (s)	-	-	9.4	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	3	1	0	10	4	208	3	9	196	8
Future Volume (vph)	8	1	3	1	0	10	4	208	3	9	196	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.969			0.876			0.998			0.995	
Flt Protected		0.967			0.996			0.999			0.998	
Satd. Flow (prot)	0	1646	0	0	1665	0	0	1788	0	0	1780	0
Flt Permitted		0.967			0.996			0.999			0.998	
Satd. Flow (perm)	0	1646	0	0	1665	0	0	1788	0	0	1780	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	7%	100%	33%	0%	0%	11%	25%	3%	0%	0%	1%	14%
Adj. Flow (vph)	9	1	3	1	0	11	5	236	3	10	223	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	12	0	0	244	0	0	242	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	1	3	1	0	10	4	208	3	9	196	8
Future Vol, veh/h	8	1	3	1	0	10	4	208	3	9	196	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	7	100	33	0	0	11	25	3	0	0	1	14
Mvmt Flow	9	1	3	1	0	11	5	236	3	10	223	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	501	497	228	498	500	238	232	0	0	239	0	0
Stage 1	248	248	-	248	248	-	-	-	-	-	-	-
Stage 2	253	249	-	250	252	-	-	-	-	-	-	-
Critical Hdwy	6.77	7.1	6.33	6.9	6.3	6.21	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.9	3.597	3.5	4	3.399	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	500	379	750	500	489	784	1212	-	-	1340	-	-
Stage 1	766	569	-	771	715	-	-	-	-	-	-	-
Stage 2	761	568	-	769	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	488	374	750	492	482	784	1212	-	-	1340	-	-
Mov Cap-2 Maneuver	488	374	-	492	482	-	-	-	-	-	-	-
Stage 1	762	564	-	767	711	-	-	-	-	-	-	-
Stage 2	746	565	-	757	706	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	9.9	0.1	0.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1212	-	-	520 744	1340	-	-
HCM Lane V/C Ratio	0.004	-	-	0.026 0.017	0.008	-	-
HCM Control Delay (s)	8	0	-	12.1 9.9	7.7	0	-
HCM Lane LOS	A	A	-	B A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1 0.1	0	-	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-NB-SAT

06/28/2021

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	79	16	22	204	196	67
Future Volume (vph)	79	16	22	204	196	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.966	
Flt Protected	0.960			0.995		
Satd. Flow (prot)	1742	0	0	1764	1799	0
Flt Permitted	0.960			0.995		
Satd. Flow (perm)	1742	0	0	1764	1799	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	4%	2%	2%
Adj. Flow (vph)	81	16	22	208	200	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	97	0	0	230	268	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	16	22	204	196	67
Future Vol, veh/h	79	16	22	204	196	67
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	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	4	2	2
Mvmt Flow	81	16	22	208	200	68

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	486	234	268
Stage 1	234	-	-
Stage 2	252	-	-
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	574	821	1307
Stage 1	831	-	-
Stage 2	817	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	563	821	1307
Mov Cap-2 Maneuver	563	-	-
Stage 1	815	-	-
Stage 2	817	-	-

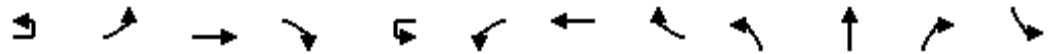
Approach	EB	NB	SB
HCM Control Delay, s	12.2	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1307	-	594	-	-
HCM Lane V/C Ratio	0.017	-	0.163	-	-
HCM Control Delay (s)	7.8	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-SAT

06/28/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	128	1012	141	1	12	1499	35	79	132	72	50
Future Volume (vph)	3	128	1012	141	1	12	1499	35	79	132	72	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.997			0.966		
Flt Protected		0.950				0.950				0.986		
Satd. Flow (prot)	0	1728	3455	1531	0	1736	3363	0	0	1832	0	0
Flt Permitted		0.950				0.950				0.555		
Satd. Flow (perm)	0	1728	3455	1531	0	1736	3363	0	0	1031	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							3					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	3%	0%	0%	3%	0%	4%	2%	0%	2%
Adj. Flow (vph)	3	132	1043	145	1	12	1545	36	81	136	74	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	1043	145	0	13	1581	0	0	291	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-SAT

06/28/2021



Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	110	165
Future Volume (vph)	110	165
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.931	
Flt Protected	0.992	
Satd. Flow (prot)	1708	0
Flt Permitted	0.807	
Satd. Flow (perm)	1389	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	0%	2%
Adj. Flow (vph)	113	170
Shared Lane Traffic (%)		
Lane Group Flow (vph)	335	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	CI+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	CI+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-NB-SAT
06/28/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	22.0	22.0	67.0	67.0	22.0	22.0	67.0		31.0	31.0		31.0
Total Split (%)	18.3%	18.3%	55.8%	55.8%	18.3%	18.3%	55.8%		25.8%	25.8%		25.8%
Maximum Green (s)	15.0	15.0	60.0	60.0	15.0	15.0	60.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.70	0.48	0.15		0.13	0.94			1.31		
Control Delay		69.3	13.7	10.9		56.4	39.8			207.0		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		69.3	13.7	10.9		56.4	39.8			207.0		
Queue Length 50th (ft)		101	174	36		10	585			~295		
Queue Length 95th (ft)		170	317	88		31	#766			#473		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		223	2154	954		224	1741			222		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.61	0.48	0.15		0.06	0.91			1.31		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 116.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Saturday Midday Hour (10:30 - 11:30)
JMC 15064

Synchro 10 Report
Page 19



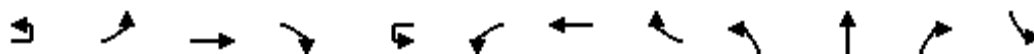
Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	25.8%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	1.12	
Control Delay	131.4	
Queue Delay	0.0	
Total Delay	131.4	
Queue Length 50th (ft)	~305	
Queue Length 95th (ft)	#492	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	299	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.12	
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-NB-SAT

06/28/2021



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	3	128	1012	141	1	12	1499	35	79	132	72	50
Future Volume (veh/h)	3	128	1012	141	1	12	1499	35	79	132	72	50
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1949	1949	1934		1894	1850	1894	1914	1945	1976	2027
Adj Flow Rate, veh/h		132	1043	145		12	1545	36	81	136	74	52
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	3		0	3	0	4	2	0	2
Cap, veh/h		164	2128	942		15	1736	40	110	159	77	82
Arrive On Green		0.09	0.57	0.57		0.01	0.49	0.49	0.23	0.23	0.23	0.23
Sat Flow, veh/h		1856	3702	1639		1804	3510	82	292	687	334	189
Grp Volume(v), veh/h		132	1043	145		12	772	809	291	0	0	335
Grp Sat Flow(s),veh/h/ln		1856	1851	1639		1804	1757	1835	1313	0	0	1669
Q Serve(g_s), s		7.5	18.0	4.5		0.7	42.8	43.0	3.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s		7.5	18.0	4.5		0.7	42.8	43.0	23.9	0.0	0.0	20.7
Prop In Lane		1.00		1.00		1.00		0.04	0.28		0.25	0.16
Lane Grp Cap(c), veh/h		164	2128	942		15	869	908	347	0	0	425
V/C Ratio(X)		0.80	0.49	0.15		0.79	0.89	0.89	0.84	0.00	0.00	0.79
Avail Cap(c_a), veh/h		258	2128	942		251	976	1020	347	0	0	425
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		48.3	13.6	10.7		53.4	24.6	24.7	40.7	0.0	0.0	39.5
Incr Delay (d2), s/veh		9.5	0.2	0.1		59.7	9.3	9.2	16.5	0.0	0.0	9.6
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
%ile BackOfQ(50%),veh/ln		3.8	6.9	1.5		0.6	18.5	19.4	9.2	0.0	0.0	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		57.7	13.8	10.8		113.1	33.9	33.9	57.2	0.0	0.0	49.1
LnGrp LOS		E	B	B		F	C	C	E	A	A	D
Approach Vol, veh/h			1320				1593			291		
Approach Delay, s/veh			17.8				34.5			57.2		
Approach LOS			B				C			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	69.1		31.0	16.6	60.4		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		25.0	15.0	60.0		25.0				
Max Q Clear Time (g_c+I1), s	2.7	20.0		22.7	9.5	45.0		25.9				
Green Ext Time (p_c), s	0.0	8.9		0.4	0.2	8.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-NB-SAT
06/28/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	110	165
Future Volume (veh/h)	110	165
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2057	2027
Adj Flow Rate, veh/h	113	170
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	0	2
Cap, veh/h	147	196
Arrive On Green	0.23	0.23
Sat Flow, veh/h	633	847
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.51
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	335	
Approach Delay, s/veh	49.1	
Approach LOS	D	
Timer - Assigned Phs		

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-BD-AM
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	74	204	90	67	206
Future Volume (vph)	70	74	204	90	67	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.930		0.959			
Flt Protected	0.976					0.988
Satd. Flow (prot)	1488	0	1686	0	0	1442
Flt Permitted	0.976					0.988
Satd. Flow (perm)	1488	0	1686	0	0	1442
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	7%	3%	1%	7%	4%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	80	85	234	103	77	237
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	337	0	0	314
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	74	204	90	67	206
Future Vol, veh/h	70	74	204	90	67	206
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	9	7	3	1	7	4
Mvmt Flow	80	85	234	103	77	237

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	678	287	0
Stage 1	287	-	-
Stage 2	391	-	-
Critical Hdwy	5.29	5.67	-
Critical Hdwy Stg 1	4.29	-	-
Critical Hdwy Stg 2	4.29	-	-
Follow-up Hdwy	3.581	3.363	-
Pot Cap-1 Maneuver	510	777	-
Stage 1	821	-	-
Stage 2	761	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	472	776	-
Mov Cap-2 Maneuver	472	-	-
Stage 1	820	-	-
Stage 2	705	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	591	1193
HCM Lane V/C Ratio	-	-	0.28	0.065
HCM Control Delay (s)	-	-	13.4	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0.2

Lanes, Volumes, Timings
2: Dale Ave/Hawkes Ave & Croton Dam Rd

2025-BD-AM
07/30/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	123	7	117	162	7	149
Future Volume (vph)	123	7	117	162	7	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993		0.922			
Flt Protected	0.955					0.998
Satd. Flow (prot)	1796	0	1559	0	0	1677
Flt Permitted	0.955					0.998
Satd. Flow (perm)	1796	0	1559	0	0	1677
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	1			11	11	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	0%	7%	6%	33%	7%
Adj. Flow (vph)	143	8	136	188	8	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	324	0	0	181
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	123	7	117	162	7	149
Future Vol, veh/h	123	7	117	162	7	149
Conflicting Peds, #/hr	1	0	0	11	11	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	0	7	6	33	7
Mvmt Flow	143	8	136	188	8	173

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	431	241	0
Stage 1	241	-	-
Stage 2	190	-	-
Critical Hdwy	5.43	5.7	-
Critical Hdwy Stg 1	4.43	-	-
Critical Hdwy Stg 2	4.43	-	-
Follow-up Hdwy	3.527	3.3	-
Pot Cap-1 Maneuver	653	830	-
Stage 1	852	-	-
Stage 2	885	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	641	822	-
Mov Cap-2 Maneuver	641	-	-
Stage 1	844	-	-
Stage 2	877	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	649	1060
HCM Lane V/C Ratio	-	-	0.233	0.008
HCM Control Delay (s)	-	-	12.2	8.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-BD-AM
07/30/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	15	0	8	5	152	11	10	112	0
Future Volume (vph)	0	3	2	15	0	8	5	152	11	10	112	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.942			0.953			0.991				
Flt Protected					0.968			0.999			0.996	
Satd. Flow (prot)	0	1852	0	0	1498	0	0	1694	0	0	1759	0
Flt Permitted					0.968			0.999			0.996	
Satd. Flow (perm)	0	1852	0	0	1498	0	0	1694	0	0	1759	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	8%	0%	0%	0%	5%	10%	50%	2%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	3	19	0	10	6	190	14	13	140	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	29	0	0	210	0	0	153	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	2	15	0	8	5	152	11	10	112	0
Future Vol, veh/h	0	3	2	15	0	8	5	152	11	10	112	0
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	8	0	0	0	5	10	50	2	0
Mvmt Flow	0	4	3	19	0	10	6	190	14	13	140	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	384	386	144	379	379	197	144	0	0	204	0	0
Stage 1	170	170	-	209	209	-	-	-	-	-	-	-
Stage 2	214	216	-	170	170	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.38	6.7	6.3	4.1	-	-	4.6	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.572	4	3.3	2.2	-	-	2.65	-	-
Pot Cap-1 Maneuver	796	760	965	556	545	845	1451	-	-	1127	-	-
Stage 1	964	878	-	771	724	-	-	-	-	-	-	-
Stage 2	948	871	-	810	755	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	773	743	961	545	533	845	1445	-	-	1127	-	-
Mov Cap-2 Maneuver	773	743	-	545	533	-	-	-	-	-	-	-
Stage 1	955	863	-	767	720	-	-	-	-	-	-	-
Stage 2	932	867	-	794	742	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.4		11.1		0.2		0.7					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1445	-	-	817	622	1127	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.008	0.046	0.011	-	-				
HCM Control Delay (s)	7.5	0	-	9.4	11.1	8.2	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile O(veh)	0	-	-	0	0.1	0	-	-				

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-BD-AM
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	5	159	1	5	114
Future Volume (vph)	8	5	159	1	5	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.949		0.999			
Flt Protected	0.970					0.998
Satd. Flow (prot)	1673	0	1640	0	0	1861
Flt Permitted	0.970					0.998
Satd. Flow (perm)	1673	0	1640	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Adj. Flow (vph)	10	6	196	1	6	141
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	197	0	0	147
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	5	159	1	5	114
Future Vol, veh/h	8	5	159	1	5	114
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, %	-5	-	7	-	-	-7
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	10	6	196	1	6	141
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	350	197	0	0	197	0
Stage 1	197	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	5.4	5.7	-	-	4.1	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	718	873	-	-	1388	-
Stage 1	888	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	714	873	-	-	1388	-
Mov Cap-2 Maneuver	714	-	-	-	-	-
Stage 1	888	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.8	0		0.3		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		768	1388	
HCM Lane V/C Ratio	-	-		0.021	0.004	
HCM Control Delay (s)	-	-		9.8	7.6	
HCM Lane LOS	-	-		A	A	
HCM 95th %tile Q(veh)	-	-		0.1	0	

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-BD-AM
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	3	158	5	1	114
Future Volume (vph)	5	3	158	5	1	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.946		0.996			
Flt Protected	0.971					
Satd. Flow (prot)	1501	0	1780	0	0	1670
Flt Permitted	0.971					
Satd. Flow (perm)	1501	0	1780	0	0	1670
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	33%	0%	5%	0%	100%	6%
Adj. Flow (vph)	6	4	190	6	1	137
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	196	0	0	138
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	3	158	5	1	114
Future Vol, veh/h	5	3	158	5	1	114
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, %	-6	-	-4	-	-	6
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	33	0	5	0	100	6
Mvmt Flow	6	4	190	6	1	137
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	332	193	0	0	196	0
Stage 1	193	-	-	-	-	-
Stage 2	139	-	-	-	-	-
Critical Hdwy	5.53	5.6	-	-	5.1	-
Critical Hdwy Stg 1	4.53	-	-	-	-	-
Critical Hdwy Stg 2	4.53	-	-	-	-	-
Follow-up Hdwy	3.797	3.3	-	-	3.1	-
Pot Cap-1 Maneuver	675	882	-	-	956	-
Stage 1	822	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	674	882	-	-	956	-
Mov Cap-2 Maneuver	674	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.9	0	0.1			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	739	956	-	
HCM Lane V/C Ratio	-	-	0.013	0.001	-	
HCM Control Delay (s)	-	-	9.9	8.8	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-BD-AM

07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	54	159	2	141	113
Future Volume (vph)	2	54	159	2	141	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.869		0.998			
Flt Protected	0.998					0.973
Satd. Flow (prot)	1641	0	1796	0	0	1595
Flt Permitted	0.998					0.973
Satd. Flow (perm)	1641	0	1796	0	0	1595
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				3	3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	3%	100%	12%	7%
Adj. Flow (vph)	2	58	171	2	152	122
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	173	0	0	274
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	1.01	1.01	1.02	1.02	1.07	1.07
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
6: Croton Dam Rd & Narragansett Avenue

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Intersection

Int Delay, s/veh 3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	54	159	2	141	113
Future Vol, veh/h	2	54	159	2	141	113
Conflicting Peds, #/hr	0	0	0	3	3	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, %	-6	-	-4	-	-	4
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	3	100	12	7
Mvmt Flow	2	58	171	2	152	122

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	601	175	0
Stage 1	175	-	-
Stage 2	426	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	570	899	-
Stage 1	912	-	-
Stage 2	764	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	499	897	-
Mov Cap-2 Maneuver	499	-	-
Stage 1	910	-	-
Stage 2	671	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	4.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	872	1339
HCM Lane V/C Ratio	-	-	0.069	0.113
HCM Control Delay (s)	-	-	9.4	8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.4

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1	7	11	0	10	0	207	5	3	237	3
Future Volume (vph)	10	1	7	11	0	10	0	207	5	3	237	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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
Ped Bike Factor												
Frt		0.946			0.935			0.997			0.998	
Flt Protected		0.973			0.975						0.999	
Satd. Flow (prot)	0	1943	0	0	1458	0	0	1797	0	0	1722	0
Flt Permitted		0.973			0.975						0.999	
Satd. Flow (perm)	0	1943	0	0	1458	0	0	1797	0	0	1722	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Confl. Peds. (#/hr)									3	3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	50%	0%	11%	0%	3%	0%	33%	5%	0%
Adj. Flow (vph)	11	1	8	12	0	11	0	230	6	3	263	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	23	0	0	236	0	0	269	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1	7	11	0	10	0	207	5	3	237	3
Future Vol, veh/h	10	1	7	11	0	10	0	207	5	3	237	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	50	0	11	0	3	0	33	5	0
Mvmt Flow	11	1	8	12	0	11	0	230	6	3	263	3
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	510	510	265	511	508	236	266	0	0	239	0	0
Stage 1	271	271	-	236	236	-	-	-	-	-	-	-
Stage 2	239	239	-	275	272	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6	7.4	6.3	6.21	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.95	4	3.399	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	505	497	790	416	484	786	1310	-	-	1166	-	-
Stage 1	762	710	-	680	723	-	-	-	-	-	-	-
Stage 2	790	730	-	648	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	497	494	790	409	481	784	1310	-	-	1162	-	-
Mov Cap-2 Maneuver	497	494	-	409	481	-	-	-	-	-	-	-
Stage 1	762	708	-	678	721	-	-	-	-	-	-	-
Stage 2	779	728	-	639	697	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.4		12.1		0		0.1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1310	-	-	581	530	1162	-	-				
HCM Lane V/C Ratio	-	-	-	0.034	0.044	0.003	-	-				
HCM Control Delay (s)	0	-	-	11.4	12.1	8.1	0	-				
HCM Lane LOS	A	-	-	B	B	A	A	-				
HCM 95th %tile O(veh)	0	-	-	0.1	0.1	0	-	-				

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-BD-AM
07/30/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	79	50	19	208	193	55
Future Volume (vph)	79	50	19	208	193	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.970	
Flt Protected	0.970			0.996		
Satd. Flow (prot)	1623	0	0	1765	1730	0
Flt Permitted	0.970			0.996		
Satd. Flow (perm)	1623	0	0	1765	1730	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	0%	4%	5%	12%
Adj. Flow (vph)	88	56	21	231	214	61
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	0	252	275	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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 3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	50	19	208	193	55
Future Vol, veh/h	79	50	19	208	193	55
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	0	4	5	12
Mvmt Flow	88	56	21	231	214	61

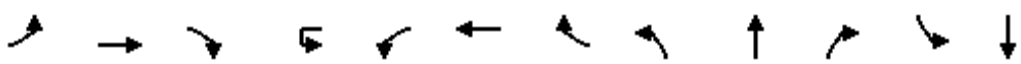
Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	518	245	275
Stage 1	245	-	-
Stage 2	273	-	-
Critical Hdwy	6.05	6.05	4.1
Critical Hdwy Stg 1	5.05	-	-
Critical Hdwy Stg 2	5.05	-	-
Follow-up Hdwy	3.545	3.345	2.2
Pot Cap-1 Maneuver	543	797	1300
Stage 1	811	-	-
Stage 2	790	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	533	797	1300
Mov Cap-2 Maneuver	533	-	-
Stage 1	796	-	-
Stage 2	790	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1300	-	612	-	-
HCM Lane V/C Ratio	0.016	-	0.234	-	-
HCM Control Delay (s)	7.8	0	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-AM
07/30/2021

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	132	2298	119	3	8	976	17	40	166	81	35	121
Future Volume (vph)	132	2298	119	3	8	976	17	40	166	81	35	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	11	11	13	13	13	11	11
Grade (%)		-2%				1%			0%			-4%
Storage Length (ft)	110		190		150		0	0		0	0	
Storage Lanes	1		1		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.997			0.962			0.924
Flt Protected	0.950				0.950				0.993			0.995
Satd. Flow (prot)	1588	3357	1447	0	1365	3174	0	0	1813	0	0	1620
Flt Permitted	0.950				0.950				0.641			0.813
Satd. Flow (perm)	1588	3357	1447	0	1365	3174	0	0	1170	0	0	1324
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)						2						
Link Speed (mph)		40				40			30			30
Link Distance (ft)		1697				1673			161			419
Travel Time (s)		28.9				28.5			3.7			9.5
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	11%	5%	9%	33%	25%	9%	13%	0%	6%	0%	0%	7%
Adj. Flow (vph)	133	2321	120	3	8	986	17	40	168	82	35	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	2321	120	0	11	1003	0	0	290	0	0	357
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Median Width(ft)		11				11			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02	1.02
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	2	2	2	1	2	2		1	2		1	2
Detector Template				Left				Left			Left	
Leading Detector (ft)	83	83	83	20	83	83		20	83		20	83
Trailing Detector (ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Position(ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Size(ft)	40	40	40	20	40	40		20	40		20	40
Detector 1 Type	Cl+Ex	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)	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0	3.0
Detector 1 Queue (s)	0.0	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	4.0		0.0	4.0
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
9: Croton Dam Rd & NYS Route 9A

2025-BD-AM
07/30/2021

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width (ft)	11
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	7%
Adj. Flow (vph)	200
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	R NA
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.02
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-AM
07/30/2021

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2					8			4	
Detector Phase	5	2	2	1	1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0	11.0
Total Split (s)	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0	31.0
Total Split (%)	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%	20.7%
Maximum Green (s)	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0	25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	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)	7.0	7.0	7.0		7.0	7.0			6.0			6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	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	3.0
Recall Mode	None	Min	Min	None	None	Min		None	None		None	None
v/c Ratio	0.70	1.05	0.13		0.15	0.60			1.28			1.39
Control Delay	74.7	55.4	9.6		65.6	22.9			197.2			236.2
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0			0.0
Total Delay	74.7	55.4	9.6		65.6	22.9			197.2			236.2
Queue Length 50th (ft)	103	~882	29		9	291			~283			~368
Queue Length 95th (ft)	186	#1403	73		31	383			#533			#645
Internal Link Dist (ft)		1617				1593			81			339
Turn Bay Length (ft)	110		190		150							
Base Capacity (vph)	246	2218	955		211	2098			227			257
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	0.54	1.05	0.13		0.05	0.48			1.28			1.39

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 129

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A





Lane Group	SBR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-AM
07/30/2021

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	132	2298	119	3	8	976	17	40	166	81	35	121
Future Volume (veh/h)	132	2298	119	3	8	976	17	40	166	81	35	121
Initial Q (Qb), veh	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	
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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1814	1904	1844		1524	1761	1701	1976	1884	1976	2057	1952
Adj Flow Rate, veh/h	133	2321	120		8	986	17	40	168	82	35	122
Peak Hour Factor	0.99	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	11	5	9		25	9	13	0	6	0	0	7
Cap, veh/h	160	2351	1015		8	1895	33	57	171	77	51	114
Arrive On Green	0.09	0.65	0.65		0.01	0.56	0.56	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1727	3617	1562		1451	3365	58	134	892	405	107	598
Grp Volume(v), veh/h	133	2321	120		8	490	513	290	0	0	357	0
Grp Sat Flow(s),veh/h/ln	1727	1808	1562		1451	1673	1750	1431	0	0	1604	0
Q Serve(g_s), s	9.9	82.0	3.8		0.7	23.7	23.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.9	82.0	3.8		0.7	23.7	23.7	25.0	0.0	0.0	25.0	0.0
Prop In Lane	1.00		1.00		1.00		0.03	0.14		0.28	0.10	
Lane Grp Cap(c), veh/h	160	2351	1015		8	942	986	305	0	0	337	0
V/C Ratio(X)	0.83	0.99	0.12		0.95	0.52	0.52	0.95	0.00	0.00	1.06	0.00
Avail Cap(c_a), veh/h	264	2352	1016		222	1088	1138	305	0	0	337	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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	58.3	22.4	8.7		65.0	17.6	17.6	52.8	0.0	0.0	53.6	0.0
Incr Delay (d2), s/veh	10.8	15.6	0.1		130.7	0.4	0.4	38.5	0.0	0.0	65.5	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
%ile BackOfQ(50%),veh/ln	4.7	35.5	1.2		0.6	8.8	9.2	12.9	0.0	0.0	17.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.1	38.0	8.7		195.7	18.1	18.1	91.3	0.0	0.0	119.2	0.0
LnGrp LOS	E	D	A		F	B	B	F	A	A	F	A
Approach Vol, veh/h		2574				1011			290			357
Approach Delay, s/veh		38.2				19.5			91.3			119.2
Approach LOS		D				B			F			F
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	92.0		31.0	19.1	80.6		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	2.7	84.0		27.0	11.9	25.7		27.0				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.3	6.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			44.2									
HCM 6th LOS			D									
Notes												
User approved ignoring U-Turning movement.												

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-AM
07/30/2021

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	198
Future Volume (veh/h)	198
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1952
Adj Flow Rate, veh/h	200
Peak Hour Factor	0.99
Percent Heavy Veh, %	7
Cap, veh/h	172
Arrive On Green	0.19
Sat Flow, veh/h	899
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.56
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-BD-PM
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	77	74	217	49	43	183
Future Volume (vph)	77	74	217	49	43	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.934		0.975			
Flt Protected	0.975					0.991
Satd. Flow (prot)	1595	0	1678	0	0	1469
Flt Permitted	0.975					0.991
Satd. Flow (perm)	1595	0	1678	0	0	1469
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	4	7		1	1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	4%	7%	8%	2%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	79	76	224	51	44	189
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	275	0	0	233
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	77	74	217	49	43	183
Future Vol, veh/h	77	74	217	49	43	183
Conflicting Peds, #/hr	4	7	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	4	7	8	2
Mvmt Flow	79	76	224	51	44	189

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	532	258	0
Stage 1	251	-	-
Stage 2	281	-	-
Critical Hdwy	5.21	5.61	-
Critical Hdwy Stg 1	4.21	-	-
Critical Hdwy Stg 2	4.21	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	609	817	-
Stage 1	862	-	-
Stage 2	844	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	583	812	-
Mov Cap-2 Maneuver	583	-	-
Stage 1	861	-	-
Stage 2	809	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	676	1252
HCM Lane V/C Ratio	-	-	0.23	0.035
HCM Control Delay (s)	-	-	11.9	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkes Ave & Croton Dam Rd

2025-BD-PM
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	124	5	160	131	0	101
Future Volume (vph)	124	5	160	131	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.994		0.939			
Flt Protected	0.954					
Satd. Flow (prot)	1798	0	1638	0	0	1748
Flt Permitted	0.954					
Satd. Flow (perm)	1798	0	1638	0	0	1748
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	3	1		1	1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	20%	5%	1%	0%	4%
Adj. Flow (vph)	141	6	182	149	0	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	331	0	0	115
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	124	5	160	131	0	101
Future Vol, veh/h	124	5	160	131	0	101
Conflicting Peds, #/hr	3	1	0	1	1	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	20	5	1	0	4
Mvmt Flow	141	6	182	149	0	115

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	376	259	0
Stage 1	258	-	-
Stage 2	118	-	-
Critical Hdwy	5.42	5.9	-
Critical Hdwy Stg 1	4.42	-	-
Critical Hdwy Stg 2	4.42	-	-
Follow-up Hdwy	3.518	3.48	-
Pot Cap-1 Maneuver	694	765	-
Stage 1	843	-	-
Stage 2	937	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	692	764	-
Mov Cap-2 Maneuver	692	-	-
Stage 1	842	-	-
Stage 2	935	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	695	1238
HCM Lane V/C Ratio	-	-	0.211	-
HCM Control Delay (s)	-	-	11.6	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-BD-PM

07/30/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	13	1	4	4	114	13	12	115	2
Future Volume (vph)	0	3	2	13	1	4	4	114	13	12	115	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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		0.955			0.968			0.987			0.998	
Flt Protected					0.966			0.998			0.995	
Satd. Flow (prot)	0	1877	0	0	1598	0	0	1743	0	0	1812	0
Flt Permitted					0.966			0.998			0.995	
Satd. Flow (perm)	0	1877	0	0	1598	0	0	1743	0	0	1812	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	9%	0%	3%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	2	15	1	5	5	134	15	14	135	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	21	0	0	154	0	0	151	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	2	13	1	4	4	114	13	12	115	2
Future Vol, veh/h	0	3	2	13	1	4	4	114	13	12	115	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	1	9	0	3	0
Mvmt Flow	0	4	2	15	1	5	5	134	15	14	135	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	319	323	136	319	317	142	137	0	0	149	0	0
Stage 1	164	164	-	152	152	-	-	-	-	-	-	-
Stage 2	155	159	-	167	165	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.3	6.7	6.3	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	832	782	972	626	592	907	1459	-	-	1445	-	-
Stage 1	966	879	-	848	769	-	-	-	-	-	-	-
Stage 2	970	879	-	832	759	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	818	771	972	616	584	907	1459	-	-	1445	-	-
Mov Cap-2 Maneuver	818	771	-	616	584	-	-	-	-	-	-	-
Stage 1	962	870	-	845	766	-	-	-	-	-	-	-
Stage 2	960	875	-	818	751	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	10.6	0.2	0.7
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1459	-	-	841 661	1445	-	-
HCM Lane V/C Ratio	0.003	-	-	0.007 0.032	0.01	-	-
HCM Control Delay (s)	7.5	0	-	9.3 10.6	7.5	0	-
HCM Lane LOS	A	A	-	A B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0 0.1	0	-	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-BD-PM
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	4	115	3	11	121
Future Volume (vph)	7	4	115	3	11	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.948		0.996			
Flt Protected	0.970					0.996
Satd. Flow (prot)	1671	0	1765	0	0	1826
Flt Permitted	0.970					0.996
Satd. Flow (perm)	1671	0	1765	0	0	1826
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%
Adj. Flow (vph)	8	5	139	4	13	146
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	143	0	0	159
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	4	115	3	11	121
Future Vol, veh/h	7	4	115	3	11	121
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, %	-5	-	7	-	-	-7
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	4
Mvmt Flow	8	5	139	4	13	146

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	313	141	0
Stage 1	141	-	-
Stage 2	172	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	746	930	-
Stage 1	926	-	-
Stage 2	905	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	739	930	-
Mov Cap-2 Maneuver	739	-	-
Stage 1	926	-	-
Stage 2	896	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	799	1452
HCM Lane V/C Ratio	-	-	0.017	0.009
HCM Control Delay (s)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-BD-PM

07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	1	117	2	3	128
Future Volume (vph)	4	1	117	2	3	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977		0.998			
Flt Protected	0.960					0.999
Satd. Flow (prot)	1519	0	1851	0	0	1729
Flt Permitted	0.960					0.999
Satd. Flow (perm)	1519	0	1851	0	0	1729
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	25%	0%	1%	0%	0%	3%
Adj. Flow (vph)	5	1	139	2	4	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	141	0	0	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	117	2	3	128
Future Vol, veh/h	4	1	117	2	3	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, %	-6	-	-4	-	-	6
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	25	0	1	0	0	3
Mvmt Flow	5	1	139	2	4	152
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	300	140	0	0	141	0
Stage 1	140	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	5.45	5.6	-	-	4.1	-
Critical Hdwy Stg 1	4.45	-	-	-	-	-
Critical Hdwy Stg 2	4.45	-	-	-	-	-
Follow-up Hdwy	3.725	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	714	935	-	-	1455	-
Stage 1	873	-	-	-	-	-
Stage 2	860	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	712	935	-	-	1455	-
Mov Cap-2 Maneuver	712	-	-	-	-	-
Stage 1	873	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.9	0		0.2		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	748		1455	-	
HCM Lane V/C Ratio	-	0.008		0.002	-	
HCM Control Delay (s)	-	9.9		7.5	0	
HCM Lane LOS	-	A		A	A	
HCM 95th %tile Q(veh)	-	0		0	-	

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-BD-PM
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	107	114	3	84	128
Future Volume (vph)	3	107	114	3	84	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.868		0.997			
Flt Protected	0.999					0.981
Satd. Flow (prot)	1625	0	1850	0	0	1734
Flt Permitted	0.999					0.981
Satd. Flow (perm)	1625	0	1850	0	0	1734
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	1%	0%	0%	3%
Adj. Flow (vph)	3	120	128	3	94	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	123	0	131	0	0	238
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	107	114	3	84	128
Future Vol, veh/h	3	107	114	3	84	128
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	1	0	0	3
Mvmt Flow	3	120	128	3	94	144

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	463	131	0
Stage 1	131	-	-
Stage 2	332	-	-
Critical Hdwy	5.2	5.61	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.309	-
Pot Cap-1 Maneuver	654	942	-
Stage 1	940	-	-
Stage 2	817	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	608	941	-
Mov Cap-2 Maneuver	608	-	-
Stage 1	939	-	-
Stage 2	760	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	927	1465
HCM Lane V/C Ratio	-	-	0.133	0.064
HCM Control Delay (s)	-	-	9.5	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1	3	1	10	11	3	217	1	11	208	7
Future Volume (vph)	7	1	3	1	10	11	3	217	1	11	208	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.966			0.932			0.999			0.996	
Flt Protected		0.968			0.998			0.999			0.998	
Satd. Flow (prot)	0	1823	0	0	1781	0	0	1833	0	0	1758	0
Flt Permitted		0.968			0.998			0.999			0.998	
Satd. Flow (perm)	0	1823	0	0	1781	0	0	1833	0	0	1758	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	33%	100%	0%	11%	0%	1%	0%	20%	2%	0%
Adj. Flow (vph)	8	1	3	1	11	12	3	244	1	12	234	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	24	0	0	248	0	0	254	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	1	3	1	10	11	3	217	1	11	208	7
Future Vol, veh/h	7	1	3	1	10	11	3	217	1	11	208	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	33	100	0	11	0	1	0	20	2	0
Mvmt Flow	8	1	3	1	11	12	3	244	1	12	234	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	524	513	238	515	517	245	242	0	0	245	0	0
Stage 1	262	262	-	251	251	-	-	-	-	-	-	-
Stage 2	262	251	-	264	266	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6.33	7.9	6.3	6.21	4.1	-	-	4.3	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.597	4.4	4	3.399	2.2	-	-	2.38	-	-
Pot Cap-1 Maneuver	495	495	740	356	479	777	1336	-	-	1223	-	-
Stage 1	770	716	-	587	713	-	-	-	-	-	-	-
Stage 2	770	723	-	577	703	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	473	488	740	350	472	777	1336	-	-	1223	-	-
Mov Cap-2 Maneuver	473	488	-	350	472	-	-	-	-	-	-	-
Stage 1	768	708	-	585	711	-	-	-	-	-	-	-
Stage 2	744	721	-	567	695	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	11.5	0.1	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	526 576	1223	-	-
HCM Lane V/C Ratio	0.003	-	-	0.023 0.043	0.01	-	-
HCM Control Delay (s)	7.7	0	-	12 11.5	8	0	-
HCM Lane LOS	A	A	-	B B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1 0.1	0	-	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-BD-PM
07/30/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	22	39	195	204	77
Future Volume (vph)	48	22	39	195	204	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.958				0.963	
Flt Protected	0.967			0.992		
Satd. Flow (prot)	1613	0	0	1792	1789	0
Flt Permitted	0.967			0.992		
Satd. Flow (perm)	1613	0	0	1792	1789	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	21%	0%	2%	2%	3%
Adj. Flow (vph)	53	24	43	217	227	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	0	260	313	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	48	22	39	195	204	77
Future Vol, veh/h	48	22	39	195	204	77
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	21	0	2	2	3
Mvmt Flow	53	24	43	217	227	86

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	573	270	313
Stage 1	270	-	-
Stage 2	303	-	-
Critical Hdwy	6	6.21	4.1
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.489	2.2
Pot Cap-1 Maneuver	516	736	1259
Stage 1	804	-	-
Stage 2	780	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	496	736	1259
Mov Cap-2 Maneuver	496	-	-
Stage 1	773	-	-
Stage 2	780	-	-

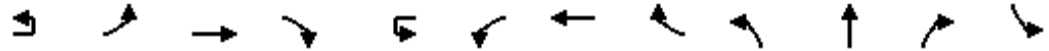
Approach	EB	NB	SB
HCM Control Delay, s	12.6	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1259	-	553	-	-
HCM Lane V/C Ratio	0.034	-	0.141	-	-
HCM Control Delay (s)	8	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM

07/30/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	160	1195	156	2	20	2276	31	51	141	51	19
Future Volume (vph)	8	160	1195	156	2	20	2276	31	51	141	51	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.998			0.971		
Flt Protected		0.950				0.950				0.990		
Satd. Flow (prot)	0	1713	3422	1561	0	1736	3366	0	0	1857	0	0
Flt Permitted		0.950				0.950				0.428		
Satd. Flow (perm)	0	1713	3422	1561	0	1736	3366	0	0	803	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							1					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	3%	1%	0%	0%	3%	0%	0%	1%	5%	6%
Adj. Flow (vph)	8	165	1232	161	2	21	2346	32	53	145	53	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	1232	161	0	23	2378	0	0	251	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

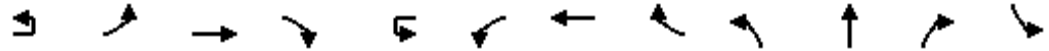
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Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	105	179
Future Volume (vph)	105	179
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.920	
Flt Protected	0.997	
Satd. Flow (prot)	1637	0
Flt Permitted	0.911	
Satd. Flow (perm)	1496	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	3%	6%
Adj. Flow (vph)	108	185
Shared Lane Traffic (%)		
Lane Group Flow (vph)	313	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	CI+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	CI+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM
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Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	27.0	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0
Total Split (%)	18.0%	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%
Maximum Green (s)	20.0	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.82	0.53	0.15		0.26	1.23			1.86		
Control Delay		92.4	13.7	9.9		74.9	139.2			448.7		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		92.4	13.7	9.9		74.9	139.2			448.7		
Queue Length 50th (ft)		166	327	58		22	~1526			~373		
Queue Length 95th (ft)		#278	406	95		54	#1652			#556		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		231	2330	1062		234	1930			135		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.75	0.53	0.15		0.10	1.23			1.86		

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 148.3

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Weekday PM Hour (4:30 - 5:30)
JMC 15064

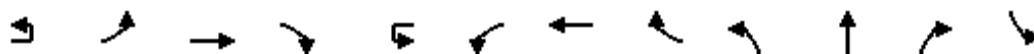
Synchro 10 Report
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Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	20.7%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	1.24	
Control Delay	187.3	
Queue Delay	0.0	
Total Delay	187.3	
Queue Length 50th (ft)	~382	
Queue Length 95th (ft)	#579	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	252	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.24	
Intersection Summary		

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM
07/30/2021



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	8	160	1195	156	2	20	2276	31	51	141	51	19
Future Volume (veh/h)	8	160	1195	156	2	20	2276	31	51	141	51	19
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1934	1934	1964		1894	1850	1894	1976	1961	1899	1967
Adj Flow Rate, veh/h		165	1232	161		21	2346	32	53	145	53	20
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		3	3	1		0	3	0	0	1	5	6
Cap, veh/h		191	2480	1124		26	2080	28	62	132	44	38
Arrive On Green		0.10	0.68	0.68		0.01	0.59	0.59	0.17	0.17	0.17	0.17
Sat Flow, veh/h		1842	3674	1664		1804	3550	48	187	766	255	69
Grp Volume(v), veh/h		165	1232	161		21	1159	1219	251	0	0	313
Grp Sat Flow(s),veh/h/ln		1842	1837	1664		1804	1757	1841	1208	0	0	1798
Q Serve(g_s), s		12.8	23.8	5.0		1.7	85.0	85.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		12.8	23.8	5.0		1.7	85.0	85.0	25.0	0.0	0.0	25.0
Prop In Lane		1.00		1.00		1.00		0.03	0.21		0.21	0.06
Lane Grp Cap(c), veh/h		191	2480	1124		26	1030	1079	238	0	0	336
V/C Ratio(X)		0.86	0.50	0.14		0.80	1.13	1.13	1.05	0.00	0.00	0.93
Avail Cap(c_a), veh/h		254	2480	1124		249	1030	1079	238	0	0	336
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		64.0	11.5	8.5		71.3	30.0	30.0	60.6	0.0	0.0	60.1
Incr Delay (d2), s/veh		20.1	0.2	0.1		40.1	69.1	70.7	73.1	0.0	0.0	31.8
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
%ile BackOfQ(50%),veh/ln		7.0	9.1	1.8		1.1	53.0	56.0	13.7	0.0	0.0	14.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		84.1	11.7	8.5		111.4	99.2	100.8	133.6	0.0	0.0	91.9
LnGrp LOS		F	B	A		F	F	F	F	A	A	F
Approach Vol, veh/h			1558				2399			251		
Approach Delay, s/veh			19.0				100.1			133.6		
Approach LOS			B				F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	104.9		31.0	22.1	92.0		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	3.7	25.8		27.0	14.8	87.0		27.0				
Green Ext Time (p_c), s	0.0	12.0		0.0	0.3	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	73.4
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM
07/30/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	105	179
Future Volume (veh/h)	105	179
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2012	1967
Adj Flow Rate, veh/h	108	185
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	3	6
Cap, veh/h	115	183
Arrive On Green	0.17	0.17
Sat Flow, veh/h	666	1063
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.59
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	313	
Approach Delay, s/veh	91.9	
Approach LOS	F	
Timer - Assigned Phs		

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-BD-SAT
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	57	197	66	40	167
Future Volume (vph)	44	57	197	66	40	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.923		0.966			
Flt Protected	0.979					0.990
Satd. Flow (prot)	1807	0	1701	0	0	1501
Flt Permitted	0.979					0.990
Satd. Flow (perm)	1807	0	1701	0	0	1501
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	1	1		3	3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	2%	3%	0%	0%	1%
Parking (#/hr)		5				5
Adj. Flow (vph)	52	68	235	79	48	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	314	0	0	247
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.07	1.07	1.11	1.32
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 2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	44	57	197	66	40	167
Future Vol, veh/h	44	57	197	66	40	167
Conflicting Peds, #/hr	1	1	0	3	3	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, %	-6	-	-3	-	-	3
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	2	3	0	0	1
Mvmt Flow	52	68	235	79	48	199

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	574	279	0
Stage 1	278	-	-
Stage 2	296	-	-
Critical Hdwy	5.2	5.62	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.318	-
Pot Cap-1 Maneuver	586	796	-
Stage 1	849	-	-
Stage 2	838	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	558	793	-
Mov Cap-2 Maneuver	558	-	-
Stage 1	846	-	-
Stage 2	801	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	670	1252
HCM Lane V/C Ratio	-	-	0.179	0.038
HCM Control Delay (s)	-	-	11.5	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkles Ave & Croton Dam Rd

2025-BD-SAT
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	126	2	122	132	0	81
Future Volume (vph)	126	2	122	132	0	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998		0.930			
Flt Protected	0.953					
Satd. Flow (prot)	1852	0	1650	0	0	1818
Flt Permitted	0.953					
Satd. Flow (perm)	1852	0	1650	0	0	1818
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%
Adj. Flow (vph)	142	2	137	148	0	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	285	0	0	91
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	126	2	122	132	0	81
Future Vol, veh/h	126	2	122	132	0	81
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, %	-5	-	-3	-	-	-5
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	1	0	0
Mvmt Flow	142	2	137	148	0	91

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	302	211	0
Stage 1	211	-	-
Stage 2	91	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	755	859	-
Stage 1	879	-	-
Stage 2	962	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	755	859	-
Mov Cap-2 Maneuver	755	-	-
Stage 1	879	-	-
Stage 2	962	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	756	1289
HCM Lane V/C Ratio	-	-	0.19	-
HCM Control Delay (s)	-	-	10.9	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-BD-SAT

07/30/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	8	2	4	4	3	112	16	9	118	3
Future Volume (vph)	2	2	8	2	4	4	3	112	16	9	118	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.907			0.944			0.983			0.997	
Flt Protected		0.992			0.992			0.999			0.997	
Satd. Flow (prot)	0	1642	0	0	1601	0	0	1730	0	0	1862	0
Flt Permitted		0.992			0.992			0.999			0.997	
Satd. Flow (perm)	0	1642	0	0	1601	0	0	1730	0	0	1862	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	67%	1%	0%	0%	0%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	2	2	9	2	5	5	3	130	19	10	137	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	12	0	0	152	0	0	150	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	2	8	2	4	4	3	112	16	9	118	3
Future Vol, veh/h	2	2	8	2	4	4	3	112	16	9	118	3
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	50	0	0	0	0	0	67	1	0	0	0	0
Mvmt Flow	2	2	9	2	5	5	3	130	19	10	137	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	312	314	139	310	306	142	140	0	0	149	0	0
Stage 1	159	159	-	146	146	-	-	-	-	-	-	-
Stage 2	153	155	-	164	160	-	-	-	-	-	-	-
Critical Hdwy	4.6	3.5	4.7	7.3	6.7	6.3	4.77	-	-	4.1	-	-
Critical Hdwy Stg 1	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.95	4	3.3	3.5	4	3.3	2.803	-	-	2.2	-	-
Pot Cap-1 Maneuver	722	786	969	635	601	907	1126	-	-	1445	-	-
Stage 1	847	879	-	855	774	-	-	-	-	-	-	-
Stage 2	850	880	-	835	763	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	707	777	969	622	594	906	1126	-	-	1445	-	-
Mov Cap-2 Maneuver	707	777	-	622	594	-	-	-	-	-	-	-
Stage 1	844	872	-	852	772	-	-	-	-	-	-	-
Stage 2	837	877	-	818	757	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.2		10.3		0.2		0.5	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1126	-	-	879	696	1445	-
HCM Lane V/C Ratio	0.003	-	-	0.016	0.017	0.007	-
HCM Control Delay (s)	8.2	0	-	9.2	10.3	7.5	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-BD-SAT
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	5	114	5	15	124
Future Volume (vph)	7	5	114	5	15	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.944		0.994			
Flt Protected	0.972					0.995
Satd. Flow (prot)	1668	0	1729	0	0	1875
Flt Permitted	0.972					0.995
Satd. Flow (perm)	1668	0	1729	0	0	1875
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	7	5	116	5	15	127
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	121	0	0	142
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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 0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	5	114	5	15	124
Future Vol, veh/h	7	5	114	5	15	124
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-5	-	7	-	-	-7
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	7	5	116	5	15	127

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	277	120	0
Stage 1	120	-	-
Stage 2	157	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	774	953	-
Stage 1	941	-	-
Stage 2	915	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	765	952	-
Mov Cap-2 Maneuver	765	-	-
Stage 1	940	-	-
Stage 2	905	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	833	1477
HCM Lane V/C Ratio	-	-	0.015	0.01
HCM Control Delay (s)	-	-	9.4	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-BD-SAT
07/30/2021

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	2	106	13	3	128
Future Volume (vph)	11	2	106	13	3	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981		0.985			
Flt Protected	0.959					0.999
Satd. Flow (prot)	1841	0	1795	0	0	1763
Flt Permitted	0.959					0.999
Satd. Flow (perm)	1841	0	1795	0	0	1763
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	2%	9%	0%	1%
Adj. Flow (vph)	12	2	112	14	3	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	126	0	0	138
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	2	106	13	3	128
Future Vol, veh/h	11	2	106	13	3	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, %	-6	-	-4	-	-	6
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	9	0	1
Mvmt Flow	12	2	112	14	3	135

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	260	119	0
Stage 1	119	-	-
Stage 2	141	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	800	957	-
Stage 1	948	-	-
Stage 2	934	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	798	957	-
Mov Cap-2 Maneuver	798	-	-
Stage 1	948	-	-
Stage 2	932	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	819	1473
HCM Lane V/C Ratio	-	-	0.017	0.002
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-BD-SAT
07/30/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	93	98	10	81	130
Future Volume (vph)	1	93	98	10	81	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.866		0.988			
Flt Protected						0.981
Satd. Flow (prot)	1638	0	1834	0	0	1746
Flt Permitted						0.981
Satd. Flow (perm)	1638	0	1834	0	0	1746
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	1%	0%	3%	0%
Adj. Flow (vph)	1	102	108	11	89	143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	0	119	0	0	232
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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	93	98	10	81	130
Future Vol, veh/h	1	93	98	10	81	130
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	3	0
Mvmt Flow	1	102	108	11	89	143

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	436	115	0
Stage 1	115	-	-
Stage 2	321	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	672	961	-
Stage 1	951	-	-
Stage 2	823	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	627	960	-
Mov Cap-2 Maneuver	627	-	-
Stage 1	950	-	-
Stage 2	769	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	955	1461
HCM Lane V/C Ratio	-	-	0.108	0.061
HCM Control Delay (s)	-	-	9.2	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	3	1	0	10	4	183	3	9	206	8
Future Volume (vph)	8	1	3	1	0	10	4	183	3	9	206	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.969			0.876			0.998			0.995	
Flt Protected		0.967			0.996			0.999			0.998	
Satd. Flow (prot)	0	1646	0	0	1665	0	0	1787	0	0	1780	0
Flt Permitted		0.967			0.996			0.999			0.998	
Satd. Flow (perm)	0	1646	0	0	1665	0	0	1787	0	0	1780	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	7%	100%	33%	0%	0%	11%	25%	3%	0%	0%	1%	14%
Adj. Flow (vph)	9	1	3	1	0	11	5	208	3	10	234	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	12	0	0	216	0	0	253	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)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	1	3	1	0	10	4	183	3	9	206	8
Future Vol, veh/h	8	1	3	1	0	10	4	183	3	9	206	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	7	100	33	0	0	11	25	3	0	0	1	14
Mvmt Flow	9	1	3	1	0	11	5	208	3	10	234	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	484	480	239	481	483	210	243	0	0	211	0	0
Stage 1	259	259	-	220	220	-	-	-	-	-	-	-
Stage 2	225	221	-	261	263	-	-	-	-	-	-	-
Critical Hdwy	6.77	7.1	6.33	6.9	6.3	6.21	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.9	3.597	3.5	4	3.399	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	512	388	739	512	499	813	1200	-	-	1372	-	-
Stage 1	756	562	-	797	734	-	-	-	-	-	-	-
Stage 2	786	585	-	759	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	500	383	739	503	493	813	1200	-	-	1372	-	-
Mov Cap-2 Maneuver	500	383	-	503	493	-	-	-	-	-	-	-
Stage 1	752	558	-	793	730	-	-	-	-	-	-	-
Stage 2	771	582	-	748	699	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	9.8	0.2	0.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1200	-	-	529	770	1372	-
HCM Lane V/C Ratio	0.004	-	-	0.026	0.016	0.007	-
HCM Control Delay (s)	8	0	-	12	9.8	7.6	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-BD-SAT
07/30/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	79	16	22	179	206	67
Future Volume (vph)	79	16	22	179	206	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.967	
Flt Protected	0.960			0.995		
Satd. Flow (prot)	1742	0	0	1764	1801	0
Flt Permitted	0.960			0.995		
Satd. Flow (perm)	1742	0	0	1764	1801	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	4%	2%	2%
Adj. Flow (vph)	81	16	22	183	210	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	97	0	0	205	278	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	16	22	179	206	67
Future Vol, veh/h	79	16	22	179	206	67
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	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	4	2	2
Mvmt Flow	81	16	22	183	210	68

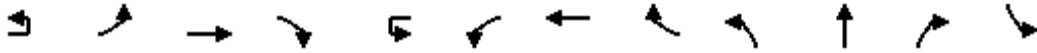
Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	471	244	278
Stage 1	244	-	-
Stage 2	227	-	-
Critical Hdwy	6	6	4.1
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	585	811	1296
Stage 1	823	-	-
Stage 2	836	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	574	811	1296
Mov Cap-2 Maneuver	574	-	-
Stage 1	807	-	-
Stage 2	836	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1296	-	604	-	-
HCM Lane V/C Ratio	0.017	-	0.16	-	-
HCM Control Delay (s)	7.8	0	12.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT
07/30/2021

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	128	1012	140	1	22	1499	35	61	126	71	50
Future Volume (vph)	3	128	1012	140	1	22	1499	35	61	126	71	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.997			0.963		
Flt Protected		0.950				0.950				0.988		
Satd. Flow (prot)	0	1728	3455	1531	0	1736	3363	0	0	1833	0	0
Flt Permitted		0.950				0.950				0.605		
Satd. Flow (perm)	0	1728	3455	1531	0	1736	3363	0	0	1122	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							3					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	3%	0%	0%	3%	0%	4%	2%	0%	2%
Adj. Flow (vph)	3	132	1043	144	1	23	1545	36	63	130	73	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	1043	144	0	24	1581	0	0	266	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Peak Saturday Midday Hour (10:30 - 11:30)
JMC 15064

Synchro 10 Report
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Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT
07/30/2021



Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	111	165
Future Volume (vph)	111	165
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.932	
Flt Protected	0.992	
Satd. Flow (prot)	1709	0
Flt Permitted	0.811	
Satd. Flow (perm)	1398	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	0%	2%
Adj. Flow (vph)	114	170
Shared Lane Traffic (%)		
Lane Group Flow (vph)	336	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	CI+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	CI+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT
07/30/2021



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	22.0	22.0	67.0	67.0	22.0	22.0	67.0		31.0	31.0		31.0
Total Split (%)	18.3%	18.3%	55.8%	55.8%	18.3%	18.3%	55.8%		25.8%	25.8%		25.8%
Maximum Green (s)	15.0	15.0	60.0	60.0	15.0	15.0	60.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.70	0.51	0.16		0.22	0.94			1.10		
Control Delay		69.3	15.7	12.4		57.7	39.8			131.6		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		69.3	15.7	12.4		57.7	39.8			131.6		
Queue Length 50th (ft)		101	252	51		18	585			~239		
Queue Length 95th (ft)		170	326	90		46	#766			#411		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		223	2059	912		224	1741			241		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.61	0.51	0.16		0.11	0.91			1.10		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 116.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Saturday Midday Hour (10:30 - 11:30)
JMC 15064

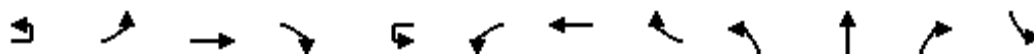
Synchro 10 Report
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Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	25.8%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	1.12	
Control Delay	130.2	
Queue Delay	0.0	
Total Delay	130.2	
Queue Length 50th (ft)	~305	
Queue Length 95th (ft)	#492	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	301	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.12	
Intersection Summary		

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT
07/30/2021



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	3	128	1012	140	1	22	1499	35	61	126	71	50
Future Volume (veh/h)	3	128	1012	140	1	22	1499	35	61	126	71	50
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1949	1949	1934		1894	1850	1894	1914	1945	1976	2027
Adj Flow Rate, veh/h		132	1043	144		23	1545	36	63	130	73	52
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	3		0	3	0	4	2	0	2
Cap, veh/h		165	2127	941		28	1758	41	97	169	84	82
Arrive On Green		0.09	0.57	0.57		0.02	0.50	0.50	0.22	0.22	0.22	0.22
Sat Flow, veh/h		1856	3702	1639		1804	3510	82	247	776	387	194
Grp Volume(v), veh/h		132	1043	144		23	772	809	266	0	0	336
Grp Sat Flow(s),veh/h/ln		1856	1851	1639		1804	1757	1835	1410	0	0	1705
Q Serve(g_s), s		7.2	17.3	4.3		1.3	40.6	40.8	0.0	0.0	0.0	0.8
Cycle Q Clear(g_c), s		7.2	17.3	4.3		1.3	40.6	40.8	19.2	0.0	0.0	20.0
Prop In Lane		1.00		1.00		1.00		0.04	0.24		0.27	0.15
Lane Grp Cap(c), veh/h		165	2127	941		28	880	919	349	0	0	411
V/C Ratio(X)		0.80	0.49	0.15		0.82	0.88	0.88	0.76	0.00	0.00	0.82
Avail Cap(c_a), veh/h		268	2141	948		261	1016	1061	387	0	0	452
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		46.3	13.1	10.3		50.9	23.1	23.1	38.6	0.0	0.0	39.3
Incr Delay (d2), s/veh		8.5	0.2	0.1		40.9	8.0	7.9	7.8	0.0	0.0	10.5
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
%ile BackOfQ(50%),veh/ln		3.6	6.5	1.4		0.9	17.2	18.0	7.2	0.0	0.0	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		54.8	13.3	10.4		91.8	31.0	31.0	46.4	0.0	0.0	49.8
LnGrp LOS		D	B	B		F	C	C	D	A	A	D
Approach Vol, veh/h			1319				1604			266		
Approach Delay, s/veh			17.1				31.9			46.4		
Approach LOS			B				C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	66.6		28.5	16.3	59.0		28.5				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		25.0	15.0	60.0		25.0				
Max Q Clear Time (g_c+I1), s	3.3	19.3		22.0	9.2	42.8		21.2				
Green Ext Time (p_c), s	0.0	8.9		0.5	0.2	9.1		0.5				

Intersection Summary

HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT
07/30/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	111	165
Future Volume (veh/h)	111	165
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2057	2027
Adj Flow Rate, veh/h	114	170
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	0	2
Cap, veh/h	141	187
Arrive On Green	0.22	0.22
Sat Flow, veh/h	649	863
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.51
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	336	
Approach Delay, s/veh	49.8	
Approach LOS	D	
Timer - Assigned Phs		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-AM-IMP

01/24/2022

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	132	2298	119	3	8	976	17	40	166	81	35	121
Future Volume (vph)	132	2298	119	3	8	976	17	40	166	81	35	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	11	11	13	13	13	11	11
Grade (%)		-2%				1%			0%			-4%
Storage Length (ft)	110		190		150		0	0		0	0	
Storage Lanes	1		1		1		0	0		1	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.997				0.850		
Flt Protected	0.950				0.950				0.990			0.989
Satd. Flow (prot)	1588	3357	1447	0	1365	3174	0	0	1854	1669	0	1757
Flt Permitted	0.950				0.950				0.794			0.641
Satd. Flow (perm)	1588	3357	1447	0	1365	3174	0	0	1487	1669	0	1139
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)						2						
Link Speed (mph)		40				40			30			30
Link Distance (ft)		1697				1673			161			419
Travel Time (s)		28.9				28.5			3.7			9.5
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	11%	5%	9%	33%	25%	9%	13%	0%	6%	0%	0%	7%
Adj. Flow (vph)	133	2321	120	3	8	986	17	40	168	82	35	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	2321	120	0	11	1003	0	0	208	82	0	157
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Median Width(ft)		11				11			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02	1.02
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	2	2	2	1	2	2		1	2	2	1	2
Detector Template				Left				Left			Left	
Leading Detector (ft)	83	83	83	20	83	83		20	83	83	20	83
Trailing Detector (ft)	-5	-5	-5	0	-5	-5		0	-5	-5	0	-5
Detector 1 Position(ft)	-5	-5	-5	0	-5	-5		0	-5	-5	0	-5
Detector 1 Size(ft)	40	40	40	20	40	40		20	40	40	20	40
Detector 1 Type	Cl+Ex	Cl+Ex	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)	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0	0.0	0.0	3.0
Detector 1 Queue (s)	0.0	0.0	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	4.0	0.0	0.0	4.0
Detector 2 Position(ft)	43	43	43		43	43			43	43		43
Detector 2 Size(ft)	40	40	40		40	40			40	40		40
Detector 2 Type	Cl+Ex	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		0.0

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width (ft)	11
Grade (%)	
Storage Length (ft)	200
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1488
Flt Permitted	
Satd. Flow (perm)	1488
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	7%
Adj. Flow (vph)	200
Shared Lane Traffic (%)	
Lane Group Flow (vph)	200
Enter Blocked Intersection	No
Lane Alignment	R NA
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.02
Turning Speed (mph)	9
Number of Detectors	2
Detector Template	
Leading Detector (ft)	83
Trailing Detector (ft)	-5
Detector 1 Position(ft)	-5
Detector 1 Size(ft)	40
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	43
Detector 2 Size(ft)	40
Detector 2 Type	CI+Ex
Detector 2 Channel	
Detector 2 Extend (s)	0.0

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-AM-IMP
01/24/2022

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2					8		8	4	
Detector Phase	5	2	2	1	1	6		8	8	8	4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0	11.0	11.0	11.0
Total Split (s)	24.0	75.0	75.0	12.0	12.0	63.0		23.0	23.0	23.0	23.0	23.0
Total Split (%)	21.8%	68.2%	68.2%	10.9%	10.9%	57.3%		20.9%	20.9%	20.9%	20.9%	20.9%
Maximum Green (s)	17.0	68.0	68.0	5.0	5.0	56.0		17.0	17.0	17.0	17.0	17.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	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		0.0
Total Lost Time (s)	7.0	7.0	7.0		7.0	7.0			6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	Min	Min	None	None	Min		None	None	None	None	None
v/c Ratio	0.64	1.02	0.12		0.16	0.63			0.83	0.29		0.81
Control Delay	56.2	41.3	6.7		53.3	20.9			67.9	40.7		72.5
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay	56.2	41.3	6.7		53.3	20.9			67.9	40.7		72.5
Queue Length 50th (ft)	79	661	22		7	237			126	45		95
Queue Length 95th (ft)	153	#1131	58		27	325			#287	100		#236
Internal Link Dist (ft)		1617				1593			81			339
Turn Bay Length (ft)	110		190		150							
Base Capacity (vph)	269	2278	982		68	1774			251	283		193
Starvation Cap Reductn	0	0	0		0	0			0	0		0
Spillback Cap Reductn	0	0	0		0	0			0	0		0
Storage Cap Reductn	0	0	0		0	0			0	0		0
Reduced v/c Ratio	0.49	1.02	0.12		0.16	0.57			0.83	0.29		0.81

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 100.4

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Croton Dam Rd & NYS Route 9A





Lane Group	SBR
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	23.0
Total Split (%)	20.9%
Maximum Green (s)	17.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
v/c Ratio	0.79
Control Delay	64.0
Queue Delay	0.0
Total Delay	64.0
Queue Length 50th (ft)	120
Queue Length 95th (ft)	#273
Internal Link Dist (ft)	
Turn Bay Length (ft)	200
Base Capacity (vph)	252
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.79
Intersection Summary	

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-AM-IMP

01/24/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	132	2298	119	3	8	976	17	40	166	81	35	121
Future Volume (veh/h)	132	2298	119	3	8	976	17	40	166	81	35	121
Initial Q (Qb), veh	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	
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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1814	1904	1844		1524	1761	1701	1976	1884	1976	2057	1952
Adj Flow Rate, veh/h	133	2321	120		8	986	17	40	168	82	35	122
Peak Hour Factor	0.99	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	11	5	9		25	9	13	0	6	0	0	7
Cap, veh/h	165	2379	1027		9	1912	33	78	218	239	81	211
Arrive On Green	0.10	0.66	0.66		0.01	0.57	0.57	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1727	3617	1562		1451	3365	58	255	1526	1675	269	1477
Grp Volume(v), veh/h	133	2321	120		8	490	513	208	0	82	157	0
Grp Sat Flow(s),veh/h/ln	1727	1808	1562		1451	1673	1750	1781	0	1675	1746	0
Q Serve(g_s), s	7.8	63.3	2.9		0.6	18.5	18.5	3.1	0.0	4.6	0.0	0.0
Cycle Q Clear(g_c), s	7.8	63.3	2.9		0.6	18.5	18.5	11.6	0.0	4.6	8.5	0.0
Prop In Lane	1.00		1.00		1.00		0.03	0.19		1.00	0.22	
Lane Grp Cap(c), veh/h	165	2379	1027		9	950	995	295	0	239	292	0
V/C Ratio(X)	0.81	0.98	0.12		0.93	0.52	0.52	0.70	0.00	0.34	0.54	0.00
Avail Cap(c_a), veh/h	285	2384	1030		70	950	995	334	0	276	330	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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.7	16.9	6.5		51.3	13.6	13.6	42.8	0.0	39.9	41.4	0.0
Incr Delay (d2), s/veh	9.0	13.2	0.1		121.1	0.5	0.5	5.7	0.0	0.9	1.5	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
%ile BackOfQ(50%),veh/ln	3.7	25.4	0.9		0.5	6.4	6.7	5.6	0.0	1.9	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	30.1	6.6		172.4	14.1	14.1	48.5	0.0	40.7	42.9	0.0
LnGrp LOS	D	C	A		F	B	B	D	A	D	D	A
Approach Vol, veh/h		2574				1011			290			357
Approach Delay, s/veh		30.3				15.3			46.3			53.9
Approach LOS		C				B			D			D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	74.8		20.7	16.8	65.6		20.7				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	5.0	68.0		17.0	17.0	56.0		17.0				
Max Q Clear Time (g_c+I1), s	2.6	65.3		14.2	9.8	20.5		13.6				
Green Ext Time (p_c), s	0.0	2.6		0.5	0.3	6.2		0.5				

Intersection Summary

HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-AM-IMP

01/24/2022

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	198
Future Volume (veh/h)	198
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1952
Adj Flow Rate, veh/h	200
Peak Hour Factor	0.99
Percent Heavy Veh, %	7
Cap, veh/h	236
Arrive On Green	0.14
Sat Flow, veh/h	1654
Grp Volume(v), veh/h	200
Grp Sat Flow(s),veh/h/ln	1654
Q Serve(g_s), s	12.2
Cycle Q Clear(g_c), s	12.2
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	236
V/C Ratio(X)	0.85
Avail Cap(c_a), veh/h	273
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	43.1
Incr Delay (d2), s/veh	19.3
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	6.2
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	62.5
LnGrp LOS	E
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM-IMP

01/24/2022

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	160	1195	156	2	20	2276	31	51	141	51	19
Future Volume (vph)	8	160	1195	156	2	20	2276	31	51	141	51	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		1	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.998				0.850	
Flt Protected		0.950				0.950				0.987		
Satd. Flow (prot)	0	1713	3422	1561	0	1736	3366	0	0	1924	1589	0
Flt Permitted		0.950				0.950				0.750		
Satd. Flow (perm)	0	1713	3422	1561	0	1736	3366	0	0	1462	1589	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							2					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	3%	1%	0%	0%	3%	0%	0%	1%	5%	6%
Adj. Flow (vph)	8	165	1232	161	2	21	2346	32	53	145	53	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	1232	161	0	23	2378	0	0	198	53	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2	2	1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83	83	20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40	40	20
Detector 1 Type	Cl+Ex	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0	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	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0	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
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM-IMP

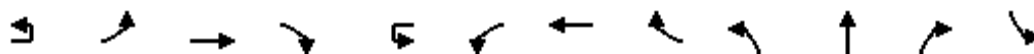
01/24/2022



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	105	179
Future Volume (vph)	105	179
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		200
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt		0.850
Flt Protected	0.992	
Satd. Flow (prot)	1796	1502
Flt Permitted	0.513	
Satd. Flow (perm)	929	1502
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	3%	6%
Adj. Flow (vph)	108	185
Shared Lane Traffic (%)		
Lane Group Flow (vph)	128	185
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	2
Detector Template		
Leading Detector (ft)	83	83
Trailing Detector (ft)	-5	-5
Detector 1 Position(ft)	-5	-5
Detector 1 Size(ft)	40	40
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	3.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	4.0	0.0
Detector 2 Position(ft)	43	43
Detector 2 Size(ft)	40	40
Detector 2 Type	Cl+Ex	Cl+Ex
Detector 2 Channel		
Detector 2 Extend (s)	0.0	0.0

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM-IMP
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Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA	Perm	Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8		8	4
Detector Phase	5	5	2	2	1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0	11.0	11.0
Total Split (s)	16.0	16.0	77.0	77.0	14.0	14.0	75.0		19.0	19.0	19.0	19.0
Total Split (%)	14.5%	14.5%	70.0%	70.0%	12.7%	12.7%	68.2%		17.3%	17.3%	17.3%	17.3%
Maximum Green (s)	9.0	9.0	70.0	70.0	7.0	7.0	68.0		13.0	13.0	13.0	13.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	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)		7.0	7.0	7.0		7.0	7.0			6.0	6.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None	None	None
v/c Ratio		1.24	0.51	0.14		0.22	1.14			1.15	0.28	
Control Delay		195.6	8.9	6.5		54.5	93.2			159.2	48.7	
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0	0.0	
Total Delay		195.6	8.9	6.5		54.5	93.2			159.2	48.7	
Queue Length 50th (ft)		~152	141	25		16	~1040			~164	35	
Queue Length 95th (ft)		#290	296	71		43	#1178			#310	75	
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		140	2439	1112		110	2081			172	187	
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		1.24	0.51	0.14		0.21	1.14			1.15	0.28	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Weekday PM Hour (4:30 - 5:30)
JMC 15064

Synchro 10 Report
Page 3



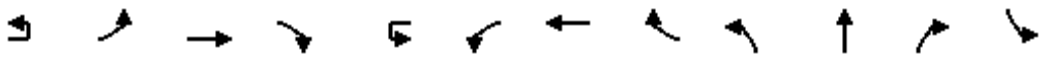
Lane Group	SBT	SBR
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	11.0
Total Split (s)	19.0	19.0
Total Split (%)	17.3%	17.3%
Maximum Green (s)	13.0	13.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
v/c Ratio	1.17	1.05
Control Delay	184.1	127.9
Queue Delay	0.0	0.0
Total Delay	184.1	127.9
Queue Length 50th (ft)	~108	~142
Queue Length 95th (ft)	#230	#285
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		200
Base Capacity (vph)	109	177
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.17	1.05
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-PM-IMP

01/24/2022

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	8	160	1195	156	2	20	2276	31	51	141	51	19
Future Volume (veh/h)	8	160	1195	156	2	20	2276	31	51	141	51	19
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1934	1934	1964		1894	1850	1894	1976	1961	1899	1967
Adj Flow Rate, veh/h		165	1232	161		21	2346	32	53	145	53	20
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		3	3	1		0	3	0	0	1	5	6
Cap, veh/h		151	2520	1141		26	2194	30	90	163	190	59
Arrive On Green		0.08	0.69	0.69		0.01	0.62	0.62	0.12	0.12	0.12	0.12
Sat Flow, veh/h		1842	3674	1664		1804	3550	48	410	1383	1609	175
Grp Volume(v), veh/h		165	1232	161		21	1159	1219	198	0	53	128
Grp Sat Flow(s),veh/h/ln		1842	1837	1664		1804	1757	1841	1793	0	1609	1894
Q Serve(g_s), s		9.0	17.4	3.7		1.3	68.0	68.0	5.2	0.0	3.3	0.0
Cycle Q Clear(g_c), s		9.0	17.4	3.7		1.3	68.0	68.0	12.0	0.0	3.3	6.8
Prop In Lane		1.00		1.00		1.00		0.03	0.27		1.00	0.16
Lane Grp Cap(c), veh/h		151	2520	1141		26	1086	1138	253	0	190	262
V/C Ratio(X)		1.10	0.49	0.14		0.82	1.07	1.07	0.78	0.00	0.28	0.49
Avail Cap(c_a), veh/h		151	2520	1141		115	1086	1138	253	0	190	262
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh		50.5	8.2	6.0		54.1	21.0	21.0	48.0	0.0	44.2	45.7
Incr Delay (d2), s/veh		101.0	0.1	0.1		45.2	46.9	48.1	14.5	0.0	0.8	1.4
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
%ile BackOfQ(50%),veh/ln		8.3	5.9	1.1		0.9	37.8	40.0	6.4	0.0	1.4	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		151.5	8.3	6.1		99.3	67.9	69.1	62.5	0.0	45.0	47.1
LnGrp LOS		F	A	A		F	F	F	E	A	D	D
Approach Vol, veh/h			1558				2399			251		
Approach Delay, s/veh			23.3				68.8			58.8		
Approach LOS			C				E			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	82.4		19.0	16.0	75.0		19.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	70.0		13.0	9.0	68.0		13.0				
Max Q Clear Time (g_c+I1), s	3.3	19.4		14.1	11.0	70.0		14.0				
Green Ext Time (p_c), s	0.0	11.8		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			53.0									
HCM 6th LOS			D									
Notes												
User approved ignoring U-Turning movement.												

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-PM-IMP
01/24/2022

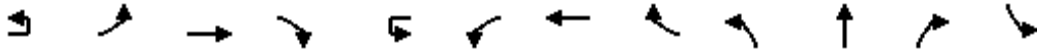


Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	105	179
Future Volume (veh/h)	105	179
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2012	1967
Adj Flow Rate, veh/h	108	185
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	3	6
Cap, veh/h	203	197
Arrive On Green	0.12	0.12
Sat Flow, veh/h	1719	1667
Grp Volume(v), veh/h	0	185
Grp Sat Flow(s),veh/h/ln	0	1667
Q Serve(g_s), s	0.0	12.1
Cycle Q Clear(g_c), s	0.0	12.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	0	197
V/C Ratio(X)	0.00	0.94
Avail Cap(c_a), veh/h	0	197
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	1.00
Uniform Delay (d), s/veh	0.0	48.1
Incr Delay (d2), s/veh	0.0	46.9
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	95.0
LnGrp LOS	A	F
Approach Vol, veh/h	313	
Approach Delay, s/veh	75.4	
Approach LOS	E	
Timer - Assigned Phs		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT-IMP

01/24/2022

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	128	1012	140	1	22	1499	35	61	126	71	50
Future Volume (vph)	3	128	1012	140	1	22	1499	35	61	126	71	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		1	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.997				0.850	
Flt Protected		0.950				0.950				0.984		
Satd. Flow (prot)	0	1728	3455	1531	0	1736	3363	0	0	1882	1669	0
Flt Permitted		0.950				0.950				0.697		
Satd. Flow (perm)	0	1728	3455	1531	0	1736	3363	0	0	1333	1669	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							3					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	3%	0%	0%	3%	0%	4%	2%	0%	2%
Adj. Flow (vph)	3	132	1043	144	1	23	1545	36	63	130	73	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	1043	144	0	24	1581	0	0	193	73	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2	2	1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83	83	20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40	40	20
Detector 1 Type	Cl+Ex	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0	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	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0	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
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT-IMP

01/24/2022

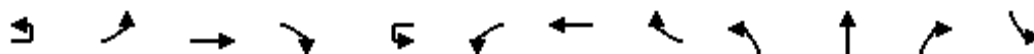


Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	111	165
Future Volume (vph)	111	165
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		200
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt		0.850
Flt Protected	0.985	
Satd. Flow (prot)	1834	1561
Flt Permitted	0.620	
Satd. Flow (perm)	1154	1561
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	0%	2%
Adj. Flow (vph)	114	170
Shared Lane Traffic (%)		
Lane Group Flow (vph)	166	170
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	2
Detector Template		
Leading Detector (ft)	83	83
Trailing Detector (ft)	-5	-5
Detector 1 Position(ft)	-5	-5
Detector 1 Size(ft)	40	40
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	3.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	4.0	0.0
Detector 2 Position(ft)	43	43
Detector 2 Size(ft)	40	40
Detector 2 Type	Cl+Ex	Cl+Ex
Detector 2 Channel		
Detector 2 Extend (s)	0.0	0.0

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT-IMP

01/24/2022



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA	Perm	Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8		8	4
Detector Phase	5	5	2	2	1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0	11.0	11.0
Total Split (s)	19.0	19.0	67.0	67.0	13.0	13.0	61.0		30.0	30.0	30.0	30.0
Total Split (%)	17.3%	17.3%	60.9%	60.9%	11.8%	11.8%	55.5%		27.3%	27.3%	27.3%	27.3%
Maximum Green (s)	12.0	12.0	60.0	60.0	6.0	6.0	54.0		24.0	24.0	24.0	24.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	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)		7.0	7.0	7.0		7.0	7.0			6.0	6.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None	None	None
v/c Ratio		0.71	0.47	0.15		0.24	0.92			0.80	0.24	
Control Delay		66.2	11.9	9.9		54.9	34.1			65.2	38.5	
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0	0.0	
Total Delay		66.2	11.9	9.9		54.9	34.1			65.2	38.5	
Queue Length 50th (ft)		89	143	29		16	492			125	42	
Queue Length 95th (ft)		#185	300	83		45	#724			#209	84	
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		206	2236	991		103	1809			318	398	
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		0.66	0.47	0.15		0.23	0.87			0.61	0.18	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 101.6

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Croton Dam Rd & NYS Route 9A



Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT-IMP

01/24/2022



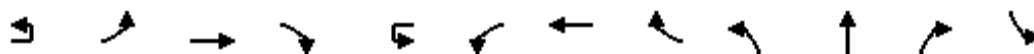
Lane Group	SBT	SBR
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	11.0
Total Split (s)	30.0	30.0
Total Split (%)	27.3%	27.3%
Maximum Green (s)	24.0	24.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
v/c Ratio	0.80	0.60
Control Delay	67.9	48.5
Queue Delay	0.0	0.0
Total Delay	67.9	48.5
Queue Length 50th (ft)	108	106
Queue Length 95th (ft)	#195	177
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		200
Base Capacity (vph)	275	373
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.60	0.46
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT-IMP

01/24/2022



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	3	128	1012	140	1	22	1499	35	61	126	71	50
Future Volume (veh/h)	3	128	1012	140	1	22	1499	35	61	126	71	50
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1949	1949	1934		1894	1850	1894	1914	1945	1976	2027
Adj Flow Rate, veh/h		132	1043	144		23	1545	36	63	130	73	52
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	3		0	3	0	4	2	0	2
Cap, veh/h		169	2222	983		27	1839	43	126	181	238	121
Arrive On Green		0.09	0.60	0.60		0.02	0.52	0.52	0.14	0.14	0.14	0.14
Sat Flow, veh/h		1856	3702	1639		1804	3510	82	480	1276	1675	446
Grp Volume(v), veh/h		132	1043	144		23	772	809	193	0	73	166
Grp Sat Flow(s),veh/h/ln		1856	1851	1639		1804	1757	1835	1755	0	1675	1828
Q Serve(g_s), s		5.7	12.9	3.2		1.0	30.8	30.9	1.7	0.0	3.2	0.0
Cycle Q Clear(g_c), s		5.7	12.9	3.2		1.0	30.8	30.9	8.6	0.0	3.2	6.9
Prop In Lane		1.00		1.00		1.00		0.04	0.33		1.00	0.31
Lane Grp Cap(c), veh/h		169	2222	983		27	921	961	307	0	238	317
V/C Ratio(X)		0.78	0.47	0.15		0.84	0.84	0.84	0.63	0.00	0.31	0.52
Avail Cap(c_a), veh/h		270	2695	1193		131	1151	1202	559	0	488	583
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh		36.6	9.2	7.2		40.5	16.7	16.7	33.9	0.0	31.7	33.2
Incr Delay (d2), s/veh		7.5	0.2	0.1		45.6	4.6	4.5	2.1	0.0	0.7	1.3
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
%ile BackOfQ(50%),veh/ln		2.8	4.3	0.9		0.8	11.6	12.2	3.8	0.0	1.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		44.2	9.3	7.3		86.1	21.3	21.2	36.0	0.0	32.4	34.5
LnGrp LOS		D	A	A		F	C	C	D	A	C	C
Approach Vol, veh/h			1319				1604			266		
Approach Delay, s/veh			12.6				22.2			35.0		
Approach LOS			B				C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	56.5		17.7	14.5	50.2		17.7				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	6.0	60.0		24.0	12.0	54.0		24.0				
Max Q Clear Time (g_c+I1), s	3.0	14.9		9.8	7.7	32.9		10.6				
Green Ext Time (p_c), s	0.0	9.0		1.5	0.2	10.3		1.1				

Intersection Summary

HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-SAT-IMP
01/24/2022



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	111	165
Future Volume (veh/h)	111	165
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2057	2027
Adj Flow Rate, veh/h	114	170
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	0	2
Cap, veh/h	197	244
Arrive On Green	0.14	0.14
Sat Flow, veh/h	1383	1718
Grp Volume(v), veh/h	0	170
Grp Sat Flow(s),veh/h/ln	0	1718
Q Serve(g_s), s	0.0	7.8
Cycle Q Clear(g_c), s	0.0	7.8
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	0	244
V/C Ratio(X)	0.00	0.70
Avail Cap(c_a), veh/h	0	500
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.7
Incr Delay (d2), s/veh	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	37.2
LnGrp LOS	A	D
Approach Vol, veh/h	336	
Approach Delay, s/veh	35.9	
Approach LOS	D	
Timer - Assigned Phs		

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-BD-ALT-AM
01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	74	205	90	67	213
Future Volume (vph)	70	74	205	90	67	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.930		0.959			
Flt Protected	0.976					0.988
Satd. Flow (prot)	1488	0	1686	0	0	1442
Flt Permitted	0.976					0.988
Satd. Flow (perm)	1488	0	1686	0	0	1442
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	7%	3%	1%	7%	4%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	80	85	236	103	77	245
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	339	0	0	322
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	74	205	90	67	213
Future Vol, veh/h	70	74	205	90	67	213
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	9	7	3	1	7	4
Mvmt Flow	80	85	236	103	77	245

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	688	289	0
Stage 1	289	-	-
Stage 2	399	-	-
Critical Hdwy	5.29	5.67	-
Critical Hdwy Stg 1	4.29	-	-
Critical Hdwy Stg 2	4.29	-	-
Follow-up Hdwy	3.581	3.363	-
Pot Cap-1 Maneuver	505	775	-
Stage 1	820	-	-
Stage 2	757	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	467	774	-
Mov Cap-2 Maneuver	467	-	-
Stage 1	819	-	-
Stage 2	700	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	587	1191
HCM Lane V/C Ratio	-	-	0.282	0.065
HCM Control Delay (s)	-	-	13.5	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.2	0.2

Lanes, Volumes, Timings
2: Dale Ave/Hawkles Ave & Croton Dam Rd

2025-BD-ALT-AM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	130	7	117	161	7	149
Future Volume (vph)	130	7	117	161	7	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993		0.922			
Flt Protected	0.955					0.998
Satd. Flow (prot)	1796	0	1559	0	0	1677
Flt Permitted	0.955					0.998
Satd. Flow (perm)	1796	0	1559	0	0	1677
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	1			11	11	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	0%	7%	6%	33%	7%
Adj. Flow (vph)	151	8	136	187	8	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	0	323	0	0	181
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	7	117	161	7	149
Future Vol, veh/h	130	7	117	161	7	149
Conflicting Peds, #/hr	1	0	0	11	11	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	0	7	6	33	7
Mvmt Flow	151	8	136	187	8	173

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	431	241	0
Stage 1	241	-	-
Stage 2	190	-	-
Critical Hdwy	5.43	5.7	-
Critical Hdwy Stg 1	4.43	-	-
Critical Hdwy Stg 2	4.43	-	-
Follow-up Hdwy	3.527	3.3	-
Pot Cap-1 Maneuver	653	830	-
Stage 1	852	-	-
Stage 2	885	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	641	822	-
Mov Cap-2 Maneuver	641	-	-
Stage 1	844	-	-
Stage 2	877	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	648	1061
HCM Lane V/C Ratio	-	-	0.246	0.008
HCM Control Delay (s)	-	-	12.4	8.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-BD-ALT-AM

01/24/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	10	0	17	5	153	11	32	119	0
Future Volume (vph)	0	3	2	10	0	17	5	153	11	32	119	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.942			0.917			0.991				
Flt Protected					0.981			0.999			0.990	
Satd. Flow (prot)	0	1852	0	0	1492	0	0	1694	0	0	1654	0
Flt Permitted					0.981			0.999			0.990	
Satd. Flow (perm)	0	1852	0	0	1492	0	0	1694	0	0	1654	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)							4					4
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	8%	0%	0%	0%	5%	10%	50%	2%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	3	13	0	21	6	191	14	40	149	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	34	0	0	211	0	0	189	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	2	10	0	17	5	153	11	32	119	0
Future Vol, veh/h	0	3	2	10	0	17	5	153	11	32	119	0
Conflicting Peds, #/hr	0	0	0	0	0	0	4	0	0	0	0	4
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	8	0	0	0	5	10	50	2	0
Mvmt Flow	0	4	3	13	0	21	6	191	14	40	149	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	454	450	153	443	443	198	153	0	0	205	0	0
Stage 1	233	233	-	210	210	-	-	-	-	-	-	-
Stage 2	221	217	-	233	233	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.38	6.7	6.3	4.1	-	-	4.6	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.38	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.572	4	3.3	2.2	-	-	2.65	-	-
Pot Cap-1 Maneuver	759	738	957	502	500	844	1440	-	-	1126	-	-
Stage 1	941	869	-	770	724	-	-	-	-	-	-	-
Stage 2	945	871	-	747	706	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	712	703	953	482	476	844	1434	-	-	1126	-	-
Mov Cap-2 Maneuver	712	703	-	482	476	-	-	-	-	-	-	-
Stage 1	933	832	-	766	720	-	-	-	-	-	-	-
Stage 2	917	867	-	713	676	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.6		10.7		0.2		1.8					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1434	-	-	785	660	1126	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.008	0.051	0.036	-	-				
HCM Control Delay (s)	7.5	0	-	9.6	10.7	8.3	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile O(veh)	0	-	-	0	0.2	0.1	-	-				

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-BD-ALT-AM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	15	159	4	14	114
Future Volume (vph)	9	15	159	4	14	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914		0.997			
Flt Protected	0.982					0.995
Satd. Flow (prot)	1631	0	1639	0	0	1858
Flt Permitted	0.982					0.995
Satd. Flow (perm)	1631	0	1639	0	0	1858
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Adj. Flow (vph)	11	19	196	5	17	141
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	201	0	0	158
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	15	159	4	14	114
Future Vol, veh/h	9	15	159	4	14	114
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, %	-5	-	7	-	-	-7
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	11	19	196	5	17	141
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	374	199	0	0	201	0
Stage 1	199	-	-	-	-	-
Stage 2	175	-	-	-	-	-
Critical Hdwy	5.4	5.7	-	-	4.1	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	700	871	-	-	1383	-
Stage 1	887	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	691	871	-	-	1383	-
Mov Cap-2 Maneuver	691	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.7	0	0.8			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	793	1383	-	
HCM Lane V/C Ratio	-	-	0.037	0.012	-	
HCM Control Delay (s)	-	-	9.7	7.6	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-BD-ALT-AM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	3	181	5	1	123
Future Volume (vph)	5	3	181	5	1	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.946		0.996			
Flt Protected	0.971					
Satd. Flow (prot)	1501	0	1779	0	0	1671
Flt Permitted	0.971					
Satd. Flow (perm)	1501	0	1779	0	0	1671
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	33%	0%	5%	0%	100%	6%
Adj. Flow (vph)	6	4	218	6	1	148
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	224	0	0	149
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	3	181	5	1	123
Future Vol, veh/h	5	3	181	5	1	123
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, %	-6	-	-4	-	-	6
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	33	0	5	0	100	6
Mvmt Flow	6	4	218	6	1	148

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	371	221	0
Stage 1	221	-	-
Stage 2	150	-	-
Critical Hdwy	5.53	5.6	-
Critical Hdwy Stg 1	4.53	-	-
Critical Hdwy Stg 2	4.53	-	-
Follow-up Hdwy	3.797	3.3	-
Pot Cap-1 Maneuver	648	855	-
Stage 1	805	-	-
Stage 2	849	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	647	855	-
Mov Cap-2 Maneuver	647	-	-
Stage 1	805	-	-
Stage 2	848	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	712	930
HCM Lane V/C Ratio	-	-	0.014	0.001
HCM Control Delay (s)	-	-	10.1	8.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-BD-ALT-AM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	54	182	2	141	122
Future Volume (vph)	2	54	182	2	141	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.869		0.999			
Flt Protected	0.998					0.974
Satd. Flow (prot)	1641	0	1800	0	0	1598
Flt Permitted	0.998					0.974
Satd. Flow (perm)	1641	0	1800	0	0	1598
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				3	3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	3%	100%	12%	7%
Adj. Flow (vph)	2	58	196	2	152	131
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	198	0	0	283
Enter Blocked Intersection	No	1 veh	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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	54	182	2	141	122
Future Vol, veh/h	2	54	182	2	141	122
Conflicting Peds, #/hr	0	0	0	3	3	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, %	-6	-	-4	-	-	4
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	3	100	12	7
Mvmt Flow	2	58	196	2	152	131

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	635	200	0
Stage 1	200	-	-
Stage 2	435	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	551	875	-
Stage 1	896	-	-
Stage 2	759	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	481	873	-
Mov Cap-2 Maneuver	481	-	-
Stage 1	894	-	-
Stage 2	664	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	4.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	848	1310
HCM Lane V/C Ratio	-	-	0.071	0.116
HCM Control Delay (s)	-	-	9.6	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.4

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1	7	11	0	10	0	230	5	3	246	3
Future Volume (vph)	10	1	7	11	0	10	0	230	5	3	246	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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
Ped Bike Factor												
Frt		0.946			0.935			0.997			0.999	
Flt Protected		0.973			0.975						0.999	
Satd. Flow (prot)	0	1943	0	0	1458	0	0	1797	0	0	1724	0
Flt Permitted		0.973			0.975						0.999	
Satd. Flow (perm)	0	1943	0	0	1458	0	0	1797	0	0	1724	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Confl. Peds. (#/hr)									3	3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	50%	0%	11%	0%	3%	0%	33%	5%	0%
Adj. Flow (vph)	11	1	8	12	0	11	0	256	6	3	273	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	23	0	0	262	0	0	279	0
Enter Blocked Intersection	1 veh	No	No	No	No	1 veh	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1	7	11	0	10	0	230	5	3	246	3
Future Vol, veh/h	10	1	7	11	0	10	0	230	5	3	246	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	50	0	11	0	3	0	33	5	0
Mvmt Flow	11	1	8	12	0	11	0	256	6	3	273	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	546	546	275	547	544	262	276	0	0	265	0	0
Stage 1	281	281	-	262	262	-	-	-	-	-	-	-
Stage 2	265	265	-	285	282	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6	7.4	6.3	6.21	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.4	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.95	4	3.399	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	480	476	780	394	463	761	1299	-	-	1139	-	-
Stage 1	753	704	-	658	705	-	-	-	-	-	-	-
Stage 2	767	714	-	639	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	472	473	780	387	460	759	1299	-	-	1135	-	-
Mov Cap-2 Maneuver	472	473	-	387	460	-	-	-	-	-	-	-
Stage 1	753	702	-	656	703	-	-	-	-	-	-	-
Stage 2	756	712	-	630	690	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.7		12.5		0		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1299	-	-	558 505	1135	-	-
HCM Lane V/C Ratio	-	-	-	0.036 0.046	0.003	-	-
HCM Control Delay (s)	0	-	-	11.7 12.5	8.2	0	-
HCM Lane LOS	A	-	-	B B	A A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1 0.1	0	-	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-BD-ALT-AM

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	79	50	19	231	202	55
Future Volume (vph)	79	50	19	231	202	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.971	
Flt Protected	0.970			0.996		
Satd. Flow (prot)	1623	0	0	1764	1732	0
Flt Permitted	0.970			0.996		
Satd. Flow (perm)	1623	0	0	1764	1732	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	0%	4%	5%	12%
Adj. Flow (vph)	88	56	21	257	224	61
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	0	278	285	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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 2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	50	19	231	202	55
Future Vol, veh/h	79	50	19	231	202	55
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	0	4	5	12
Mvmt Flow	88	56	21	257	224	61

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	554	255	285
Stage 1	255	-	-
Stage 2	299	-	-
Critical Hdwy	6.05	6.05	4.1
Critical Hdwy Stg 1	5.05	-	-
Critical Hdwy Stg 2	5.05	-	-
Follow-up Hdwy	3.545	3.345	2.2
Pot Cap-1 Maneuver	519	787	1289
Stage 1	803	-	-
Stage 2	771	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	509	787	1289
Mov Cap-2 Maneuver	509	-	-
Stage 1	788	-	-
Stage 2	771	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1289	-	590	-	-
HCM Lane V/C Ratio	0.016	-	0.243	-	-
HCM Control Delay (s)	7.8	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM

01/24/2022

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	132	2298	122	3	13	976	17	48	173	89	35	122
Future Volume (vph)	132	2298	122	3	13	976	17	48	173	89	35	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	11	11	13	13	13	11	11
Grade (%)		-2%				1%			0%			-4%
Storage Length (ft)	110		190		150		0	0		0	0	
Storage Lanes	1		1		1		0	0		0	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.997			0.961			0.925
Flt Protected	0.950				0.950				0.992			0.995
Satd. Flow (prot)	1588	3357	1447	0	1372	3174	0	0	1811	0	0	1622
Flt Permitted	0.950				0.950				0.589			0.801
Satd. Flow (perm)	1588	3357	1447	0	1372	3174	0	0	1075	0	0	1306
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)						2						
Link Speed (mph)		40				40			30			30
Link Distance (ft)		1697				1673			161			419
Travel Time (s)		28.9				28.5			3.7			9.5
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	11%	5%	9%	33%	25%	9%	13%	0%	6%	0%	0%	7%
Adj. Flow (vph)	133	2321	123	3	13	986	17	48	175	90	35	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	2321	123	0	16	1003	0	0	313	0	0	358
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Median Width(ft)		11				11			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02	1.02
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	2	2	2	1	2	2		1	2		1	2
Detector Template				Left				Left			Left	
Leading Detector (ft)	83	83	83	20	83	83		20	83		20	83
Trailing Detector (ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Position(ft)	-5	-5	-5	0	-5	-5		0	-5		0	-5
Detector 1 Size(ft)	40	40	40	20	40	40		20	40		20	40
Detector 1 Type	Cl+Ex	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)	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0	3.0
Detector 1 Queue (s)	0.0	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	4.0		0.0	4.0
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

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width (ft)	11
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	7%
Adj. Flow (vph)	200
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	R NA
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.02
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM
01/24/2022

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2					8			4	
Detector Phase	5	2	2	1	1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0	5.0
Minimum Split (s)	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0	11.0
Total Split (s)	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0	31.0
Total Split (%)	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%	20.7%
Maximum Green (s)	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0	25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	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)	7.0	7.0	7.0		7.0	7.0			6.0			6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	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	3.0
Recall Mode	None	Min	Min	None	None	Min		None	None		None	None
v/c Ratio	0.70	1.05	0.13		0.21	0.59			1.50			1.42
Control Delay	75.1	56.3	9.8		67.0	22.8			286.8			247.3
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0			0.0
Total Delay	75.1	56.3	9.8		67.0	22.8			286.8			247.3
Queue Length 50th (ft)	103	~882	30		12	291			~337			~373
Queue Length 95th (ft)	187	#1416	76		39	383			#601			#654
Internal Link Dist (ft)		1617				1593			81			339
Turn Bay Length (ft)	110		190		150							
Base Capacity (vph)	246	2213	954		213	2094			208			253
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	0.54	1.05	0.13		0.08	0.48			1.50			1.42

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 129.3

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A





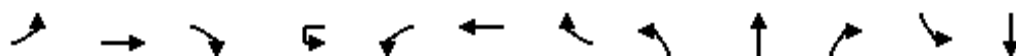
Lane Group	SBR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM

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Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	132	2298	122	3	13	976	17	48	173	89	35	122
Future Volume (veh/h)	132	2298	122	3	13	976	17	48	173	89	35	122
Initial Q (Qb), veh	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	
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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1814	1904	1844		1524	1761	1701	1976	1884	1976	2057	1952
Adj Flow Rate, veh/h	133	2321	123		13	986	17	48	175	90	35	123
Peak Hour Factor	0.99	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	11	5	9		25	9	13	0	6	0	0	7
Cap, veh/h	160	2343	1012		13	1899	33	60	156	74	51	115
Arrive On Green	0.09	0.65	0.65		0.01	0.56	0.56	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1727	3617	1562		1451	3365	58	149	818	390	108	604
Grp Volume(v), veh/h	133	2321	123		13	490	513	313	0	0	358	0
Grp Sat Flow(s),veh/h/ln	1727	1808	1562		1451	1673	1750	1357	0	0	1614	0
Q Serve(g_s), s	9.9	82.8	3.9		1.2	23.7	23.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.9	82.8	3.9		1.2	23.7	23.7	25.0	0.0	0.0	25.0	0.0
Prop In Lane	1.00		1.00		1.00		0.03	0.15		0.29	0.10	
Lane Grp Cap(c), veh/h	160	2343	1012		13	944	988	290	0	0	338	0
V/C Ratio(X)	0.83	0.99	0.12		0.98	0.52	0.52	1.08	0.00	0.00	1.06	0.00
Avail Cap(c_a), veh/h	263	2343	1012		221	1084	1134	290	0	0	338	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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	58.5	22.7	8.8		65.0	17.6	17.6	53.7	0.0	0.0	53.9	0.0
Incr Delay (d2), s/veh	10.9	16.4	0.1		108.1	0.4	0.4	75.2	0.0	0.0	65.8	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
%ile BackOfQ(50%),veh/ln	4.8	36.2	1.3		0.8	8.8	9.2	15.8	0.0	0.0	17.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.5	39.1	8.9		173.1	18.0	18.0	128.9	0.0	0.0	119.7	0.0
LnGrp LOS	E	D	A		F	B	B	F	A	A	F	A
Approach Vol, veh/h	2577			1016			313			358		
Approach Delay, s/veh	39.2			20.0			128.9			119.7		
Approach LOS	D			C			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	92.0		31.0	19.1	81.1		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	3.2	84.8		27.0	11.9	25.7		27.0				
Green Ext Time (p_c), s	0.0	0.2		0.0	0.3	6.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM

01/24/2022

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	198
Future Volume (veh/h)	198
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1952
Adj Flow Rate, veh/h	200
Peak Hour Factor	0.99
Percent Heavy Veh, %	7
Cap, veh/h	172
Arrive On Green	0.19
Sat Flow, veh/h	902
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.56
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-BD--ALT-PM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	77	74	225	49	43	186
Future Volume (vph)	77	74	225	49	43	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.934		0.976			
Flt Protected	0.975					0.991
Satd. Flow (prot)	1595	0	1680	0	0	1469
Flt Permitted	0.975					0.991
Satd. Flow (perm)	1595	0	1680	0	0	1469
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	4	7		1	1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	4%	7%	8%	2%
Parking (#/hr)	5	5				5
Adj. Flow (vph)	79	76	232	51	44	192
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	283	0	0	236
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.10	0.92	1.07	1.07	1.11	1.32
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 3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	77	74	225	49	43	186
Future Vol, veh/h	77	74	225	49	43	186
Conflicting Peds, #/hr	4	7	0	1	1	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, %	-6	-	-3	-	-	3
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	1	4	7	8	2
Mvmt Flow	79	76	232	51	44	192

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	543	266	0
Stage 1	259	-	-
Stage 2	284	-	-
Critical Hdwy	5.21	5.61	-
Critical Hdwy Stg 1	4.21	-	-
Critical Hdwy Stg 2	4.21	-	-
Follow-up Hdwy	3.509	3.309	-
Pot Cap-1 Maneuver	602	810	-
Stage 1	858	-	-
Stage 2	843	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	576	805	-
Mov Cap-2 Maneuver	576	-	-
Stage 1	857	-	-
Stage 2	807	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	669	1244
HCM Lane V/C Ratio	-	-	0.233	0.036
HCM Control Delay (s)	-	-	12	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkes Ave & Croton Dam Rd

2025-BD--ALT-PM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	127	5	160	139	0	101
Future Volume (vph)	127	5	160	139	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995		0.937			
Flt Protected	0.954					
Satd. Flow (prot)	1800	0	1635	0	0	1748
Flt Permitted	0.954					
Satd. Flow (perm)	1800	0	1635	0	0	1748
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Confl. Peds. (#/hr)	3	1		1	1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	20%	5%	1%	0%	4%
Adj. Flow (vph)	144	6	182	158	0	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	150	0	340	0	0	115
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	127	5	160	139	0	101
Future Vol, veh/h	127	5	160	139	0	101
Conflicting Peds, #/hr	3	1	0	1	1	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, %	-5	-	-3	-	-	-5
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	20	5	1	0	4
Mvmt Flow	144	6	182	158	0	115

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	380	263	0
Stage 1	262	-	-
Stage 2	118	-	-
Critical Hdwy	5.42	5.9	-
Critical Hdwy Stg 1	4.42	-	-
Critical Hdwy Stg 2	4.42	-	-
Follow-up Hdwy	3.518	3.48	-
Pot Cap-1 Maneuver	691	761	-
Stage 1	841	-	-
Stage 2	937	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	689	760	-
Mov Cap-2 Maneuver	689	-	-
Stage 1	840	-	-
Stage 2	935	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	691	1228
HCM Lane V/C Ratio	-	-	0.217	-
HCM Control Delay (s)	-	-	11.6	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-BD--ALT-PM

01/24/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	3	2	13	1	9	4	122	13	22	118	2
Future Volume (vph)	0	3	2	13	1	9	4	122	13	22	118	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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		0.955			0.945			0.988			0.998	
Flt Protected					0.973			0.998			0.992	
Satd. Flow (prot)	0	1877	0	0	1572	0	0	1745	0	0	1810	0
Flt Permitted					0.973			0.998			0.992	
Satd. Flow (perm)	0	1877	0	0	1572	0	0	1745	0	0	1810	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	9%	0%	3%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	0	4	2	15	1	11	5	144	15	26	139	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	27	0	0	164	0	0	167	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	2	13	1	9	4	122	13	22	118	2
Future Vol, veh/h	0	3	2	13	1	9	4	122	13	22	118	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	1	9	0	3	0
Mvmt Flow	0	4	2	15	1	11	5	144	15	26	139	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	360	361	140	357	355	152	141	0	0	159	0	0
Stage 1	192	192	-	162	162	-	-	-	-	-	-	-
Stage 2	168	169	-	195	193	-	-	-	-	-	-	-
Critical Hdwy	4.1	3.5	4.7	7.3	6.7	6.3	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.1	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	809	769	968	590	563	896	1455	-	-	1433	-	-
Stage 1	956	875	-	837	761	-	-	-	-	-	-	-
Stage 2	965	878	-	803	737	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	784	751	968	576	549	896	1455	-	-	1433	-	-
Mov Cap-2 Maneuver	784	751	-	576	549	-	-	-	-	-	-	-
Stage 1	952	858	-	834	758	-	-	-	-	-	-	-
Stage 2	948	874	-	782	722	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	10.6	0.2	1.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1455	-	-	825 668	1433	-	-
HCM Lane V/C Ratio	0.003	-	-	0.007 0.041 0.018		-	-
HCM Control Delay (s)	7.5	0	-	9.4 10.6 7.6	0	-	-
HCM Lane LOS	A	A	-	A B A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0 0.1 0.1	-	-	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-BD--ALT-PM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	17	115	16	50	121
Future Volume (vph)	20	17	115	16	50	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.939		0.984			
Flt Protected	0.973					0.986
Satd. Flow (prot)	1661	0	1744	0	0	1823
Flt Permitted	0.973					0.986
Satd. Flow (perm)	1661	0	1744	0	0	1823
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%
Adj. Flow (vph)	24	20	139	19	60	146
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	0	158	0	0	206
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	17	115	16	50	121
Future Vol, veh/h	20	17	115	16	50	121
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, %	-5	-	7	-	-	-7
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	4
Mvmt Flow	24	20	139	19	60	146

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	415	149	0
Stage 1	149	-	-
Stage 2	266	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	671	922	-
Stage 1	921	-	-
Stage 2	843	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	640	922	-
Mov Cap-2 Maneuver	640	-	-
Stage 1	921	-	-
Stage 2	804	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	745	1434
HCM Lane V/C Ratio	-	-	0.06	0.042
HCM Control Delay (s)	-	-	10.1	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-BD--ALT-PM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	1	130	2	3	167
Future Volume (vph)	4	1	130	2	3	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.977		0.998			
Flt Protected	0.960					0.999
Satd. Flow (prot)	1519	0	1851	0	0	1729
Flt Permitted	0.960					0.999
Satd. Flow (perm)	1519	0	1851	0	0	1729
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	25%	0%	1%	0%	0%	3%
Adj. Flow (vph)	5	1	155	2	4	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	157	0	0	203
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	1	130	2	3	167
Future Vol, veh/h	4	1	130	2	3	167
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, %	-6	-	-4	-	-	6
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	25	0	1	0	0	3
Mvmt Flow	5	1	155	2	4	199
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	363	156	0	0	157	0
Stage 1	156	-	-	-	-	-
Stage 2	207	-	-	-	-	-
Critical Hdwy	5.45	5.6	-	-	4.1	-
Critical Hdwy Stg 1	4.45	-	-	-	-	-
Critical Hdwy Stg 2	4.45	-	-	-	-	-
Follow-up Hdwy	3.725	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	669	919	-	-	1435	-
Stage 1	863	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	667	919	-	-	1435	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.1	0		0.1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	706	1435	-	
HCM Lane V/C Ratio	-	-	0.008	0.002	-	
HCM Control Delay (s)	-	-	10.1	7.5	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile O(veh)	-	-	0	0	-	

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-BD--ALT-PM

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	107	127	3	84	167
Future Volume (vph)	3	107	127	3	84	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.868		0.997			
Flt Protected	0.999					0.984
Satd. Flow (prot)	1625	0	1850	0	0	1736
Flt Permitted	0.999					0.984
Satd. Flow (perm)	1625	0	1850	0	0	1736
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	1%	0%	0%	3%
Adj. Flow (vph)	3	120	143	3	94	188
Shared Lane Traffic (%)						
Lane Group Flow (vph)	123	0	146	0	0	282
Enter Blocked Intersection	No	1 veh	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	1.01	1.01	1.02	1.02	1.07	1.07
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	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	107	127	3	84	167
Future Vol, veh/h	3	107	127	3	84	167
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	1	1	0	0	3
Mvmt Flow	3	120	143	3	94	188
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	522	146	0	0	147	0
Stage 1	146	-	-	-	-	-
Stage 2	376	-	-	-	-	-
Critical Hdwy	5.2	5.61	-	-	4.1	-
Critical Hdwy Stg 1	4.2	-	-	-	-	-
Critical Hdwy Stg 2	4.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	617	926	-	-	1447	-
Stage 1	931	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	571	925	-	-	1446	-
Mov Cap-2 Maneuver	571	-	-	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.6	0		2.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 910		1446	-	
HCM Lane V/C Ratio	-	- 0.136		0.065	-	
HCM Control Delay (s)	-	- 9.6		7.7	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.5		0.2	-	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1	3	1	10	11	3	230	1	11	247	7
Future Volume (vph)	7	1	3	1	10	11	3	230	1	11	247	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.966			0.932			0.999			0.996	
Flt Protected		0.968			0.998			0.999			0.998	
Satd. Flow (prot)	0	1823	0	0	1781	0	0	1833	0	0	1760	0
Flt Permitted		0.968			0.998			0.999			0.998	
Satd. Flow (perm)	0	1823	0	0	1781	0	0	1833	0	0	1760	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	33%	100%	0%	11%	0%	1%	0%	20%	2%	0%
Adj. Flow (vph)	8	1	3	1	11	12	3	258	1	12	278	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	24	0	0	262	0	0	298	0
Enter Blocked Intersection	1 veh	No	No	No	No	1 veh	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	1	3	1	10	11	3	230	1	11	247	7
Future Vol, veh/h	7	1	3	1	10	11	3	230	1	11	247	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	33	100	0	11	0	1	0	20	2	0
Mvmt Flow	8	1	3	1	11	12	3	258	1	12	278	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	582	571	282	573	575	259	286	0	0	259	0	0
Stage 1	306	306	-	265	265	-	-	-	-	-	-	-
Stage 2	276	265	-	308	310	-	-	-	-	-	-	-
Critical Hdwy	6.7	6.1	6.33	7.9	6.3	6.21	4.1	-	-	4.3	-	-
Critical Hdwy Stg 1	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.7	5.1	-	6.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.597	4.4	4	3.399	2.2	-	-	2.38	-	-
Pot Cap-1 Maneuver	456	462	699	324	445	764	1288	-	-	1208	-	-
Stage 1	733	688	-	576	703	-	-	-	-	-	-	-
Stage 2	758	714	-	544	674	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	435	455	699	318	438	764	1288	-	-	1208	-	-
Mov Cap-2 Maneuver	435	455	-	318	438	-	-	-	-	-	-	-
Stage 1	731	680	-	574	701	-	-	-	-	-	-	-
Stage 2	732	712	-	534	666	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	11.9	0.1	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1288	-	-	487 545	1208	-	-
HCM Lane V/C Ratio	0.003	-	-	0.025 0.045	0.01	-	-
HCM Control Delay (s)	7.8	0	-	12.6 11.9	8	0	-
HCM Lane LOS	A	A	-	B B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1 0.1	0	-	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-BD--ALT-PM

01/24/2022

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	22	39	208	243	77
Future Volume (vph)	48	22	39	208	243	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.958				0.967	
Flt Protected	0.967			0.992		
Satd. Flow (prot)	1613	0	0	1792	1797	0
Flt Permitted	0.967			0.992		
Satd. Flow (perm)	1613	0	0	1792	1797	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	21%	0%	2%	2%	3%
Adj. Flow (vph)	53	24	43	231	270	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	0	274	356	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	48	22	39	208	243	77
Future Vol, veh/h	48	22	39	208	243	77
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	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	21	0	2	2	3
Mvmt Flow	53	24	43	231	270	86

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	630	313	356
Stage 1	313	-	-
Stage 2	317	-	-
Critical Hdwy	6	6.21	4.1
Critical Hdwy Stg 1	5	-	-
Critical Hdwy Stg 2	5	-	-
Follow-up Hdwy	3.5	3.489	2.2
Pot Cap-1 Maneuver	481	697	1214
Stage 1	772	-	-
Stage 2	770	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	461	697	1214
Mov Cap-2 Maneuver	461	-	-
Stage 1	740	-	-
Stage 2	770	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1214	-	516	-	-
HCM Lane V/C Ratio	0.036	-	0.151	-	-
HCM Control Delay (s)	8.1	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD--ALT-PM

01/24/2022

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	160	1195	163	2	45	2276	31	57	145	54	19
Future Volume (vph)	8	160	1195	163	2	45	2276	31	57	145	54	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.998			0.971		
Flt Protected		0.950				0.950				0.989		
Satd. Flow (prot)	0	1713	3422	1561	0	1736	3366	0	0	1855	0	0
Flt Permitted		0.950				0.950				0.407		
Satd. Flow (perm)	0	1713	3422	1561	0	1736	3366	0	0	763	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							1					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	3%	1%	0%	0%	3%	0%	0%	1%	5%	6%
Adj. Flow (vph)	8	165	1232	168	2	46	2346	32	59	149	56	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	1232	168	0	48	2378	0	0	264	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Peak Weekday PM Hour (4:30 - 5:30)
JMC 15064

Synchro 10 Report
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Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD--ALT-PM

01/24/2022



Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	112	179
Future Volume (vph)	112	179
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.922	
Flt Protected	0.997	
Satd. Flow (prot)	1641	0
Flt Permitted	0.911	
Satd. Flow (perm)	1500	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	3%	6%
Adj. Flow (vph)	115	185
Shared Lane Traffic (%)		
Lane Group Flow (vph)	320	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	CI+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	CI+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD--ALT-PM

01/24/2022



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	27.0	27.0	92.0	92.0	27.0	27.0	92.0		31.0	31.0		31.0
Total Split (%)	18.0%	18.0%	61.3%	61.3%	18.0%	18.0%	61.3%		20.7%	20.7%		20.7%
Maximum Green (s)	20.0	20.0	85.0	85.0	20.0	20.0	85.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.82	0.55	0.17		0.43	1.23			2.06		
Control Delay		92.4	16.3	11.7		78.0	139.2			532.1		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		92.4	16.3	11.7		78.0	139.2			532.1		
Queue Length 50th (ft)		166	342	64		46	~1526			~407		
Queue Length 95th (ft)		#278	434	106		90	#1652			#593		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		231	2222	1014		234	1930			128		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.75	0.55	0.17		0.21	1.23			2.06		

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 148.3

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Weekday PM Hour (4:30 - 5:30)
JMC 15064

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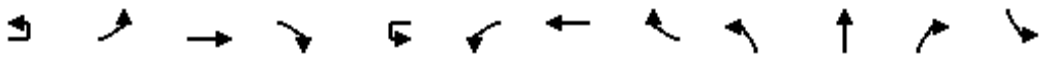


Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	20.7%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	1.26	
Control Delay	195.3	
Queue Delay	0.0	
Total Delay	195.3	
Queue Length 50th (ft)	~396	
Queue Length 95th (ft)	#594	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	253	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.26	
Intersection Summary		

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD--ALT-PM

01/24/2022

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	8	160	1195	163	2	45	2276	31	57	145	54	19
Future Volume (veh/h)	8	160	1195	163	2	45	2276	31	57	145	54	19
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1934	1934	1964		1894	1850	1894	1976	1961	1899	1967
Adj Flow Rate, veh/h		165	1232	168		46	2346	32	59	149	56	20
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		3	3	1		0	3	0	0	1	5	6
Cap, veh/h		191	2411	1092		60	2080	28	64	123	42	38
Arrive On Green		0.10	0.66	0.66		0.03	0.59	0.59	0.17	0.17	0.17	0.17
Sat Flow, veh/h		1842	3674	1664		1804	3550	48	195	712	244	68
Grp Volume(v), veh/h		165	1232	168		46	1159	1219	264	0	0	320
Grp Sat Flow(s),veh/h/ln		1842	1837	1664		1804	1757	1841	1152	0	0	1806
Q Serve(g_s), s		12.8	25.2	5.6		3.7	85.0	85.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		12.8	25.2	5.6		3.7	85.0	85.0	25.0	0.0	0.0	25.0
Prop In Lane		1.00		1.00		1.00		0.03	0.22		0.21	0.06
Lane Grp Cap(c), veh/h		191	2411	1092		60	1030	1079	229	0	0	338
V/C Ratio(X)		0.86	0.51	0.15		0.76	1.13	1.13	1.15	0.00	0.00	0.95
Avail Cap(c_a), veh/h		254	2411	1092		249	1030	1079	229	0	0	338
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		64.0	12.9	9.5		69.5	30.0	30.0	60.7	0.0	0.0	60.3
Incr Delay (d2), s/veh		20.1	0.2	0.1		17.6	69.1	70.7	107.1	0.0	0.0	35.5
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
%ile BackOfQ(50%),veh/ln		7.0	9.8	2.0		2.0	53.0	56.0	15.4	0.0	0.0	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		84.1	13.1	9.6		87.1	99.2	100.8	167.8	0.0	0.0	95.8
LnGrp LOS		F	B	A		F	F	F	F	A	A	F
Approach Vol, veh/h			1565				2424			264		
Approach Delay, s/veh			20.2				99.7			167.8		
Approach LOS			C				F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	102.2		31.0	22.1	92.0		31.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	20.0	85.0		25.0	20.0	85.0		25.0				
Max Q Clear Time (g_c+I1), s	5.7	27.2		27.0	14.8	87.0		27.0				
Green Ext Time (p_c), s	0.1	12.1		0.0	0.3	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			76.2									
HCM 6th LOS			E									
Notes												
User approved ignoring U-Turning movement.												

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD--ALT-PM

01/24/2022



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	112	179
Future Volume (veh/h)	112	179
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2012	1967
Adj Flow Rate, veh/h	115	185
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	3	6
Cap, veh/h	120	180
Arrive On Green	0.17	0.17
Sat Flow, veh/h	694	1044
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.58
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	320	
Approach Delay, s/veh	95.8	
Approach LOS	F	
Timer - Assigned Phs		

Lanes, Volumes, Timings
1: Dale Ave & Pine Ave

2025-BD-ALT-SAT
01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	57	200	66	40	171
Future Volume (vph)	44	57	200	66	40	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	10	10	10	10
Grade (%)	-6%		-3%			3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.923		0.966			
Flt Protected	0.979					0.991
Satd. Flow (prot)	1807	0	1700	0	0	1502
Flt Permitted	0.979					0.991
Satd. Flow (perm)	1807	0	1700	0	0	1502
Link Speed (mph)	30		30			30
Link Distance (ft)	477		315			163
Travel Time (s)	10.8		7.2			3.7
Confl. Peds. (#/hr)	1	1		3	3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	2%	3%	0%	0%	1%
Parking (#/hr)		5				5
Adj. Flow (vph)	52	68	238	79	48	204
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	317	0	0	252
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.07	1.07	1.11	1.32
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 2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	44	57	200	66	40	171
Future Vol, veh/h	44	57	200	66	40	171
Conflicting Peds, #/hr	1	1	0	3	3	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, %	-6	-	-3	-	-	3
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	2	3	0	0	1
Mvmt Flow	52	68	238	79	48	204

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	582	282	0
Stage 1	281	-	-
Stage 2	301	-	-
Critical Hdwy	5.2	5.62	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.318	-
Pot Cap-1 Maneuver	581	793	-
Stage 1	847	-	-
Stage 2	835	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	554	790	-
Mov Cap-2 Maneuver	554	-	-
Stage 1	844	-	-
Stage 2	798	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	666	1248
HCM Lane V/C Ratio	-	-	0.181	0.038
HCM Control Delay (s)	-	-	11.6	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Lanes, Volumes, Timings
2: Dale Ave/Hawkles Ave & Croton Dam Rd

2025-BD-ALT-SAT

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	130	2	122	135	0	81
Future Volume (vph)	130	2	122	135	0	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	10	10	10
Grade (%)	-5%		-3%			-5%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998		0.929			
Flt Protected	0.953					
Satd. Flow (prot)	1852	0	1648	0	0	1818
Flt Permitted	0.953					
Satd. Flow (perm)	1852	0	1648	0	0	1818
Link Speed (mph)	30		30			30
Link Distance (ft)	231		163			286
Travel Time (s)	5.3		3.7			6.5
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%
Adj. Flow (vph)	146	2	137	152	0	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	0	289	0	0	91
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.97	0.97	1.07	1.07	1.06	1.06
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 3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	2	122	135	0	81
Future Vol, veh/h	130	2	122	135	0	81
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, %	-5	-	-3	-	-	-5
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	2	1	0	0
Mvmt Flow	146	2	137	152	0	91

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	304	213	0
Stage 1	213	-	-
Stage 2	91	-	-
Critical Hdwy	5.4	5.7	-
Critical Hdwy Stg 1	4.4	-	-
Critical Hdwy Stg 2	4.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	753	857	-
Stage 1	878	-	-
Stage 2	962	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	753	857	-
Mov Cap-2 Maneuver	753	-	-
Stage 1	878	-	-
Stage 2	962	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	754	1284
HCM Lane V/C Ratio	-	-	0.197	-
HCM Control Delay (s)	-	-	10.9	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0

Lanes, Volumes, Timings
3: Croton Dam Rd & Cherry Hill Circle/Pershing Ave

2025-BD-ALT-SAT

01/24/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	8	2	4	6	3	115	16	21	122	3
Future Volume (vph)	2	2	8	2	4	6	3	115	16	21	122	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	11	11	11	11	11	11
Grade (%)		-15%			1%			4%			-4%	
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
Ped Bike Factor												
Frt		0.907			0.932			0.984			0.998	
Flt Protected		0.992			0.993			0.999			0.993	
Satd. Flow (prot)	0	1642	0	0	1582	0	0	1732	0	0	1857	0
Flt Permitted		0.992			0.993			0.999			0.993	
Satd. Flow (perm)	0	1642	0	0	1582	0	0	1732	0	0	1857	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		176			414			330			747	
Travel Time (s)		4.0			9.4			7.5			17.0	
Confl. Peds. (#/hr)	2					2						
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	67%	1%	0%	0%	0%	0%
Parking (#/hr)	5	5	5	5	5	5						
Adj. Flow (vph)	2	2	9	2	5	7	3	134	19	24	142	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	14	0	0	156	0	0	169	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			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.80	0.96	0.80	0.96	1.15	0.96	1.07	1.07	1.07	1.02	1.02	1.02
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	2	8	2	4	6	3	115	16	21	122	3
Future Vol, veh/h	2	2	8	2	4	6	3	115	16	21	122	3
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-15	-	-	1	-	-	4	-	-	-4	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	50	0	0	0	0	0	67	1	0	0	0	0
Mvmt Flow	2	2	9	2	5	7	3	134	19	24	142	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	350	351	144	347	343	146	145	0	0	153	0	0
Stage 1	192	192	-	150	150	-	-	-	-	-	-	-
Stage 2	158	159	-	197	193	-	-	-	-	-	-	-
Critical Hdwy	4.6	3.5	4.7	7.3	6.7	6.3	4.77	-	-	4.1	-	-
Critical Hdwy Stg 1	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	3.6	2.5	-	6.3	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.95	4	3.3	3.5	4	3.3	2.803	-	-	2.2	-	-
Pot Cap-1 Maneuver	702	773	965	600	572	903	1121	-	-	1440	-	-
Stage 1	834	875	-	850	771	-	-	-	-	-	-	-
Stage 2	848	879	-	801	737	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	680	757	965	583	560	902	1121	-	-	1440	-	-
Mov Cap-2 Maneuver	680	757	-	583	560	-	-	-	-	-	-	-
Stage 1	831	859	-	847	769	-	-	-	-	-	-	-
Stage 2	833	876	-	777	724	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	10.3	0.2	1.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1121	-	-	865	697	1440	-
HCM Lane V/C Ratio	0.003	-	-	0.016	0.02	0.017	-
HCM Control Delay (s)	8.2	0	-	9.2	10.3	7.5	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0.1	-

Lanes, Volumes, Timings
4: Croton Dam Rd & Site Dwy

2025-BD-ALT-SAT

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	23	19	114	10	32	124
Future Volume (vph)	23	19	114	10	32	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-5%		7%			-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.939		0.989			
Flt Protected	0.973					0.990
Satd. Flow (prot)	1661	0	1721	0	0	1867
Flt Permitted	0.973					0.990
Satd. Flow (perm)	1661	0	1721	0	0	1867
Link Speed (mph)	30		30			30
Link Distance (ft)	188		747			845
Travel Time (s)	4.3		17.0			19.2
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	23	19	116	10	33	127
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	126	0	0	160
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.09	1.09	1.00	1.00
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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	19	114	10	32	124
Future Vol, veh/h	23	19	114	10	32	124
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-5	-	7	-	-	-7
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	23	19	116	10	33	127
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	315	122	0	0	127	0
Stage 1	122	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	5.4	5.7	-	-	4.1	-
Critical Hdwy Stg 1	4.4	-	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	744	951	-	-	1472	-
Stage 1	940	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	725	950	-	-	1471	-
Mov Cap-2 Maneuver	725	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.7	0	1.5			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	812	1471	-	
HCM Lane V/C Ratio	-	-	0.053	0.022	-	
HCM Control Delay (s)	-	-	9.7	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-	

Lanes, Volumes, Timings
5: Croton Dam Rd & Grandview Avenue

2025-BD-ALT-SAT

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	2	120	13	3	145
Future Volume (vph)	11	2	120	13	3	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Grade (%)	-6%		-4%			6%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981		0.986			
Flt Protected	0.959					0.999
Satd. Flow (prot)	1841	0	1799	0	0	1762
Flt Permitted	0.959					0.999
Satd. Flow (perm)	1841	0	1799	0	0	1762
Link Speed (mph)	30		30			30
Link Distance (ft)	525		845			363
Travel Time (s)	11.9		19.2			8.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	2%	9%	0%	1%
Adj. Flow (vph)	12	2	126	14	3	153
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	140	0	0	156
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
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	0.96	0.96	1.02	1.02	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	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	2	120	13	3	145
Future Vol, veh/h	11	2	120	13	3	145
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, %	-6	-	-4	-	-	6
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	9	0	1
Mvmt Flow	12	2	126	14	3	153
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	292	133	0	0	140	0
Stage 1	133	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	5.2	5.6	-	-	4.1	-
Critical Hdwy Stg 1	4.2	-	-	-	-	-
Critical Hdwy Stg 2	4.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	775	942	-	-	1456	-
Stage 1	939	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	773	942	-	-	1456	-
Mov Cap-2 Maneuver	773	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.6	0	0.2			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	795	1456	-	
HCM Lane V/C Ratio	-	-	0.017	0.002	-	
HCM Control Delay (s)	-	-	9.6	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanes, Volumes, Timings
6: Croton Dam Rd & Narragansett Avenue

2025-BD-ALT-SAT

01/24/2022

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	93	112	10	81	147
Future Volume (vph)	1	93	112	10	81	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	-6%		-4%			4%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.866		0.989			
Flt Protected						0.983
Satd. Flow (prot)	1638	0	1836	0	0	1751
Flt Permitted						0.983
Satd. Flow (perm)	1638	0	1836	0	0	1751
Link Speed (mph)	30		30			30
Link Distance (ft)	590		363			252
Travel Time (s)	13.4		8.3			5.7
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	1%	0%	3%	0%
Adj. Flow (vph)	1	102	123	11	89	162
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	0	134	0	0	251
Enter Blocked Intersection	No	1 veh	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	1.01	1.01	1.02	1.02	1.07	1.07
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 3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	93	112	10	81	147
Future Vol, veh/h	1	93	112	10	81	147
Conflicting Peds, #/hr	0	0	0	1	1	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, %	-6	-	-4	-	-	4
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	1	0	3	0
Mvmt Flow	1	102	123	11	89	162

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	470	130	0
Stage 1	130	-	-
Stage 2	340	-	-
Critical Hdwy	5.2	5.6	-
Critical Hdwy Stg 1	4.2	-	-
Critical Hdwy Stg 2	4.2	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	650	945	-
Stage 1	941	-	-
Stage 2	812	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	605	944	-
Mov Cap-2 Maneuver	605	-	-
Stage 1	940	-	-
Stage 2	757	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	938	1442
HCM Lane V/C Ratio	-	-	0.11	0.062
HCM Control Delay (s)	-	-	9.3	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	3	1	0	10	4	197	3	9	223	8
Future Volume (vph)	8	1	3	1	0	10	4	197	3	9	223	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	15	15	15	11	11	11	11	11	11
Grade (%)		-2%			-1%			-2%			2%	
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		0.969			0.876			0.998			0.996	
Flt Protected		0.967			0.996			0.999			0.998	
Satd. Flow (prot)	0	1646	0	0	1665	0	0	1788	0	0	1783	0
Flt Permitted		0.967			0.996			0.999			0.998	
Satd. Flow (perm)	0	1646	0	0	1665	0	0	1788	0	0	1783	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		289			365			252			311	
Travel Time (s)		6.6			8.3			5.7			7.1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	7%	100%	33%	0%	0%	11%	25%	3%	0%	0%	1%	14%
Adj. Flow (vph)	9	1	3	1	0	11	5	224	3	10	253	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	12	0	0	232	0	0	272	0
Enter Blocked Intersection	1 veh	No	No	No	No	1 veh	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			0			0			0	
Link Offset(ft)		10			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.87	0.87	0.87	0.88	0.88	0.88	1.03	1.03	1.03	1.06	1.06	1.06
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	1	3	1	0	10	4	197	3	9	223	8
Future Vol, veh/h	8	1	3	1	0	10	4	197	3	9	223	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-2	-	-	-1	-	-	-2	-	-	2	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	7	100	33	0	0	11	25	3	0	0	1	14
Mvmt Flow	9	1	3	1	0	11	5	224	3	10	253	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	519	515	258	516	518	226	262	0	0	227	0	0
Stage 1	278	278	-	236	236	-	-	-	-	-	-	-
Stage 2	241	237	-	280	282	-	-	-	-	-	-	-
Critical Hdwy	6.77	7.1	6.33	6.9	6.3	6.21	4.35	-	-	4.1	-	-
Critical Hdwy Stg 1	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.77	6.1	-	5.9	5.3	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4.9	3.597	3.5	4	3.399	2.425	-	-	2.2	-	-
Pot Cap-1 Maneuver	487	370	721	487	478	796	1180	-	-	1353	-	-
Stage 1	740	551	-	782	723	-	-	-	-	-	-	-
Stage 2	772	575	-	743	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	475	365	721	478	471	796	1180	-	-	1353	-	-
Mov Cap-2 Maneuver	475	365	-	478	471	-	-	-	-	-	-	-
Stage 1	736	546	-	778	719	-	-	-	-	-	-	-
Stage 2	757	572	-	731	686	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.3		9.9		0.2		0.3	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1180	-	-	505	751	1353	-
HCM Lane V/C Ratio	0.004	-	-	0.027	0.017	0.008	-
HCM Control Delay (s)	8.1	0	-	12.3	9.9	7.7	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Lanes, Volumes, Timings
8: Croton Dam Rd & Kitchawan State Rd

2025-BD-ALT-SAT

01/24/2022

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	79	16	22	193	223	67
Future Volume (vph)	79	16	22	193	223	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	-2%			0%	0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.969	
Flt Protected	0.960			0.995		
Satd. Flow (prot)	1742	0	0	1764	1805	0
Flt Permitted	0.960			0.995		
Satd. Flow (perm)	1742	0	0	1764	1805	0
Link Speed (mph)	35			30	30	
Link Distance (ft)	990			311	161	
Travel Time (s)	19.3			7.1	3.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	4%	2%	2%
Adj. Flow (vph)	81	16	22	197	228	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	97	0	0	219	296	0
Enter Blocked Intersection	1 veh	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	1.03	1.03	1.04	1.04	1.00	1.00
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	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	16	22	193	223	67
Future Vol, veh/h	79	16	22	193	223	67
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	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	4	2	2
Mvmt Flow	81	16	22	197	228	68

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	503	262	296
Stage 1	262	-	-
Stage 2	241	-	-
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	562	793	1277
Stage 1	810	-	-
Stage 2	826	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	551	793	1277
Mov Cap-2 Maneuver	551	-	-
Stage 1	795	-	-
Stage 2	826	-	-

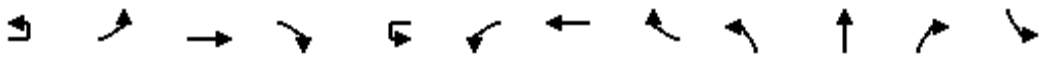
Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1277	-	581	-	-
HCM Lane V/C Ratio	0.018	-	0.167	-	-
HCM Control Delay (s)	7.9	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT

01/24/2022

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	128	1012	143	1	31	1499	35	67	130	75	50
Future Volume (vph)	3	128	1012	143	1	31	1499	35	67	130	75	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		0	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.997			0.963		
Flt Protected		0.950				0.950				0.988		
Satd. Flow (prot)	0	1728	3455	1531	0	1736	3363	0	0	1832	0	0
Flt Permitted		0.950				0.950				0.580		
Satd. Flow (perm)	0	1728	3455	1531	0	1736	3363	0	0	1076	0	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							3					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	3%	0%	0%	3%	0%	4%	2%	0%	2%
Adj. Flow (vph)	3	132	1043	147	1	32	1545	36	69	134	77	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	1043	147	0	33	1581	0	0	280	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2		1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83		20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5		0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40		20
Detector 1 Type	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0		0.0
Detector 2 Position(ft)		43	43	43		43	43			43		
Detector 2 Size(ft)		40	40	40		40	40			40		
Detector 2 Type		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		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT

01/24/2022



Lane Group	SBT	SBR
Lane Configurations	↕	
Traffic Volume (vph)	114	165
Future Volume (vph)	114	165
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt	0.932	
Flt Protected	0.992	
Satd. Flow (prot)	1710	0
Flt Permitted	0.807	
Satd. Flow (perm)	1391	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	0%	2%
Adj. Flow (vph)	118	170
Shared Lane Traffic (%)		
Lane Group Flow (vph)	340	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	83	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	40	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	3.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	4.0	
Detector 2 Position(ft)	43	
Detector 2 Size(ft)	40	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT

01/24/2022



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA		Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8			4
Detector Phase	5	5	2	2	1	1	6		8	8		4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0		5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0		11.0
Total Split (s)	22.0	22.0	67.0	67.0	22.0	22.0	67.0		31.0	31.0		31.0
Total Split (%)	18.3%	18.3%	55.8%	55.8%	18.3%	18.3%	55.8%		25.8%	25.8%		25.8%
Maximum Green (s)	15.0	15.0	60.0	60.0	15.0	15.0	60.0		25.0	25.0		25.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0		4.0
All-Red Time (s)	2.0	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		
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0			6.0		
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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		3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None		None
v/c Ratio		0.70	0.51	0.16		0.28	0.94			1.21		
Control Delay		69.3	16.1	12.8		58.7	39.8			167.7		
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0		
Total Delay		69.3	16.1	12.8		58.7	39.8			167.7		
Queue Length 50th (ft)		101	255	53		25	585			~270		
Queue Length 95th (ft)		170	333	93		58	#766			#445		
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		223	2045	906		224	1741			232		
Starvation Cap Reductn		0	0	0		0	0			0		
Spillback Cap Reductn		0	0	0		0	0			0		
Storage Cap Reductn		0	0	0		0	0			0		
Reduced v/c Ratio		0.61	0.51	0.16		0.15	0.91			1.21		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 116.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A



Peak Saturday Midday Hour (10:30 - 11:30)
JMC 15064

Synchro 10 Report
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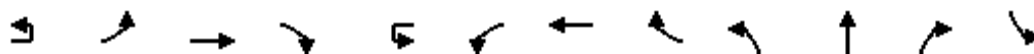
Lane Group	SBT	SBR
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	11.0	
Total Split (s)	31.0	
Total Split (%)	25.8%	
Maximum Green (s)	25.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	None	
v/c Ratio	1.14	
Control Delay	136.5	
Queue Delay	0.0	
Total Delay	136.5	
Queue Length 50th (ft)	~313	
Queue Length 95th (ft)	#500	
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		
Base Capacity (vph)	299	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.14	
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT

01/24/2022



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	3	128	1012	143	1	31	1499	35	67	130	75	50
Future Volume (veh/h)	3	128	1012	143	1	31	1499	35	67	130	75	50
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1949	1949	1934		1894	1850	1894	1914	1945	1976	2027
Adj Flow Rate, veh/h		132	1043	147		32	1545	36	69	134	77	52
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	3		0	3	0	4	2	0	2
Cap, veh/h		165	2087	924		41	1746	41	100	165	84	81
Arrive On Green		0.09	0.56	0.56		0.02	0.50	0.50	0.23	0.23	0.23	0.23
Sat Flow, veh/h		1856	3702	1639		1804	3510	82	255	734	375	187
Grp Volume(v), veh/h		132	1043	147		32	772	809	280	0	0	340
Grp Sat Flow(s),veh/h/ln		1856	1851	1639		1804	1757	1835	1365	0	0	1679
Q Serve(g_s), s		7.4	18.1	4.6		1.9	41.8	42.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s		7.4	18.1	4.6		1.9	41.8	42.0	21.7	0.0	0.0	20.9
Prop In Lane		1.00		1.00		1.00		0.04	0.25		0.27	0.15
Lane Grp Cap(c), veh/h		165	2087	924		41	874	913	350	0	0	417
V/C Ratio(X)		0.80	0.50	0.16		0.79	0.88	0.89	0.80	0.00	0.00	0.82
Avail Cap(c_a), veh/h		262	2095	927		255	994	1038	366	0	0	436
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh		47.4	14.0	11.1		51.6	23.9	23.9	39.5	0.0	0.0	39.6
Incr Delay (d2), s/veh		8.8	0.2	0.1		27.5	8.7	8.6	11.6	0.0	0.0	11.0
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
%ile BackOfQ(50%),veh/ln		3.7	7.0	1.6		1.1	17.9	18.8	8.2	0.0	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		56.2	14.2	11.2		79.0	32.6	32.5	51.1	0.0	0.0	50.6
LnGrp LOS		E	B	B		E	C	C	D	A	A	D
Approach Vol, veh/h			1322				1613			280		
Approach Delay, s/veh			18.1				33.5			51.1		
Approach LOS			B				C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	66.8		29.9	16.4	59.8		29.9				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	15.0	60.0		25.0	15.0	60.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	20.1		22.9	9.4	44.0		23.7				
Green Ext Time (p_c), s	0.0	8.9		0.4	0.2	8.7		0.2				

Intersection Summary

HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT
01/24/2022



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	114	165
Future Volume (veh/h)	114	165
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2057	2027
Adj Flow Rate, veh/h	118	170
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	0	2
Cap, veh/h	147	189
Arrive On Green	0.23	0.23
Sat Flow, veh/h	652	839
Grp Volume(v), veh/h	0	0
Grp Sat Flow(s),veh/h/ln	0	0
Q Serve(g_s), s	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0
Prop In Lane		0.50
Lane Grp Cap(c), veh/h	0	0
V/C Ratio(X)	0.00	0.00
Avail Cap(c_a), veh/h	0	0
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	0.0
LnGrp LOS	A	A
Approach Vol, veh/h	340	
Approach Delay, s/veh	50.6	
Approach LOS	D	
Timer - Assigned Phs		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM-IMP

01/24/2022

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	132	2298	122	3	13	976	17	48	173	89	35	122
Future Volume (vph)	132	2298	122	3	13	976	17	48	173	89	35	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	11	11	11	13	13	13	11	11
Grade (%)		-2%				1%			0%			-4%
Storage Length (ft)	110		190		150		0	0		0	0	
Storage Lanes	1		1		1		0	0		1	0	
Taper Length (ft)	25				25			25			25	
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.997				0.850		
Flt Protected	0.950				0.950				0.989			0.989
Satd. Flow (prot)	1588	3357	1447	0	1372	3174	0	0	1854	1669	0	1757
Flt Permitted	0.950				0.950				0.744			0.583
Satd. Flow (perm)	1588	3357	1447	0	1372	3174	0	0	1395	1669	0	1036
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)						2						
Link Speed (mph)		40				40			30			30
Link Distance (ft)		1697				1673			161			419
Travel Time (s)		28.9				28.5			3.7			9.5
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	11%	5%	9%	33%	25%	9%	13%	0%	6%	0%	0%	7%
Adj. Flow (vph)	133	2321	123	3	13	986	17	48	175	90	35	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	2321	123	0	16	1003	0	0	223	90	0	158
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA	Left
Median Width(ft)		11				11			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02	1.02
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Number of Detectors	2	2	2	1	2	2		1	2	2	1	2
Detector Template				Left				Left			Left	
Leading Detector (ft)	83	83	83	20	83	83		20	83	83	20	83
Trailing Detector (ft)	-5	-5	-5	0	-5	-5		0	-5	-5	0	-5
Detector 1 Position(ft)	-5	-5	-5	0	-5	-5		0	-5	-5	0	-5
Detector 1 Size(ft)	40	40	40	20	40	40		20	40	40	20	40
Detector 1 Type	Cl+Ex	Cl+Ex	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)	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0	0.0	0.0	3.0
Detector 1 Queue (s)	0.0	0.0	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	4.0	0.0	0.0	4.0
Detector 2 Position(ft)	43	43	43		43	43			43	43		43
Detector 2 Size(ft)	40	40	40		40	40			40	40		40
Detector 2 Type	Cl+Ex	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		0.0

Peak Weekday AM Hour (7:15 - 8:15)
JMC 15064

Synchro 10 Report
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Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM-IMP

01/24/2022

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	198
Future Volume (vph)	198
Ideal Flow (vphpl)	1900
Lane Width (ft)	11
Grade (%)	
Storage Length (ft)	200
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1488
Flt Permitted	
Satd. Flow (perm)	1488
Right Turn on Red	No
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.99
Heavy Vehicles (%)	7%
Adj. Flow (vph)	200
Shared Lane Traffic (%)	
Lane Group Flow (vph)	200
Enter Blocked Intersection	No
Lane Alignment	R NA
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.02
Turning Speed (mph)	9
Number of Detectors	2
Detector Template	
Leading Detector (ft)	83
Trailing Detector (ft)	-5
Detector 1 Position(ft)	-5
Detector 1 Size(ft)	40
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	43
Detector 2 Size(ft)	40
Detector 2 Type	CI+Ex
Detector 2 Channel	
Detector 2 Extend (s)	0.0

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM-IMP

01/24/2022

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	1	6			8			4
Permitted Phases			2					8		8	4	
Detector Phase	5	2	2	1	1	6		8	8	8	4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0	11.0	11.0	11.0
Total Split (s)	24.0	75.0	75.0	12.0	12.0	63.0		23.0	23.0	23.0	23.0	23.0
Total Split (%)	21.8%	68.2%	68.2%	10.9%	10.9%	57.3%		20.9%	20.9%	20.9%	20.9%	20.9%
Maximum Green (s)	17.0	68.0	68.0	5.0	5.0	56.0		17.0	17.0	17.0	17.0	17.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	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		0.0
Total Lost Time (s)	7.0	7.0	7.0		7.0	7.0			6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag						
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	Min	Min	None	None	Min		None	None	None	None	None
v/c Ratio	0.65	1.04	0.13		0.24	0.62			0.97	0.33		0.92
Control Delay	57.9	50.2	7.7		58.4	20.5			96.3	43.1		95.8
Queue Delay	0.0	0.0	0.0		0.0	0.0			0.0	0.0		0.0
Total Delay	57.9	50.2	7.7		58.4	20.5			96.3	43.1		95.8
Queue Length 50th (ft)	79	661	22		10	237			138	50		97
Queue Length 95th (ft)	153	#1131	59		35	325			#324	108		#247
Internal Link Dist (ft)		1617				1593			81			339
Turn Bay Length (ft)	110		190		150							
Base Capacity (vph)	263	2227	960		67	1735			231	276		171
Starvation Cap Reductn	0	0	0		0	0			0	0		0
Spillback Cap Reductn	0	0	0		0	0			0	0		0
Storage Cap Reductn	0	0	0		0	0			0	0		0
Reduced v/c Ratio	0.51	1.04	0.13		0.24	0.58			0.97	0.33		0.92

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 102.8

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Croton Dam Rd & NYS Route 9A





Lane Group	SBR
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	11.0
Total Split (s)	23.0
Total Split (%)	20.9%
Maximum Green (s)	17.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.0
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
v/c Ratio	0.81
Control Delay	68.1
Queue Delay	0.0
Total Delay	68.1
Queue Length 50th (ft)	120
Queue Length 95th (ft)	#273
Internal Link Dist (ft)	
Turn Bay Length (ft)	200
Base Capacity (vph)	246
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.81
Intersection Summary	

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM-IMP

01/24/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	132	2298	122	3	13	976	17	48	173	89	35	122
Future Volume (veh/h)	132	2298	122	3	13	976	17	48	173	89	35	122
Initial Q (Qb), veh	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	
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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1814	1904	1844		1524	1761	1701	1976	1884	1976	2057	1952
Adj Flow Rate, veh/h	133	2321	123		13	986	17	48	175	90	35	123
Peak Hour Factor	0.99	0.99	0.99		0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	11	5	9		25	9	13	0	6	0	0	7
Cap, veh/h	164	2358	1019		13	1904	33	85	213	246	80	213
Arrive On Green	0.10	0.65	0.65		0.01	0.57	0.57	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1727	3617	1562		1451	3365	58	295	1447	1675	258	1452
Grp Volume(v), veh/h	133	2321	123		13	490	513	223	0	90	158	0
Grp Sat Flow(s),veh/h/ln	1727	1808	1562		1451	1673	1750	1742	0	1675	1709	0
Q Serve(g_s), s	7.9	65.0	3.1		0.9	18.8	18.8	4.2	0.0	5.0	0.0	0.0
Cycle Q Clear(g_c), s	7.9	65.0	3.1		0.9	18.8	18.8	13.0	0.0	5.0	8.8	0.0
Prop In Lane	1.00		1.00		1.00		0.03	0.22		1.00	0.22	
Lane Grp Cap(c), veh/h	164	2358	1019		13	946	990	298	0	246	294	0
V/C Ratio(X)	0.81	0.98	0.12		0.99	0.52	0.52	0.75	0.00	0.37	0.54	0.00
Avail Cap(c_a), veh/h	282	2360	1019		70	946	990	326	0	273	322	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
Upstream Filter(I)	1.00	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.2	17.6	6.8		51.6	13.9	13.9	43.3	0.0	40.1	41.4	0.0
Incr Delay (d2), s/veh	9.0	14.9	0.1		113.4	0.5	0.5	8.4	0.0	0.9	1.5	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
%ile BackOfQ(50%),veh/ln	3.7	26.7	0.9		0.7	6.5	6.8	6.3	0.0	2.1	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	32.5	6.9		165.1	14.4	14.4	51.8	0.0	41.0	43.0	0.0
LnGrp LOS	E	C	A		F	B	B	D	A	D	D	A
Approach Vol, veh/h		2577				1016			313			358
Approach Delay, s/veh		32.5				16.3			48.7			52.4
Approach LOS		C				B			D			D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	75.0		21.3	16.9	66.0		21.3				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	5.0	68.0		17.0	17.0	56.0		17.0				
Max Q Clear Time (g_c+I1), s	2.9	67.0		14.2	9.9	20.8		15.0				
Green Ext Time (p_c), s	0.0	1.0		0.5	0.3	6.2		0.3				

Intersection Summary

HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-AM-IMP

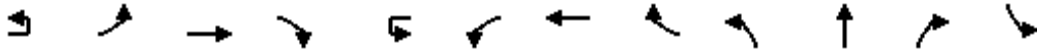
01/24/2022

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	198
Future Volume (veh/h)	198
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1952
Adj Flow Rate, veh/h	200
Peak Hour Factor	0.99
Percent Heavy Veh, %	7
Cap, veh/h	243
Arrive On Green	0.15
Sat Flow, veh/h	1654
Grp Volume(v), veh/h	200
Grp Sat Flow(s),veh/h/ln	1654
Q Serve(g_s), s	12.2
Cycle Q Clear(g_c), s	12.2
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	243
V/C Ratio(X)	0.82
Avail Cap(c_a), veh/h	270
HCM Platoon Ratio	1.00
Upstream Filter(I)	1.00
Uniform Delay (d), s/veh	43.1
Incr Delay (d2), s/veh	16.8
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	6.1
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	59.9
LnGrp LOS	E
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-PM-IMP

01/24/2022

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	160	1195	163	2	45	2276	31	57	145	54	19
Future Volume (vph)	8	160	1195	163	2	45	2276	31	57	145	54	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		1	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.998				0.850	
Flt Protected		0.950				0.950				0.986		
Satd. Flow (prot)	0	1713	3422	1561	0	1736	3366	0	0	1922	1589	0
Flt Permitted		0.950				0.950				0.727		
Satd. Flow (perm)	0	1713	3422	1561	0	1736	3366	0	0	1417	1589	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							2					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	3%	3%	1%	0%	0%	3%	0%	0%	1%	5%	6%
Adj. Flow (vph)	8	165	1232	168	2	46	2346	32	59	149	56	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	1232	168	0	48	2378	0	0	208	56	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2	2	1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83	83	20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40	40	20
Detector 1 Type	Cl+Ex	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0	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	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0	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
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-PM-IMP

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Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	112	179
Future Volume (vph)	112	179
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		200
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt		0.850
Flt Protected	0.993	
Satd. Flow (prot)	1798	1502
Flt Permitted	0.495	
Satd. Flow (perm)	896	1502
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	3%	6%
Adj. Flow (vph)	115	185
Shared Lane Traffic (%)		
Lane Group Flow (vph)	135	185
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	2
Detector Template		
Leading Detector (ft)	83	83
Trailing Detector (ft)	-5	-5
Detector 1 Position(ft)	-5	-5
Detector 1 Size(ft)	40	40
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	3.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	4.0	0.0
Detector 2 Position(ft)	43	43
Detector 2 Size(ft)	40	40
Detector 2 Type	Cl+Ex	Cl+Ex
Detector 2 Channel		
Detector 2 Extend (s)	0.0	0.0

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-PM-IMP

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Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA	Perm	Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8		8	4
Detector Phase	5	5	2	2	1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0	11.0	11.0
Total Split (s)	16.0	16.0	77.0	77.0	14.0	14.0	75.0		19.0	19.0	19.0	19.0
Total Split (%)	14.5%	14.5%	70.0%	70.0%	12.7%	12.7%	68.2%		17.3%	17.3%	17.3%	17.3%
Maximum Green (s)	9.0	9.0	70.0	70.0	7.0	7.0	68.0		13.0	13.0	13.0	13.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	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)		7.0	7.0	7.0		7.0	7.0			6.0	6.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None	None	None
v/c Ratio		1.24	0.54	0.16		0.45	1.14			1.25	0.30	
Control Delay		195.6	11.6	8.3		63.8	93.2			191.7	49.1	
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0	0.0	
Total Delay		195.6	11.6	8.3		63.8	93.2			191.7	49.1	
Queue Length 50th (ft)		~152	240	45		33	~1040			~183	37	
Queue Length 95th (ft)		#290	296	74		73	#1178			#333	77	
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		140	2264	1033		110	2081			167	187	
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		1.24	0.54	0.16		0.44	1.14			1.25	0.30	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

~ 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: 9: Croton Dam Rd & NYS Route 9A





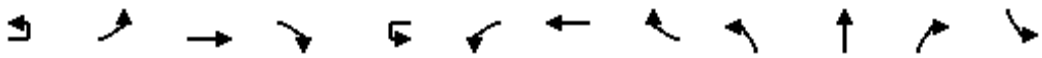
Lane Group	SBT	SBR
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	11.0
Total Split (s)	19.0	19.0
Total Split (%)	17.3%	17.3%
Maximum Green (s)	13.0	13.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
v/c Ratio	1.29	1.05
Control Delay	223.1	127.9
Queue Delay	0.0	0.0
Total Delay	223.1	127.9
Queue Length 50th (ft)	~121	~142
Queue Length 95th (ft)	#246	#285
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		200
Base Capacity (vph)	105	177
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.29	1.05
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-PM-IMP

01/24/2022

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	8	160	1195	163	2	45	2276	31	57	145	54	19
Future Volume (veh/h)	8	160	1195	163	2	45	2276	31	57	145	54	19
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1934	1934	1964		1894	1850	1894	1976	1961	1899	1967
Adj Flow Rate, veh/h		165	1232	168		46	2346	32	59	149	56	20
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		3	3	1		0	3	0	0	1	5	6
Cap, veh/h		151	2451	1110		59	2194	30	93	154	190	57
Arrive On Green		0.08	0.67	0.67		0.03	0.62	0.62	0.12	0.12	0.12	0.12
Sat Flow, veh/h		1842	3674	1664		1804	3550	48	434	1306	1609	163
Grp Volume(v), veh/h		165	1232	168		46	1159	1219	208	0	56	135
Grp Sat Flow(s),veh/h/ln		1842	1837	1664		1804	1757	1841	1740	0	1609	1874
Q Serve(g_s), s		9.0	18.5	4.1		2.8	68.0	68.0	5.8	0.0	3.5	0.0
Cycle Q Clear(g_c), s		9.0	18.5	4.1		2.8	68.0	68.0	13.0	0.0	3.5	7.2
Prop In Lane		1.00		1.00		1.00		0.03	0.28		1.00	0.15
Lane Grp Cap(c), veh/h		151	2451	1110		59	1086	1138	248	0	190	259
V/C Ratio(X)		1.10	0.50	0.15		0.77	1.07	1.07	0.84	0.00	0.29	0.52
Avail Cap(c_a), veh/h		151	2451	1110		115	1086	1138	248	0	190	259
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh		50.5	9.2	6.8		52.8	21.0	21.0	48.5	0.0	44.3	45.9
Incr Delay (d2), s/veh		101.0	0.2	0.1		18.9	46.9	48.1	21.9	0.0	0.9	1.9
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
%ile BackOfQ(50%),veh/ln		8.3	6.4	1.3		1.5	37.8	40.0	7.2	0.0	1.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		151.5	9.3	6.8		71.7	67.9	69.1	70.4	0.0	45.2	47.7
LnGrp LOS		F	A	A		E	F	F	E	A	D	D
Approach Vol, veh/h			1565				2424			264		
Approach Delay, s/veh			24.1				68.6			65.0		
Approach LOS			C				E			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	80.4		19.0	16.0	75.0		19.0				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	70.0		13.0	9.0	68.0		13.0				
Max Q Clear Time (g_c+I1), s	4.8	20.5		14.1	11.0	70.0		15.0				
Green Ext Time (p_c), s	0.0	11.8		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			53.6									
HCM 6th LOS			D									
Notes												
User approved ignoring U-Turning movement.												

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-PM-IMP
01/24/2022

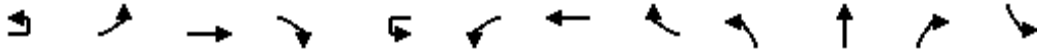


Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	112	179
Future Volume (veh/h)	112	179
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2012	1967
Adj Flow Rate, veh/h	115	185
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	3	6
Cap, veh/h	202	197
Arrive On Green	0.12	0.12
Sat Flow, veh/h	1711	1667
Grp Volume(v), veh/h	0	185
Grp Sat Flow(s),veh/h/ln	0	1667
Q Serve(g_s), s	0.0	12.1
Cycle Q Clear(g_c), s	0.0	12.1
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	0	197
V/C Ratio(X)	0.00	0.94
Avail Cap(c_a), veh/h	0	197
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	1.00
Uniform Delay (d), s/veh	0.0	48.1
Incr Delay (d2), s/veh	0.0	46.9
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	95.0
LnGrp LOS	A	F
Approach Vol, veh/h	320	
Approach Delay, s/veh	75.1	
Approach LOS	E	
Timer - Assigned Phs		

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT-IMP

01/24/2022

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	128	1012	143	1	31	1499	35	67	130	75	50
Future Volume (vph)	3	128	1012	143	1	31	1499	35	67	130	75	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	11	12	11	11	11	13	13	13	11
Grade (%)			-2%				1%			0%		
Storage Length (ft)		110		190		150		0	0		0	0
Storage Lanes		1		1		1		0	0		1	0
Taper Length (ft)		25				25			25			25
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt				0.850			0.997				0.850	
Flt Protected		0.950				0.950				0.983		
Satd. Flow (prot)	0	1728	3455	1531	0	1736	3363	0	0	1880	1669	0
Flt Permitted		0.950				0.950				0.693		
Satd. Flow (perm)	0	1728	3455	1531	0	1736	3363	0	0	1325	1669	0
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)							3					
Link Speed (mph)			40				40			30		
Link Distance (ft)			1697				1673			161		
Travel Time (s)			28.9				28.5			3.7		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	2%	3%	0%	0%	3%	0%	4%	2%	0%	2%
Adj. Flow (vph)	3	132	1043	147	1	32	1545	36	69	134	77	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	1043	147	0	33	1581	0	0	203	77	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	L NA	Left	R NA	L NA
Median Width(ft)			11				11			0		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			16				16			16		
Two way Left Turn Lane												
Headway Factor	0.99	1.03	1.03	1.03	1.01	1.05	1.05	1.05	0.96	0.96	0.96	1.02
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	2	1	2	2		1	2	2	1
Detector Template	Left				Left				Left			Left
Leading Detector (ft)	20	83	83	83	20	83	83		20	83	83	20
Trailing Detector (ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Position(ft)	0	-5	-5	-5	0	-5	-5		0	-5	-5	0
Detector 1 Size(ft)	20	40	40	40	20	40	40		20	40	40	20
Detector 1 Type	Cl+Ex	Cl+Ex	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	2.0	3.0	3.0	0.0	2.0	3.0		0.0	3.0	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	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.0	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
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT-IMP

01/24/2022



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	114	165
Future Volume (vph)	114	165
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	11
Grade (%)	-4%	
Storage Length (ft)		200
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Frt		0.850
Flt Protected	0.985	
Satd. Flow (prot)	1834	1561
Flt Permitted	0.628	
Satd. Flow (perm)	1169	1561
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	419	
Travel Time (s)	9.5	
Peak Hour Factor	0.97	0.97
Heavy Vehicles (%)	0%	2%
Adj. Flow (vph)	118	170
Shared Lane Traffic (%)		
Lane Group Flow (vph)	170	170
Enter Blocked Intersection	No	No
Lane Alignment	Left	R NA
Median Width(ft)	0	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.02	1.02
Turning Speed (mph)		9
Number of Detectors	2	2
Detector Template		
Leading Detector (ft)	83	83
Trailing Detector (ft)	-5	-5
Detector 1 Position(ft)	-5	-5
Detector 1 Size(ft)	40	40
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	3.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	4.0	0.0
Detector 2 Position(ft)	43	43
Detector 2 Size(ft)	40	40
Detector 2 Type	Cl+Ex	Cl+Ex
Detector 2 Channel		
Detector 2 Extend (s)	0.0	0.0

Lanes, Volumes, Timings
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT-IMP

01/24/2022



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA		Perm	NA	Perm	Perm
Protected Phases	5	5	2		1	1	6			8		
Permitted Phases				2					8		8	4
Detector Phase	5	5	2	2	1	1	6		8	8	8	4
Switch Phase												
Minimum Initial (s)	3.0	3.0	10.0	10.0	3.0	3.0	10.0		5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	17.0	17.0	10.0	10.0	17.0		11.0	11.0	11.0	11.0
Total Split (s)	19.0	19.0	67.0	67.0	13.0	13.0	61.0		30.0	30.0	30.0	30.0
Total Split (%)	17.3%	17.3%	60.9%	60.9%	11.8%	11.8%	55.5%		27.3%	27.3%	27.3%	27.3%
Maximum Green (s)	12.0	12.0	60.0	60.0	6.0	6.0	54.0		24.0	24.0	24.0	24.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	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)		7.0	7.0	7.0		7.0	7.0			6.0	6.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	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	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min		None	None	None	None
v/c Ratio		0.71	0.49	0.16		0.33	0.93			0.81	0.24	
Control Delay		67.4	13.8	11.3		58.8	35.7			65.2	38.2	
Queue Delay		0.0	0.0	0.0		0.0	0.0			0.0	0.0	
Total Delay		67.4	13.8	11.3		58.8	35.7			65.2	38.2	
Queue Length 50th (ft)		91	224	46		22	512			133	45	
Queue Length 95th (ft)		#185	300	85		56	#724			#233	88	
Internal Link Dist (ft)			1617				1593			81		
Turn Bay Length (ft)		110		190		150						
Base Capacity (vph)		203	2122	940		102	1785			312	393	
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		0.67	0.49	0.16		0.32	0.89			0.65	0.20	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 102.8

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

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

Queue shown is maximum after two cycles.

Splits and Phases: 9: Croton Dam Rd & NYS Route 9A





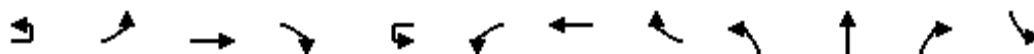
Lane Group	SBT	SBR
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	11.0
Total Split (s)	30.0	30.0
Total Split (%)	27.3%	27.3%
Maximum Green (s)	24.0	24.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
v/c Ratio	0.77	0.58
Control Delay	63.5	46.9
Queue Delay	0.0	0.0
Total Delay	63.5	46.9
Queue Length 50th (ft)	111	106
Queue Length 95th (ft)	#201	177
Internal Link Dist (ft)	339	
Turn Bay Length (ft)		200
Base Capacity (vph)	275	368
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.62	0.46
Intersection Summary		

HCM 6th Signalized Intersection Summary

9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT-IMP

01/24/2022



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	3	128	1012	143	1	31	1499	35	67	130	75	50
Future Volume (veh/h)	3	128	1012	143	1	31	1499	35	67	130	75	50
Initial Q (Qb), veh		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
Parking Bus, Adj		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		
Adj Sat Flow, veh/h/ln		1949	1949	1934		1894	1850	1894	1914	1945	1976	2027
Adj Flow Rate, veh/h		132	1043	147		32	1545	36	69	134	77	52
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	3		0	3	0	4	2	0	2
Cap, veh/h		169	2185	967		39	1829	43	132	183	251	120
Arrive On Green		0.09	0.59	0.59		0.02	0.52	0.52	0.15	0.15	0.15	0.15
Sat Flow, veh/h		1856	3702	1639		1804	3510	82	500	1224	1675	426
Grp Volume(v), veh/h		132	1043	147		32	772	809	203	0	77	170
Grp Sat Flow(s),veh/h/ln		1856	1851	1639		1804	1757	1835	1725	0	1675	1814
Q Serve(g_s), s		5.8	13.5	3.4		1.5	31.5	31.7	2.2	0.0	3.4	0.0
Cycle Q Clear(g_c), s		5.8	13.5	3.4		1.5	31.5	31.7	9.4	0.0	3.4	7.2
Prop In Lane		1.00		1.00		1.00		0.04	0.34		1.00	0.31
Lane Grp Cap(c), veh/h		169	2185	967		39	916	956	316	0	251	328
V/C Ratio(X)		0.78	0.48	0.15		0.81	0.84	0.85	0.64	0.00	0.31	0.52
Avail Cap(c_a), veh/h		265	2645	1171		129	1130	1180	544	0	479	571
HCM Platoon Ratio		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	1.00	1.00		1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh		37.3	9.8	7.7		40.9	17.2	17.2	34.3	0.0	31.8	33.3
Incr Delay (d2), s/veh		7.6	0.2	0.1		30.9	5.0	4.9	2.2	0.0	0.7	1.3
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
%ile BackOfQ(50%),veh/ln		2.9	4.6	1.0		1.0	12.1	12.7	4.1	0.0	1.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		45.0	10.0	7.8		71.8	22.2	22.1	36.5	0.0	32.5	34.6
LnGrp LOS		D	A	A		E	C	C	D	A	C	C
Approach Vol, veh/h			1322				1613			280		
Approach Delay, s/veh			13.2				23.1			35.4		
Approach LOS			B				C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	56.6		18.6	14.6	50.8		18.6				
Change Period (Y+Rc), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	6.0	60.0		24.0	12.0	54.0		24.0				
Max Q Clear Time (g_c+I1), s	3.5	15.5		9.8	7.8	33.7		11.4				
Green Ext Time (p_c), s	0.0	9.0		1.6	0.2	10.0		1.1				

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
9: Croton Dam Rd & NYS Route 9A

2025-BD-ALT-SAT-IMP

01/24/2022



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	114	165
Future Volume (veh/h)	114	165
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	2057	2027
Adj Flow Rate, veh/h	118	170
Peak Hour Factor	0.97	0.97
Percent Heavy Veh, %	0	2
Cap, veh/h	208	257
Arrive On Green	0.15	0.15
Sat Flow, veh/h	1387	1718
Grp Volume(v), veh/h	0	170
Grp Sat Flow(s),veh/h/ln	0	1718
Q Serve(g_s), s	0.0	7.8
Cycle Q Clear(g_c), s	0.0	7.8
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	0	257
V/C Ratio(X)	0.00	0.66
Avail Cap(c_a), veh/h	0	491
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.7
Incr Delay (d2), s/veh	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	36.6
LnGrp LOS	A	D
Approach Vol, veh/h	340	
Approach Delay, s/veh	35.6	
Approach LOS	D	
Timer - Assigned Phs		

APPENDIX E

SPEED STUDY

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
09/18/15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	1	1	1	2	15	17	15	2	0	0	0	0	0	0	54	31-40	32
11:00	0	1	0	1	9	27	16	6	3	0	0	0	0	0	63	36-45	43
12 PM	1	0	1	8	14	44	26	4	1	0	0	0	0	0	99	36-45	70
13:00	0	0	0	3	20	31	15	3	0	0	0	0	0	0	72	31-40	51
14:00	1	0	1	11	20	48	26	4	0	1	0	0	0	0	112	36-45	74
15:00	0	0	0	8	28	40	25	3	2	0	0	0	0	0	106	31-40	68
16:00	2	1	1	6	34	42	17	4	2	0	0	0	0	0	109	31-40	76
17:00	1	0	1	8	25	46	25	8	1	0	0	0	0	0	115	36-45	71
18:00	0	1	2	9	33	43	29	7	1	0	0	0	0	0	125	31-40	76
19:00	0	1	2	8	25	40	24	5	1	0	0	0	0	0	106	31-40	65
20:00	0	0	3	5	18	28	8	2	0	0	0	0	0	0	64	31-40	46
21:00	1	0	1	4	10	23	7	5	0	0	0	0	0	0	51	31-40	33
22:00	0	0	2	1	13	13	2	3	1	0	0	0	0	0	35	31-40	26
23:00	0	0	0	2	20	6	6	3	1	0	0	0	0	0	38	31-40	26
Total	7	5	15	76	284	448	241	59	13	1	0	0	0	0	1149		
Percent	0.6%	0.4%	1.3%	6.6%	24.7%	39.0%	21.0%	5.1%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	10:00	10:00	10:00	10:00	11:00	11:00	11:00	11:00						11:00		
Vol.	1	1	1	2	15	27	16	6	3						63		
PM Peak	16:00	16:00	20:00	14:00	16:00	14:00	18:00	17:00	15:00	14:00					18:00		
Vol.	2	1	3	11	34	48	29	8	2	1					125		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/19/15	0	0	0	3	0	4	0	0	1	0	0	0	0	0	8	36-45	4
01:00	1	0	1	0	5	3	1	1	0	0	0	0	0	0	12	31-40	8
02:00	0	0	0	0	1	4	1	0	0	0	0	0	0	0	6	33-42	5
03:00	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3	20-29	2
04:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	4	34-43	3
05:00	0	0	0	0	1	1	3	0	0	0	0	0	0	0	5	35-44	4
06:00	0	0	0	1	5	8	7	1	0	0	0	0	0	0	22	35-44	15
07:00	1	0	2	1	8	21	19	2	0	0	0	0	0	0	54	36-45	40
08:00	1	0	0	1	11	17	26	12	0	0	0	0	0	0	68	36-45	43
09:00	1	1	1	2	7	28	17	12	0	0	0	0	0	0	69	36-45	45
10:00	0	0	1	3	14	34	30	5	0	0	0	0	0	0	87	36-45	64
11:00	0	0	0	4	20	38	24	6	0	0	0	0	0	0	92	36-45	62
12 PM	1	1	0	1	17	45	24	15	1	0	0	0	0	0	105	36-45	69
13:00	0	0	1	8	20	35	21	5	1	0	0	0	0	0	91	36-45	56
14:00	2	0	0	7	19	36	16	4	2	0	0	0	0	0	86	31-40	55
15:00	3	3	4	8	27	33	15	6	1	0	1	0	0	0	101	31-40	60
16:00	3	1	1	4	33	33	23	3	0	0	0	0	0	0	101	31-40	66
17:00	1	0	0	11	37	55	10	3	1	0	0	0	0	0	118	31-40	92
18:00	1	1	1	2	24	44	27	3	1	0	0	0	0	0	104	36-45	71
19:00	1	0	0	9	19	31	12	3	0	0	0	0	0	0	75	31-40	50
20:00	1	0	0	3	15	25	9	3	1	0	0	0	0	0	57	31-40	40
21:00	0	0	1	3	13	29	10	1	0	0	0	0	0	0	57	31-40	42
22:00	0	0	1	2	7	17	5	3	0	0	0	0	0	0	35	31-40	24
23:00	1	0	0	2	9	7	8	3	0	0	0	0	0	0	30	31-40	16
Total	18	7	14	77	312	551	309	92	9	0	1	0	0	0	1390		
Percent	1.3%	0.5%	1.0%	5.5%	22.4%	39.6%	22.2%	6.6%	0.6%	0.0%	0.1%	0.0%	0.0%	0.0%			
AM Peak	01:00	09:00	07:00	11:00	11:00	11:00	10:00	08:00	00:00						11:00		
Vol.	1	1	2	4	20	38	30	12	1						92		
PM Peak	15:00	15:00	15:00	17:00	17:00	17:00	18:00	12:00	14:00		15:00				17:00		
Vol.	3	3	4	11	37	55	27	15	2		1				118		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/20/15	0	0	0	1	7	9	3	1	0	0	0	0	0	0	21	31-40	16
01:00	0	0	0	1	2	8	6	3	0	0	0	0	0	0	20	36-45	14
02:00	0	0	0	0	4	6	4	1	1	0	0	0	0	0	16	36-45	10
03:00	0	0	0	0	0	3	2	1	0	0	0	0	0	0	6	36-45	5
04:00	0	0	0	0	3	0	0	1	0	0	0	0	0	0	4	26-35	3
05:00	0	0	0	0	1	1	3	0	0	0	0	0	0	0	5	35-44	4
06:00	0	0	0	0	1	5	0	0	0	0	0	0	0	0	6	31-40	6
07:00	0	0	0	1	3	6	3	5	0	0	0	0	0	0	18	31-40	9
08:00	0	0	0	1	9	25	11	2	3	0	0	0	0	0	51	35-44	36
09:00	0	0	0	1	3	16	17	5	2	0	0	0	0	0	44	36-45	33
10:00	1	2	1	1	7	17	15	4	0	0	0	0	0	0	48	36-45	32
11:00	2	0	0	4	11	34	21	0	0	0	0	0	0	0	72	36-45	55
12 PM	0	0	0	6	27	45	17	2	1	0	0	0	0	0	98	31-40	72
13:00	4	0	1	3	30	42	29	10	1	1	0	0	0	0	121	31-40	72
14:00	3	0	0	4	19	28	25	3	0	0	0	0	0	0	82	36-45	53
15:00	4	0	4	8	35	37	23	6	1	1	0	0	0	0	119	31-40	72
16:00	1	1	2	9	26	40	19	1	0	0	0	0	0	0	99	31-40	66
17:00	1	0	1	10	23	48	16	4	1	0	0	0	0	0	104	31-40	71
18:00	0	0	0	2	19	38	18	7	1	0	0	0	0	0	85	31-40	57
19:00	1	0	0	0	12	22	14	8	1	0	0	0	0	0	58	35-44	36
20:00	0	0	0	4	14	26	14	5	0	1	0	0	0	0	64	31-40	40
21:00	0	2	1	2	13	16	5	1	1	0	0	0	0	0	41	31-40	29
22:00	0	0	0	1	7	6	5	0	0	0	0	0	0	0	19	31-40	13
23:00	0	0	0	0	7	4	1	0	1	0	0	0	0	0	13	31-40	11
Total	17	5	10	59	283	482	271	70	14	3	0	0	0	0	1214		
Percent	1.4%	0.4%	0.8%	4.9%	23.3%	39.7%	22.3%	5.8%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	10:00	10:00	11:00	11:00	11:00	11:00	07:00	08:00						11:00		
Vol.	2	2	1	4	11	34	21	5	3						72		
PM Peak	13:00	21:00	15:00	17:00	15:00	17:00	13:00	13:00	12:00	13:00					13:00		
Vol.	4	2	4	10	35	48	29	10	1	1					121		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/21/15	0	0	0	0	0	4	1	1	1	0	0	0	0	0	7	36-45	5
01:00	0	0	0	0	0	1	3	1	0	0	0	0	0	0	5	41-50	4
02:00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2	29-38	1
03:00	0	0	0	1	0	1	0	1	1	0	0	0	0	0	4	44-53	2
04:00	0	0	0	1	1	3	1	1	0	0	0	0	0	0	7	36-45	4
05:00	0	0	0	0	0	4	1	5	1	0	0	0	0	0	11	41-50	6
06:00	0	0	0	1	13	18	20	6	0	0	0	0	0	0	58	36-45	38
07:00	0	0	1	4	12	32	27	5	2	0	0	0	0	0	83	36-45	59
08:00	1	0	0	6	11	34	26	10	1	0	0	0	0	0	89	36-45	60
09:00	0	1	1	3	10	22	18	7	1	0	0	0	0	0	63	36-45	40
10:00	0	0	2	6	15	22	15	4	0	1	0	0	0	0	65	36-45	37
11:00	2	0	0	0	18	28	18	4	0	2	0	0	0	0	72	31-40	46
12 PM	0	0	0	3	17	39	18	4	0	0	0	0	0	0	81	34-43	57
13:00	0	0	1	6	14	24	20	1	1	0	0	0	0	0	67	36-45	44
14:00	0	0	0	7	17	28	21	3	1	0	0	0	0	0	77	36-45	49
15:00	1	0	1	6	20	30	26	5	1	0	0	0	0	0	90	36-45	56
16:00	3	0	1	12	37	50	26	7	1	0	0	0	0	0	137	31-40	87
17:00	2	0	0	10	30	40	23	3	0	0	0	0	0	0	108	31-40	70
18:00	1	0	2	10	28	46	20	5	0	0	0	0	0	0	112	31-40	74
19:00	0	0	1	6	18	38	20	4	0	0	0	0	0	0	87	35-44	58
20:00	1	0	1	0	13	26	12	7	3	0	0	0	0	0	63	31-40	39
21:00	1	0	0	0	12	9	13	5	1	0	0	0	0	0	41	36-45	22
22:00	1	0	0	0	7	8	7	1	1	0	0	0	0	0	25	31-40	15
23:00	0	0	0	0	4	3	3	0	0	0	0	0	0	0	10	31-40	7
Total	13	1	11	82	297	511	339	90	16	3	1	0	0	0	1364		
Percent	1.0%	0.1%	0.8%	6.0%	21.8%	37.5%	24.9%	6.6%	1.2%	0.2%	0.1%	0.0%	0.0%	0.0%			
AM Peak	11:00	09:00	10:00	08:00	11:00	08:00	07:00	08:00	07:00	11:00	02:00				08:00		
Vol.	2	1	2	6	18	34	27	10	2	2	1				89		
PM Peak	16:00		18:00	16:00	16:00	16:00	15:00	16:00	20:00						16:00		
Vol.	3		2	12	37	50	26	7	3						137		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/22/15	0	0	0	0	3	6	1	2	0	0	0	0	0	0	12	31-40	9
01:00	0	0	0	0	2	1	1	0	0	0	0	0	0	0	4	29-38	3
02:00	0	1	0	1	0	0	1	0	0	0	0	0	0	0	3	9-18	1
03:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	44-53	1
04:00	0	0	0	0	2	1	2	1	1	0	0	0	0	0	7	41-50	3
05:00	0	0	0	0	1	4	6	2	1	0	0	0	0	0	14	36-45	10
06:00	1	0	0	2	10	14	21	4	1	0	0	0	0	0	53	36-45	35
07:00	2	0	1	3	12	26	29	4	1	0	1	0	0	0	79	36-45	55
08:00	0	0	1	9	12	32	22	9	2	1	0	0	0	0	88	36-45	54
09:00	1	1	2	3	15	33	18	8	0	0	0	0	0	0	81	36-45	51
10:00	0	0	0	5	12	17	16	5	1	0	0	0	0	0	56	36-45	33
11:00	0	0	2	7	16	19	10	10	1	0	0	0	0	0	65	31-40	35
12 PM	0	0	0	3	13	30	17	2	1	0	0	0	0	0	66	36-45	47
13:00	2	0	0	6	11	17	21	5	2	0	0	0	0	0	64	36-45	38
14:00	4	3	1	7	20	29	22	6	1	0	0	0	0	0	93	36-45	51
15:00	0	0	2	10	23	35	19	5	1	0	0	0	0	0	95	31-40	58
16:00	1	0	1	8	31	44	32	5	1	0	0	0	0	0	123	36-45	76
17:00	4	0	2	8	34	52	25	7	0	0	0	0	0	0	132	31-40	86
18:00	3	0	4	5	26	34	20	7	1	1	0	0	0	0	101	31-40	60
19:00	2	0	1	2	26	36	18	4	2	0	0	0	0	0	91	31-40	62
20:00	5	1	1	3	13	22	11	2	0	0	0	0	0	0	58	31-40	35
21:00	1	0	1	4	17	22	14	4	0	0	0	0	0	0	63	31-40	39
22:00	0	0	0	1	7	16	5	1	1	0	0	0	0	0	31	31-40	23
23:00	1	0	0	0	4	6	4	1	1	0	0	0	0	0	17	31-40	10
Total	27	6	19	87	310	496	335	94	20	2	1	0	0	0	1397		
Percent	1.9%	0.4%	1.4%	6.2%	22.2%	35.5%	24.0%	6.7%	1.4%	0.1%	0.1%	0.0%	0.0%	0.0%			
AM Peak	07:00	02:00	09:00	08:00	11:00	09:00	07:00	11:00	08:00	08:00	07:00				08:00		
Vol.	2	1	2	9	16	33	29	10	2	1	1				88		
PM Peak	20:00	14:00	18:00	15:00	17:00	17:00	16:00	17:00	13:00	18:00					17:00		
Vol.	5	3	4	10	34	52	32	7	2	1					132		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/23/15	0	0	0	0	1	5	0	0	0	0	0	0	0	0	6	31-40	6
01:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
02:00	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4	34-43	3
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	24-33	1
04:00	0	0	0	1	0	1	0	3	0	1	0	0	0	0	6	46-55	3
05:00	0	0	0	0	1	4	3	2	1	0	0	0	0	0	11	36-45	7
06:00	1	0	0	0	8	24	13	1	0	0	0	0	0	0	47	36-45	37
07:00	2	0	0	3	9	23	26	10	0	0	0	0	0	0	73	36-45	49
08:00	1	1	0	1	12	33	20	10	1	1	1	0	0	0	81	36-45	53
09:00	1	0	3	3	9	20	18	5	1	0	0	0	0	0	60	36-45	38
10:00	1	0	0	3	1	24	19	9	1	0	0	0	0	0	58	36-45	43
11:00	0	0	0	2	13	36	20	9	0	0	0	0	0	0	80	36-45	56
12 PM	0	0	1	3	16	35	24	3	1	0	0	0	0	0	83	36-45	59
13:00	1	0	0	16	26	42	14	5	0	0	1	0	0	0	105	31-40	68
14:00	0	0	0	3	15	46	21	1	0	1	0	0	0	0	87	36-45	67
15:00	2	0	1	11	25	43	17	2	2	0	0	0	0	0	103	31-40	68
16:00	3	0	1	7	34	43	27	6	1	0	0	0	0	0	122	31-40	77
17:00	3	1	3	3	41	55	25	10	1	0	0	0	0	0	142	31-40	96
18:00	3	0	2	4	23	32	25	6	2	0	0	0	0	0	97	35-44	57
19:00	2	0	2	9	25	36	13	5	1	1	0	0	0	0	94	31-40	61
20:00	0	0	1	4	19	26	8	1	1	0	0	0	0	0	60	31-40	45
21:00	0	1	1	6	7	22	5	3	0	0	0	0	0	0	45	31-40	29
22:00	0	0	0	3	9	14	10	3	0	0	0	0	0	0	39	36-45	24
23:00	0	0	0	0	1	4	5	1	0	0	0	0	0	0	11	36-45	9
Total	22	3	15	82	297	569	315	95	13	4	2	0	0	0	1417		
Percent	1.6%	0.2%	1.1%	5.8%	21.0%	40.2%	22.2%	6.7%	0.9%	0.3%	0.1%	0.0%	0.0%	0.0%			
AM Peak	01:00	08:00	09:00	07:00	11:00	11:00	07:00	07:00	05:00	04:00	08:00				08:00		
Vol.	2	1	3	3	13	36	26	10	1	1	1				81		
PM Peak	16:00	17:00	17:00	13:00	17:00	17:00	16:00	17:00	15:00	14:00	13:00				17:00		
Vol.	3	1	3	16	41	55	27	10	2	1	1				142		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/24/15	0	0	0	0	1	3	2	2	0	0	0	0	0	0	8	34-43	5
01:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	24-33	1
02:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	34-43	1
03:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	34-43	1
04:00	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3	25-34	2
05:00	0	0	0	1	0	5	1	0	0	1	1	0	0	0	9	36-45	6
06:00	0	1	0	1	6	19	23	6	0	0	1	0	0	0	57	36-45	42
07:00	3	0	1	2	14	34	26	10	1	0	0	0	0	0	91	36-45	60
08:00	1	0	0	4	17	32	30	3	0	0	0	0	0	0	87	36-45	62
09:00	0	0	0	0	7	33	23	10	2	0	0	0	0	0	75	36-45	56
10:00	0	0	0	1	10	20	20	7	1	0	0	0	0	0	59	36-45	40
11:00	1	0	0	4	16	22	14	10	0	1	0	0	0	0	68	31-40	38
12 PM	0	1	0	3	12	32	23	10	2	0	0	0	0	0	83	36-45	55
13:00	0	0	1	4	10	25	20	9	1	0	0	0	0	0	70	36-45	45
14:00	1	0	0	7	20	38	15	5	0	0	0	0	0	0	86	31-40	58
15:00	1	0	1	8	32	45	21	7	1	0	0	0	0	0	116	31-40	77
16:00	2	0	1	12	29	37	25	14	2	0	0	0	0	0	122	31-40	66
17:00	0	0	2	7	26	43	23	6	0	0	0	0	0	0	107	31-40	69
18:00	1	0	1	7	28	56	28	5	5	0	0	0	0	0	131	32-41	84
19:00	0	0	0	9	32	37	12	4	0	0	0	0	0	0	94	31-40	69
20:00	2	0	2	2	21	24	15	2	0	0	0	0	0	0	68	31-40	45
21:00	2	0	0	9	13	20	10	1	1	0	0	0	0	0	56	31-40	33
22:00	0	0	0	3	6	17	12	3	1	0	0	0	0	0	42	36-45	29
23:00	1	0	0	0	8	4	2	1	1	0	0	0	0	0	17	31-40	12
Total	15	2	9	84	311	546	348	115	18	2	2	0	0	0	1452		
Percent	1.0%	0.1%	0.6%	5.8%	21.4%	37.6%	24.0%	7.9%	1.2%	0.1%	0.1%	0.0%	0.0%	0.0%			
AM Peak	07:00	06:00	07:00	08:00	08:00	07:00	08:00	07:00	09:00	05:00	05:00				07:00		
Vol.	3	1	1	4	17	34	30	10	2	1	1				91		
PM Peak	16:00	12:00	17:00	16:00	15:00	18:00	18:00	16:00	18:00						18:00		
Vol.	2	1	2	12	32	56	28	14	5						131		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/25/15	0	0	0	0	3	0	1	2	0	0	0	0	0	0	6	26-35	3
01:00	0	0	0	0	2	0	0	1	0	1	0	0	0	0	4	25-34	2
02:00	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4	35-44	4
03:00	0	0	0	0	3	0	0	1	0	0	0	0	0	0	4	26-35	3
04:00	0	1	0	0	0	3	1	0	0	0	0	0	0	0	5	36-45	4
05:00	0	0	0	0	3	6	5	2	1	1	0	0	0	0	18	35-44	11
06:00	0	0	0	2	9	27	16	4	0	2	0	0	0	0	60	36-45	43
07:00	2	0	0	3	15	26	27	11	4	1	1	0	0	0	90	36-45	53
08:00	2	0	0	3	17	26	32	15	0	0	0	1	0	0	96	36-45	58
09:00	0	0	1	3	12	33	21	2	3	0	0	0	0	0	75	36-45	54
10:00	0	1	6	1	18	20	22	5	0	0	0	0	0	0	73	36-45	42
11:00	0	0	0	3	7	20	16	7	0	0	0	0	0	0	53	36-45	36
12 PM	0	0	3	6	16	37	22	10	0	0	0	0	0	0	94	36-45	59
13:00	1	0	5	4	10	22	16	4	0	0	0	0	0	0	62	36-45	38
14:00	2	1	0	6	20	43	17	7	2	0	0	0	0	0	98	31-40	63
15:00	6	1	1	6	17	49	23	4	2	0	0	0	0	0	109	36-45	72
16:00	0	0	0	12	31	64	32	6	0	1	0	0	0	0	146	36-45	96
17:00	2	0	2	9	25	49	17	4	0	0	0	0	0	0	108	31-40	74
18:00	2	0	1	4	28	58	20	6	0	0	0	0	0	0	119	31-40	86
19:00	1	0	1	6	26	53	15	9	2	1	0	0	0	0	114	31-40	79
20:00	2	2	3	7	22	29	12	3	1	0	0	0	0	0	81	31-40	51
21:00	2	0	1	8	12	21	9	2	1	0	0	0	0	0	56	31-40	33
22:00	0	0	2	2	17	19	7	1	0	0	0	0	0	0	48	31-40	36
23:00	0	0	0	3	10	10	9	1	0	0	0	0	0	0	33	31-40	20
Total	22	6	26	88	323	617	342	107	16	7	1	1	0	0	1556		
Percent	1.4%	0.4%	1.7%	5.7%	20.8%	39.7%	22.0%	6.9%	1.0%	0.4%	0.1%	0.1%	0.0%	0.0%			
AM Peak	07:00	04:00	10:00	07:00	10:00	09:00	08:00	08:00	07:00	06:00	07:00	08:00			08:00		
Vol.	2	1	6	3	18	33	32	15	4	2	1	1			96		
PM Peak	15:00	20:00	13:00	16:00	16:00	16:00	16:00	12:00	14:00	16:00					16:00		
Vol.	6	2	5	12	31	64	32	10	2	1					146		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/26/15	0	0	1	1	6	2	6	1	0	0	0	0	0	0	17	32-41	8
01:00	0	0	0	0	1	2	2	1	2	0	0	0	0	0	8	36-45	4
02:00	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3	34-43	3
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
04:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	29-38	1
05:00	0	0	0	0	3	2	2	2	0	0	0	0	0	0	9	31-40	5
06:00	0	0	1	2	2	6	3	3	0	0	0	0	0	0	17	34-43	9
07:00	0	0	1	2	9	24	9	1	4	0	0	0	0	0	50	35-44	33
08:00	1	0	1	3	11	20	26	13	2	0	0	0	0	0	77	36-45	46
09:00	1	0	0	4	11	42	28	4	2	0	0	0	0	0	92	36-45	70
10:00	2	0	4	7	14	35	20	7	3	0	0	0	0	0	92	36-45	55
11:00	4	1	2	6	13	24	16	5	1	0	0	0	0	0	72	36-45	40
12 PM	0	0	4	7	19	32	21	3	2	0	0	0	0	0	88	36-45	53
13:00	0	0	1	9	43	35	23	2	0	1	0	0	0	0	114	31-40	78
14:00	2	0	2	8	30	37	21	5	0	1	0	0	0	0	106	31-40	67
15:00	6	2	2	14	23	42	17	3	2	0	0	0	0	0	111	31-40	65
16:00	2	0	0	6	26	39	12	5	0	0	0	0	0	0	90	31-40	65
17:00	0	0	0	5	30	45	27	6	0	0	0	0	0	0	113	31-40	75
18:00	0	1	2	5	24	40	18	4	1	0	0	0	0	0	95	31-40	64
19:00	3	0	0	7	20	31	10	6	1	0	0	0	0	0	78	31-40	51
20:00	0	0	0	1	13	32	10	3	0	0	0	0	0	0	59	31-40	45
21:00	0	0	2	6	17	18	11	3	0	0	0	0	0	0	57	31-40	35
22:00	0	0	0	5	13	15	9	4	1	0	0	0	0	0	47	31-40	28
23:00	0	0	1	6	9	17	8	1	0	0	0	0	0	0	42	31-40	26
Total	21	4	24	105	337	543	300	82	21	2	0	0	0	0	1439		
Percent	1.5%	0.3%	1.7%	7.3%	23.4%	37.7%	20.8%	5.7%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	11:00	10:00	10:00	10:00	09:00	09:00	08:00	07:00						09:00		
Vol.	4	1	4	7	14	42	28	13	4						92		
PM Peak	15:00	15:00	12:00	15:00	13:00	17:00	17:00	17:00	12:00	13:00					13:00		
Vol.	6	2	4	14	43	45	27	6	2	1					114		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

SB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/27/15	1	0	1	4	8	18	5	6	1	0	0	0	0	0	44	31-40	26
01:00	0	0	1	1	1	7	3	1	0	0	0	0	0	0	14	35-44	10
02:00	2	0	0	1	2	2	0	0	1	0	0	0	0	0	8	31-40	4
03:00	0	0	0	1	0	3	2	0	0	0	0	0	0	0	6	35-44	5
04:00	0	0	0	0	0	2	0	0	0	1	0	0	0	0	3	30-39	2
05:00	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3	19-28	1
06:00	0	0	0	0	1	3	4	3	0	0	0	0	0	0	11	36-45	7
07:00	0	0	1	1	7	7	12	2	1	0	1	0	0	0	32	36-45	19
08:00	2	2	0	2	3	8	15	11	0	0	0	0	0	0	43	41-50	26
09:00	1	0	1	2	8	26	17	3	1	1	0	0	0	0	60	36-45	43
10:00	2	0	0	1	14	24	15	5	2	0	0	0	0	0	63	34-43	39
11:00	1	0	0	6	20	38	25	9	2	0	0	0	0	0	101	36-45	63
12 PM	3	0	0	8	21	43	34	5	3	0	1	0	0	0	118	36-45	77
13:00	1	0	0	4	22	38	23	6	0	0	0	0	0	0	94	36-45	61
14:00	0	0	1	2	20	41	20	6	1	1	0	0	0	0	92	36-45	61
15:00	1	0	2	11	24	38	16	4	0	1	1	0	0	0	98	31-40	62
16:00	3	2	1	8	26	41	27	0	0	0	0	0	0	0	108	34-43	68
17:00	0	0	2	4	22	45	24	10	1	0	0	0	0	0	108	35-44	69
18:00	1	0	0	4	26	38	9	4	0	0	0	0	0	0	82	31-40	64
19:00	2	0	2	9	23	34	16	2	0	0	0	0	0	0	88	31-40	57
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	20	4	12	70	248	456	268	77	14	4	3	0	0	0	1176		
Percent	1.7%	0.3%	1.0%	6.0%	21.1%	38.8%	22.8%	6.5%	1.2%	0.3%	0.3%	0.0%	0.0%	0.0%			
AM Peak	02:00	08:00	00:00	11:00	11:00	11:00	11:00	08:00	10:00	04:00	07:00				11:00		
Vol.	2	2	1	6	20	38	25	11	2	1	1				101		
PM Peak	12:00	16:00	15:00	15:00	16:00	17:00	12:00	17:00	12:00	14:00	12:00				12:00		
Vol.	3	2	2	11	26	45	34	10	3	1	1				118		
Total	182	43	155	810	3002	5219	3068	881	154	28	11	1	0	0	13554		
Percent	1.3%	0.3%	1.1%	6.0%	22.1%	38.5%	22.6%	6.5%	1.1%	0.2%	0.1%	0.0%	0.0%	0.0%			

15th Percentile : 31 MPH
50th Percentile : 37 MPH
85th Percentile : 43 MPH
95th Percentile : 47 MPH

Stats
10 MPH Pace Speed : 36-45 MPH
Number in Pace : 8287
Percent in Pace : 61.1%
Number of Vehicles > 35 MPH : 9362
Percent of Vehicles > 35 MPH : 69.1%
Mean Speed(Average) : 38 MPH

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Speed	in Pace
09/18/15	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	2	1	4	8	13	22	11	3	1	0	0	0	0	0	65	31-40	35
11:00	3	0	0	3	12	19	11	4	0	2	0	0	0	0	54	31-40	31
12 PM	3	0	2	1	14	16	23	6	0	0	0	0	0	0	65	36-45	39
13:00	3	0	0	2	12	28	23	7	1	0	0	0	0	0	76	36-45	51
14:00	2	1	2	7	23	25	27	3	0	0	0	0	0	0	90	36-45	52
15:00	1	0	0	5	24	45	27	5	0	0	0	0	0	0	107	36-45	72
16:00	3	0	0	5	22	40	31	15	2	0	0	0	0	0	118	36-45	71
17:00	2	0	0	3	21	38	28	8	1	1	0	0	0	0	102	36-45	66
18:00	0	0	1	7	32	34	25	8	2	0	0	0	1	0	110	31-40	66
19:00	1	0	1	3	24	27	12	5	1	0	0	0	0	0	74	31-40	51
20:00	2	0	0	2	19	13	4	1	0	0	0	0	0	0	41	31-40	32
21:00	1	0	1	5	5	16	8	3	0	0	0	0	0	0	39	36-45	24
22:00	0	0	0	3	9	9	6	0	0	0	0	0	0	0	27	31-40	18
23:00	0	0	0	2	6	5	2	2	0	0	0	0	0	0	17	31-40	11
Total	23	2	11	56	236	337	238	70	8	3	0	0	1	0	985		
Percent	2.3%	0.2%	1.1%	5.7%	24.0%	34.2%	24.2%	7.1%	0.8%	0.3%	0.0%	0.0%	0.1%	0.0%			
AM Peak	11:00	10:00	10:00	10:00	10:00	10:00	10:00	11:00	10:00	11:00					10:00		
Vol.	3	1	4	8	13	22	11	4	1	2					65		
PM Peak	12:00	14:00	12:00	14:00	18:00	15:00	16:00	16:00	16:00	17:00			18:00		16:00		
Vol.	3	1	2	7	32	45	31	15	2	1			1		118		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/19/15	0	0	0	0	4	3	4	0	0	0	0	0	0	0	11	36-45	7
01:00	0	1	1	0	3	4	1	0	1	0	0	0	0	0	11	31-40	7
02:00	1	0	0	0	3	6	1	1	0	0	0	0	0	0	12	31-40	9
03:00	0	0	0	2	1	3	1	0	1	0	0	0	0	0	8	36-45	4
04:00	0	0	0	1	1	5	1	0	0	1	0	0	0	0	9	34-43	6
05:00	0	0	0	1	2	8	1	0	0	0	0	0	0	0	12	31-40	10
06:00	0	0	0	5	5	10	9	3	1	0	0	0	0	0	33	36-45	19
07:00	1	0	1	4	30	36	13	5	3	0	0	0	0	0	93	31-40	66
08:00	0	1	0	3	11	41	15	7	1	0	1	0	0	0	80	36-45	56
09:00	2	0	1	9	24	31	19	5	1	0	0	0	0	0	92	31-40	55
10:00	1	0	0	5	18	22	31	8	2	0	0	0	0	0	87	36-45	53
11:00	4	0	2	7	26	30	17	6	0	0	0	0	0	0	92	31-40	56
12 PM	2	0	0	4	18	40	29	5	4	0	0	0	0	0	102	36-45	69
13:00	2	0	3	7	19	27	23	5	5	0	0	0	0	0	91	36-45	50
14:00	2	0	1	1	12	26	20	8	1	1	0	0	0	0	72	36-45	46
15:00	6	0	1	6	26	22	19	5	1	0	0	0	0	0	86	31-40	48
16:00	3	0	1	4	22	23	12	7	2	1	0	0	0	0	75	31-40	45
17:00	0	0	0	3	16	31	18	8	2	0	0	0	0	0	78	35-44	49
18:00	0	0	3	7	11	26	12	4	1	0	1	0	0	0	65	36-45	38
19:00	0	0	0	4	15	16	8	2	0	1	0	0	0	0	46	31-40	31
20:00	1	0	1	2	14	11	5	3	2	0	0	0	0	0	39	31-40	25
21:00	0	0	0	3	5	8	3	1	0	0	0	0	0	0	20	31-40	13
22:00	0	0	0	2	8	6	7	2	0	0	0	0	0	0	25	31-40	14
23:00	0	0	1	2	8	4	4	3	0	0	0	0	0	0	22	30-39	12
Total	25	2	16	82	302	439	273	88	28	4	2	0	0	0	1261		
Percent	2.0%	0.2%	1.3%	6.5%	23.9%	34.8%	21.6%	7.0%	2.2%	0.3%	0.2%	0.0%	0.0%	0.0%			
AM Peak	11:00	01:00	11:00	09:00	07:00	08:00	10:00	10:00	07:00	04:00	08:00				07:00		
Vol.	4	1	2	9	30	41	31	8	3	1	1				93		
PM Peak	15:00		13:00	13:00	15:00	12:00	12:00	14:00	13:00	14:00	18:00				12:00		
Vol.	6		3	7	26	40	29	8	5	1	1				102		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/20/15	0	0	1	3	6	1	1	1	0	0	0	0	0	0	13	26-35	9
01:00	0	0	1	0	3	1	0	2	0	0	0	0	0	0	7	31-40	4
02:00	0	0	0	1	0	2	1	0	0	0	0	0	0	0	4	34-43	3
03:00	0	0	0	0	1	4	3	1	1	0	0	0	0	0	10	36-45	7
04:00	0	0	3	1	5	4	0	1	0	0	0	0	0	0	14	31-40	9
05:00	0	0	0	0	1	2	1	1	0	0	0	0	0	0	5	36-45	3
06:00	0	0	0	2	4	8	4	1	0	0	0	0	0	0	19	31-40	12
07:00	0	0	0	1	9	13	8	3	1	0	1	0	0	0	36	31-40	22
08:00	1	0	0	1	9	16	4	5	1	0	0	0	0	0	37	31-40	25
09:00	1	0	1	2	20	28	19	7	1	1	1	0	0	0	81	31-40	48
10:00	2	0	1	5	19	19	14	1	0	1	0	0	0	0	62	31-40	38
11:00	2	0	1	12	19	20	16	4	0	0	0	0	0	0	74	31-40	39
12 PM	2	0	0	3	12	46	15	8	0	0	0	0	0	0	86	36-45	61
13:00	5	0	0	5	11	40	19	8	3	0	0	0	0	0	91	36-45	59
14:00	2	1	0	7	18	26	17	7	1	0	0	0	0	0	79	31-40	44
15:00	3	0	0	7	14	32	12	8	1	0	0	0	0	0	77	31-40	46
16:00	1	0	1	6	21	18	9	3	1	0	0	0	0	0	60	31-40	39
17:00	2	0	2	4	16	28	12	3	0	1	0	0	0	0	68	31-40	44
18:00	1	0	1	0	8	17	7	4	0	0	0	0	0	0	38	31-40	25
19:00	3	0	0	3	11	12	8	4	1	0	0	0	0	0	42	31-40	23
20:00	0	0	0	1	10	10	2	0	2	0	0	0	0	0	25	31-40	20
21:00	2	0	0	3	7	10	6	1	1	0	0	0	0	0	30	31-40	17
22:00	0	0	0	0	4	5	6	4	0	0	0	0	0	0	19	36-45	11
23:00	0	0	0	2	0	4	2	1	0	0	0	0	0	0	9	36-45	6
Total	27	1	12	69	228	366	186	78	14	3	2	0	0	0	986		
Percent	2.7%	0.1%	1.2%	7.0%	23.1%	37.1%	18.9%	7.9%	1.4%	0.3%	0.2%	0.0%	0.0%	0.0%			
AM Peak	10:00		04:00	11:00	09:00	09:00	09:00	09:00	03:00	09:00	07:00				09:00		
Vol.	2		3	12	20	28	19	7	1	1	1				81		
PM Peak	13:00	14:00	17:00	14:00	16:00	12:00	13:00	12:00	13:00	17:00					13:00		
Vol.	5	1	2	7	21	46	19	8	3	1					91		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Page 14

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/21/15	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3	29-38	2
01:00	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4	30-39	4
02:00	0	0	0	0	2	4	1	1	0	0	0	0	0	0	8	31-40	6
03:00	0	0	0	0	5	4	1	1	0	0	0	0	0	0	11	31-40	9
04:00	1	0	0	0	2	1	4	0	0	1	0	0	0	0	9	35-44	5
05:00	0	0	1	2	2	3	1	3	0	1	0	0	0	0	13	29-38	5
06:00	1	0	0	4	13	35	14	6	2	2	0	0	0	0	77	34-43	49
07:00	1	0	2	9	41	38	25	12	1	1	0	0	0	0	130	31-40	79
08:00	3	0	2	5	19	28	34	3	2	0	0	0	0	0	96	36-45	62
09:00	0	0	2	3	18	14	9	4	2	0	0	0	0	0	52	31-40	32
10:00	1	0	0	0	14	22	12	3	0	0	0	0	0	0	52	31-40	36
11:00	1	0	1	0	14	19	16	3	0	0	1	0	0	0	55	36-45	35
12 PM	1	0	2	7	16	15	11	5	0	0	0	0	0	0	57	31-40	31
13:00	1	0	0	2	12	20	13	1	2	1	0	0	0	0	52	34-43	33
14:00	4	0	0	4	15	28	20	8	2	0	0	0	0	0	81	36-45	48
15:00	1	0	0	4	16	21	26	15	3	0	0	0	0	0	86	36-45	47
16:00	3	0	0	6	19	43	31	6	4	0	0	0	0	0	112	36-45	74
17:00	2	0	1	3	13	50	16	9	2	1	0	0	0	0	97	36-45	66
18:00	0	0	0	5	34	33	24	4	2	0	0	0	0	0	102	31-40	67
19:00	0	0	3	9	23	22	10	3	1	0	0	0	0	0	71	31-40	45
20:00	3	0	0	2	16	11	4	3	0	0	0	0	0	0	39	31-40	27
21:00	1	0	0	1	4	12	4	1	0	0	0	0	0	0	23	31-40	16
22:00	1	0	0	3	2	5	3	0	1	1	0	0	0	0	16	34-43	8
23:00	0	0	0	1	4	7	4	5	0	0	0	0	0	0	21	36-45	11
Total	25	0	14	70	307	438	284	96	24	8	1	0	0	0	1267		
Percent	2.0%	0.0%	1.1%	5.5%	24.2%	34.6%	22.4%	7.6%	1.9%	0.6%	0.1%	0.0%	0.0%	0.0%			
AM Peak	08:00		07:00	07:00	07:00	07:00	08:00	07:00	06:00	06:00	11:00				07:00		
Vol.	3		2	9	41	38	34	12	2	2	1				130		
PM Peak	14:00		19:00	19:00	18:00	17:00	16:00	15:00	16:00	13:00					16:00		
Vol.	4		3	9	34	50	31	15	4	1					112		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/22/15	0	0	0	1	0	1	4	0	0	0	0	0	0	0	6	36-45	5
01:00	0	0	0	0	1	2	1	0	0	0	0	0	0	0	4	30-39	3
02:00	1	0	0	0	1	4	0	0	1	0	1	0	0	0	8	31-40	5
03:00	0	0	0	2	3	4	5	0	0	0	0	0	0	0	14	35-44	9
04:00	0	0	0	0	1	2	1	2	1	0	0	0	0	0	7	46-55	3
05:00	0	0	0	1	4	3	2	1	1	0	0	0	0	0	12	31-40	7
06:00	4	0	0	5	18	22	29	3	2	0	0	0	0	0	83	36-45	51
07:00	3	0	0	12	36	48	36	11	2	0	0	0	0	0	148	36-45	84
08:00	0	1	1	8	19	27	19	14	2	0	0	0	0	0	91	31-40	46
09:00	1	0	3	5	20	24	13	5	0	0	0	0	0	0	71	31-40	44
10:00	2	1	2	6	14	18	15	4	0	0	0	0	0	0	62	36-45	33
11:00	3	0	2	5	13	14	7	5	1	0	0	0	0	0	50	31-40	27
12 PM	0	0	0	6	16	22	7	4	0	0	0	0	0	0	55	31-40	38
13:00	4	0	0	3	16	20	22	7	3	0	0	0	0	0	75	36-45	42
14:00	3	0	1	13	19	25	12	8	0	0	0	0	0	0	81	31-40	44
15:00	0	0	1	8	23	20	22	8	0	0	0	0	0	0	82	31-40	43
16:00	0	0	0	5	14	30	30	11	0	0	0	0	0	0	90	36-45	60
17:00	1	0	1	3	21	36	28	3	1	0	0	0	0	0	94	36-45	64
18:00	0	0	0	1	20	31	26	7	1	0	0	0	0	0	86	36-45	57
19:00	2	0	1	4	20	26	14	5	0	0	0	0	0	0	72	31-40	46
20:00	3	0	0	3	17	14	7	1	1	0	0	0	0	0	46	31-40	31
21:00	0	0	1	0	10	15	7	1	0	1	0	0	0	0	35	31-40	25
22:00	0	0	0	5	10	10	7	2	1	1	0	0	0	0	36	31-40	20
23:00	1	0	0	3	3	5	4	0	0	0	0	0	0	0	16	36-45	9
Total	28	2	13	99	319	423	318	102	17	2	1	0	0	0	1324		
Percent	2.1%	0.2%	1.0%	7.5%	24.1%	31.9%	24.0%	7.7%	1.3%	0.2%	0.1%	0.0%	0.0%	0.0%			
AM Peak	06:00	08:00	09:00	07:00	07:00	07:00	07:00	08:00	06:00		02:00				07:00		
Vol.	4	1	3	12	36	48	36	14	2		1				148		
PM Peak	13:00		14:00	14:00	15:00	17:00	16:00	16:00	13:00	21:00					17:00		
Vol.	4		1	13	23	36	30	11	3	1					94		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/23/15	1	0	0	0	1	2	2	0	0	0	0	0	0	0	6	34-43	4
01:00	0	0	0	0	2	1	1	1	0	0	0	0	0	0	5	31-40	3
02:00	0	0	0	0	1	2	0	0	0	0	0	0	1	0	4	30-39	3
03:00	0	0	0	1	4	6	2	1	0	0	0	0	0	0	14	31-40	10
04:00	0	0	0	0	1	2	1	1	0	0	0	0	0	0	5	36-45	3
05:00	0	1	0	1	1	4	2	0	1	0	0	0	0	0	10	36-45	6
06:00	2	0	1	3	15	27	20	8	1	1	0	0	0	0	78	36-45	47
07:00	3	0	0	5	36	56	28	16	1	1	0	0	0	0	146	31-40	92
08:00	2	1	1	9	15	31	27	4	2	1	0	0	0	0	93	36-45	58
09:00	2	0	0	6	17	32	20	4	2	0	0	0	0	0	83	36-45	52
10:00	0	0	0	4	13	18	16	7	0	0	0	0	0	0	58	36-45	34
11:00	1	0	1	4	12	30	18	4	2	1	0	0	0	0	73	36-45	48
12 PM	3	0	2	3	16	15	21	9	1	0	0	0	0	0	70	36-45	36
13:00	1	0	0	7	18	23	21	3	0	1	0	0	0	0	74	36-45	44
14:00	0	0	0	5	13	32	10	3	0	1	0	0	0	0	64	31-40	45
15:00	2	0	0	5	13	21	20	13	0	0	0	0	0	0	74	36-45	41
16:00	1	0	1	4	12	36	34	12	2	0	0	0	0	0	102	36-45	70
17:00	3	0	0	4	24	42	17	9	3	1	0	0	0	0	103	31-40	66
18:00	0	0	1	5	14	33	15	8	1	0	0	0	0	0	77	36-45	48
19:00	0	0	3	6	13	15	7	5	1	0	0	0	0	0	50	31-40	28
20:00	0	0	0	3	18	9	6	3	0	1	0	0	0	0	40	31-40	27
21:00	0	0	0	2	8	10	4	3	0	0	0	0	0	0	27	31-40	18
22:00	1	0	0	5	8	8	11	4	0	0	0	0	0	0	37	36-45	19
23:00	0	0	0	1	3	4	2	2	0	1	0	1	0	0	14	31-40	7
Total	22	2	10	83	278	459	305	120	17	9	0	1	1	0	1307		
Percent	1.7%	0.2%	0.8%	6.4%	21.3%	35.1%	23.3%	9.2%	1.3%	0.7%	0.0%	0.1%	0.1%	0.0%			
AM Peak	07:00	05:00	06:00	08:00	07:00	07:00	07:00	07:00	08:00	06:00			02:00		07:00		
Vol.	3	1	1	9	36	56	28	16	2	1			1		146		
PM Peak	12:00		19:00	13:00	17:00	17:00	16:00	15:00	17:00	13:00		23:00			17:00		
Vol.	3		3	7	24	42	34	13	3	1		1			103		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/24/15	0	0	0	1	2	2	2	0	0	0	0	0	0	0	7	29-38	4
01:00	0	0	0	0	0	2	1	1	0	0	0	0	0	0	4	34-43	3
02:00	0	0	0	0	1	6	0	1	0	0	0	0	0	0	8	31-40	7
03:00	0	0	0	0	1	3	2	1	0	1	0	0	0	0	8	36-45	5
04:00	0	0	0	3	1	0	0	0	1	1	0	0	0	0	6	26-35	4
05:00	0	0	0	0	4	4	3	1	1	0	0	0	0	0	13	31-40	8
06:00	2	0	0	2	19	37	18	10	2	0	0	0	0	0	90	31-40	56
07:00	2	0	2	11	33	50	38	13	3	0	0	0	0	0	152	36-45	88
08:00	3	0	1	1	21	42	31	5	2	0	0	0	0	0	106	36-45	73
09:00	0	0	1	2	20	26	22	4	1	1	0	0	0	0	77	36-45	48
10:00	1	0	0	3	19	19	16	4	1	0	0	0	0	0	63	31-40	38
11:00	1	0	0	4	12	21	13	7	3	0	0	1	0	0	62	34-43	34
12 PM	7	0	1	7	4	24	13	3	2	0	0	0	0	0	61	36-45	37
13:00	1	0	0	3	10	26	12	4	1	0	0	0	0	0	57	35-44	38
14:00	1	0	0	6	12	25	20	5	0	0	0	0	0	0	69	36-45	45
15:00	1	0	0	10	22	29	20	14	1	0	0	0	0	0	97	31-40	51
16:00	3	0	1	1	23	27	18	8	1	0	0	0	0	0	82	31-40	50
17:00	3	0	0	4	17	37	24	10	3	0	1	0	0	0	99	36-45	61
18:00	3	0	0	1	17	36	24	5	4	0	0	0	0	0	90	36-45	60
19:00	0	0	0	3	25	26	24	3	0	0	0	0	0	0	81	31-40	51
20:00	2	0	0	3	22	22	11	1	0	0	0	0	0	0	61	31-40	44
21:00	0	1	0	11	15	12	5	3	0	0	0	0	0	0	47	29-38	27
22:00	0	0	0	1	3	10	3	4	2	0	0	0	0	0	23	36-45	13
23:00	0	0	0	0	4	4	1	1	0	0	0	0	0	0	10	31-40	8
Total	30	1	6	77	307	490	321	108	28	3	1	1	0	0	1373		
Percent	2.2%	0.1%	0.4%	5.6%	22.4%	35.7%	23.4%	7.9%	2.0%	0.2%	0.1%	0.1%	0.0%	0.0%			
AM Peak	08:00		07:00	07:00	07:00	07:00	07:00	07:00	07:00	03:00		11:00			07:00		
Vol.	3		2	11	33	50	38	13	3	1		1			152		
PM Peak	12:00	21:00	12:00	21:00	19:00	17:00	17:00	15:00	18:00		17:00				17:00		
Vol.	7	1	1	11	25	37	24	14	4		1				99		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/25/15	0	0	0	1	3	6	4	1	0	0	0	0	0	0	15	36-45	10
01:00	0	0	0	3	1	1	0	0	0	0	0	0	0	0	5	26-35	4
02:00	0	0	0	0	3	2	1	1	0	0	0	0	0	0	7	31-40	5
03:00	0	0	0	1	1	5	2	0	0	0	0	0	0	0	9	36-45	7
04:00	0	0	0	0	0	5	3	1	1	1	0	0	0	0	11	36-45	8
05:00	0	0	0	3	4	9	3	1	0	2	0	0	0	0	22	31-40	13
06:00	1	0	0	2	19	29	14	7	4	0	0	0	0	0	76	31-40	48
07:00	4	0	1	9	40	60	28	8	1	0	0	0	0	0	151	31-40	100
08:00	3	0	3	9	23	30	18	5	2	0	1	0	0	0	94	31-40	53
09:00	0	0	1	3	20	23	9	6	2	0	0	0	0	0	64	31-40	43
10:00	1	2	1	6	19	25	13	4	0	0	0	0	0	0	71	31-40	44
11:00	2	0	1	2	12	22	22	6	4	0	0	0	0	0	71	36-45	44
12 PM	2	0	1	4	19	32	9	5	2	0	0	0	0	0	74	31-40	51
13:00	0	0	0	2	17	27	13	9	0	0	0	0	0	0	68	31-40	44
14:00	0	0	0	4	13	25	13	16	2	0	1	0	0	0	74	36-45	38
15:00	1	0	0	1	29	34	25	9	0	1	1	0	0	0	101	31-40	63
16:00	0	0	1	2	28	36	29	9	1	0	0	0	0	0	106	34-43	65
17:00	2	0	0	8	11	45	31	12	2	1	0	0	0	0	112	36-45	76
18:00	2	0	1	7	14	40	19	5	2	0	0	0	0	0	90	36-45	59
19:00	2	0	2	7	24	25	16	1	0	1	0	0	0	0	78	31-40	49
20:00	0	0	0	5	17	10	10	3	0	0	0	0	0	0	45	31-40	27
21:00	1	0	1	6	16	22	11	2	0	0	0	0	0	0	59	31-40	38
22:00	0	0	1	4	19	13	10	0	0	0	0	0	0	0	47	31-40	32
23:00	0	0	0	4	0	5	6	1	1	0	0	0	0	0	17	36-45	11
Total	21	2	14	93	352	531	309	112	24	6	3	0	0	0	1467		
Percent	1.4%	0.1%	1.0%	6.3%	24.0%	36.2%	21.1%	7.6%	1.6%	0.4%	0.2%	0.0%	0.0%	0.0%			
AM Peak	07:00	10:00	08:00	07:00	07:00	07:00	07:00	07:00	06:00	05:00	08:00				07:00		
Vol.	4	2	3	9	40	60	28	8	4	2	1				151		
PM Peak	12:00		19:00	17:00	15:00	17:00	17:00	14:00	12:00	15:00	14:00				17:00		
Vol.	2		2	8	29	45	31	16	2	1	1				112		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/26/15	0	0	0	0	5	4	6	1	0	0	0	0	0	0	16	36-45	10
01:00	0	0	0	1	3	1	1	1	0	0	0	0	0	0	7	31-40	4
02:00	0	0	0	0	4	5	6	1	0	0	0	0	0	0	16	36-45	11
03:00	0	0	1	1	3	6	2	0	0	0	0	0	0	0	13	31-40	9
04:00	0	0	0	3	1	2	2	0	0	0	2	0	0	0	10	36-45	4
05:00	0	0	1	0	1	5	1	1	0	0	0	0	0	0	9	34-43	6
06:00	0	0	2	3	13	8	9	4	0	0	0	0	0	0	39	31-40	21
07:00	2	0	1	6	22	36	16	6	2	0	0	0	0	0	91	31-40	58
08:00	2	0	2	2	17	27	22	4	2	0	0	0	0	0	78	36-45	49
09:00	2	0	1	4	23	34	19	9	0	0	0	0	0	0	92	31-40	57
10:00	2	0	1	5	28	39	15	11	0	0	0	0	0	0	101	31-40	67
11:00	2	0	0	9	26	37	19	11	2	1	0	0	0	0	107	31-40	63
12 PM	0	0	1	4	18	35	25	1	4	0	0	0	0	0	88	36-45	60
13:00	3	0	1	3	19	32	20	12	2	1	0	0	0	0	93	34-43	52
14:00	7	0	1	0	9	37	15	7	2	1	0	0	0	0	79	36-45	52
15:00	1	1	2	2	25	28	30	5	0	0	0	0	0	0	94	36-45	58
16:00	1	0	0	6	17	29	15	4	0	0	0	0	0	0	72	31-40	46
17:00	0	0	2	5	24	35	19	3	1	0	0	0	0	0	89	31-40	59
18:00	1	0	0	1	16	22	13	2	2	1	0	0	0	0	58	31-40	38
19:00	0	0	1	4	21	12	10	1	0	0	0	0	0	0	49	31-40	33
20:00	2	0	0	3	11	6	6	2	0	0	0	0	0	0	30	31-40	17
21:00	0	0	1	0	7	11	5	0	1	0	0	0	0	0	25	31-40	18
22:00	0	0	0	1	8	8	4	3	0	1	1	0	0	0	26	31-40	16
23:00	0	0	3	2	6	6	2	1	0	0	0	0	0	0	20	31-40	12
Total	25	1	21	65	327	465	282	90	18	5	3	0	0	0	1302		
Percent	1.9%	0.1%	1.6%	5.0%	25.1%	35.7%	21.7%	6.9%	1.4%	0.4%	0.2%	0.0%	0.0%	0.0%			
AM Peak	07:00		06:00	11:00	10:00	10:00	08:00	10:00	07:00	11:00	04:00				11:00		
Vol.	2		2	9	28	39	22	11	2	1	2				107		
PM Peak	14:00	15:00	23:00	16:00	15:00	14:00	15:00	13:00	12:00	13:00	22:00				15:00		
Vol.	7	1	3	6	25	37	30	12	4	1	1				94		

Traffic Databank

716 S Sixth Ave
Mount Vernon, NY 10550

Site Code:
Station ID:
CROTON DAM RD
OSSINING, NY
Latitude: 0' 0.0000 Undefined

NB

Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76		Pace	Number
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total	Speed	in Pace
09/27/15	1	0	0	4	2	4	3	0	0	0	0	0	0	0	14	34-43	7
01:00	0	0	0	2	4	1	0	1	0	0	0	0	0	0	8	26-35	6
02:00	0	1	0	1	2	3	1	0	0	0	0	0	0	0	8	31-40	5
03:00	0	0	0	1	3	2	2	1	0	0	0	0	0	0	9	31-40	5
04:00	0	0	0	0	2	2	2	2	0	0	0	0	0	0	8	30-39	4
05:00	0	1	0	1	3	2	0	0	0	0	0	0	0	0	7	29-38	5
06:00	0	0	0	2	6	8	2	5	0	0	0	0	0	0	23	31-40	14
07:00	0	0	1	3	5	12	13	5	1	0	0	0	0	0	40	36-45	25
08:00	3	0	1	3	3	13	14	8	0	0	0	1	0	0	46	36-45	27
09:00	1	0	1	5	19	33	17	8	1	0	0	0	0	0	85	31-40	52
10:00	0	0	0	6	20	23	19	7	3	0	0	0	0	0	78	31-40	43
11:00	2	0	0	3	19	31	15	6	2	0	0	0	0	0	78	31-40	50
12 PM	1	0	1	7	19	28	16	6	3	0	0	0	0	0	81	31-40	47
13:00	2	0	1	2	17	35	36	8	0	0	0	0	0	0	101	36-45	71
14:00	2	1	1	3	19	43	15	3	2	0	0	0	0	0	89	31-40	62
15:00	3	0	0	0	16	31	14	5	2	0	0	0	0	0	71	31-40	47
16:00	1	0	0	6	10	30	15	6	0	0	1	0	0	0	69	36-45	45
17:00	1	0	0	2	9	23	21	5	2	0	0	0	0	0	63	36-45	44
18:00	0	0	0	2	13	18	14	2	0	1	0	0	0	0	50	34-43	32
19:00	0	0	0	1	15	24	3	0	0	0	0	0	0	0	43	31-40	39
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	17	3	6	54	206	366	222	78	16	1	1	1	0	0	971		
Percent	1.8%	0.3%	0.6%	5.6%	21.2%	37.7%	22.9%	8.0%	1.6%	0.1%	0.1%	0.1%	0.0%	0.0%			
AM Peak	08:00	02:00	07:00	10:00	10:00	09:00	10:00	08:00	10:00			08:00			09:00		
Vol.	3	1	1	6	20	33	19	8	3			1			85		
PM Peak	15:00	14:00	12:00	12:00	12:00	14:00	13:00	13:00	12:00	18:00	16:00				13:00		
Vol.	3	1	1	7	19	43	36	8	3	1	1				101		
Total	243	16	123	748	2862	4314	2738	942	194	44	14	3	2	0	12243		
Percent	2.0%	0.1%	1.0%	6.1%	23.4%	35.2%	22.4%	7.7%	1.6%	0.4%	0.1%	0.0%	0.0%	0.0%			

15th Percentile : 31 MPH
50th Percentile : 37 MPH
85th Percentile : 43 MPH
95th Percentile : 48 MPH

Stats
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 7176
Percent in Pace : 58.6%
Number of Vehicles > 35 MPH : 8251
Percent of Vehicles > 35 MPH : 67.4%
Mean Speed(Average) : 38 MPH

APPENDIX F

NYSDOT GUIDANCE MEMO

MEMORANDUM

TO: Regional Traffic Engineers
Regional Design Engineers
Regional Planning & Program Managers

FROM: Don Sweezy, Director - Traffic Operations Bureau
Mike Rossi, Director – Highway Data Services Bureau

SUBJECT: Traffic Data Collection Guidance during COVID-19 Pandemic

DATE: August 11, 2020

During the COVID-19 pandemic and as a result of the “New York State on PAUSE” plan, traffic volumes on many of our State’s roadways saw a dramatic decline in March and April. While traffic volumes have been on a steady incline back up, they are still not where they would be during “normal” conditions. And since traffic data is an integral component to our project planning, development, and delivery, the acquisition of traffic data is still necessary during this time to progress our capital program. We also have permit applicants and local agencies that look to NYSDOT for guidance when administering their own projects.

To that end, this memo provides guidance on the acquisition of traffic count data for planning and design. The context of the intersection or corridor will be very important in estimating the affect that the pandemic may have on traffic volumes and this guidance does not supersede the use of judgement in that regard. Geographic area (urban vs. rural), the Region’s current phase of reopening, roadway functional class, and surrounding land uses all will influence the current traffic conditions and patterns. Additionally, the Institute of Transportation Engineers (ITE) recently released an informational report about conducting counts and studies during a pandemic. The document offers guidance on the types of questions, issues, and decisions that must be made regarding traffic counting while we are experiencing COVID-related traffic impacts¹.

Before beginning a traffic study, the Regional Traffic Engineer (RTE) and Regional Planning and Program Manager (RPPM), as well as local municipalities, should be consulted on the availability of traffic data from recent projects. Traffic volume counts available from the Highway Data Services Bureau should also be compiled to provide historic traffic trends and a comparable reference to “normal” traffic conditions.

Since the context of each site will be unique and the data available will also vary, each Region should use their judgment when determining the best procedures for traffic volume development. The following is a suggested method when traffic volume development is needed on a current project:

- 1) Determine if traffic counts have been conducted at the location within the past five years (on either a State, local, or development project). If so, they may be used as a base and grown to the existing year using a growth rate confirmed from historic traffic counts and the Region and/or MPO.

- 2) If no traffic counts have been collected at the location within the past five years, new counts should be obtained as follows:
- a. Intersection Turning Movement Count (TMC)
 - i. Conduct a TMC during desired peak periods.
 - ii. Conduct an hourly roadway volume count on at least one leg of the intersection concurrently with the TMC, following the Traffic Monitoring Standards for Short Count Data Collection. Note that the roadway volume count should be collected where there is a previous hourly roadway volume count available to compare.
 - iii. If there is no previous hourly roadway volume count on a leg of the intersection, collect an hourly roadway count at a nearby location where a previous hourly roadway volume count is available.
 - iv. Use the Average Weekday Hourly traffic volumes from the previous and new roadway volume count to create an adjustment factor for each hour to then apply to the TMC.

*Note: This methodology assumes the turning movement proportions are the same as pre-NYSPAUSE. Judgement will need to be made based on the site specifics and traffic patterns.

- b. Roadway Volume Count
 - i. Collect a new Roadway Volume Count at desired location
 - ii. Collect at least one new Roadway Volume Count at a nearby location with previous data available.
 - 1. Preferably an adjacent segment of the same roadway
 - 2. If no adjacent, then an intersecting road nearby
 - 3. If no adjacent or intersecting road, then a similar road nearby
 - iii. Use the Average Weekday Hourly traffic volumes from the previous and the newly collected count to create an adjustment factor for each hour.

Again, this is a suggested procedure and we recognize that there will be other methods, including the availability and use of “big data”. For any counts or studies undergone at this time, detailed documentation of the conditions, methodologies, and assumptions will be key.

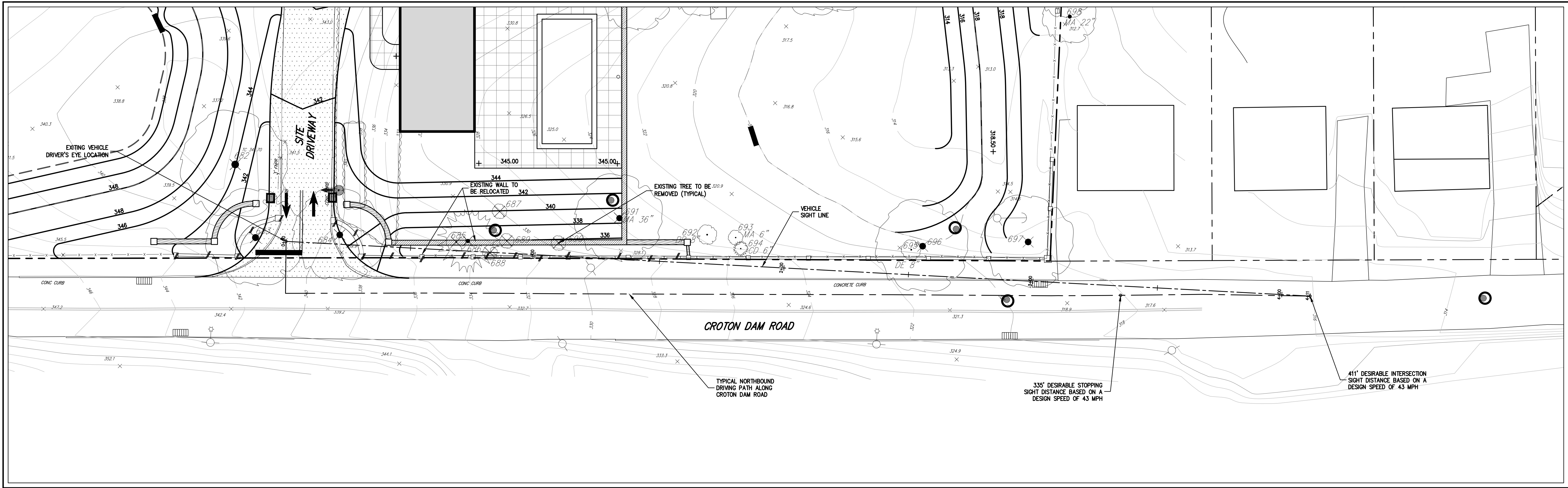
Please contact Christina Doughney in the Traffic Operations Bureau (518-457-5289) or Kurt Matias in Highway Data Services (518-457-2815) with any questions or clarifications.

cc: R. Limoges, Office of Traffic Safety & Mobility
R. Wilder, Office of Design
R. Sack, Office of Technical Services
C. Doughney, OTSM – Traffic Operations Bureau
H. McCulloch, Office of Design – Design Bureau
M. Rossi, Highway Data Services
K. Matias, Highway Data Services
A. Haynes, Highway Data Services

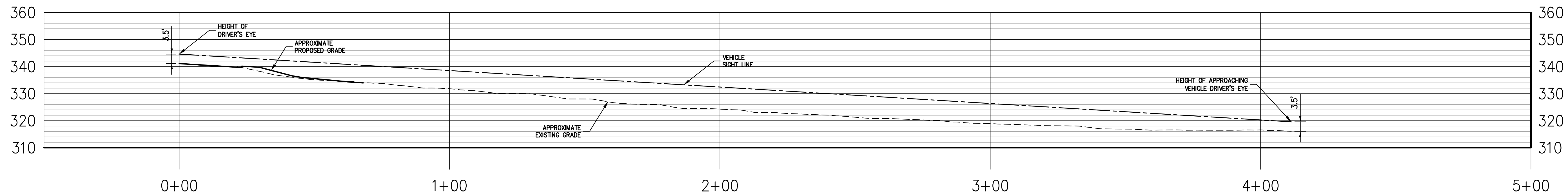
¹ “What a Transportation Professional Needs to Know about Counts and Studies during the Pandemic”, Institute of Transportation Engineers, July 2020.

APPENDIX G

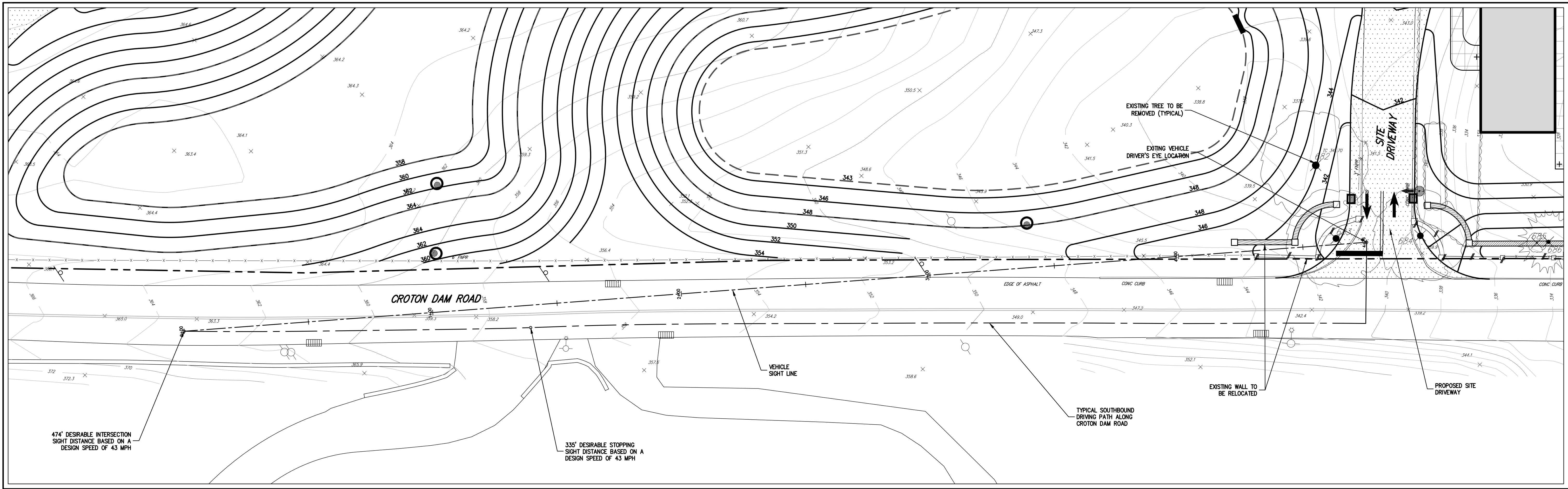
SIGHT DISTANCE PLAN



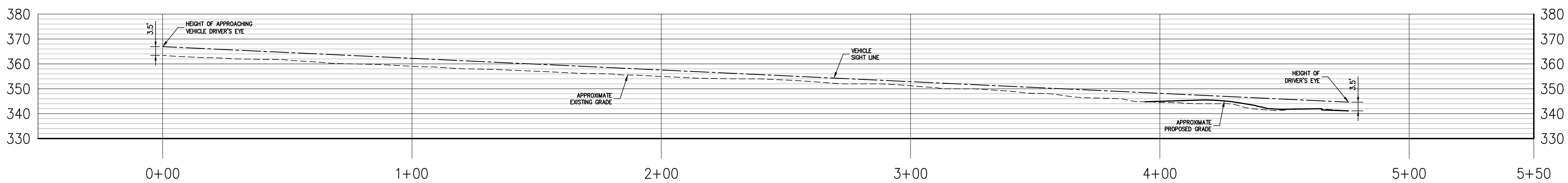
RIGHT TURN FROM STOP (LOOKING LEFT) PLAN VIEW
SCALE: 1" = 20'



RIGHT TURN FROM STOP (LOOKING LEFT) PLAN VIEW PROFILE
SCALE: 1" = 20' HORIZ. & 1" = 20' VERT.
411' DESIRABLE INTERSECTION SIGHT DISTANCE BASED ON A DESIGN SPEED OF 43 MPH



LEFT TURN FROM STOP (LOOKING RIGHT) PLAN VIEW
SCALE: 1" = 20'

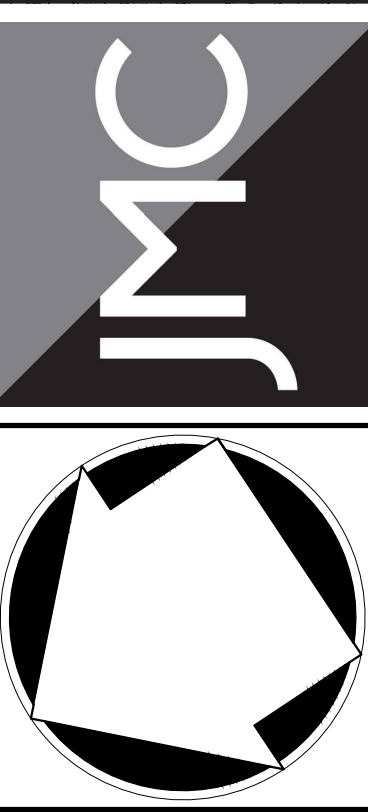


LEFT TURN FROM STOP (LOOKING RIGHT) PLAN VIEW PROFILE
SCALE: 1" = 20' HORIZ. & 1" = 20' VERT.
474' DESIRABLE INTERSECTION SIGHT DISTANCE BASED ON A DESIGN SPEED OF 43 MPH

No.	Revised	Date	By
1.	REVISED PER UPDATED DEVELOPMENT	07/30/2021	MJP

APPLICANT/OWNER	ARCHITECT
GLENCO 9 RIDGE ROAD BRONXVILLE, NY 10708	MINNO WASKO 80 LAMBERT LANE LAMBERTVILLE, NEW JERSEY 08550

JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC JMC Site Development Consultants, LLC John Meyer Consulting, Inc. 123 BEVERLY ROAD • ARBON, NY 10584 PHONE 914.233.5525 • FAX 914.272.2102 www.jmcpllc.com



RIVER KNOLL 40 TOWN OF COSSING, NEW YORK
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ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

Drawn: JE	Approved: AG
Scale: AS SHOWN	
Date: 05/09/2017	
Project No: 15064	
15064-001-001	15064-001-001
15064-001-001	15064-001-001

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