



Area Traffic Study

Red Schoolhouse Road
Village of Chestnut Ridge, Rockland County, New York

December 29, 2020

Prepared For
Village of Chestnut Ridge
277 Old Nyack Turnpike
Chestnut Ridge, NY 10977

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LIST OF DEFINITIONS/ABBREVIATIONS

AADT AVERAGE ANNUAL DAILY TRAFFIC

AASHTOAMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS

ATR AUTOMATIC TRAFFIC RECORDER

GSP GARDEN STATE PARKWAY

ITEINSTITUTE OF TRANSPORTATION ENGINEERS

MUTCDMANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

NYS DOT NEW YORK STATE DEPARTMENT OF TRANSPORTATION

NYSTA NEW YORK STATE THRUWAY AUTHORITY

RCHD ROCKLAND COUNTY HIGHWAY DEPARTMENT

R.O.W. RIGHT-OF-WAY

STIP STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM

EXECUTIVE SUMMARY

RED SCHOOLHOUSE ROAD CORRIDOR TRAFFIC STUDY

A detailed Traffic Impact Study has been prepared for the Red Schoolhouse Road Corridor between the New Jersey State Line and Williams Road. The purpose of this study was to identify existing conditions, prepare estimates of traffic from planned or proposed developments in the area, and to identify future operating conditions based on future total traffic volumes. Note that the study area is generally identified on Figure E-1. Based on these traffic projections and results of the analysis, certain recommended improvements were identified for the corridor. The details of the methodology are contained in the overall study dated December 8, 2020.

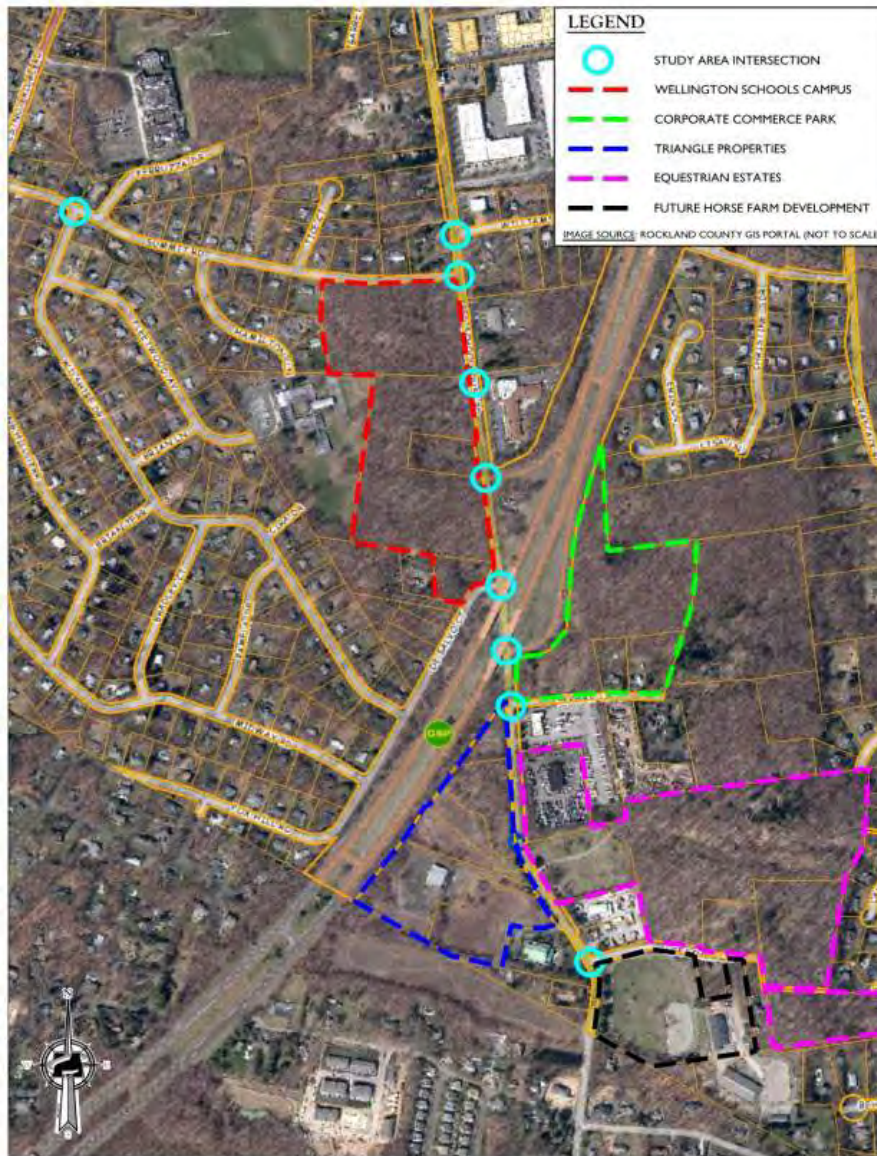


FIGURE E-1

The types of improvements that have been identified include traffic signal upgrades and/or new traffic signal installations, intersection widenings, and other related improvements to accommodate both vehicular traffic and pedestrians. Due to the length of the corridor, complexities relative to geometrics in the vicinity of the GSP and potential environmental considerations, the study outlines various intersection improvements that could be completed on a phased basis. Note that the improvements have only been conceptually identified and that construction level design drawings would be required to be able to implement any of these improvements. The types of improvements, which are shown on the Summary Figures identified herein, include the following:

- Construction of a separate southbound left turn lane on Red Schoolhouse Road at Williams Road.
- Construction of separate northbound left turn lane on Red Schoolhouse Road at Summit Road, installation of a new traffic signal and installation of pedestrian sidewalks with signalized pedestrian crossings.
- At the proposed Wellington Schools access connection with Red Schoolhouse Road, construct separate northbound and southbound left turn lanes and construct a sidewalk along the Wellington Schools Site frontage between Summit Road and DeSalvo Court.
- At the GSP SB Exit Ramp upgrade the existing traffic signal with new actuation and traffic signal timings. Further improvements should include the widening of the GSP southbound off-ramp to provide a double dual left turn along with a two-lane received on Red Schoolhouse Road Southbound. This widening will also require the replacement of the existing traffic signal.
- Modifying the intersection of DeSalvo Court and Red Schoolhouse Road for right turn entry/right turn exit-only.
- Construction of a northbound channelized right turn lane on Red Schoolhouse Road and associated ramp widening at GSP On-Ramp to provide a free right turn movement onto the ramp.
- Possible construction of a “jug handle” and/or roundabout to allow U-turn maneuvers to access the GSP northbound on-ramp in lieu of a separate left turn lane due to the complications created by the GSP overpass bridge piers. This could also help alleviate left turn conflicts for the Corporate Commerce Park Development.
- Construction of intersection improvements including construction of auxiliary left and right turn lanes on Red Schoolhouse Road and installation of a new traffic signal to serve the Triangle Properties Development and Equestrian Estate Development.
- Possible construction of a separate southbound left turn lane on Red Schoolhouse Road at Loescher Lane as part of the Future Horse Farm Development.

It should be noted that the above improvements if completed as one project would provide a full widening of Red Schoolhouse Road from Williams Road to Loescher Lane providing a minimum of a three (3) lane cross section throughout the corridor. Other related or alternative improvements are also identified below. These improvements would either compliment or be added onto those identified above.

- Complete sight distance and signing and striping improvements at the intersection of Wilshire Drive and Summit Road.
- Possible replacement of approximately 750 LF of existing asphalt sidewalk on the south side of Summit Road west of Red Schoolhouse Road
- Further future Red Schoolhouse Road lane widening under the GSP Overpass on the west side of the center bridge piers, including dedicated pedestrian and bicycle accommodations. Figure E-2 below identifies past consideration of this possibility based on NYSTA record plan information for the GSP Overpass at Red Schoolhouse Road. It should be noted that there may be safety concerns with this configuration due to the location of the GSP Overpass center bridge piers.

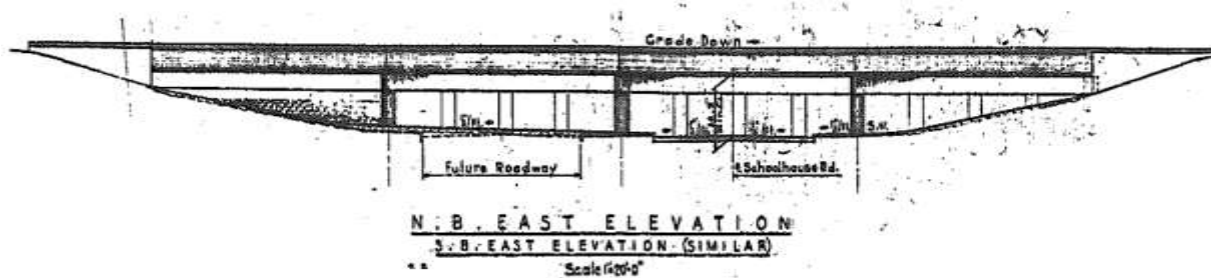


FIGURE E-2

The majority of the above improvements could be constructed independently of each other, which is important due to the potential cost and other constraints. The budget cost for the types of improvements are identified in Table C-1. Note that in addition to these individual intersection improvements, the provision of sidewalks as part of each component and also the allocation of R.O.W. dedication to accommodate future improvements, including the longer-term improvement of a comprehensive widening of Red Schoolhouse Road from Williams Road through Loescher Lane, would be made possible with the proper land dedications and/or easements for each of the property owners of proposed/planned developments along the corridor. Note that there may also be other land acquisitions necessary for those parcels along the corridor that are not part of the currently planned developments.



**TABLE E-1
 SUMMARY OF RED SCHOOLHOUSE ROAD IMPROVEMENTS AND ANTICIPATED BUDGET COSTS**

LOCATION	IMPROVEMENT DESCRIPTION ⁽¹⁾	BUDGET COST ⁽²⁾
RED SCHOOLHOUSE ROAD/WILLIAMS ROAD (SHEET NO. CP-1)	CONSTRUCTION OF SEPARATE SOUTHBOUND LEFT TURN LANE ON RED SCHOOLHOUSE ROAD	\$200,000.00
RED SCHOOLHOUSE ROAD/SUMMIT ROAD (SHEET NO. CP-1)	CONSTRUCTION OF SEPARATE NORTHBOUND LEFT TURN LANE ON RED SCHOOLHOUSE ROAD	\$350,000.00
	TRAFFIC SIGNAL INSTALLATION	\$200,000.00
	INSTALL SIDEWALK WITH ADA RAMPS	\$100,000.00
RED SCHOOLHOUSE ROAD/WELLINGTON SCHOOLS CAMPUS/PROMENADE AT CHESTNUT RIDGE (SHEET NO. CP-2)	CONSTRUCTION OF SEPARATE LEFT TURN LANES NORTHBOUND AND SOUTHBOUND ON RED SCHOOLHOUSE ROAD	\$500,000.00
	CONSTRUCT SIDEWALK ON WEST SIDE OF RED SCHOOLHOUSE ROAD FROM SUMMIT ROAD TO DESALVO COURT	\$220,000.00
RED SCHOOLHOUSE ROAD/GSP SB OFF RAMP ⁽³⁾ (SHEET NO. CP-3)	MODIFY TRAFFIC SIGNAL ACTUATION/TIMINGS	\$60,000.00
	WIDEN RAMP TO PROVIDE DUAL LEFT TURN LANE ON PARKWAY EXIT INCLUDING TWO LANE RECEIVER ON SOUTHBOUND RED SCHOOLHOUSE ROAD	\$550,000.00
	REPLACE TRAFFIC SIGNAL	\$200,000.00
RED SCHOOLHOUSE ROAD/DESALVO COURT ⁽³⁾ (SHEET NO. CP-3)	CREATE A RIGHT-TURN ENTRY/RIGHT-TURN EXIT TO ELIMINATE LEFT TURN CONFLICTS	\$100,000.00
RED SCHOOLHOUSE ROAD/GSP NB ON RAMP ⁽³⁾ (SHEET NO. CP-3)	WIDEN RED SCHOOLHOUSE ROAD TO PROVIDE SEPARATE CHANNELIZED NORTHBOUND RIGHT TURN LANE ON RED SCHOOLHOUSE ROAD WITH ADDED RECEIVING LANE ON GSP ON-RAMP TO PROVIDE FEE RIGHT TURN MOVEMENT	\$450,000.00
RED SCHOOLHOUSE ROAD AT SEPHAR LANE/CORPORATE COMMERCE PARK ACCESS ⁽³⁾ (SHEET NO. CP-4)	CONSTRUCTION OF "JUG HANDLE" WITH TRAFFIC SIGNAL TO ACCOMMODATE U-TURNS TO GSP AND TO RED SCHOOLHOUSE ROAD NORTHBOUND	\$950,000.00
	INSTALL TRAFFIC SIGNAL	\$200,000.00



LOCATION	IMPROVEMENT DESCRIPTION ⁽¹⁾	BUDGET COST ⁽²⁾
RED SCHOOLHOUSE ROAD AT TRIANGLE PROPERTIES/ EQUESTRIAN ESTATES ACCESS (SHEET NO. CP-5)	CONSTRUCTION OF 4-WAY INTERSECTION WITH WIDENING OF SEPARATE LEFT TURN LANES ON RED SCHOOL HOUSE ROAD.	\$600,000.00
	INSTALL NEW TRAFFIC SIGNAL	\$200,000.00
RED SCHOOLHOUSE ROAD AT LOESCHER LANE/FUTURE HORSE FARM DEVELOPMENT ACCESS (SHEET NO. CP-6)	POSSIBLE LEFT TURN LANE WIDENING	\$450,000.00
SUMMIT ROAD/WILSHIRE DRIVE	STRIPING, SIGNING, AND SIGHT DISTANCE IMPROVEMENTS	\$25,000.00
TOTAL		\$5,355,000.00
GSP INTERCHANGE AND UNDERPASS AREA ⁽³⁾ (SHEET NO. CP-7)	WIDEN RED SCHOOLHOUSE ROAD ON WEST SIDE OF GSP OVERPASS SUPPORT COLUMNS TO ACCOMMODATE ADDED LANE AND DEDICATED PEDESTRIAN/BICYCLE FACILITIES.	\$1,250,000.00
TOTAL		\$6,605,000.00
ALTERNATE IMPROVEMENTS		
SUMMIT ROAD REPLACEMENT SIDEWALK	REPLACEMENT OF APPROXIMATELY 750 LF OF EXISTING ASPHALT SIDEWALK ON SOUTH SIDE OF SUMMIT ROAD WITH NEW FULLY ADA COMPLIANT CONCRETE SIDEWALK	\$60,000.00
RED SCHOOLHOUSE ROAD AT SEPHAR LANE/CORPORATE COMMERCE PARK ACCESS ^(3, 5) (SHEET NO. CP-4A)	ALTERNATE CONSTRUCTION OF ROUNDABOUT TO SERVE TRIANGLE PROPERTIES/CORPORATE COMMERCE PARK	\$900,000.00
RED SCHOOLHOUSE ROAD AT TRIANGLE PROPERTIES ACCESS (SHEET NO. CP-4B) ⁽⁵⁾	ALTERNATE CONSTRUCTION OF ROUNDABOUT TO SERVE TRIANGLE PROPERTIES/EQUESTRIAN ESTATES ACCESS	\$900,000.00
NOTES:		
<ol style="list-style-type: none"> 1. SEE CONCEPTUAL IMPROVEMENT SKETCHES AS IDENTIFIED ABOVE AND CONTAINED IN APPENDIX D. 2. REPRESENTS "BALL PARK" BUDGETARY ESTIMATES BASED ON COST OF OTHER RECENTLY COMPLETED IMPROVEMENTS OF SIMILAR NATURE AS WELL AS AVAILABLE NYSDOT UNIT PRICE INFORMATION. ACTUAL COSTS WILL BE DEPENDENT ON LOCATION OF SPECIFIC FACTORS INCLUDING EXISTING UTILITIES, GRADING, DRAINAGE, AND ANY ENVIRONMENTAL CONSTRAINTS. 3. IMPROVEMENTS IN AND AROUND THE GSP INTERCHANGE RAMPS WILL REQUIRE REVIEW AND APPROVAL AS WELL AS PERMITTING FROM THE NYSTA. 4. ALL PROPOSED IMPROVEMENTS INCLUDING PROPOSED PROJECT ACCESS CONNECTIONS WILL REQUIRE REVIEW AND APPROVAL OF THE RCHD. 5. ALTERNATE ROUNDABOUT IMPROVEMENTS AT SEPHAR LANE AND/OR TRIANGLE PROPERTIES ACCESS WOULD REPLACE "JUG HANDLE" ALTERNATIVE AND REQUIRED TRAFFIC SIGNAL INSTALLATION. 		

I. INTRODUCTION

A. PROJECT BACKGROUND

This report has been prepared to evaluate existing traffic conditions and to identify possible recommended improvements to accommodate future traffic volumes associated with several developments that are proposed along or in proximity to the Red Schoolhouse Road corridor. We have reviewed this in association with the Village's Red Schoolhouse Road Corridor Study and Comprehensive Plan.

A future Design Year of 2025 for analysis purposes has been utilized in completing the traffic analysis in order to evaluate future traffic conditions associated with the proposed future developments.

B. SCOPE OF STUDY

This study has been prepared to identify current and future traffic operating conditions along the Red Schoolhouse Road Corridor and to assess the potential traffic impacts and safety concerns in response to the several proposed developments along the Red Schoolhouse Road Corridor. Specifically, this report addresses the following goals as identified by the Village.

1. Identify any existing traffic capacity and movement deficiencies;
2. Identify any existing deficiencies in roadway geometry, sight distance, signing, pavement striping, or signal timing within the study area.
3. Identify any existing unsafe conditions to vehicular traffic, pedestrians or cyclists in the area;
4. Identify and suggest alternatives for mitigating any identified existing deficiencies;
5. Identify the impacts of proposed developments on the operation of area roadways upon full buildout;
6. Identify any unsafe conditions likely to occur based on proposed projects;
7. Apportion impacts between the identified proposed projects as well as to projected background traffic growth conditions;
8. Identify and suggest alternatives for mitigating impacts and unsafe conditions caused by proposed projects and develop approximate cost estimates for design and construction/implementation of improvements;
9. Suggest the most reasonable phasing and responsibilities for identified necessary improvements;

10. Share preliminary draft of the study with RCHD and NYSTA at critical points, and coordinate feedback and adjust recommendations.

In conducting this study, all available traffic count data for the study area intersections were obtained from previous reports prepared by various traffic consultants that have completed other studies in the area. These data were supplemented with new traffic counts collected by representatives of Maser Consulting. These data were also compared to historical traffic volume data obtained from the NYSDOT and RCHD to adjust and account for the effects of the COVID-19 pandemic on traffic in the area. Together these data were utilized to establish the Existing Traffic Volumes representing existing traffic conditions in the vicinity of the site at the following study area intersections:

- Red Schoolhouse Road & Williams Road.
- Red Schoolhouse Road & Summit Road.
- Red Schoolhouse Road & DeSalvo Court.
- Red Schoolhouse Road & GSP SB off Ramp.
- Red Schoolhouse Road & GSP NB on Ramp.
- Red Schoolhouse Road & Sephar Lane.
- Red Schoolhouse Road & Loescher Lane.
- Summit Road & Wilshire Drive

The Existing Traffic Volumes were then projected to the 2025 Design Year to take into account background traffic growth to obtain the Year 2025 No-Build Traffic Volumes.

Estimates were then made of the potential traffic that the significant proposed/pending area developments would generate during each of the peak hours (see Section V.C for further discussion). The resulting site generated traffic volumes for these developments were then added to the roadway system and combined with the Year 2025 No-Build Traffic Volumes resulting in the Year 2025 Build Traffic Volumes.

The Existing, No-Build and Build Traffic Volumes were then compared to roadway capacities based on the procedures from the Highway Capacity Manual to determine existing and future Levels of Service and operating conditions based on the Synchro analysis procedures. Recommendations for improvements were made where necessary to serve the existing and/or future traffic volumes. Note that as described in more detail in Section IV.E, both interim and longer-term improvements were identified.

II. DOCUMENT AND DATA REVIEW

A. REVIEW OF EXISTING CONDITIONS

(Figures No. 1 & 1A; Tables No. 1; APPENDIX A, APPENDIX B, APPENDIX C)

The overall area of study, which is identified on EXHIBIT II-1 below, consists of the Red Schoolhouse Road corridor between the New Jersey State Line and Williams Road. This section includes the GSP Interchange, Summit Road, Williams Road, and DeSalvo Court as well as other area roadways that intersect Red Schoolhouse Road north and south of the GSP interchange area. The study area is further identified in Figures No. 1 and 1A contained in APPENDIX B of this study.

Field visits were conducted by representatives of Maser Consulting on Thursday September 3, Wednesday September 16, Thursday October 1, and Saturday October 3, 2020 during the Weekday AM, Weekday PM, and Saturday Peak periods to observe the roadway geometry and traffic conditions throughout the study area. Existing pedestrian and bicycle facilities, pavement conditions, roadway dimensions, and conditions of curbing and shoulders were also observed and are documented as summarized below. TABLE II-1 below summarizes some of the key existing roadway conditions information. Table No. 1, contained in APPENDIX C, provides a further detailed summary of this and other information for each of the area roadways.

Automatic Traffic Recorder (ATR) and radar speed observations were also collected along Red Schoolhouse Road, Summit Road and Williams Road, as necessary to identify hourly and daily traffic variations, vehicle classifications, and to identify average and 85th percentile travel speeds along the roadways. TABLE II-1 also summarizes the speed data that was compiled for the area roadways.



EXHIBIT II-1 – PROJECT STUDY AREA

TABLE II-1 – EXISTING ROADWAY CHARACTERISTICS

ROADWAY	RED SCHOOLHOUSE ROAD		SUMMIT ROAD		WILLIAMS ROAD		DESALVO COURT	
START	NJ STATE LINE		NYS ROUTE 45		RED SCHOOLHOUSE ROAD		FOXHILL ROAD	
END	NYS ROUTE 45		RED SCHOOLHOUSE ROAD		PASCACK ROAD		RED SCHOOLHOUSE ROAD	
JURISDICTION	ROCKLAND COUNTY HIGHWAY DEPT.		VILLAGE OF CHESTNUT RIDGE		VILLAGE OF CHESTNUT RIDGE		VILLAGE OF CHESTNUT RIDGE	
LENGTH	0.94 MILES		0.48 MILES		0.20 MILES		0.25 MILES	
CLASSIFICATION	URBAN MINOR ARTERIAL		URBAN LOCAL ROAD		URBAN LOCAL ROAD		URBAN LOCAL ROAD	
NO. OF LANES	2		2		2		2	
PAVEMENT TYPE	ASPHALT		ASPHALT		ASPHALT		ASPHALT	
PAVEMENT WIDTH	VARIES 22-30 FT.		22 FT.		VARIES 20-24 FT.		30 FT.	
PAVEMENT CONDITION	FAIR/POOR		GOOD/FAIR		GOOD/FAIR		GOOD/FAIR	
SHOULDER WIDTH	N/A		N/A		N/A		N/A	
AADT	8,206 VPD		2,970 VPD		3,325 VPD		-	
PERCENT HEAVY VEHICLES	2.3%		1.0%		3.1%		-	
POSTED SPEED LIMIT (MPH)	30 MPH		30 MPH		30 MPH		30 MPH	
AVERAGE SPEED (MPH)	NB	SB	EB	WB	EB	WB	EB	WB
	35 MPH	36 MPH	31 MPH	29 MPH	29 MPH	28 MPH	-	-
85 TH PERCENTILE SPEED (MPH)	NB	SB	EB	WB	EB	WB	EB	WB
	40 MPH	42 MPH	35 MPH	33 MPH	33 MPH	33 MPH	-	-
SIDEWALKS	WEST SIDE BETWEEN DESALVO COURT & GSP NORTHBOUND ON-RAMP ONLY		CONCRETE/ASPHALT SIDEWALK ALONG SOUTH SIDE OF ROADWAY FOR ENTIRE LENGTH		NONE		NONE	
BICYCLE FACILITIES	NONE		NONE		NONE		NONE	
NOTES	-		5-TON WEIGHT LIMIT RESTRICTION		-		-	

The following provides a description of each of the study area roadways based on our observations of the existing conditions.

1. Red Schoolhouse Road (C.R. 41)

Red Schoolhouse Road is a major regional arterial roadway under the jurisdiction of Rockland County, which traverses in a generally north/south direction. In the immediate vicinity of the study area, it is a two-lane roadway with a double yellow centerline and narrow paved shoulders of varying width. The pavement is in generally fair to poor condition. The total existing roadway width within the study area varies between 24 and 35 feet. Curbing is in good to fair condition and is present on the east side of the roadway for the length of the corridor and on the west side of the roadway in the vicinity of the GSP overpass. A limited stretch of sidewalk is provided in the vicinity of the GSP overpass between DeSalvo Court and the GSP northbound entrance ramp. Additional sidewalks are also provided along the west side of the roadway north of the study area beginning approximately 400 feet south of Garret Court and continuing up to NYS Route 45. No marked accommodations for bicycles are present on the roadway. Within the study area, the roadway has an existing signalized intersection with the GSP southbound exit ramp. The posted speed limit is 30 MPH. Red Schoolhouse Road northbound has an AADT of 8,206 vehicles per day.

2. Summit Road

Summit Road is a two-lane Village roadway with a double yellow centerline that generally traverses in an east/west direction between a signalized intersection with NYS Route 45 and a “Stop” sign-controlled intersection with Red Schoolhouse Road. Summit Road has a posted 5-ton weight limit. The roadway generally serves residential land uses and has a posted speed limit of 30 MPH. Summit Road also provides access to the Chestnut Ridge Middle School via Ferruzza Drive and the Fleetwood Elementary School via a combination of Wilshire Drive and Fleetwood Avenue. A concrete sidewalk is present on the south side of the roadway; however, approximately 800 feet west of the Red Schoolhouse Road intersection, the sidewalk becomes asphalt and significantly narrows in width. Note that under current conditions, left turns from Red Schoolhouse Road onto Summit Road are currently prohibited between the hours of 7:00 AM – 10:00 AM, Monday through Friday, except for buses. The pavement is generally in good condition and the roadway has an AADT of 2,970 vehicles per day.

3. Williams Road

Williams Road is a two-lane Village roadway with a double yellow centerline which has “Stop” sign-controlled intersections with Red Schoolhouse Road at its western terminus and S. Pascack Road at the east end. No shoulders, bike facilities nor sidewalks are present. The roadway serves primarily residential land uses and has a posted speed limit of 30 MPH. The pavement condition on Williams Road is in good to fair condition and the roadway has an AADT of 3,325 vehicles per day.

4. Garden State Parkway Southbound Exit Ramp

The GSP Southbound Exit Ramp consists of one left turn and one right turn lane and is signal controlled at its intersection with Red Schoolhouse Road. The ramp provides approximately 270 feet of storage length for each of the turn lanes and another approximately 315 feet of travel lane as it tapers from a single lane to two lanes from the gore area of the GSP mainline. Shoulders are present on both sides of the ramp. The pavement condition on the GSP southbound exit ramps is in generally good condition. The GSP mainline has an estimated 2019 AADT of 60,987 vehicles in this vicinity. It should be noted that this interchange is the last Exit in New York and since trucks are not permitted on the GSP in New Jersey, all trucks must exit at this location.

5. DeSalvo Court

DeSalvo Court is a two-lane Village roadway with a double yellow centerline. The roadway begins at a “Stop” sign-controlled intersection with Red Schoolhouse Road and runs parallel to the GSP and intersects with Wilshire Drive and Midway Road before transitioning to Fox Hill Road at the New Jersey State Line. Some sight distance limitations exist at the intersection with Red Schoolhouse Road and are further described in Section IV.F. There are no separate sidewalks nor bicycle facilities on this roadway. The roadway generally serves residential land uses and has a posted speed limit of 30 MPH. The pavement on DeSalvo Court is in generally good to fair condition.

6. Garden State Parkway Northbound Entrance Ramp

The GSP Northbound Entrance Ramp consists of one wide lane with paved shoulders on either side at its intersection with Red Schoolhouse Road. The roadway pavement is in generally good condition.

7. Sephar Lane
Sephar Lane is an existing private, gravel/dirt driveway that intersects Red Schoolhouse Road at a “Stop” sign-controlled intersection and travels east. The roadway is currently approximately 16 feet wide. Note that immediately south of Sephar Lane is a parcel that contains the Chestnut Ridge Transportation facility. This facility has its own access connection to Red Schoolhouse Road, which has significant school bus movements during peak periods.

8. Loescher Lane
Loescher Lane is a private, gravel/dirt driveway that intersects Red Schoolhouse Road at an uncontrolled intersection and travels east. The roadway is approximately 16 feet wide. This roadway would provide access to the future Horse Farm Development.

9. Wilshire Drive
Wilshire Drive is a two-lane Village roadway which intersects Summit Road at a “Stop” sign-controlled intersection and travels southwest. The roadway has pavement in good to fair condition. The roadway has no sidewalks nor bicycle facilities at the intersection with Summit Road. Marked crosswalks are present on Wilshire Drive at the intersection with Summit Road. The roadway serves primarily residential uses and has a posted speed limit of 30 MPH.

B. DOCUMENT REVIEW
(APPENDIX A)

Maser Consulting has reviewed the pertinent documents related to the Preliminary Red Schoolhouse Road Corridor Study dated August 2018 prepared by Nelson, Pope, Voorhis (NPV) including the Chestnut Ridge Comprehensive Plan and Zoning Local Law as well as NYSDOT, NYSTA, and RCHD record plan information (including R.O.W. information), as well as several other traffic studies and plans that were available for the proposed area projects. These are summarized below:

RED SCHOOLHOUSE ROAD CORRIDOR STUDY (2018)

The Red Schoolhouse Road Corridor Study identified access to the GSP as a strength of the corridor. However, access is not provided for northbound exiting and southbound entering traffic on the GSP. Furthermore, significant vehicle delays and the possibility of increasing traffic in the corridor were identified by members of the community as potential threats to the corridor.

Long vehicle queues were identified for vehicles on the GSP exit ramp and waiting on Red Schoolhouse Road to turn left onto the GSP entrance ramp. Long wait times for turning movements were also identified at Williams Road and Summit Road. The possible need for signalization at these intersections was noted.

Red Schoolhouse Road was characterized as generally unfriendly to pedestrians and non-motorized transport; the corridor lacks sidewalks and dedicated bicycle lanes throughout much of its length. The Corridor Study recommended the construction of sidewalks on the east side of Red Schoolhouse Road for the entirety of the corridor and for most of the west side of the corridor. Bicycle lanes were recommended as a part of any future road widening projects.

Leveraging private development for transportation improvements was identified as a strategy for the Village to mitigate existing and potential future traffic issues within the corridor. The study also notes that the green and rural character of the study area is important to members of the community. The public has expressed concern that some recent developments have not been integrated well within the region.

GARDEN STATE PARKWAY RECORD DRAWINGS (1956)

The original construction documents for the GSP overpass at Red Schoolhouse Road, which have been obtained by our office from the NYSTA/NYS DOT, indicate that a future roadway and sidewalk were considered to be constructed west of and parallel to Red Schoolhouse Road in the vicinity of the overpass as shown in EXHIBIT II-2. (Additional detailed information from these record plans is provided in APPENDIX A). The future roadway was conceptually shown similar in width to the existing Red Schoolhouse Road and is routed between the overpass support columns in the same manner as the existing Red Schoolhouse Road.

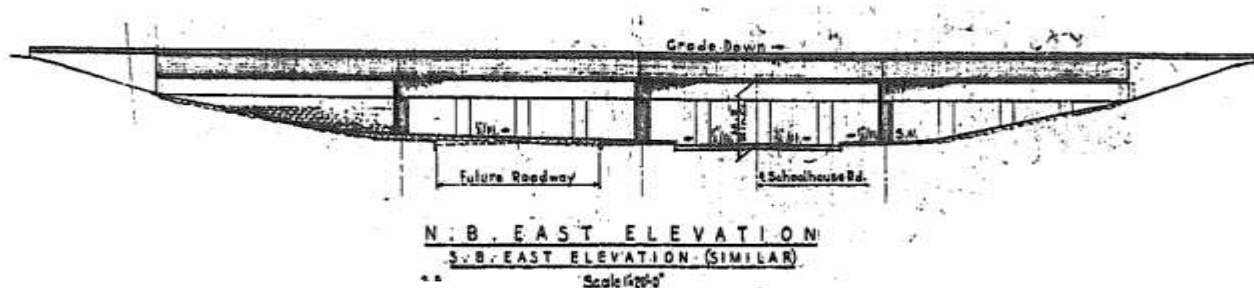


EXHIBIT II-2 – NYSTA RECORD PLANS

These record plans also identify the available R.O.W. along Red Schoolhouse Road in the vicinity of the GSP Overpass as well as extended away from the GSP ramps area north and south of the interchange.

STATE TRANSPORTATION IMPROVEMENT PLAN (STIP)

The STIP notes that NYSDOT will pursue complete streets improvements along Route 45 in Spring Valley with pedestrian accommodations including sidewalks, ramps and crosswalks. The project (PIN 807419) is estimated at a cost of \$5.0 million. This project is currently in development by the Department with an expected construction start date of Spring 2024. No other specific area improvements were identified.

CORPORATE COMMERCE PARK TRAFFIC STUDY AND SITE PLANS

In September 2019, Adler Consulting conducted a review of the traffic impacts for an approximately 151,000 square foot corporate commerce park on the north side of Sephar Lane. Level of Service analyses revealed that the GSP southbound exit ramp operates at overall Levels of Service “E” and “D” during the AM and PM peak hours, respectively. The proposed development was shown to have minimal impact on delay compared to No-Build conditions. Significant PM peak hour queuing problems were also identified at the GSP northbound entrance ramp. The study identified that vehicle queues at this intersection can back up and block turning movements at DeSalvo Court.

WELLINGTON SCHOOLS CAMPUS TRAFFIC STUDY AND SITE PLANS

In August 2019, Provident Design Engineering (PDE) conducted a review of traffic impacts for a 1000-student Girls’ K-8 school and a 400-student Boys’ high school with on-site dormitories. The principal site access for the schools is proposed via a new connection to Red Schoolhouse Road opposite the driveway to the Promenade at Chestnut Ridge. The plans were also developed in anticipation that DeSalvo Court could be relocated through a portion of the property to intersect with the GSP off ramp intersection (see Section IV.E for further discussion regarding possible right of access control restrictions). Level of Service analyses revealed that some intersections will experience a degradation of operating conditions from No-Build to Build conditions. During the AM Peak Hour, the Red Schoolhouse Road & Williams Road intersection was projected to drop from Level of Service “C” to “D” with a 5 second increase in delay. The Red Schoolhouse Road and Summit Road intersection was also projected to drop from Level of Service “C” to “D” with a 10 second increase in delay. PDE noted traffic volumes due to the school campus will likely be lower than predicted due to the use of buses for students at the Girls’ school.

OTHER PRELIMINARY SITE PLANS AND INFORMATION

Copies of preliminary site plans for various developments, including the Equestrian Estates, Triangle Properties, and future Horse Farm Development, and preliminary information regarding the mix and type of development were also reviewed in order to help identify access as well as the potential associated trip generation estimates as described in Section IV.C of this study. TABLE II-2 below provides a summary of the proposed and anticipated area developments considered.

TABLE II-2 – PROPOSED AREA DEVELOPMENTS		
PROPOSED DEVELOPMENT	PROPOSED LAND USE(S)	PROPOSED SIZE
TRIANGLE PROPERTIES	RETAIL SHOPPING CENTER	137,500 SQ. FT.
EQUESTRIAN ESTATES	RETAIL	29,524 SQ. FT.
	OFFICE	15,000 SQ. FT.
	APARTMENTS	84 UNITS
	TOWNHOMES	62 UNITS
	SINGLE FAMILY HOMES	2 UNITS
	SENIOR (AGE-RESTRICTED) APARTMENTS	118 UNITS
FUTURE HORSE FARM DEVELOPMENT	SENIOR ASSISTED LIVING	160 UNITS
WELLINGTON SCHOOLS CAMPUS	K-8 GIRLS ELEMENTARY SCHOOL	1000 STUDENTS
	BOYS HIGH SCHOOL	400 STUDENTS
CORPORATE COMMERCE PARK	CORPORATE PARK/OFFICE	150,950 SQ. FT.

C. ADDITIONAL DATA COLLECTION AND EXISTING TRAFFIC VOLUMES

(Figures No. 2, 3, 4; APPENDIX B, APPENDIX F, APPENDIX J)

Maser Consulting supplemented the available historical traffic volume data for the study area intersections, as previously identified, for the Weekday AM, Weekday PM, and Saturday Peak periods with additional existing conditions turning movement traffic counts. The data was collected in September and October 2020 and included a separate count of trucks and buses as well as observations of pedestrians and cyclists travelling along Red Schoolhouse Road, Summit Road and Williams Road. These data, which are contained in APPENDIX J, were compared with traffic data for the area intersections

previously collected by other traffic consultants during 2011, 2018, and 2019. Any recently collected data were then adjusted for seasonality or any special conditions including special traffic conditions related to COVID-19 restrictions based on historical data available from the NYSTA, NYSDOT, and RCHD. This included data on traffic volumes, growth patterns and other information.

In addition, Sections III.C, IV.B, and IV.D provide a further description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service for each of the study area intersections. APPENDIX F contains copies of the capacity analyses, which indicate further details of the existing intersection geometrics (including lane widths) and other characteristics for each of the individual intersections studied.

The Existing Traffic Volumes for each of these intersections are shown on Figures No. 2, 3, and 4 (contained in APPENDIX B) for the Weekday AM, Weekday PM and Saturday Peak Hours, respectively.

III. EXISTING CONDITIONS AND ANALYSIS PROCEDURES/ RESULTS

A. DESCRIPTION OF ANALYSIS PROCEDURES

(Appendix E)

In order to assess the both current and future traffic operating conditions and levels of service, it was necessary to perform capacity analyses for each of the study area intersections. The following is a brief description of the analysis method utilized in this report:

- Signalized Intersection Capacity Analysis

The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the *Highway Capacity Manual, 6th Edition*, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service “A” represents the best condition and a Level of Service “F” represents the worst condition. A Level of Service “C” is generally used as a design standard while a Level of Service “D” is acceptable during peak periods. A Level of Service “E” represents an operation near capacity. In order to identify an intersection’s Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

- Unsignalized Intersection Capacity Analysis

The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the *Highway Capacity Manual, 6th Edition*. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

- Roundabout Intersection Capacity Analysis

The roundabout intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the *Highway Capacity Manual, 6th Edition*. Roundabouts share the same basic control delay as two-way and all-way stop-controlled intersections, adjusting for the effect of yield control. The analysis procedure for roundabouts is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the yield location. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Additional information concerning signalized and unsignalized Levels of Service can be found in APPENDIX E of this report. The analyses were performed with the Synchro (Version 10) computer software which were incorporated into the Sim Traffic simulations model available for presentation purposes and discussed further below.

B. SIMTRAFFIC MODELING

In addition to its ability to conduct intersection capacity analyses as discussed above, the Synchro analysis software also provides the ability to conduct traffic simulations via the programs companion software SimTraffic. The SimTraffic software provides micro-simulations of intersections and roadways to simulate the interaction between area intersections. This allows the Synchro and SimTraffic analysis to be calibrated to observed existing conditions along the corridor. The simulation modeling also allows for the effects of vehicle queues along the study area corridor. The simulations were compared with the field observations of existing conditions to calibrate the model appropriately. The calibrate model and synchro analysis was then utilized to project the future No-Build and Build traffic conditions and to assist in comparison of improvement alternatives.

C. EXISTING OPERATING CONDITIONS

(Table No. 2, 3, 4 and 5; APPENDIX C, APPENDIX F, APPENDIX G)

Maser Consulting computed existing conditions operating levels of service and queues in accordance with the analysis procedures described above and utilizing the Synchro Analysis Software at the subject intersections for the AM, PM, and Saturday Peak Hours based on the existing traffic volume information obtained and summarized above. The results of the Synchro analyses, copies of which are provided in APPENDIX F, were adjusted based on field observations to reflect the actual operations of the area intersections. TABLE III-1 below, provides a summary of the overall Level of Service for each of the study area intersection under existing conditions. A further detailed Level of Service results summary is provided in Tables No. 2, 3 and 4, contained in APPENDIX C, for the Weekday Peak AM, Weekday Peak PM and Saturday Peak Hours, respectively. Table No. 5, also contained in APPENDIX C, provides a summary of the queuing analysis results for each of the peak hours. The queuing analysis compares the 50th and 95th percentile queues to the available storage length for each intersection approach and/or movement. It should be noted that for the purposes of queuing analysis it is assumed that a queued vehicle occupies 25 ft. of queue storage length.

TABLE III-1 – EXISTING CONDITIONS LEVEL OF SERVICE SUMMARY			
INTERSECTION	WEEKDAY AM PEAK HOUR	WEEKDAY PM PEAK HOUR	SATURDAY PEAK HOUR
RED SCHOOLHOUSE ROAD/ WILLIAMS ROAD	D [29.6]	D [27.2]	B [11.3]
RED SCHOOLHOUSE ROAD/ SUMMIT ROAD	C [18.5]	C [20.6]	B [11.3]
RED SCHOOLHOUSE ROAD/ GSP SB EXIT RAMP	C [24.0]	B [14.0]	B [15.3]
RED SCHOOLHOUSE ROAD/ DESALVO COURT	D [29.6]	C [19.6]	B [12.8]
RED SCHOOLHOUSE ROAD/ GSP NB ENTRANCE RAMP	---	---	---
RED SCHOOLHOUSE ROAD/ SEPHAR LANE	C [18.7]	C [23.9]	B [13.1]
SUMMIT ROAD/ WILSHIRE DRIVE	B [11.4]	B [10.0]	A [9.2]
RED SCHOOLHOUSE ROAD/ LOESCHER LANE	C [18.6]	C [23.9]	B [13.1]

The below provides a further description of each of the study area intersections and the documented existing operating conditions.

1. Red Schoolhouse Road & Williams Road

Red Schoolhouse Road intersects Williams Road at an unsignalized “T”-type intersection. The Williams Road approach is controlled by a “Stop” sign and all approaches to the intersection consist of one lane. Capacity analysis was conducted for this intersection utilizing the 2020 Existing Traffic Volumes. There are no existing sidewalks or crosswalks at this location. The analysis results indicate that the Red Schoolhouse Road approaches are currently operating at Level of Service “A” while the Williams Road approach is operating at Levels of Service “D” during the AM and PM Peak Hours while a Level of Service “B” is experienced Saturday Peak Hours.

The queuing analysis for this intersection indicates that during the Existing AM, PM, and Saturday Peak Hours, queue lengths are greatest for the Williams Road approach where in excess of 500 feet of storage length is available. The longest queue developed is approximately 88 feet during the Peak AM Hour, with slightly shorter queues during the PM Peak Hour.

It should be noted that this intersection currently meets the criteria for signal installation as indicated by the traffic signal warrant analysis conducted for this intersection based on the criteria identified in the MUTCD. Traffic signal warrant analysis for this location are provided in APPENDIX G.

2. Red Schoolhouse Road & Summit Road

Red Schoolhouse Road intersects Summit Road at an unsignalized “T”-type intersection. The Summit Road approach is controlled by a “Stop” sign and all approaches consist of one lane. There is an existing asphalt sidewalk on the south side of Summit Road at this intersection. There are no sidewalks or crosswalks along Red Schoolhouse Road at this intersection. Capacity analysis was conducted for this intersection utilizing the 2020 Existing Traffic Volumes. The analysis results indicate that the Red Schoolhouse Road approaches are currently operating at Level of Service “A” while the Summit Road approach is operating at Levels of Service “C” or better during the AM, PM and Saturday Peak Hours. As previously noted during the Weekday AM peak periods, left turns from Red Schoolhouse Road onto Summit Road are currently prohibited however, as many as 45 vehicles were observed making this maneuver.

The queuing analysis for this intersection indicates that during the Existing AM, PM, and Saturday Peak Hours, queue lengths are greatest for the Summit Road approach where in excess of 350 feet of storage length is available. The longest queue developed is approximately 50feet during the AM and PM Peak Hours.

It should be noted that this intersection currently meets the criteria for signal installation as indicated by the traffic signal warrant analysis conducted for this intersection based on the MUTCD criteria. The traffic signal warrant analysis for this location are provided in APPENDIX G.

3. Red Schoolhouse Road & GSP Southbound Exit Ramp

Red Schoolhouse Road intersects the GSP SB Exit Ramp at a signalized, “T”-type intersection. The Red Schoolhouse Road approaches each consist of one lane while the Exit Ramp has separate left turn and right turn lanes. There are no existing sidewalks or crosswalks at this location. Capacity analysis was conducted for this intersection utilizing the 2020 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service “C” during the AM Peak Hour, while an overall Level of Service “B” is experienced during the PM and Saturday Peak Hours; however certain movements including the exit ramp approach have historically experienced longer delays, especially during the AM peak period. More specifically the left turn volume for the GSP southbound off-ramp to Red Schoolhouse Road is approximately 750 vehicles during the AM Peak Hour. This magnitude of volume would typically indicate the need for a double left turn lane on the ramp approach, which would also require a two-lane receiver on Red Schoolhouse Road southbound. The majority of this traffic is known to be destined to the significant office and commercial properties located along Spring Valley Road and the surrounding area in Montvale, New Jersey.

The queueing analysis for this intersection indicates queues exceeding 550 ft. in length for the GSP Exit Ramp left turn movement during the AM Peak Hour. These queues are known to extend as far back as the GSP Ramp gore area at peak times. Initially, signal timing adjustments are recommended to alleviate these queueing conditions, while longer term improvements are discussed in Section IV.E.

4. Red Schoolhouse Road & DeSalvo Court

Red Schoolhouse Road intersects DeSalvo Court at an unsignalized “T”-type intersection. The DeSalvo Court approach is controlled by a “Stop” sign and all approaches consist of one lane. There is an existing sidewalk on the west side of Red Schoolhouse Road, that begins on the south side of DeSalvo Road at this intersection that continues south under the GSP Overpass. This sidewalk does not have an ADA compliant curb ramp at the intersection. There are not sidewalks along DeSalvo Road or north of the intersection along Red Schoolhouse Road. There are also no existing striped crosswalks at this location. The existing conditions capacity analysis conducted for this intersection utilizing the 2020 Existing Traffic Volumes indicates that the Red Schoolhouse Road approaches are currently operating at Levels of Service “B” or better

while the DeSalvo Court approach is operating at Levels of Service “D” during the AM Peak Hour, a Level of Service “C” during the PM Peak Hour and at a Level of Service “B” during the Saturday Peak Hour. As previously noted in Section II.A, there are existing sight distance restrictions at this location due to the GSP overpass support columns. The existing sight distances at this and other area intersection are discussed further in Section III.F.

The operation of this intersection is also significantly impacted by queuing along Red Schoolhouse Road from each of the GSP Ramp intersections. During the Existing AM, PM, and Saturday Peak Hours, queue lengths are greatest for the DeSalvo court approach where in excess of 500 feet of storage length is available. The longest queue developed is 38 feet during the Peak AM Hour.

5. Red Schoolhouse Road & GSP Northbound On- Ramp

Red Schoolhouse Road intersects the GSP NB On Ramp at an uncontrolled intersection. The Red Schoolhouse Road approaches each consist of one lane and the GSP northbound on-ramp provides one receiving lane for turning movements onto the ramp. There is an existing sidewalk on the west side of Red Schoolhouse Road at this location which terminates in the vicinity of this intersection. No other sidewalks or crosswalks are present at this location. Level of Service standards are not defined in the Highway Capacity Manual (HCM) for this type of intersection based on delay criteria. Note that due to the high volume of northbound right turns onto the ramp during the PM Peak Hour, delays are typically experienced for the southbound left turn maneuver. These delays can result in queues extending back through DeSalvo Court impacting the operation of that intersection as well. These queues result from the lack of a southbound left turn lane at this location in conjunction with the heavy northbound right turn movement volume during the PM Peak Hour. Also see Section III.E for discussion on AASHTO left turn lane requirements and resulting impacts of left turning vehicles.

6. Red Schoolhouse Road & Sephar Lane

Red Schoolhouse Road intersects Sephar Lane at an uncontrolled, “T”-type intersection. Sephar Lane is a gravel/dirt driveway and has an approximate width of 16 feet. The Red Schoolhouse Road approaches each consist of one lane. There are no existing sidewalks or crosswalks in the vicinity of this intersection. Capacity analysis was conducted for this intersection utilizing the 2020 Existing Traffic Volumes. The analysis results indicate that the Red Schoolhouse Road approaches are currently operating at Level of Service “B” or better and the Sephar Lane approach is operating at Level of Service “C” or better during the AM, PM and Saturday Peak Hours. Note that the left turn movement from Sephar Lane experiences longer delays during the Weekday peak hours due to the significant through volumes along Red Schoolhouse Road. This intersection does not

currently experience any significant queues due to the low volumes entering and exiting Sephar Lane under existing conditions.

7. Summit Road & Wilshire Drive

Summit Road intersects Wilshire Drive at an unsignalized “T”-type intersection. The Wilshire Drive approach is controlled by a “Stop” sign and all approaches consist of one lane. There is an existing concrete sidewalk along the south side of Summit Road at this location with a striped crosswalk crossing Wilshire Drive. Approximately 120 ft. east of this intersection there is also an existing crosswalk crossing Summit Road at Ferruzza Drive however there is no ADA compliant landing area on the north side of Summit Road. Capacity analysis was conducted for this intersection utilizing the 2020 Existing Traffic Volumes. The analysis results indicate that the Summit Road approaches are currently operating at Level of Service “A” while the Wilshire Drive approach is operating at Levels of Service “B” or better during the AM, PM and Saturday Peak Hours. This intersection does not currently experience any significant queues.

8. Red Schoolhouse Road & Loescher Lane

Red Schoolhouse Road intersects Loescher Lane at an uncontrolled “T”-type intersection. Loescher Lane is a gravel/dirt driveway and has an approximate width of 16 feet. The Red Schoolhouse Road approaches each consist of one lane. There are no existing pedestrian accommodations in the vicinity of this intersection. Capacity analysis was conducted for this intersection utilizing the 2020 Existing Traffic Volumes. The analysis results indicate that the Red Schoolhouse Road approaches are currently operating at Level of Service “B” or better and the Losecher Lane approach is operating at Level of Service “C” or better during the AM, PM and Saturday Peak Hours. Note that the left turn movement from Loescher Lane experiences some longer delays during the Weekday peak hours due to the significant through volumes along Red Schoolhouse Road. This intersection does not currently experience any significant queues due to the low volumes entering and exiting Wilshire Drive under existing conditions.

D. ACCIDENT ANALYSIS

(Table No. 6 and APPENDIX H)

Accident data for the area roadways was obtained from NYSDOT for the latest available five-year period starting 1/1/2016 through 7/21/2020. A detailed summary of this accident data is provided in Table No. 6 contained in APPENDIX C, which identifies the location, type of accident, severity, and other contributing factors. A general summary of this data by location is provide in TABLE III-2 below. . Copies of the detailed accident information is contained in APPENDIX H.

TABLE III-2 – RED SCHOOLHOUSE ROAD ACCIDENT SUMMARY			
LOCATION	NUMBER OF ACCIDENTS		
	PROPERTY DAMANAGE/ NON-REPORTABLE	INJURY	TOTAL
RED SCHOOLHOUSE RD. NORTH OF WILLIAMS RD. <i>(NON-INTERSECTION ACCIDENTS)</i>	1	1	2
RED SCHOOLHOUSE RD. AT WILLIAMS RD.	4	1	5
RED SCHOOLHOUSE RD. BETWEEN WILLIAMS RD. & SUMMIT RD. <i>(NON-INTERSECTION ACCIDENTS)</i>	---	1	1
RED SCHOOLHOUSE RD. AT SUMMIT RD.	5	4	9
RED SCHOOLHOUSE RD AT 146 RED SCHOOL HOUSE RD.	2	---	2
RED SCHOOLHOUSE RD. AT PROMENADE AT CHESTNUT RIDGE	3	---	3
RED SCHOOLHOUSE RD. AT GSP SOUTHBOUND OFF-RAMP	1	---	1
RED SCHOOLHOUSE RD. AT DE SALVO CT.	3	---	3
RED SCHOOLHOUSE RD. BETWEEN DESALVO CT. & GSP NORTHBOUND ON-RAMP <i>(NON-INTERSECTION ACCIDENTS)</i>	8	4	12
RED SCHOOLHOUSE RD. AT GSP NORTHBOUND ON-RAMP	5	---	5
RED SCHOOLHOUSE RD. BETWEEN GSP NORTHBOUND ON-RAMP AND SEPHAR LN. <i>(NON-INTERSECTION ACCIDENTS)</i>	2	---	2
RED SCHOOLHOUSE RD. AT SEPHAR LN.	2	---	2
RED SCHOOLHOUSE RD. BETWEEN SEPHAR LN. AND LOESCHER LN. <i>(NON-INTERSECTION ACCIDENTS)</i>	4	1	5
RED SCHOOLHOUSE RD. AT LOESCHER LN.	1	---	1
TOTAL	41	12	53

A total of 54 accidents were recorded during the latest three-year period. Of these incidents, 12 involved at least one injury, 30 involved property damage only and 12 were identified as non-reportable. The vicinity of Red Schoolhouse Road at Summit Road and Williams Road have experienced a total of 17 accidents over the analysis period. A review of the

detail accident data indicates that a majority of these accidents are right angle type accidents likely resulting from turning movements and delays in this vicinity.

The area between De Salvo Court and Sephar Lan also exhibits a significant accident history including a total of 24 accidents in this area of the corridor. More than half of these accidents are identified as rear-end type accidents. A majority of the accidents are also found to occur during the afternoon peak periods. Based on this it can be concluded that these accidents are likely a result of queuing and delays that occur in the vicinity of the GSP northbound on-ramp.

E. ANALYSIS OF INTERSECTION GEOMETRY

(APPENDIX I)

Each of the intersections listed above were evaluated for adequacy of existing geometry, including the ability to handle large vehicles such as school buses and tractor trailers. Design vehicle turning tracks were also completed and are contained in APPENDIX I.

F. SIGHT DISTANCES

(Table No. 7; APPENDIX C)

Maser Consulting assessed the existing sight distances and identified limitations based on existing roadway geometry and AASTHO stopping sight distance and intersection sight distance requirements. These sight distances were assessed based on observed 85th percentile travel speeds along the area roadways. Table No. 7 contained in APPENDIX C provides a detailed summary the existing sight distances based on field measurements and the AASHTO required sight distances. A discussion of this information is provided below:

1. Red Schoolhouse Road & Williams Road

Both stopping sight distance and intersection sight distance requirements are generally satisfied for this intersection. The Summit Road intersection is approximately 220 feet to the south and is clearly visible. Looking right (north) from Williams Road, sight lines are limited a vertical curve approximately 500 ft. north of the intersection. Looking left (south), it is possible to see to the vicinity of the driveway to 146 Red Schoolhouse Road, which is located approximately 425 feet south of this intersection. With some vegetative clearing the view of looking to the south from Summit Road could be improved; however, this vegetation may be located outside of the public R.O.W.

2. Red Schoolhouse Road & Summit Road

Both stopping sight distance and intersection sight distance requirements are generally satisfied for this intersection. The Williams Road intersection is located approximately 220 feet to the north and is clearly visible when looking left (north) from Summit Road. This sight line is limited by vegetation at the northwest corner of the intersection. Clearing of this vegetation would permit sight distance to the vertical curve north of Williams Road to be achieved, a distance of approximately 500 ft. Looking right (south), sight distance in excess of 500 ft. is available, in fact it is possible to see to the vicinity of the GSP exit ramp intersection. Appropriate easements and or R.O.W. dedication should be obtained in the vicinity of this intersection as part of the Welling Schools project to ensure proper continued future maintenance of sight distances to the south of Summit Road.

3. Red Schoolhouse Road & Wellington Schools Access

The sight distance for the proposed driveway to serve the Wellington Schools Access at Red Schoolhouse Road was also reviewed. With appropriate vegetative clearing along the Red Schoolhouse Road site frontage both north and south of the site access location, sight distances in excess of 500 ft. can be obtained at this location and will satisfy the AASHTO criteria. Appropriate sight distance triangles should be identified on the Site Plans for that project in order to identify required areas of vegetative clearing and maintenance.

4. Red Schoolhouse Road & GSP Southbound Off-Ramp

Both stopping sight distance and intersection sight distance requirements are satisfied for this intersection. Looking left (south) from the GSP ramp, it is possible to see beyond the GSP overpass although some utility poles obstruct this view depending on vehicle positioning. Looking right (north), approximately 900 feet of sight distance is available. As previously noted, this intersection is controlled by a traffic signal.

5. Red Schoolhouse Road & DeSalvo Court

Looking left (north) from DeSalvo Court, it is possible to see beyond the signalized intersection of Red Schoolhouse Road and the GSP Exit Ramp providing a sight distance in excess of 500 feet. When looking right (south), a sight distance of approximately 400 feet is achievable only after a vehicle pulls forward of the stop location. However, the GSP overpass support columns block a portion of the view closer to the intersection and can conceal an approaching vehicle from a turning driver's view. (See Section IV.E for further discussion.)

6. Red Schoolhouse Road & GSP NB on Ramp

The primary sight distance concerns at this intersection are the ability to stop for a vehicle waiting to turn left onto the GSP entrance ramp as well as the visibility of a left turning vehicle to see oncoming northbound traffic. In both instances, sufficient sight distance exists at this intersection.

7. Summit Road & Wilshire Drive

The 85th Percentile Speed on Summit Road is 35 MPH. Utilizing this as the design speed for evaluation of sight distances at the Summit Road/Wilshire Drive intersection indicates that sight distances from Wilshire Drive fall short of AASHTO requirements. Looking left from Wilshire Drive, sight lines are limited by trees and vegetation as well as the curvature of Summit Road. Looking right sight distance is constrained by the uphill grade of Summit Road as well as vegetation on the southeast corner of the intersection. Some vegetative clearing and pruning would improve the sight lines somewhat (see further discussion on signing recommendations in Section IV.E). It should be noted that a school speed limit of 15 MPH is in effect in the vicinity of this intersection. Additionally, the eastbound approach begins at a signalized intersection and runs approximately 400 feet on an uphill grade before intersecting Wilshire Drive. The combination of these effects will decrease traffic speeds and reduce the necessary stopping distance for drivers approaching the intersection.

8. Red Schoolhouse Road & Sephar Lane

Existing sight distances for vehicles exiting Sephar Lane are significantly limited by vegetation both north and south of the intersection. As part of the Corporate Commerce Park development, clearing of the vegetation should be completed to ensure AASHTO required intersection sight distances are met. Appropriate sight distance triangles should be identified on the Site Plans for that project in order to identify required areas of vegetative clearing and future maintenance.

9. Red Schoolhouse Road & Loescher Lane (Future Horse Farm Property Drive)

Sight distance looking to the south from Loescher Lane as well as from Red Schoolhouse Road for left turning vehicles is limited by the horizontal curve south of this intersection location. It does not appear that clearing of vegetation will improve the sight distance conditions at this location although it should be noted that there is a posted advisory speed limit of 25 MPH for this curve. The location of a potential access driveway to the Future Horse Farm Development should be assessed further as plans for that development are progressed. The site access location should be positioned in order to maximize all AASHTO required sight distances. Appropriate sight distance triangles should also be identified on the Site Plans for that project in order to identify any required areas of vegetative clearing and future maintenance.

10. Red Schoolhouse Road & Triangle Properties/Equestrian Estates Site Access Driveways
The location of the potential access driveways to the Triangle Properties and Equestrian Estates developments should be positioned in order to maximize all AASHTO required sight distances. Appropriate sight distance triangles should also be identified on the Site Plans for each development in order to identify any required areas of vegetative clearing and future maintenance.

IV. FUTURE TRAFFIC CONDITIONS, ANALYSIS, AND RECOMMENDATIONS

A. FUTURE PROJECTED NO-BUILD TRAFFIC VOLUMES

(Figures No. 5 through 7; APPENDIX B)

A basis for analysis of future traffic conditions along the corridor was determined by increasing the 2020 Existing Traffic Volumes by a growth factor of 0.5% per year for a five (5) year period to account for general background growth along the corridor. The resulting in the Year 2025 Projected Traffic Volumes are shown on Figures No. 5, 6 and 7 for the Weekday AM, Weekday PM and Saturday Peak Hours, respectively. It should be noted that the NYSDOT 2019 Traffic Volume Report for County Roads dated 7/30/2020 estimates slightly negative growth along the Red Schoolhouse Road corridor between 2015/2016 and 2019, however the 0.5% per year growth rate was utilized to account for traffic associated with other area developments that may add traffic to the corridor that are not the immediate focus of this study. These other developments are discussed further below.

In preparing this traffic study, Maser Consulting held discussions with representatives of the Borough of Montvale, New Jersey to identify any approved or potential developments within the Borough that may result in added traffic along the Red Schoolhouse Road corridor and therefore would need to be considered in the analysis contained herein. A summary of the identified projects is provided below.

- **The Alexa** – 160 Spring Valley Road (at NY/NJ Border) – 81-unit Townhouse Development - ***Currently Under Construction and Approximately 50% Occupied.***
- **Hornrock Properties MPR, LLC** – Sony Drive on Montvale/Park Ridge Border – 620 unit multifamily residential development – ***Approved, No Construction Start Date Available***
- **Triboro Square** – Mercedes Drive at Grand Avenue – Mixed Use Development – 40,500 sq. ft. of Office, 150 Room Hotel, 308 Apartments, 51,100 sq. ft. of Retail Space - ***Approved***
- **2 Paragon Drive** – 80-unit Townhouse Development - ***Approved***
- **Thrive** – 110 Summit Avenue – 203-unit Senior Housing/Assisted Living/Memory Care development currently – ***Currently Under Construction***
- **Waypoint** – 170 Unit Active Adult/Senior Housing Development – ***Under Review by Montvale Planning Board***

Based on the location, type of development and/or current status of each of the above developments, it was determined that these developments would not generate significant additional traffic along the Red Schoolhouse Road corridor and that any traffic that would be experienced along the corridor in the vicinity of the GSP interchange is captured by the 0.5% per year growth rate utilized in determining the 2025 Projected Traffic Volumes. It should also be noted that the 2025 Projected Traffic Volumes represent traffic conditions without consideration of traffic from any of the developments that are planned along the corridor and are of specific focus of this study.

B. FUTURE NO-BUILD OPERATING CONDITIONS

(Table No. 2, 3, 4 and 5, APPENDIX C)

Maser Consulting determined the Levels of Service for each of the subject intersections for the 2025 No-Build condition for the Weekday AM, PM, and Saturday Peak Hours based on the procedures previously described. TABLE IV-1 below, provides a summary of the overall Level of Service for each of the study area intersection under existing conditions. A further detailed summary of the Level of Service results is provided in Tables No. 2, 3 and 4 for the Weekday AM, Weekday PM and Saturday Peak Hours respectively. Table No. 5 also provides a summary of the queuing analysis results for each of the peak hours. Each of these tables is provided in APPENDIX C. The No-Build conditions analysis scenario does not include any modifications to signal timings nor geometric improvements within the corridor.

TABLE IV-1 – 2025 NO-BUILD CONDITIONS LEVEL OF SERVICE SUMMARY						
INTERSECTION	WEEKDAY AM PEAK HOUR		WEEKDAY PM PEAK HOUR		SATURDAY PEAK HOUR	
	EX	NB	EX	NB	EX	NB
RED SCHOOLHOUSE ROAD/ WILLIAMS ROAD	D [29.6]	D [32.3]	D [27.2]	D [29.3]	B [11.3]	B [11.4]
RED SCHOOLHOUSE ROAD/ SUMMIT ROAD	C [18.5]	C [19.3]	C [20.6]	C [21.6]	B [11.3]	B [11.4]
RED SCHOOLHOUSE ROAD/ GSP SB EXIT RAMP	C [24.0]	C [25.1]	B [14.0]	B [14.6]	B [15.3]	B [15.4]
RED SCHOOLHOUSE ROAD/ DESALVO COURT	D [29.6]	D [31.2]	C [19.6]	C [22.2]	B [12.8]	B [12.9]
RED SCHOOLHOUSE ROAD/ GSP NB ENTRANCE RAMP	---	---	---	---	---	---
RED SCHOOLHOUSE ROAD/ SEPHAR LANE	C [18.7]	C [19.2]	C [23.9]	C [24.8]	B [13.1]	B [13.3]
SUMMIT ROAD/ WILSHIRE DRIVE	B [11.4]	B [11.3]	B [10.0]	B [10.1]	A [9.2]	A [9.2]
RED SCHOOLHOUSE ROAD/ LOESCHER LANE	C [18.6]	C [19.2]	C [23.9]	C [24.8]	B [13.1]	B [13.2]

The below provides a further description of the anticipated operation conditions at each of the study area intersection under the future No-Build conditions.

1. Red Schoolhouse Road & Williams Road

Capacity analysis was conducted using the 2025 No-Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to experience Level of Service “A” during each of the Peak Hours, while the Williams Road approach is expected to experience Levels of Service “D” during the AM & PM Peak Hours while a Level of Service “B” will continue to be experienced during the Saturday Peak Hour, under future No-Build conditions.

The queuing analysis for this intersection indicates that similar queuing conditions are expected to be experienced during each of the peak hours under future No-Build conditions. The queues on the Williams Road approach are expected to increase by an approximate average of 7-8 ft. or less than one vehicle during the AM and PM Peak Hour as a result of the No-Build traffic volumes.

2. Red Schoolhouse Road & Summit Road

Capacity analysis was conducted using the 2025 No-Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to experience Level of Service “A” during each of the Peak Hours. The Summit Road approach is expected to experience a Level of Service “C” during the AM and PM Peak Hours while a Level of Service “B” will continue to be experienced during the Saturday Peak Hour, under future No-Build conditions.

The queuing analysis for this intersection indicates that similar queuing conditions are expected to be experienced during each of the peak hours under future No-Build conditions. The queues on the Summit Road approach are expected to increase by an approximate average of 3 during the AM and PM Peak Hour as a result of the No-Build traffic volumes.

3. Red Schoolhouse Road & GSP Southbound Off-Ramp

Capacity analysis was conducted using the 2025 No-Build Traffic volumes indicating that the intersection will continue to operate at an overall Level of Service “D” during the AM Peak Hour, at an overall Level of Service “C” during the PM Peak Hour and at an overall Level of Service “B” during the Saturday Peak Hour under future No-Build conditions. Note that the left turn from the GSP southbound off-ramp is expected to experience increased delays without any modifications to this intersection or the existing traffic signal.

The queuing analysis for this intersection indicates that similar queues to existing conditions are expected to be experienced during the PM and Saturday Peak Hours under future No-Build conditions. During the AM Peak Hour, the queues on the GSP Exit Off-Ramp approach are expected to continue to increase for both the left turn and right turn maneuvers with queue lengths increasing by approximately 1 car length for each movement. However, these AM Peak Hour queue increases are generally expected to be accommodated by the available queue storage lengths at the intersection.

4. Red Schoolhouse Road & DeSalvo Court

Capacity analysis was conducted using the 2025 No-Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to experience Levels of Service “B” or better during each of the peak hours while the DeSalvo Court approach is expected to continue to experience similar Levels of Service to existing conditions. Similar queues are expected to be experienced at the intersection to existing conditions queues during each of the peak hours under future No-Build conditions.

5. Red Schoolhouse Road & GSP Northbound On-Ramp
Red Schoolhouse Road intersects the GSP NB On Ramp at an uncontrolled intersection. Level of Service standards are not defined in the Highway Capacity Manual (HCM) for this type of uncontrolled intersection and were not computed. However, it should be noted that the delays currently experienced for the southbound left turn movement onto the GSP Ramp are expected to continue under future conditions without any intersection modifications. Similar queues are expected to be experienced at the intersection to existing conditions queues during each of the peak hours under future No-Build conditions.

6. Red Schoolhouse Road & Sephar Lane
Capacity analysis was conducted using the 2025 No-Build Traffic volumes indicating that the intersection will continue to experience a Level of Service “B” or better on the Red Schoolhouse Road approaches under future No-Build conditions during each of the peak hours. The Sephar Lane approach is expected to continue to experience a Level of Service “C” during the AM and PM Peak Hours and a Level of Service “B” during the Saturday Peak Hour, under future No-Build conditions. Queueing conditions at this intersection under the future No-Build conditions are expected to be similar to existing conditions since there is not anticipated to be a significant increase in traffic entering and exiting Sephar lane under No-Build Conditions.

7. Summit Road & Wilshire Drive
Capacity analysis was conducted using the 2025 No-Build Traffic volumes indicating that the intersection will continue to experience similar Levels of Service to existing conditions during each of the peak hours. Queueing conditions at this intersection under the future No-Build conditions are expected to be similar to existing conditions.

8. Red Schoolhouse Road & Loescher Lane
Capacity analysis was conducted using the 2025 No-Build Traffic volumes. The results indicate that the intersection will continue to experience similar Levels of Service to existing conditions during each of the peak hours. Queueing conditions at this intersection under the future No-Build conditions are expected to be similar to existing conditions.

C. DEVELOPMENT OF FUTURE BUILD TRAFFIC VOLUMES

(Figures No. 8 through 43, Tables No. 8 and 9; APPENDIX B, APPENDIX C)

AREA DEVELOPMENTS TRAFFIC GENERATION

Several potential developments have been proposed within the study area including the potential Wellington Schools Campus, Corporate Commerce Park, Equestrian Estates, Triangle Properties development and the Future Horse Farm development as described previously. Estimates of the traffic that would be generated by each of these developments were computed for the Weekday AM, Weekday PM and Saturday Peak periods based on information published by the ITE as contained in the report entitled “Trip Generation”, 10th Edition, 2017. The following ITE Land Use Codes were referenced in computing these estimates.

- Triangle Properties:
 - Land Use Code 820 – Shopping Center
- Equestrian Estates
 - Land Use Code 210 – Single Family Housing
 - Land Use Code 220 – Multifamily Housing
 - Land Use Code 252 – Senior Adult Housing (Attached)
 - Land Use Code 710 – Office
 - Land Use Code 820 – Shopping Center
- Future Horse Farm Development
 - Land Use Code 252 – Senior Adult Housing (Attached)
- Wellington Schools Campus
 - Land Use Code 522 – Public Middle/High School
 - Land Use Code 550 – University/College
- Corporate Commerce Park
 - Land Use Code 710 – Office

Table No. 8 contained in APPENDIX C provides a detailed summary of the anticipated traffic generation for each of the above listed developments based on the ITE data as well as the project site area, roadway frontage, hours of operations, and other related information. It should be noted that a 25% pass-by credit was applied to the trip generation for retail uses based on typically accepted criteria; however, depending on the specific use this could be somewhat higher. Additionally, a 15% internal trip reduction credit was included for each use within the Equestrian Estates development to account for the mixed-use nature of this development. This reduction was based on information outlined in the National Cooperative Highway Research Program (NCHRP) Report 684. A summary of the total “new trips” that will be experienced on the area roadways as a result of each of the proposed developments is provided in TABLE IV-2 below.

TABLE IV-2 – AREA DEVELOPMENT TRIP GENERATION SUMMARY			
DEVELOPMENT	ENTRY VOLUME	EXIT VOLUME	TOTAL
WEEKDAY PEAM AM HOUR			
TRIANGLE PROPERTIES	185	158	343
EQUESTRIAN ESTATES	112	132	244
FUTURE HORSE FARM DEVELOPMENT	19	10	29
WELLINGTON SCHOOLS CAMPUS	347	282	639
CORPORATE COMMERCE PARK	210	29	239
TOTAL	883	610	1494
WEEKDAY PEAK PM HOUR			
TRIANGLE PROPERTIES	266	266	532
EQUESTRIAN ESTATES	161	146	307
FUTURE HORSE FARM DEVELOPMENT	24	30	54
WELLINGTON SCHOOLS CAMPUS	103	129	232
CORPORATE COMMERCE PARK	42	190	232
TOTAL	597	761	1358
SATURDAY PEAK HOUR			
TRIANGLE PROPERTIES	311	287	597
EQUESTRIAN ESTATES	138	123	261
FUTURE HORSE FARM DEVELOPMENT	20	23	43
WELLINGTON SCHOOLS CAMPUS	0	0	0
CORPORATE COMMERCE PARK	43	37	80
TOTAL	511	470	981

TRIP ASSIGNMENTS

It was necessary to establish arrival and departure distributions to assign the site generated traffic volumes to the surrounding roadway network for each of the proposed area developments. Based on a review of the Existing Traffic Volumes and the expected travel patterns on the surrounding roadway network and information from the other studies prepared for these specific developments, the distributions were identified. The anticipated arrival and departure distributions for each proposed development are shown on Figures No. 8 through 19.

FUTURE BUILD TRAFFIC VOLUMES

The anticipated site generated traffic volumes identified for each development were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting site generated traffic volumes for each of the study area intersections are shown on Figures No. 20 through 37 for each of the peak hours for each individual

development. The total site generated traffic for all of these potential developments are shown on Figures No. 38, 39 and 40 for the Weekday AM, Weekday PM and Saturday Peak Hours, respectively. These site generated traffic volumes were then added to the Year 2025 No-Build Traffic Volumes to obtain the Year 2025 Build Traffic Volumes. The resulting Year 2025 Build Traffic Volumes are shown on Figures No. 41, 42 and 43 for the Weekday Peak AM, Weekday Peak PM, and Saturday Peak Hours, respectively. Note that these figures represent the future traffic volumes on the roadway network with all of the projects built and occupied.

Table No. 9, contained in APPENDIX C provides a summary of the anticipated additional traffic generation at each of the study area intersections associated with the proposed area developments. The total site generated traffic and the associated percentage increase in traffic volumes at each of the intersections is identified for the Weekday AM, Weekday PM and Saturday Peak Hours.

D. FUTURE BUILD OPERATING CONDITIONS

(Table No. 2, 3, 4 and 5, APPENDIX C)

A Level of Service analysis for the Build conditions at the subject intersections for the Weekday AM, Weekday PM, and Saturday Peak Hours was conducted utilizing the 2025 Build Traffic volumes identified above. Tables No. 2, 3, and 4 contained in APPENDIX C provide a detailed summary of the analysis results including levels of service, vehicle delays and volume-to-capacity ratios (v/c) for the subject intersections and various site access driveways. Table No. 5 also contained in APPENDIX C, provides a summary of the queuing analysis results under the future Build conditions without improvements and provides comparison to existing and No-Build queuing conditions. TABLE IV-3 below provides a summary of the overall level of service for each intersection comparing the No-Build and Build conditions for each of the peak hours. Note that this table assumes no improvements/modifications to the study are roadways. Section IV-E provides a detailed discussion of the potential improvements to address existing and future capacity constraints and/or safety concerns along the corridor.

In addition to the intersections previously identified, the future Driveway Intersections also evaluated for Level of Service under Build Conditions included:

- Red Schoolhouse Road & Equestrian Estates/Triangle Drive.
- Red Schoolhouse Road & Wellington Schools Campus Drive.
- Red Schoolhouse Road & Future Horse Farm Property Drive.

TABLE IV-3 – 2025 BUILD CONDITIONS LEVEL OF SERVICE SUMMARY (NO INTERSECTION IMPROVEMENTS)						
INTERSECTION	WEEKDAY AM PEAK HOUR		WEEKDAY PM PEAK HOUR		SATURDAY PEAK HOUR	
	NB	BD	NB	BD	NB	BD
RED SCHOOLHOUSE RD/ WILLIAMS RD	D [32.3]	F [221.0]	D [29.3]	F [272.3]	B [11.4]	C [16.5]
RED SCHOOLHOUSE RD/ SUMMIT RD	C [19.3]	F [48.0]	C [21.6]	F [85.1]	B [11.4]	B [14.0]
RED SCHOOLHOUSE RD/ GSP SB EXIT RAMP	C [25.1]	C [33.7]	B [14.6]	B [15.9]	B [15.4]	B [14.3]
RED SCHOOLHOUSE RD/ DESALVO COURT	D [31.2]	F [110.8]	C [22.2]	E [46.1]	B [12.9]	C [18.2]
RED SCHOOLHOUSE RD/ GSP NB ENTRANCE RAMP	---	---	---	---	---	---
RED SCHOOLHOUSE RD/ SEPHAR LN	C [19.2]	F [141.8]	C [24.8]	F [812.7]	B [13.3]	C [23.6]
SUMMIT RD/ WILSHIRE DR	B [11.3]	B [12.3]	B [10.1]	B [10.5]	A [9.2]	A [9.4]
RED SCHOOLHOUSE RD/ LOESCHER LN (FUTURE HORSE FARM DEV.)	C [19.2]	E [45.5]	C [24.8]	F [122.6]	B [13.2]	D [25.1]
RED SCHOOLHOUSE RD/ WELLINGTON SCHOOLS	C [16.7]	F [110.6]	B [13.5]	F [110.6]	B [10.7]	B [14.7]
RED SCHOOLHOUSE RD/ EQUESTRIAN ESTATES/ TRIANGLE PROPERTIES	---	C [23.3]	---	D [44.2]	---	B [16.3]

1. Red Schoolhouse Road & Williams Road

Capacity analysis was conducted using the 2025 Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to experience Levels of Service “B” or better during each of the peak hours, while the Williams Road approach is expected to experience Levels of Service “F” for left turns exiting Williams Road during the AM and PM Peak Hours under future conditions without modifications to the intersections. A level of Service “C” is expected to be experienced on the Williams Road approach during the Saturday Peak Hour.

The queuing analysis for this intersection indicates that a significant increase in queues will be experienced on Williams Road during the AM and PM Peak Hours due to the additional traffic generated by the area developments with queues in excess of 375 feet representing an increase in queues of approximately 300 ft during each time period. The Saturday Peak hour queues are generally expected to be similar to Existing and No-Build Conditions.

2. Red Schoolhouse Road & Summit Road

Capacity analysis was conducted using the 2025 Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to continue to experience Levels of Service “A” during each of the peak hours. The Summit Road approach is expected to experience a Level of Service “F” for left turns exiting Summit Road during the AM and PM Peak Hours under future conditions without modifications to the intersections. A Level of Service “B” is expected to be maintained during the Saturday Peak Hour.

The queuing analysis for this intersection indicates that a significant increase in queues will be experienced on Summit Road during the AM and PM Peak Hours due to the additional traffic generated by the area developments with queues approximately 140-190 feet representing an increase in queues of approximately 100-140 ft during each time period. The Saturday Peak hour queues are generally expected to be similar to Existing and No-Build Conditions.

3. Red Schoolhouse Road & GSP Southbound Off-Ramp

Capacity analysis was conducted using the 2025 Build Traffic volumes. These results indicate that the intersection is expected to continue to operate at overall Levels of Service “C” during the AM and PM Peak Hours, while a Level of Service “B” will be maintained during the Saturday Peak Hours. It should be noted that the delays on the GSP Southbound exit ramp will be significantly impacted by additional traffic from the area projects during the AM Peak Hour under future conditions without modifications to the intersection.

The queuing analysis for this intersection indicates that an increase in queues is expected during each of the peak hours without intersection improvements. During the AM Peak Hour, the most significant increases in queuing are expected on the GSP Off-Ramp approach with queues extending back to the mainline of the GSP. The northbound and southbound queues are also expected to experience some increase during this time period. During the PM Peak Hour, the most significant increases in queues are expected to be experienced on the northbound and southbound approaches with the southbound queue extending back through the Wallace Schools Campus driveway intersection location. During the Saturday Peak Hour, increases in queues are expected associated with the additional traffic to be generated by the area developments, but all queues will be accommodated by the available storage length.

4. Red Schoolhouse Road & DeSalvo Court

Capacity analysis was conducted using the 2025 Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to experience Levels of Service “C” or better during each of the peak hours with some increases in delays for left turn maneuvers from Red Schoolhouse Road. The DeSalvo Court approach is expected to experience Levels of Service “F” during the AM Peak Hour, Level of Service “E” during the PM Peak Hour and Level of Service “C”, each of which represents a significant increase in delays for vehicles exiting DeSalvo Court.

The queuing analysis for this intersection indicates that DeSalvo Court will experience a significant increase in queues during the AM and PM Peak Hours due to the additional traffic generated by the area developments with an increase in queues of approximately 50-90 ft during each time period. The Saturday Peak hour queues are generally expected to be similar to Existing and No-Build Conditions.

5. Red Schoolhouse Road & GSP Northbound On-Ramp

Delay and Level of Service computations are not defined for uncontrolled intersections and were not computed for this location. However, it should be noted that the delays currently experienced for the southbound left turn movement onto the GSP Ramp are expected to continue under future conditions without any intersection modifications. Queuing at this intersection for the southbound approach is expected to be significantly impacted as a result of the additional traffic generated by the area developments, especially during the PM Peak Hour. Similar to Existing and No-Build conditions, the lack of a southbound left turn lane and the high northbound volume results in these significant queues at this location.

6. Red Schoolhouse Road & Sephar Lane

Capacity analysis was conducted using the 2025 Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to experience Level of Service “B” or better during each of the peak hours. The Sephar Lane approach is expected to experience significant increases in delay due to the additional traffic generated by the Corporate Commerce Park development, which will utilize Sephar Lane as its access. Under future conditions without modifications to the intersection, a Level of Service “F” is expected to be experienced during the AM & PM Peak Hour while a Level of Service “C” is expected to be experienced at during the Saturday Peak Hour. Queues at this intersection are expected to increase during the AM and PM Peak hours as a result of the additional traffic generated by the Corporate Commerce Park Development that will utilize Sephar Lane for access to that development. This assumes no significant modifications to the Sephar Lane intersection as part of the Corporate Commerce Park development.

7. Summit Road & Wilshire Drive

Capacity analysis was conducted using the 2025 Build Traffic volumes. These results indicate that the Summit Road approaches are expected to experience Level of Service “A” while the Wilshire Drive approach is expected to experience Levels of Service “B” or better during the AM, PM and Saturday Peak Hours under future conditions. Queueing conditions at this intersection under the future Build conditions are expected to be similar to Existing and No-Build conditions.

8. Red Schoolhouse Road & Loescher Lane (Future Horse Farm Property Drive)

Capacity analysis was conducted using the 2025 Build Traffic volumes. These results indicate that the Red Schoolhouse Road approaches are expected to experience Level of Service “B” or better during each of the peak hours. The Loescher Lane approach is expected to experience significant increases in delay due to the additional traffic generated by the Future Horse Farm Development, which is anticipated to utilize Loescher Lane for access to the development. A Level of Service “E” is anticipated to be experienced during the AM Peak Hour, while Levels of Service “F” and “D” are expected to be experienced during the PM and Saturday Peak Hours, respectively. Queues at this intersection under the future Build conditions are expected increase to somewhat above No-Build condition queues due to the additional traffic generated by the Future Horse Farm Development. This increase in queues will mostly occur on the Loescher Lane/Site Access approach.

9. Red Schoolhouse Road & Wellington Schools Campus Drive

The Wellington Schools Campus Site Access driveway is proposed to intersect Red Schoolhouse Road at an unsignalized intersection aligning opposite the existing driveway to the Promenade at Chestnut Ridge Facility. The Red Schoolhouse Road approaches are each anticipated to remain as one lane while the Campus Drive approach will be constructed with separate left and right turn lanes. It should be noted that left turns are currently prohibited during the AM Peak Hours (7:00AM to 10:00AM Monday through Friday) from Red Schoolhouse Road into the Promenade at Chestnut Ridge facility. It is anticipated that without further improvements to Red Schoolhouse Road at this location, a similar left turn restriction would be posted for vehicles entering the Welling Schools Campus access from Red Schoolhouse Road northbound. Capacity analysis was conducted for this intersection utilizing the 2025 Build Traffic Volumes. The analysis results indicate that the Red Schoolhouse Road approaches are expected to experience Level of Service “A” while the Wellington Schools Access and Promenade at Chestnut Ridge Driveway are expected to experience Level of Service “F” and “E”, respectively during the AM and PM Peak hours.

10. Red Schoolhouse Road & Equestrian Estates/Triangle Drive

The Site access driveways associated with the Equestrian Estates and Triangle Properties developments are proposed to intersect Red Schoolhouse Road at a signalized, full-movement intersection. Under this conditions, it has been assumed as part of the access related improvements that the northbound Red Schoolhouse Road approach will be widened to consist of a separate left turn lane and a shared through/right turn lane while the southbound approach will be widened to consist of a separate left turn lane, through lane and a separate right turn lane. The Equestrian Estates Access and Triangle drive approaches are each anticipated to consist of one shared left/through lane and a separate right turn lane. Capacity analysis was conducted for this intersection utilizing the 2025 Existing Traffic Volumes. The analysis results indicate that signalization will also likely be needed to accommodate turning traffic movements.

E. RECOMMENDED IMPROVEMENTS AND COST CONSIDERATIONS

(Sheet No. CP-1 through CP-7; APPENDIX D)

A series of improvement alternatives have been identified as a result of the analysis contained herein. These improvements include geometric modifications including turning lanes, sidewalks, signal timing modifications, additional signal installations, upgraded and improved signal actuation as well as a potential roundabout. Due to the nature of some of the improvements and the potential regulatory approvals as well as associated cost implications of such, it is recommended that a phased or “building blocks” approach be considered to allow these to be implemented at individual intersections but in manner that they will work towards the completion of the overall corridor plan. Furthermore, some of the recommended project access related improvements should be tied to the specific planned developments along the corridor, while other improvements should be approached on a longer-term basis due to the requirements for R.O.W. acquisition, funding, and regulatory approvals. Conceptual plans for the potential corridor improvements were prepared using available aerial images, roadway record plan information, tax maps, and site plan information from the various development applications. More detailed design plans based on detailed roadway surveys and identifying any environmental, R.O.W., or other constraints will have to be completed for the permitting and construction of such improvements as they proceed. APPENDIX D contains copies of the various conceptual improvement plans which are identified further below. The following are the summaries of both the short and long-term improvements to be implemented:

POTENTIAL INTERIM/SHORT TERM IMPROVEMENTS

The following improvements represent interim/short term improvements that can be implemented on an intersection-by-intersection basis. These improvements have been identified such that they could be implemented separately or in conjunction with other improvements along the corridor in order to achieve the overall goal of full corridor improvements as identified in the discussion of longer-term improvements below.

It should be noted that the need for auxiliary turn lanes along Red Schoolhouse Road and/or signalization part of the main considerations for the improvements identified below. The need for auxiliary turn lanes, especially left turn lanes for turning maneuvers from Red Schoolhouse Road to the other roadways/driveways along the corridor were assessed based on the AASHTO Green Book (A Policy on Geometric Design of Highways and Streets) 7th Edition dated 2018, which provides left turn lane warrant criteria for urban arterials. These warrants are based on the number of left turn vehicles and volume of traffic along the mainline roadway passing the turning location. The need for a left turn lane was assessed at each of the area intersection. Similarly, the need for traffic signalization was also assessed for each of the area intersections as discussed previously in Section III.C.

1. Red Schoolhouse Road & Summit Road/Williams Road (Sheet No. CP-1)

The intersection of Summit Road and Red Schoolhouse Road should be improved to provide a separate left turn lane along Red School House Road. Some R.O.W. acquisition will be required to implement such improvements along the Wellington School property frontage as well as from the property in the northwest quadrant of this intersection. The Williams Road intersection has also been identified to meet the warrants for installation of a separate left turn lane and this will require land acquisition along Red Schoolhouse Road to complete. The improvements at the Summit Road intersection would also include installation of sidewalks along the west side of Summit Road and installation of ADA compliant signalized pedestrian crosswalks.

2. Red Schoolhouse Road & GSP Southbound Off-Ramp (Sheet No. CP-3)

The GSP Southbound Off-Ramp intersection with Red Schoolhouse Road is a key intersection to the operation of the Red Schoolhouse Road corridor. Several improvements have been identified for this intersection that can be implemented on a phased basis or as a comprehensive plan for this intersection.

- Traffic Signal Upgrades – The existing traffic signal at this intersection should be upgraded to include new full actuation of all intersection approaches. The potential use of GridSmart or a similar traffic signal detection technology should be explored to improve the efficiency of the traffic signal operations. The traffic signal modification could also include a separate “overlap” phase for the right turn exiting

the ramp associated with a lagging northbound phase along Red Schoolhouse Road to address differing peak demands. These traffic signal modifications could be implemented without significant changes to the traffic signal equipment currently in place and would not prohibit other further improvements to the intersection. The use of the GridSmart or other similar system would allow for that system to be installed immediately and reprogrammed as needed as other further improvements are implemented at the intersection.

- Geometric Improvements – Widening of the GSP Off-Ramp to provide a double left turn is recommended to accommodate the significant traffic volumes experienced on this movement during peak hours. This would also require a widening of Red Schoolhouse Road south of the intersection to provide two receiving lanes for the double left turn lane exiting the parkway. Due to the location of the GSP Overpass, a lane transition on Red Schoolhouse Road would also be required in the interim condition. This additional lane could also be transitioned to future roadway widening under the GSP Overpass as which is discussed in further detail as part of the longer-term improvements identified below.

3. Red Schoolhouse Road & DeSalvo Court (Sheet No. CP-3)

The potential reconstruction of DeSalvo Court to serve as a right turn entry/right turn exit only intersection has been identified to address existing sight distance concerns for left turns exiting DeSalvo Court. This modification would also reduce conflicts and delays along the corridor between the GSP ramp intersections north and south of this location. Existing traffic currently turning left onto DeSalvo Court or turning left from DeSalvo Court would need to utilize an alternate route via Summit Road. It should be noted that the traffic that would be redirected due to this modification is less than 50 total vehicles during each of the peak hours. The construction of a jug-handle or roundabout south of the interchange area, which is discussed further as part of the longer-term improvements would also provide an alternate route for vehicles exiting DeSalvo Court for access to the GSP or to travel to Red Schoolhouse Road northbound.

4. Red Schoolhouse Road & GSP Northbound On-Ramp (Sheet No. CP-3)

As identified previously, the Northbound On-Ramp is another critical intersection along the corridor which impacts the overall operation of the corridor. The initial recommended improvement for this intersection is the widening of Red Schoolhouse Road and the On-Ramp in order to provide a separate northbound right turn lane with channelized right turn movement for vehicles turning right onto the GSP ramp. The widening of the GSP on-ramp would provide a two-lane on-ramp tapering to a single lane prior at the main line of the GSP. This would allow the northbound right turn lane movement from Red Schoolhouse road to access the ramp under a free movement. The separate right turn lane on Red Schoolhouse Road would also separate out this volume

from the opposing traffic for the southbound left turn movement making this southbound left turn movement onto the ramp an easier movement with less delay.

5. Red Schoolhouse Road “Jug-Handle”/Roundabout (Sheet No. CP-4, 4A, 4B)

As an interim measure to accommodate the heavy southbound left turn volume onto the GSP northbound on-ramp and to eliminate queuing of southbound through traffic on Red Schoolhouse Road as well as to reduce conflicts with the northbound right turn traffic, the construction of either a signalized “jug handle” and/or roundabout in the vicinity of the Sephar Lane intersection and/or in conjunction with the development of the Triangle properties commercial development could be pursued.

Sheet No. CP-4 diagrams the potential “jug-handle” alternative, which would be constructed south of Sephar Lane and be controlled by a new traffic signal aligning opposite the existing access to 240 Red Schoolhouse Road. The implementation of a jug-handle is considered to be a standard traffic and access management practice for addressing left turns on busy corridors. However, this option would require a significant amount of R.O.W. to be obtained from the Triangle Properties development. Note that there is also an existing 48” corrugated metal pipe culvert that would be crossed by the jug-handle roadway and would need to be further assessed for its ability to accommodate traffic loadings.

Sheets No. CP-4A and CP-4B provide two possible alternate sketch plans identifying the installation of a roundabout at the Sephar Lane intersection or at the location of the 240 Red Schoolhouse Road driveway. At either location, the current volume turning left onto the GSP northbound on-ramp would be able to utilize the roundabout to make a U-turn maneuver which would then allow these vehicles to access the ramp via a right turn movement. If installed at the Sephar Lane location, the roundabout would also be able to accommodate the traffic associated with the Corporate Commerce Park development. However, this location may have some complications with grading on the west side of Red Schoolhouse Road due to the embankment from the GSP. Access to and from the Chestnut Ridge Transportation facility may also be complicated by a roundabout at this location, but an internal access from this site to Sephar Lane could be considered as part of the Corporate Commerce Park development. .

A roundabout at the location of the 240 Red Schoolhouse Road driveway would provide the same benefits for the GSP northbound on-ramp left turn movements. This would also allow the roundabout to possibly accommodate another access to and from the Triangle Properties development.

The jug-handle and roundabout alternatives could generally be implemented with land dedication from the properties planned for development in this vicinity, minimizing the need for any additional R.O.W. acquisition. These alternatives would also address issues in the vicinity of the GSP interchange without the need to address some of the complications in the vicinity of the interchange, which are discussed in more detail below.

6. Red Schoolhouse Road Corridor Area Developments

Associated with access to each of the individual development proposals, access related improvements on Red Schoolhouse Road including turn lanes and potential signalization of intersections will be required to accommodate the traffic anticipated to be generated by each of the individual developments. The following is a summary of the access related improvements that should be considered in order to accommodate the traffic associated with each of the proposed future developments.

- Wellington Schools Campus (Sheet No. CP-2) – The Wellington Schools Campus access will intersect Red Schoolhouse Road aligning opposite the existing access driveway to the Promenade at Chestnut Ridge senior housing facility. The proposed access for this development is planned to consist of one (1) entry lane and two (2) exit lanes providing a shared left/through lane and a separate right turn lane. It is recommended that a northbound left turn lane be constructed along Red Schoolhouse Road at this location to accommodate traffic turning left into the Site. This widening would require dedication of land to accommodate the widening. Furthermore, an opposing left turn lane for access to the Promenade at Chestnut Ridge property should also be provided when the improvement is being constructed.

This development should also provide for the installation of sidewalks along the west side of Red Schoolhouse Road along the Site frontage and through the access intersection. Full width sidewalks should also be provided along the south side of Summit Road along the Site frontage to meet the existing sidewalk along Summit Road west of this property. The construction of these improvements and required land dedications should be coordinated as part of the Site Plan Approvals for this development. It should also be noted that the current Site Plan for this project identifies the construction of a stormwater detention pond in close proximity to Red Schoolhouse Road north of DeSalvo Court that will likely conflict with proposed improvements to Red Schoolhouse Road in this area including widening to accommodate a double left turn lane from the GSP Southbound off-ramp. The pond will likely have to be either reshaped or relocated.

Finally, the Site Plan for this project appears to identify a potential R.O.W. for the realignment of DeSalvo Court through the Site property to align opposite the GSP SB Off-Ramp. The potential of this modification to DeSalvo Court is discussed further below in relation to the potential longer-term improvements.

- Corporate Commerce Park Development (Sheet No. CP-4) – The Corporate Commerce Park Development is proposed to be accessed via a reconstruction of Sephar Lane. The location of this intersection is problematic due to its proximity to the GSP interchange and specifically the GSP northbound on-ramp. It is anticipated that left turn maneuvers at this location would experience similar delays to the left turn maneuvers at the GSP northbound on-ramp due to the volume of through traffic along Red Schoolhouse Road. A left turn lane would be needed to address this condition, however due to the proximity of this intersection to the GSP overpass, the construction of a left turn lane on Red Schoolhouse Road has significant challenges. The construction of a roundabout at this location, as noted above, would address the need for a left turn lane and be able to accommodate all traffic movements associated with this development. Alternatively, the implementation of a jug-handle or roundabout at the 420 Red Schoolhouse Road location would call for left turns at this driveway to be prohibited, however an alternate access management solution may need to be explored to accommodate vehicles leaving the site destined to the south if left turns were to be restricted (see further discussion below).
- Triangle Properties and Equestrian Estates Developments (Sheet No. CP-5) – The Triangle Properties and Equestrian Estates developments are proposed be accessed via new driveway connections to Red Schoolhouse Road to be located south of the 240 Red Schoolhouse Road property. The locations of the access driveways to each of these developments should be coordinated to align opposite each other to form a 4-way full movement intersection. Based on the volumes projected to be generated by each of these developments it is recommended that widening of Red Schoolhouse Road be implemented in order to provide a separate left turn lane in both the northbound and southbound direction at the newly formed intersection as well as a southbound right turn lane. Furthermore, the projected traffic volumes indicate that installation of a traffic signal will be required at this location. Dedication of R.O.W. will likely be required in order to accommodate these improvements. The construction of these improvements and required land dedications should be coordinated as part of the Site Plan Approvals for each of these projects.

LONG TERM IMPROVEMENTS

The following identifies longer-term improvements to accommodate additional projected traffic flows associated with the area developments and anticipated growth of traffic from other potential sources. These improvements will require potential land acquisitions, further regulatory approvals, investigation of wetlands, and other factors which will result in the need to implement these improvements over a longer term. The overall goal of these improvements is to combine the improvements identified above, which can be implemented in a shorter timeframe with these below longer-term improvements resulting in one comprehensive corridor improvement plan for Red Schoolhouse Road between the New York/New Jersey Stateline at the south end and Williams Road at the north end. The overall corridor improvement plan is identified on Sheet No. CP-6 with alternate variations identified on Sheet No. CP-7.

1. Additional Southbound Through Lane at GSP Overpass (Sheet No. CP-7)

As indicated previously (see Section II.B and EXHIBIT II-2) an additional southbound through lane was originally contemplated as a future possibility as part of the NYSTA plans for Red Schoolhouse Road at the GSP Overpass (See also APPENDIX A – Sheet 56). Utilizing this as a basis for widening of Red Schoolhouse Road, Sheet No. CP-7 depicts the construction of a new southbound through lane through the interchange area to the west of the center bridge piers. This would also require reconstruction of the existing sidewalk that is currently present on the west side of the center bridge piers. However, this would also allow for the construction of a separate designated pedestrian/bicycle shared use path through the interchange area. The GSP Overpass bridge center piers would remain within a raised median type area. It should be noted that initial discussion of this potential alternative with the NYSTA as well as RCHD indicated that there may be potential safety concerns associated with this alternate due to the position of the bridge piers within the roadway. These would have to be reviewed further with each of these Agencies if this alternative was to be pursued further and appropriate median barrier treatment would be involved.

2. Southbound Left Turn Lane at GSP Northbound On-Ramp (Drawing No. CP-7)

In conjunction with the above, the construction a separate southbound through lane on Red Schoolhouse Road to the west of the GSP Overpass bridge center piers would allow for the existing southbound through lane to be converted to operate as a separate left turn lane for traffic entering onto the GSP northbound on-ramp.

3. Potential DeSalvo Court Realignment

As part of the Wellington Schools Campus development, a potential 50 ft. wide R.O.W. has been identified for the possible realignment DeSalvo Court opposite the GSP southbound off-ramp. However, based on the Wellington Schools Campus Site Plans

(See excerpt below, EXHIBIT IV-1) this R.O.W. would traverse approximately 1,500 sq. ft. of wetlands and/or wetland adjacent area. Furthermore, the location of this R.O.W. would have to be explored further to ensure that there are no access control restrictions in the ramp vicinity that would prohibit this connect. The alignment of this R.O.W. would also need to be reviewed to confirm that it would allow for construction of the relocated roadway relative to minimum radii, sight distance, vertical alignment and grading. If this realignment was accomplished, a separate left turn lane northbound on Red Schoolhouse Road for vehicles turning onto DeSalvo Court would also have to be incorporated into the overall plan.

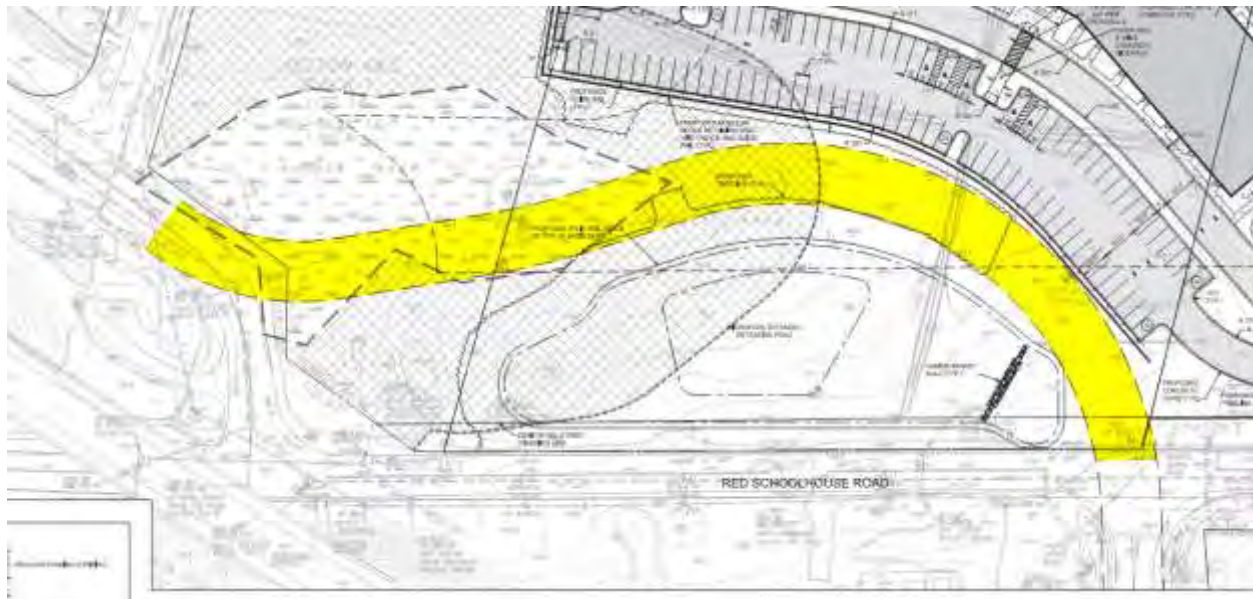


EXHIBIT IV-1 – POSSIBLE DESALVO COURT REALIGNMENT

4. Sephar Lane Access Management (Sheet No. CP-5 & CP-6)

As part of the development of the Corporate Commerce Park and any redevelopment of adjacent properties, it is recommended that a new connector road between Sephar Lane and the future significant intersection serving the Triangle Properties and Equestrian Estates Development be explored. This access management alternative would limit the number of signalized intersections along Red Schoolhouse Road and reduce vehicle conflicts in the vicinity of the GSP interchange area.

PEDESTRIAN AND CYCLIST IMPROVEMENTS

As discussed previously in Section II.A, limited pedestrian facilities are provided along Red Schoolhouse Road in the immediate vicinity of the GSP interchange. Outside of this area there are no other pedestrian or bicycle accommodations that currently exist along the roadway. Summit Road has an existing sidewalk along the south side of the roadway for its entire length between Red Schoolhouse Road and NYS Route 45. This sidewalk consists of a combination of concrete sidewalks and asphalt sidewalks, some of which should be improved to meet current standards for ADA Accessibility. As part of overall improvements and in association with each proposed development in the area, a sidewalk network should be completed to accommodate pedestrian movements to and from the various residential areas, the access to the commercial facilities, as well as for walkability to the various existing and proposed school campuses.

Along Summit Road, the existing sidewalk closest to Red Schoolhouse Road is an asphalt path which should be upgraded to a consistent width and reconstructed consistent with ADA requirements. A sidewalk along Red Schoolhouse Road from Summit Road continuing south connecting to the existing sidewalk in the vicinity of the GSP interchange and connecting further south, at least up to the proposed Triangle Properties/Equestrian Estates intersection, should be implemented. The sidewalk along Red Schoolhouse Road should also either extend from Summit Road north to Williams Road with a crosswalk connecting to Williams Road with possible signalization of this crosswalk to allow pedestrian movements to and from the east side of Red Schoolhouse Road. This would provide pedestrian access to residential areas along Williams Road. R.O.W. dedication/acquisition will be required to accommodate this sidewalk along with the other recommended improvements along Red Schoolhouse Road. Acquisition of this R.O.W. should be coordinated as part of the Site Plan approval process for the individual proposed developments along the corridor, with adequate areas set aside for both road widening and sidewalk provisions.

Accommodations for bicycles should also be provided along the corridor associated with any proposed improvements. The inclusion of a dedicated bicycle or shared use pedestrian/bicycle path in association with any of the potential improvements identified above is likely to be cost prohibitive and would require additional land dedication/acquisition. Furthermore, based on the very low volume of bicyclists observed within the study area, a dedicated facility is not warranted at this time. However, all of the above identified improvements could include the provision of minimum 5 ft. wide shoulders along Red Schoolhouse Road, which could be utilized by bicyclists along the roadway.

COST CONSIDERATIONS

(Table No. 10; APPENDIX C)

For each of the above described improvements, budgetary cost estimates have been prepared based on the conceptual improvement plans. These cost estimates, which are summarized in Table No. 10 contained in APPENDIX C, are based on NYSDOT Bid Price data and costs for similar type improvements recently completed or under construction in the New York Hudson Valley region.. The identified costs include all construction related costs for each of the identified improvements, however any required land acquisition costs are not included in these estimates (see further discussion of Land Dedication and Land Acquisition below). It should also be noted that these estimates would need to be refined based on detailed designs to be completed for the proposed improvements but represent the typical range for budgeting purposes.

OTHER CONSIDERATIONS

1. Land Dedication/Acquisition

As discussed above, many of the recommended roadway improvements along Red Schoolhouse Road will require additional lands from properties along the corridor in order to complete the roadway widening, traffic signal and/or roundabout installations and to provide pedestrian/bicycle accommodations. A significant portion of the roadway frontage along both the east and west side of Red Schoolhouse Road is controlled by Applicants of the projects that are the subject of this study. A summary of the roadway frontage controlled by each property is identified below.

TABLE IV-4 – SUMMARY OF PROJECT AREA SITE FRONTAGE			
PROPERTY	SITE FRONTAGE		
	ROADWAY	DISTANCE	SIDE
WELLINGTON SCHOOLS CAMPUS	RED SCHOOLHOUSE ROAD	1590 FT.	WEST
	SUMMIT ROAD	715 FT.	SOUTH
CORPORATE COMMERCE PARK	RED SCHOOLHOUSE ROAD	245 FT.	EAST
	GSP ON-RAMP	1390 FT.	SOUTH
TRIANGLE PROPERTIES	RED SCHOOLHOUSE ROAD	1300 FT.	WEST
EQUESTRIAN ESTATES	RED SCHOOLHOUSE ROAD	1215 FT.	EAST
FUTURE HORSE FARM	RED SCHOOLHOUSE ROAD	400 FT.	EAST
NOTES:			
SITE FRONTAGE DISTANCES LISTED ARE APPROXIMATE BASED ON AVAILABLE INFORMATION FOR THE ROCKLAND COUNT PLANNING DEPARMENT GIS BASE MAP APPLICATION			

In addition to the above, the area between the DeSalvo Court and Sephar Lane on the west side of Red School House Road as well as the areas between the GSP Southbound Off-Ramp and the GSP Northbound On-Ramp on the east side of the roadway is

currently controlled by the State of New York under the jurisdiction of the NYSTA. This encompass approximately 740 ft. of frontage on the west side of Red Schoolhouse Road and approximately 1275 ft. on the east side of the roadway.

Other properties along the roadway that may require a land acquisition in order to complete the full corridor improvements include the following:

- 125 Red Schoolhouse Road
- 7 Williams Road
- 146 Red Schoolhouse Road
- 168 Red Schoolhouse Road (Promenade at Chestnut Ridge)
- 230 Red Schoolhouse Road (Chestnut Ridge Transportation Inc.)
- 279 Red Schoolhouse Road (Best Friends Pet Hotel)

2. RCHD & NYSTA Coordination

RCHD and NYSTA each have a controlling interest in the Red Schoolhouse Road corridor. RCHD owns and maintains Red Schoolhouse Road while the NYSTA owns the R.O.W. that Red Schoolhouse Road traverses in the vicinity of the GSP interchange. The NYSTA also owns and maintains the GSP ramp intersections with Red Schoolhouse Road as well as the GSP overpass bridge. It should also be noted that based on record plan information the NYSDOT installed the traffic signal at the intersection of Red Schoolhouse Road and the GSP Southbound Off-Ramp. However, based on discussions with NYSDOT, NYSTA and RCHD none of these three Agencies own or maintain this traffic signal, which would leave ownership and maintenance of the traffic signal with the Village of Chestnut Ridge.

Maser Consulting conducted meetings with RCHD and NYSTA to present preliminary findings of this study and obtain initial input from both agencies. The following are some of the noted items from these conversations with each Agency.

- All proposed developments along Red Schoolhouse Road that would make modifications to the roadway, including construction of a new driveway connection would be required to obtain approval from the RCHD for the proposed modifications as well as a RCHD Work Permit for construction of the modifications.
- RCHD would require the roadway to be upgraded to a curbed section with sidewalk as improvements and new developments are completed.
- RCHD has no current plans for improvements to Red Schoolhouse Road.

- NYSTA indicated a potential concern with the proximity of the proposed Wellington Schools driveway to the GSP Southbound Off-Ramp due to potential queuing concerns from turning vehicles entering the Wellington Schools driveway. This would be alleviated by the construction of a left turn lane at this location.
- NYSTA has no current plans for modifications/upgrades to the GSP interchange at Red Schoolhouse Road.
- NYSTA indicated that the proposed improvements in the vicinity of the interchange are consistent with general traffic engineering and maintenance practices.
- As discussed previously NYSTA indicated some potential safety concerns with construction of a new roadway on the west side of the existing GSP overpass bridge piers due to the location of the piers and need to protect traffic from the bridge piers. They also noted that although this potential roadway was shown on the record plans, which were developed in 1956, changes in design standards since that time may preclude the construction of a new roadway on the west side of the bridge piers.

V. SUMMARY AND CONCLUSIONS

The analysis of existing and future traffic conditions indicates that improvements will be required at various intersections along the Red Schoolhouse Road corridor. In order to complete these improvements land dedication and/or acquisition will be required along much of the corridor. As each of the developments proposed in the corridor proceed through the approval process, individual intersection improvements should be completed to address access related concerns for each of those developments as well as capacity constraints that may be created by those developments at other remote locations. Adequate land dedications should also be provided by each of these developments to allow for other future traffic improvements to be completed along the corridor as additional funding may become available. As discussed in detail above, the identified improvements progressed in a phased manner (“building blocks” approach) with each individual improvement working towards the goal of a complete overall corridor improvement.



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX A

ROADWAY INVENTORY DATA

New York State Department of Transportation Local Roads Listing

**Municipality: Village of Chestnut Ridge
Rockland County**

**Geocode: 1568
NYSDOT Region: 8**

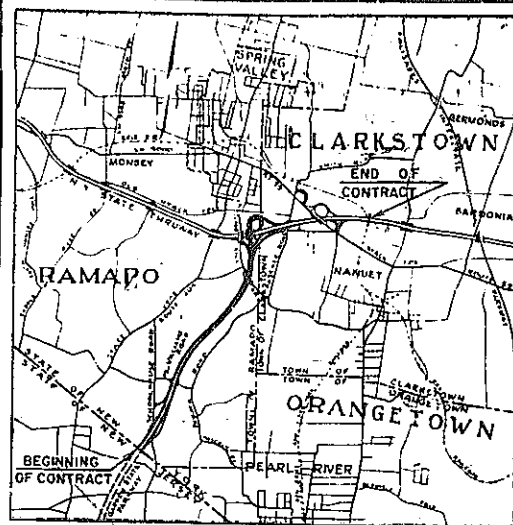
Jurisdiction: Village

<u>DOT ID</u>	<u>State Route</u>	<u>County Road#</u>	<u>Road/ Street Name</u>	<u>Start of Section</u>	<u>End of Section</u>	<u>Beg MP</u>	<u>End MP</u>	<u>Length</u>	<u>DIV Hwy</u>	<u>No. of Lanes</u>	<u>One Way</u>	<u>Pvt Type</u>	<u>Pvt Width</u>	<u>Shldr Width</u>	<u>Med Type</u>	<u>Med Width</u>	<u>Func Class</u>	<u>NHS</u>
196631			ULMAN TERRACE	CANNAN RD	CAPRICORN LA	0.00	0.24	0.24		2		A	29	0	None		19	
196632			UNICORN STREET	CANNAN RD	END	0.00	0.05	0.05		2		A	30	0	None		19	
196633			VALLEY CT	GOTTLIEB DR	CUL DE SAC	0.00	0.07	0.07		2		A	30	0	None		19	
196634			WALLACE DRIVE	GROTKE RD	APPLEDALE LA	0.00	0.36	0.36		2		A	30	0	None		19	
196635			WATERMILL RD	SOUTH PASCACK	DEMAREST RD	0.00	0.11	0.11		2		A	29	0	None		19	
196636			WEISS TERRACE	SCOTLAND RD	CUL DE SAC	0.00	0.13	0.13		2		A	30	0	None		19	
196637			WHITEFIELD ROAD	HALLER CRES	HALLER CRES	0.00	0.12	0.12		2		A	30	0	None		19	
196638			WILLIAMS ROAD	RED SCHOOLHOUSE		0.00	0.19	0.19		2		A	20	0	None		16	
196638			WILLIAMS ROAD			0.19	0.21	0.02		2		A	23	0	None		16	
196638			WILLIAMS ROAD		PASCACK RD	0.21	0.41	0.20		2		A	20	0	None		16	
196639			WILSHIRE DRIVE	SUMMIT RD	DE SALVO CT	0.00	0.71	0.71		2		A	30	0	None		19	
196640			WINDSOR TERRACE	ACKERTOWN RD	CUL DE SAC	0.00	0.06	0.06		2		A	25	0	None		19	
196641			WREN STREET	BLUE JAY ST	END	0.00	0.10	0.10		2		A	30	0	None		19	
196642			ZACHARY CT	OLD NYACK TPKE	CUL DE SAC	0.00	0.10	0.10		2		A	27	0	None		19	
								Centerline Miles Total:	35.99									
								Lane-Miles Total:	71.98									

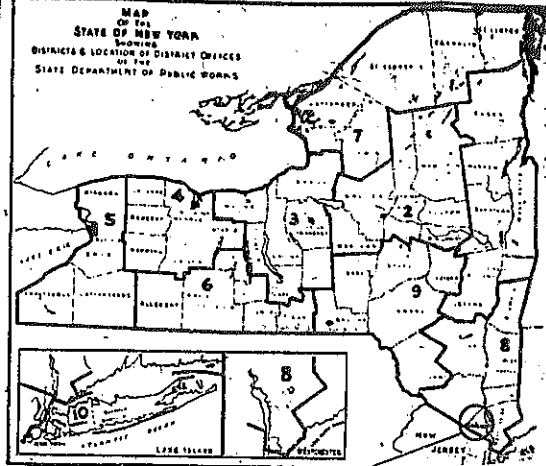
Jurisdiction: County County-maintained roads are shown below for reference.

<u>DOT ID</u>	<u>State Route</u>	<u>County Road#</u>	<u>Road/ Street Name</u>	<u>Start of Section</u>	<u>End of Section</u>	<u>Beg MP</u>	<u>End MP</u>	<u>Length</u>	<u>DIV Hwy</u>	<u>No. of Lanes</u>	<u>One Way</u>	<u>Pvt Type</u>	<u>Pvt Width</u>	<u>Shldr Width</u>	<u>Med Type</u>	<u>Med Width</u>	<u>Func Class</u>	<u>NHS</u>
193281		71	HUNGRY HOLLW RD	RT 45	OLD NYACK TPKE	0.00	1.52	1.52		2		A	20	0	None		17	
193272		52	OLD NYACK TPKE		CHESTNUT RIDGE	0.82	1.27	0.45		2		A	20	0	None		16	
193266		41	RED SCHOOLHOUSE	NJ ST LN	GARDEN STATE PK	0.00	0.48	0.48		2		A	20	5	None		19	
193266		41	RED SCHOOLHOUSE	GARDEN STATE PK	DESALYO CT	0.48	0.49	0.01		2		A	20	5	None		16	
193266		41	RED SCHOOLHOUSE	DESALYO CT	RT45	0.49	1.43	0.94		2		A	20	5	None		16	
								Centerline Miles Total:	3.40									
								Lane-Miles Total:	6.80									

Station	Func. Class	End Mile Point	Section Length	Road Name	Beginning Description	End Description	2019 Estimate		Previous Counts		Previous Counts		Previous Counts			
							AADT	% Trucks	YEAR	AADT	YEAR	AADT	YEAR	AADT	YEAR	AADT
85_8027	16	0023	0023	CENTRAL AVE	PIPETOWN HL RD	OLD NYACK TPKE	9467	3.7	2019	9467	2014	9008	2011	9238		
				Road Number CR38	County 087 Rockland	Region 08										
85_8028	17	0104	0104	BRADLEY PKWY	GREENBUSH RD	N TWEED BLVD	1863	2.4	2019	1863	2014	1441	2011	1602		
85_8029	17	0136	0032	BRADLEY HILL RD	N TWEED BLVD	SO NYACK VL	802	3.6	2018	802	2014	781	2011	873		
				Road Number CR41	County 087 Rockland	Region 08										
85_5101	19	0048	0048	RED SCHOOLHOUSE	NJ ST LN	GARDEN STATE PKWY	12040	5	2015	12157						
85_8030	16	0143	0095	RED SCHOOLHOUSE	GARDEN STATE PKWY	RT45	7894	7.7	2016	7928	2010	7048				
				Road Number CR42	County 087 Rockland	Region 08										
85_2113	16	0077	0077	TOWN LINE RD	SICKLETOWN RD	BUTTERNUT LA	5389	3.7	2018	5397	2014	5434	2008	5427		
85_6011	16	0198	0121	TOWNLINE RD	BUTTERNUT LA	MIDDLETOWN RD	6166	3.7	2015	6201	2012	6505	2009	4044		
				Road Number CR44	County 087 Rockland	Region 08										
85_2046	17	0059	0059	GREEN RD	WESTERN HWY	SICKLETOWN RD	560	6.3	2018	560	2014	584	2011	648		
				Road Number CR46	County 087 Rockland	Region 08										
85_6047	16	0108	0108	CONVENT RD	OLD MIDLTLN RD	EP PASCACK RD	7932	3.4	2019	7932	2014	7726	2011	7769	2008	9589
				Road Number CR47	County 087 Rockland	Region 08										
85_8072	16	0010	0010	THIELLS MT IVY	RT 202	PIP RAMP	14252	3.7	2018	14272	2011	15834				
85_6070	17	0030	0030	RESERVOIR RD	NEW RT 210	W MAIN ST	2397	4.4	2019	2397	2014	2441	2011	2342		
85_8074	16	0069	0069	HAMMOND RD	SUFFERN LA	WILLOW GR RD	4627	5.8	2018	4634	2014	3904	2011	4560		
85_8076	16	0079	0079	THIELLS RD	FILORS LANE	NEW RT 210	4858	3.7	2018	4865	2011	3151				
85_8073	16	0209	0199	THIELLS MT IVY	PIP RAMP	LETCHWORTH VILLAGE RD	7336	3.1	2018	7346	2014	6859	2011	7295		
				Road Number CR51	County 087 Rockland	Region 08										
85_8031	16	0118	0118	SANATORIUM RD	NEW HEMPSTEAD RD	RT 45	3376	6.4	2019	3376	2016	2901	2013	2812	2010	3016
				Road Number CR52	County 087 Rockland	Region 08										
85_8035	19	0010	0010	OLD NYACK TPKE	DEAD END	S PASCACK RD	422	5	2011	430						
85_8032	16	0052	0052	OLD NYACK TPKE	SADDLE RIVER R	HUNGRY HOLLW R	9788	5.7	2019	9788	2016	9293	2013	8668	2010	8225
85_8033	16	0127	0075	OLD NYACK TPKE	HUNGRY HOLLW R	CHESTNUT RIDGE VL	7645	3.7	2018	7656	2014	11065	2011	11282		



LOCATION PLAN
Scale: 1" = 4500'



LOCATION OF WORK

NEW YORK STATE THRUWAY AUTHORITY
PLANS FOR CONSTRUCTING A PORTION OF THE
NEW YORK STATE THRUWAY
HUDSON SECTION

CONNECTION TO GARDEN STATE PARKWAY
SUBDIVISION 8A ROCKLAND COUNTY
 From Station N.B. 0+07.8 to Station "E" 6 "E" 146+05.2
 A Length of 2.764 Miles of which 2.685 Miles are in the Town of Ramapo and 0.079 Mile in the Town of Clarkstown
AND FOR CONSTRUCTING

- RAMP "E"**
 A Length of 0.287 Mile in the Town of Clarkstown and
 A Length of 0.185 Mile in the Town of Ramapo
- RAMP "F"**
 A Length of 0.425 Mile in the Town of Clarkstown
- RAMP "A"**
 A Length of 0.078 Mile in the Town of Ramapo
- RAMP "B"**
 A Length of 0.220 Mile in the Town of Ramapo
- RAMP "C"**
 A Length of 0.478 Mile in the Town of Ramapo
- RAMP "D"**
 A Length of 0.485 Mile in the Town of Ramapo and
 A Length of 0.478 Mile in the Town of Clarkstown
- RAMP "G"**
 A Length of 0.373 Mile in the Town of Clarkstown
- RAMP "H"**
 A Length of 0.423 Mile in the Town of Clarkstown
- RAMP "L"**
 A Length of 0.032 Mile in the Town of Ramapo and
 A Length of 0.220 Mile in the Town of Clarkstown
A COMBINED LENGTH OF 3.833 MILES
- AND FOR CONSTRUCTING PORTIONS OF**
 Schoolhouse Road, a Length of 0.114 Mile
 Scotland Hill Road, a Length of 0.197 Mile
 Scotland Hill Road, (at RAMP "C") a Length of 0.022 Mile
 Road V, a Length of 0.130 Mile
A TOTAL LENGTH OF 0.757 MILE IN THE TOWN OF RAMAPO AND
A TOTAL LENGTH OF 0.130 MILE IN THE TOWN OF CLARKSTOWN
A COMBINED LENGTH OF 0.887 MILE
 SERVICE ROAD AT SCHOOLHOUSE ROAD, A LENGTH OF 0.327 MI.
 SERVICE ROAD AT SCOTLAND HILL ROAD, A LENGTH OF 0.097 MI.

STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N. Y.	1956	1	

NEW YORK STATE THRUWAY - HUDSON SECTION
 CONNECTION TO GARDEN STATE PARKWAY
 SUBDIVISION 8A ROCKLAND COUNTY

- TYPE OF CONSTRUCTION**
- | | |
|-----------------------------|-------------|
| Reinf. Cem. Conc. Pav't | 6.397 Miles |
| Asphalt Concrete - Optional | 0.463 Mile |
| Miscellaneous Work | |
- Including
1. H.G.S. N.B. Thruway over Schoolhouse Rd. Prestressed Conc., 4 Spans, 1 @ 73'-3 1/2", 1 @ 74'-0 3/4", 1 @ 75'-0 3/4", 8 @ 58'-3"
 2. H.G.S. S.B. Thruway over Schoolhouse Rd. Prestressed Conc., 4 Spans, 1 @ 74'-3 3/4", 1 @ 72'-5 1/4", 1 @ 73'-6 3/4", 8 @ 74'-3 3/4"
 3. H.G.S. N.B. Thruway over Williams Road. Prestressed Conc., 3 Spans, 1 @ 41'-6 3/4", 1 @ 45'-0 3/4", and 1 @ 37'-10 1/2"
 4. H.G.S. S.B. Thruway over Williams Road, Prestressed Conc., 3 Spans, 1 @ 42'-2", 1 @ 45'-0 3/4", and 1 @ 38'-9"
 5. H.G.S. Scotland Hill Road over Thruway, Prestressed Conc., 5 Spans, 1 @ 33'-3", 2 @ 64'-2 3/4", 1 @ 66'-3" & 1 @ 52'-10"
 6. H.G.S. Thruway Connection over Exist. Thruway, Prestressed Conc., 4 Spans, 1 @ 65'-7 1/2", 1 @ 59'-5", 1 @ 66'-4 1/2" and 1 @ 62'-3"
 7. H.G.S. Scotland Hill Road over RAMP "C" (Extension of existing Bridge) Composite I Beam; 2 Spans, 1 @ 44'-3 1/2" varies to 57'-6 1/2" and 1 @ 42'-10"
 8. H.G.S. Thruway over Pascoack Road (Widening of existing Bridge) Composite I Beam, 3 Spans, 1 @ 54'-1 1/2", 1 @ 81'-2 1/4" and 1 @ 72'-11 3/8"

STANDARD STRUCTURE SHEETS
 46-4; 56-1; 51-27; 50-34; 51-3; 51-13A; 56-20; 51-21; 52-43; 53-11A; 53-11R; 53-11W; 54-45; 55-7; 55-17A; 55-17B; 56-17C; 55-17DR; 55-17E; 54-9; 53-41R; 54-18P; 56-6; 56-48; 56-49; 53-41.

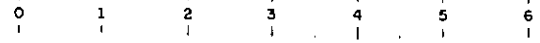
All work contemplated under this contract to be covered by and in conformity with the specifications adopted January 2, 1951, except as modified on these plans and in the Itemized Proposal.

PREPARED AND RECOMMENDED
 BY: **MADIGAN-HYLAND**
 CONSULTING ENGINEERS
m h DATE: JUNE 29, 1956

APPROVED DATE: JULY 2, 1956
NEW YORK STATE THRUWAY AUTHORITY
 B. D. TALLAMY, CHAIRMAN
 BY: C. H. LANG
C. H. Lang
 CHIEF ENGINEER

RECORD DRAWINGS

IT



DATE OF CONTRACT: JULY 26, 1956	TYPE	MEASURED LENGTH	LENGTH IN MILES	THICKNESS OF TOP	WIDTH		SQ. FT. PAVEMENT	CU YDS. OF TOP	MATERIALS			CONTRACTOR GEO. M. BREWSTER & SON, INC.
					MET. L	ROADWAY			SAND	STONE	CEMENT	
DATE OF STARTING: AUG. 7, 1956	CONCRETE MIX 1-1 1/4 : 3 1/2	19,184 FT.	3.633		2 @ 25'	2 @ 40.5'	1,073,324		WARD PAVEMENTS 84 P-117	SUFFERN STONE CO. 33 P-42	ALPHA LEHIGH N. AMERICAN	ENG'R. IN CHARGE MADIGAN - HYLAND
DATE OF COMPLETION AUG. 22, 1956	BIT. MAC'UM BRICK	4,684 FT. NONE	0.887	1 in.				40	SCALE BROS. 88 P-73	SUFFERN STONE CO. 33 P-42	CITIES SERVICE CO.	DIST. ENG'R. <i>[Signature]</i>
TOTALS												

METAL REINFORCEMENT FOR PAVE., KING MESH SLAB LENGTH 10.0 FT. FURNISHED BY AMERICAN STEEL & WIRE CO. JOINT SUPPORTS ACME STD. STRUCT. SHEET NO. 55-48, 55-118

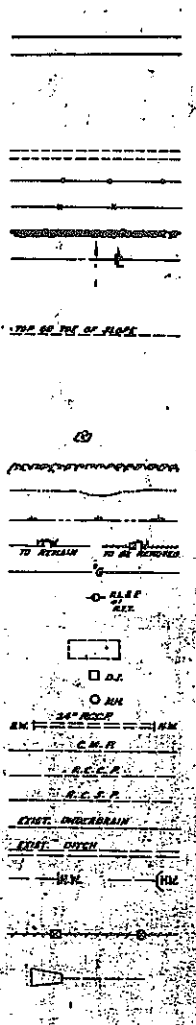
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 5 " " II
 6 " " III
 7 DELINEATOR DETAILS
 8 MISCELLANEOUS DETAILS
 9 DRAINAGE DETAILS I
 10 " " II
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 11 ALIGNMENT TABLE I
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 13 TABLE OF LENGTHS
 14 EARTHWORK TABLE AND SUMMARY
 15 MISCELLANEOUS TABLES I
 16 " " II
 17 DRAINAGE AND STRUCTURES I
 18 " " II
 19 " " III & MISC. DRAINAGE DETAILS
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 24 " " 29+10 " " 44+90, WILLIAMS RD. RAMPS "A" & "B"
 25 " " 44+90 " " 61+00
 26 " " 61+00 " " 77+30
 27 " " 77+30 " " 93+60, RAMP "D"
 28 " " 93+60 " " 109+00, RAMP "D", SCOTLAND HILL RD.
 29 " " 109+00 " " 124+90, RAMPS "C", "D", "E", "F" & "L"
 30 " " 124+90 " " 133+93, RAMP "C"
 31 " " 124+90 " " 134+90, RAMPS "D", "E", "F" & "L"
 32 " " 134+90 " " 154+80, RAMPS "E" & "F"
 33 " " 149+30 " " 165+80, RAMPS "F" & "L"
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 44 PROFILE RAMP "D"
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 49 " " PASCACK RD., WILLIAMS RD. & STATE HIGHWAY 689
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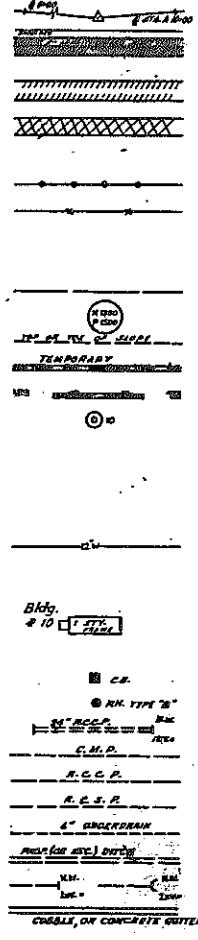
EXISTING



LEGEND

DE DELINEATOR FOR CONSTRUCTION LAYOUT
 CONCRETE PAVEMENT
 PERMANENT ASPHALT CONCRETE PAVEMENT
 TEMPORARY
 LANE OR ROAD
 GUIDE RAIL
 FENCE
 STONE WALL
 PROPERTY LINE
 R.O.W. LINE
 MAP & PARCEL NUMBER OF TAKING
 APPROXIMATE LIMIT OF GRADING
 TEMPORARY BARRICADE
 PERMANENT
 BORING AND NUMBER
 TREE
 EDGE OF WOODED AREA
 STREAM OR CHANNEL
 MARSH
 WATER MAIN (BY OTHERS)
 GAS MAIN & SIZE
 POLE
 BUILDING TO BE DEMOLISHED
 EXIST. FOUNDATION TO BE DEMOLISHED - ITEM 289
 CATCH BASIN OR DROP INLET
 MANHOLE
 CULVERT WITH HEADWALLS
 CORRUGATED METAL PIPE
 REINFORCED CONCRETE CULVERT PIPE
 SEWER PIPE
 UNDERDRAIN
 DITCH
 HEADWALL
 GUTTER
 DROP INLET, MANHOLE AND/OR PIPE TO BE REMOVED
 CONCRETE APRON

PROPOSED



ADDITIONAL DRAWINGS

- 105A PASCACK RD. BRIDGE WIDENING - REVISION OF FOUNDATION
- 52A GENERAL PLAN STA. 29+10 TO STA. 44+90
- 52B " " " " " " " " " " " "
- 52C " " " " " " " " " " " "
- 52D " " " " " " " " " " " "
- 52E " " " " " " " " " " " "
- 52F " " " " " " " " " " " "
- 52G " " " " " " " " " " " "
- 52H " " " " " " " " " " " "
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- 54 " " " " " " " " " " " "
- 55 " " " " " " " " " " " "
- 56 " " " " " " " " " " " "
- 57 " " " " " " " " " " " "
- 58 " " " " " " " " " " " "
- 59 " " " " " " " " " " " "
- 60 " " " " " " " " " " " "
- 61 " " " " " " " " " " " "
- 62 " " " " " " " " " " " "
- 63 PLAN & PROFILE OF SERVICE RD. AT SCOTLAND HILL RD.
- 63A " " " " " " " " " " " "
- 63B " " " " " " " " " " " "
- 63C SCOTLAND HILL RD. REVISED GRADING AT EAST ABUT.
- 63D PASCACK RD. BRIDGE - REVISION OF DRAINAGE
- 64 WILLIAMS RD. 54" R.C.C.P. CULVERT
- 64A REVISED DELINEATOR LAYOUT

STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N. Y.	1966	2	12

NEW YORK STATE THRUWAY - HUDSON SECTION
 CONNECTION TO GARDEN STATE PARKWAY
 SUBDIVISION 8A ROCKLAND COUNTY

GENERAL NOTES

- 1 - Datum is mean sea level at Sandy Hook
- 2 - Coordinates shown are referred to the New York State Plane Coordinate System (There is a slight difference in the coordinate system of the existing Thruway due to an adjustment during construction of the existing Thruway)
- 3 - At all locations marked LIMIT OF WORK the Contractor shall meet the existing conditions in both line and grade.
- 4 - The Contractor will be required to fill with concrete meeting the requirements of Spm 47M6 as specified in this contract the holes left in the concrete pavement, after the test cores have been drilled. No specific payment will be made for this work, but the cost thereof shall be included in the price bid for concrete paving.
- 5 - R.O.W. monuments to be placed at all angle points, at 500 feet maximum spacing and at summits where existing surface would restrict the sight from one monument to another and as ordered by the Engineer. Low type R.O.W. markers to be used in developed areas as directed by the Engineer.
- 6 - Tapering pavement slabs shall continue for a minimum of 2 feet in width, or to a transverse joint as directed by the Engineer. The adjacent slab shall be widened to continue the taper.

2R

LIST OF DRAWINGS
LEGEND & GENERAL NOTES

MADIGAN - HYLAND ENGINEERS NEW YORK CITY	IN CHARGE OF W. J. Spontoni
DRAWN BY E. J. K.	TRACED BY W. J. S.
CHECKED BY E. J. K.	SCALE

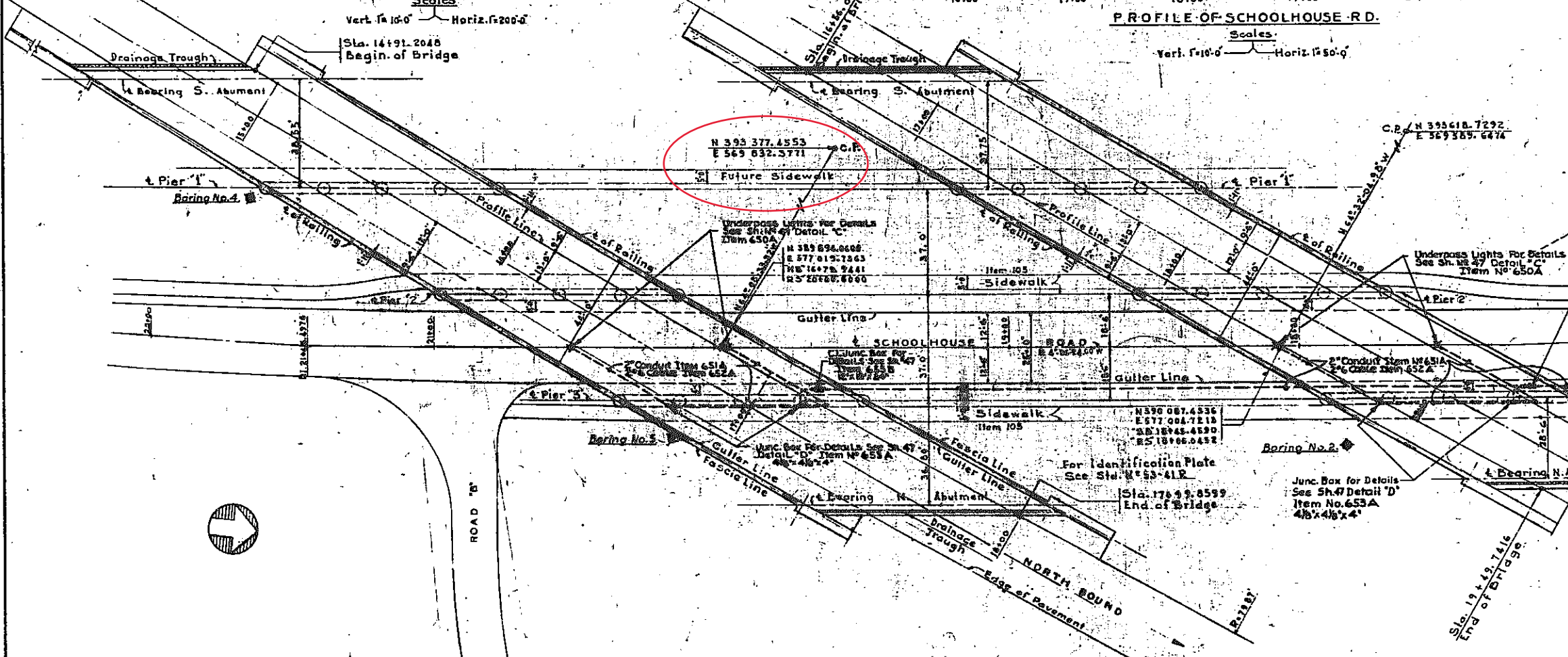
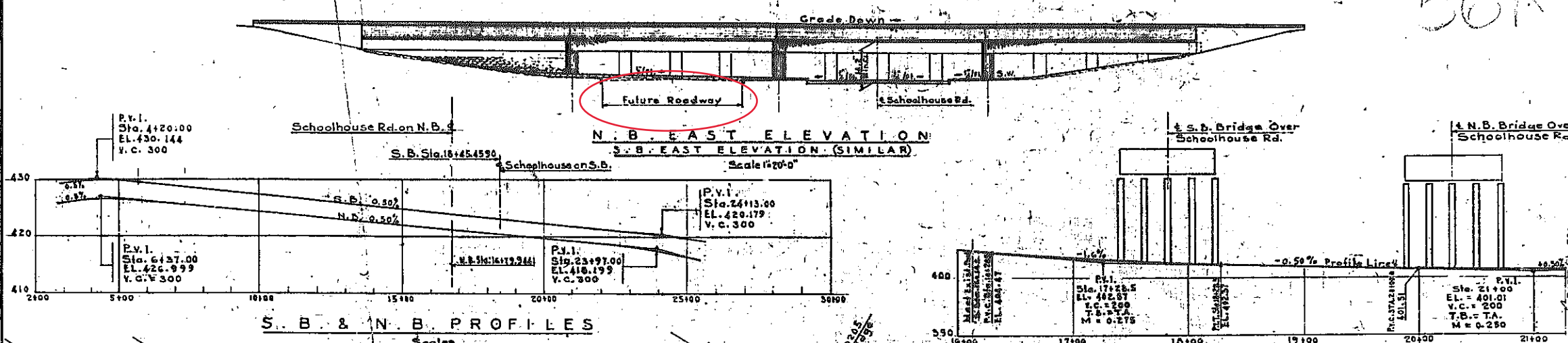
RECOMMENDED BY
[Signature]

STATE	FISCAL YER.	SHEET NO.	TOTAL SHEETS
N.Y.	1956	56	112

NEW YORK STATE THRUWAY - HUDSON SECTION
CONNECTION TO GARDEN STATE PARKWAY
SUBDIVISION BA ROCKLAND COUNTY

56R

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM	UNIT	TOTAL
			NEAT ROUND
55	Trench Culvert and Bridge Excavation	C.Y.	1,418 172,100
107	Pipe Underdrain 6"	L.F.	800 850
13	Cast Iron Pipe 6"	L.F.	32 30
15-2	Portland Cement-Type 2	Bbl.	1943 1950
15-2A	Portland Cement-Type 2A	Bbl.	5,851 5690
18S	Class 1A Concrete	C.Y.	1,707 1,800
20S	Class 1 Concrete	C.Y.	1,229 1,280
24A	Bagged Screened Gravel	C.Y.	712 220
25FS	Steel Fabric Reinforcing	S.Y.	2840 3000
28S	Bar Reinforcement for Structures	Lbs.	426,374 427,000
29S	Structural Steel	Lbs.	30,800 31,000
37LW	Aluminum Alloy Rolling	L.F.	15,883 15,883
47B1	Cement Concrete Pavement	C.Y.	313 320
76S	Maintenance & Protection of Traffic	L.S.	224 224
79	Dry Stone Paving	S.Y.	224 224
2EF	Selected Fill	C.Y.	19,500 19,500
85C	Cast-in-Place Concrete Piles	L.F.	2744 5,000
87	Furnish Equip. for Driving Piles	L.S.	13,000 13,000
30	Misc. Metals	Lbs.	13,000 13,000
93S	Granite Curb	L.F.	1,383 1,383
121	Top Soil Replace from Stockpile	C.Y.	407 550
119	Run of Bank Gravel Fill	C.Y.	1,433 1430
123	Seeding	Acre	1.50 1.50
124	Sodding	S.Y.	10.50 10.50
219	Concrete Admixture	Lbs.	10,858 11,500
220	Air Entraining Agent	Gal.	22 25
550A	Prestressed Concr. Stringers	N.B. Ea.	20 40
550B	"	S.B. Ea.	10 20
551A	Post Tensioning	N.B. Ea.	10 20
551B	"	S.B. Ea.	10 20
14A	12" Reinf. Conc. Culvert Pipe	L.F.	195 110
650L	Underpass Luminare and Fixture Box	L.F.	4 4
651A	2" Galvanized Steel Conduit	L.F.	300 300
652A	4" GALV. RING, GOOY Cable	L.F.	200 200
653A	48" x 48" x 4" Junc. Box	L.F.	1 1
655	2" Bronze Hose	L.F.	116 116



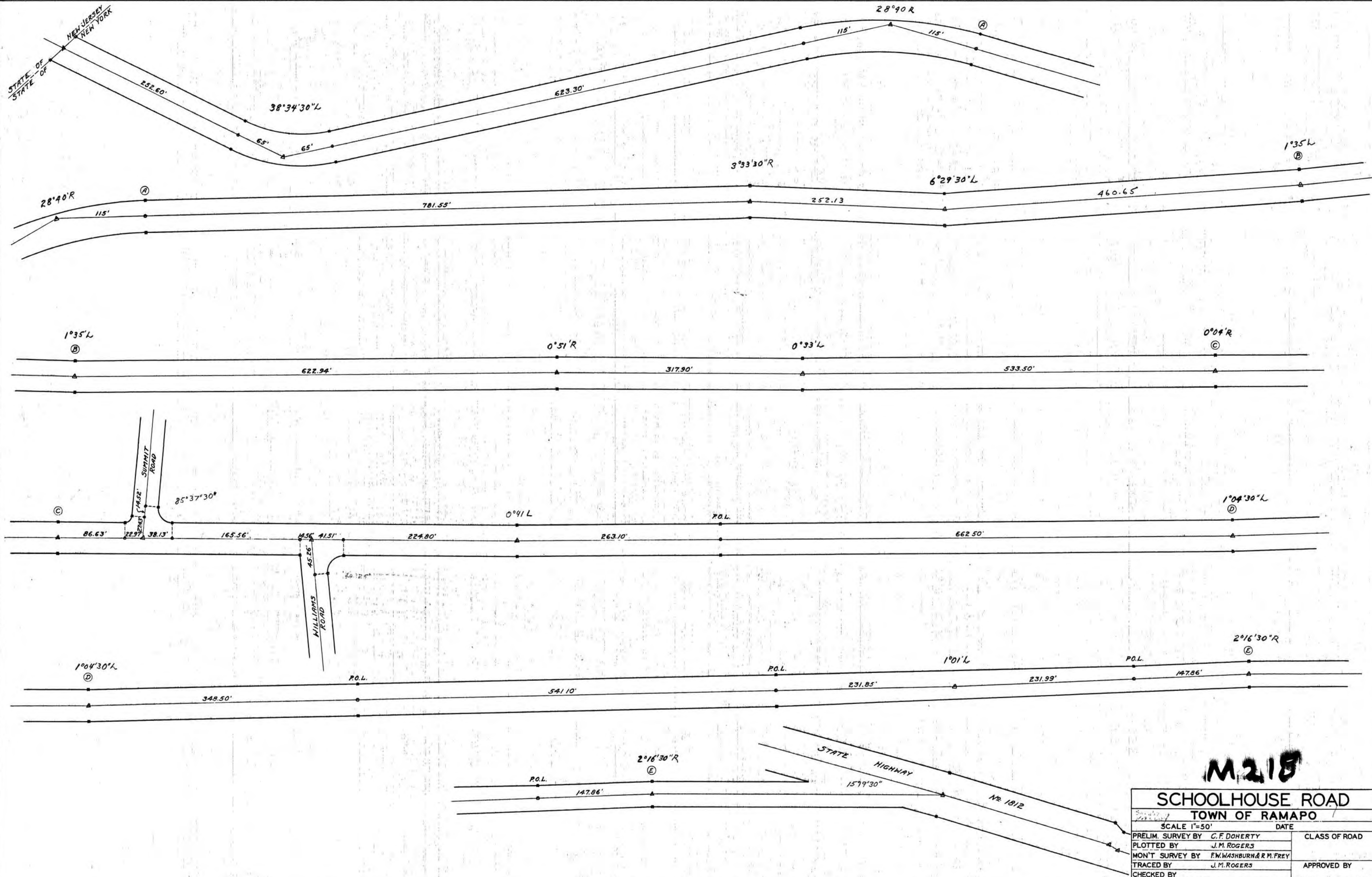
SCHOOLHOUSE ROAD BRIDGE
GENERAL PLAN & ELEVATION

RECOMMENDED BY:
[Signature]

MADIGAN-HYLAND ENGINEERS
NEW YORK CITY

IN CHARGE OF:
DRAWN BY:
CHECKED BY:
DESIGNED BY:
SCALE: Noted

29-6-56



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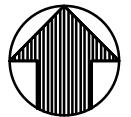
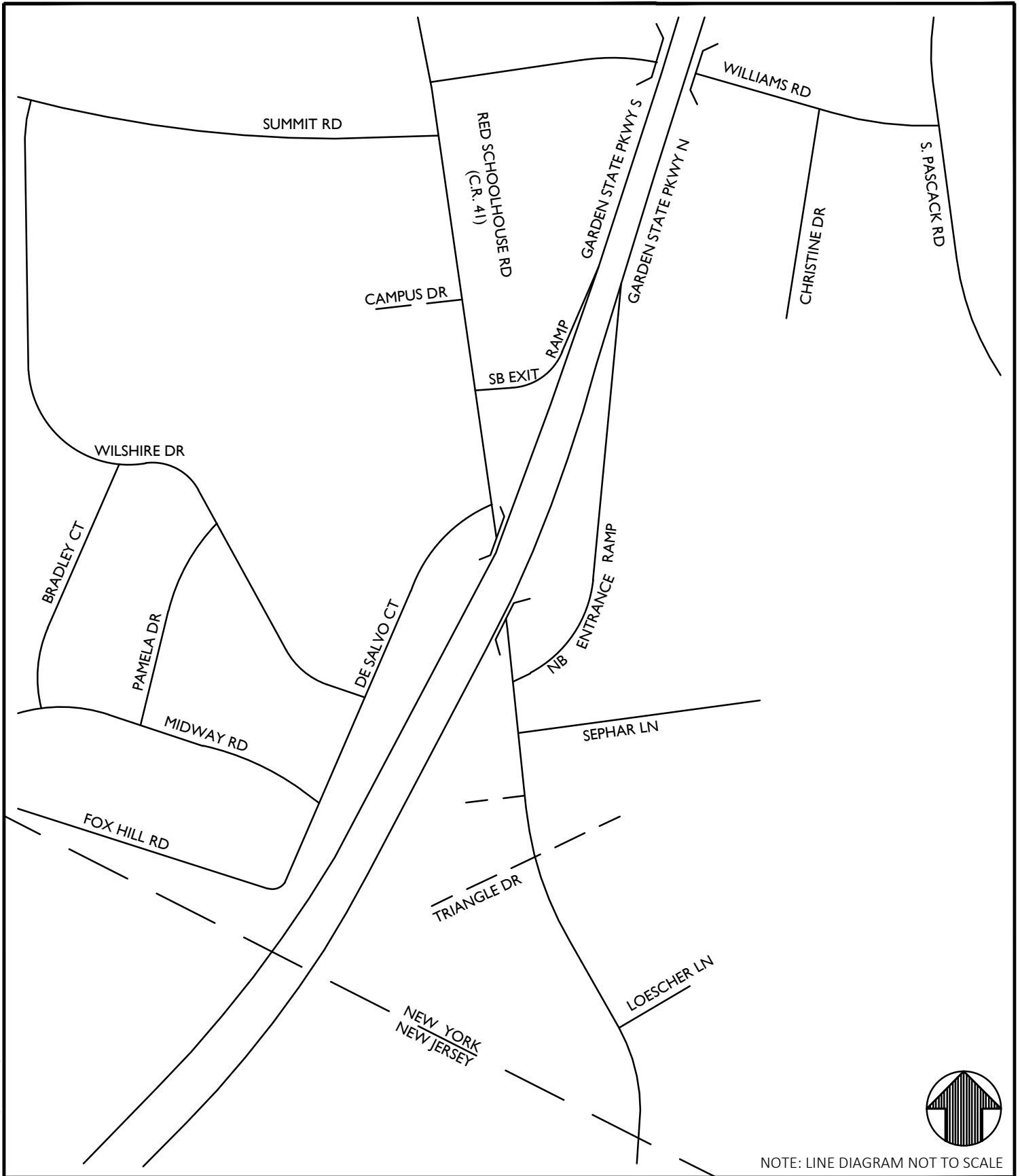
SCHOOLHOUSE ROAD		CLASS OF ROAD
TOWN OF RAMAPO		
SCALE 1"=50'	DATE	
PRELIM. SURVEY BY C. F. DOHERTY		
PLOTTED BY J. M. ROGERS		
MON'T SURVEY BY F. W. WASHBURN & R. M. FREY		
TRACED BY J. M. ROGERS		APPROVED BY
CHECKED BY		COUNTY ENGINEER
SHEET OF		



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX B

TRAFFIC VOLUME FIGURES



NOTE: LINE DIAGRAM NOT TO SCALE

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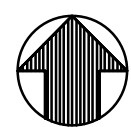
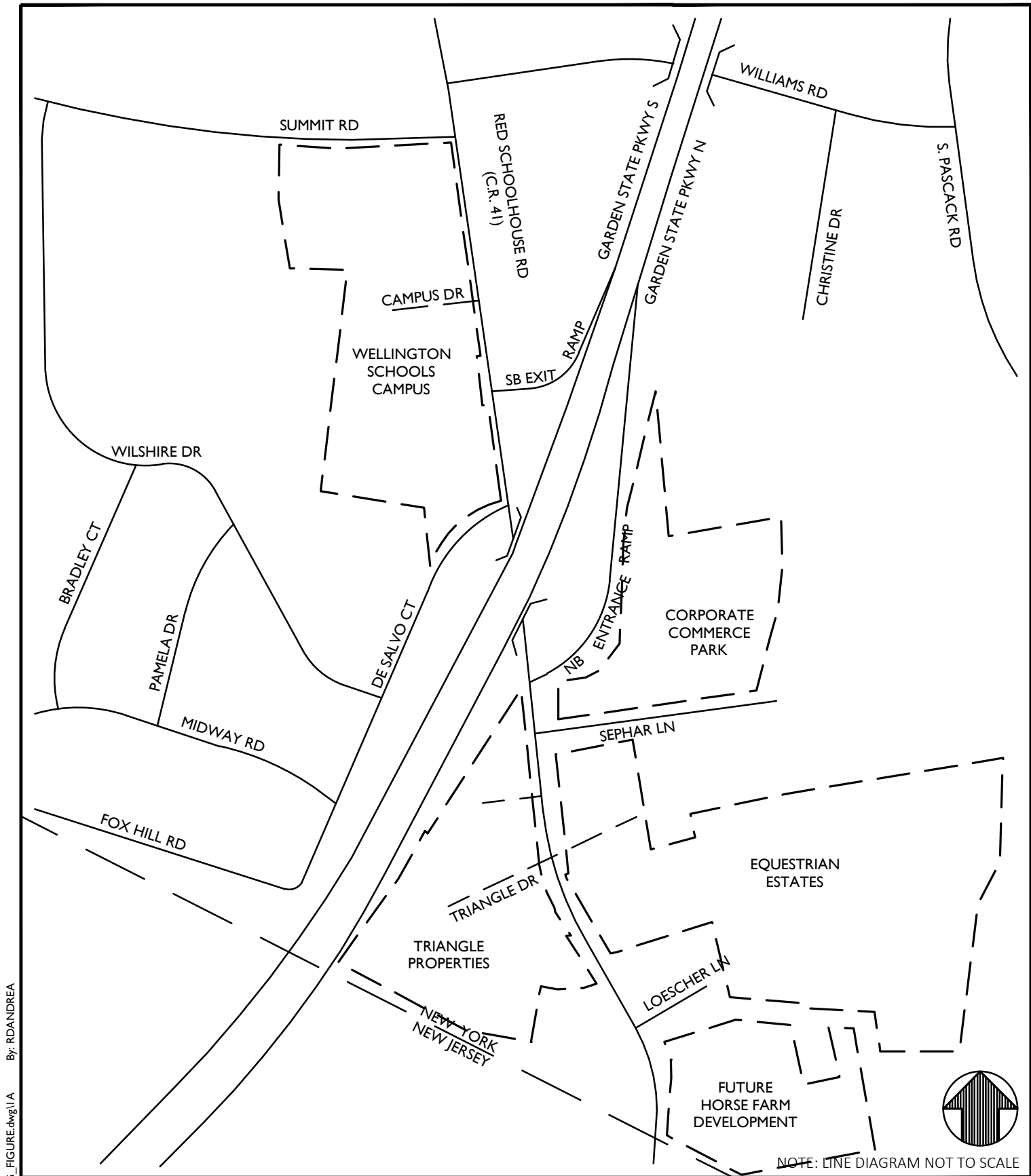
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20003327A	200811PWG_FIGURE		

SITE LOCATION MAP

SHEET NUMBER:
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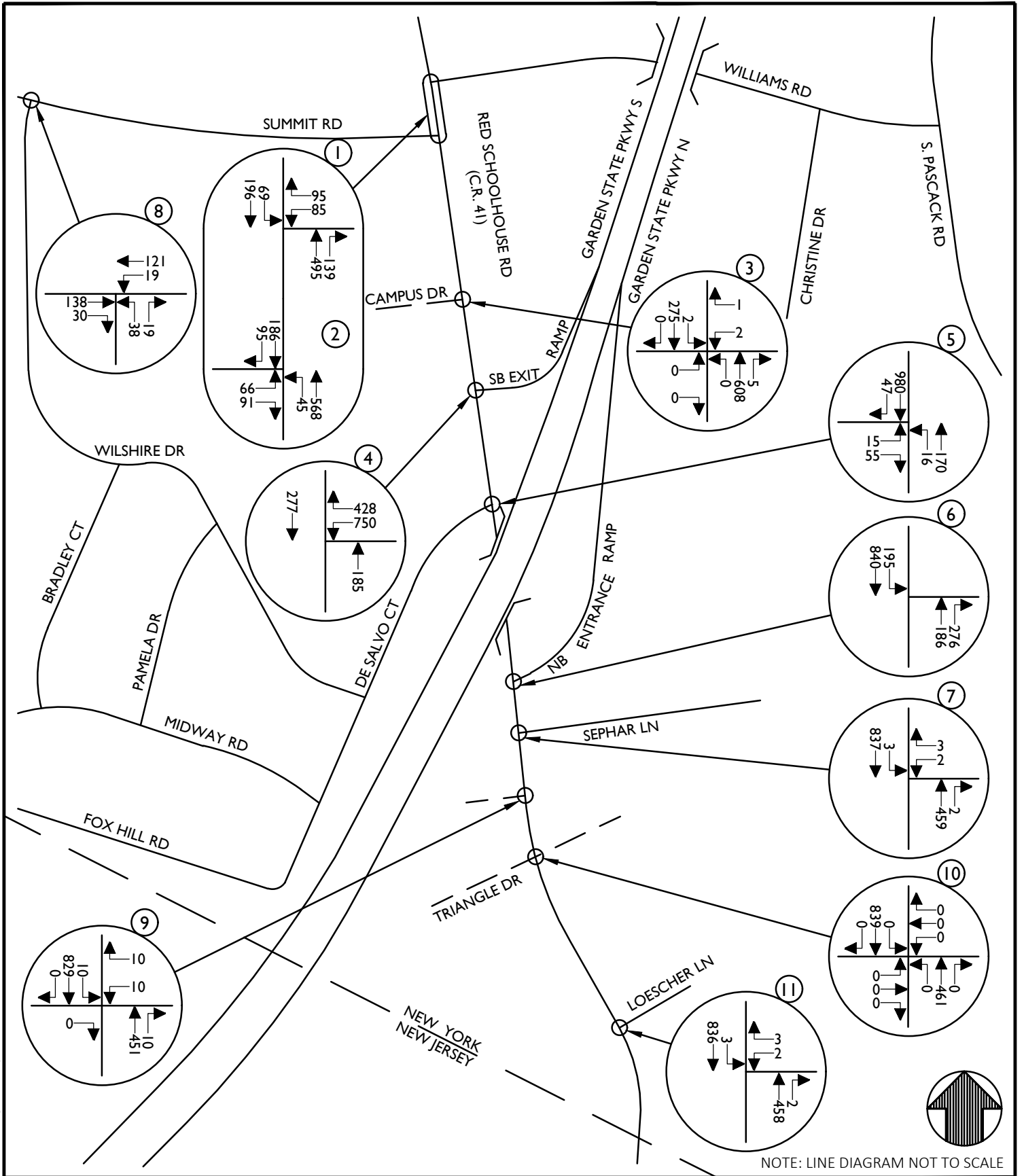
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20003327A	200811PWG_FIGURE		

SHEET TITLE:
**STUDY AREA ROADWAYS
 & PROJECT LOCATIONS**

SHEET NUMBER:
IA

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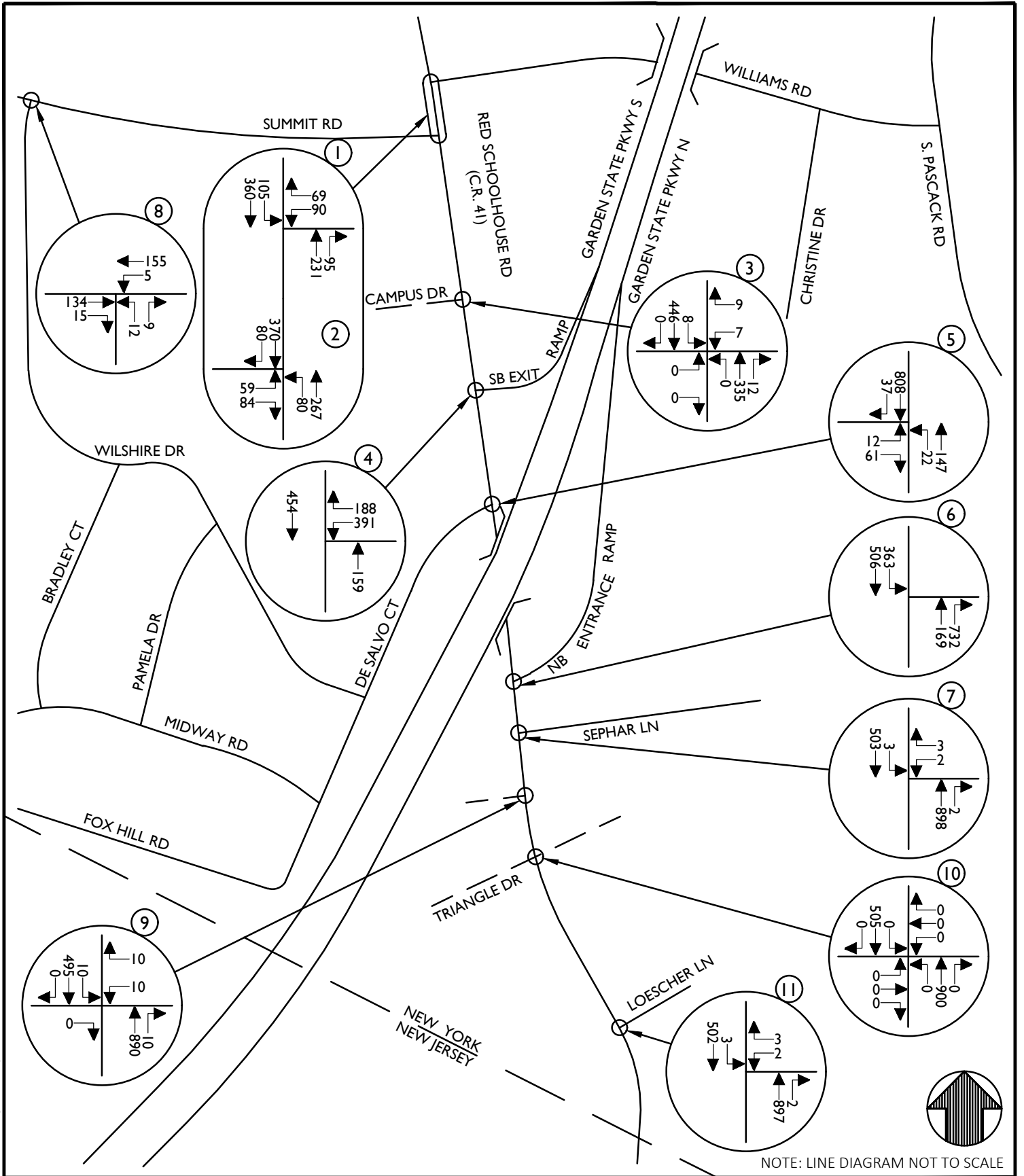
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SHEET TITLE: 2020 EXISTING TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER:			2



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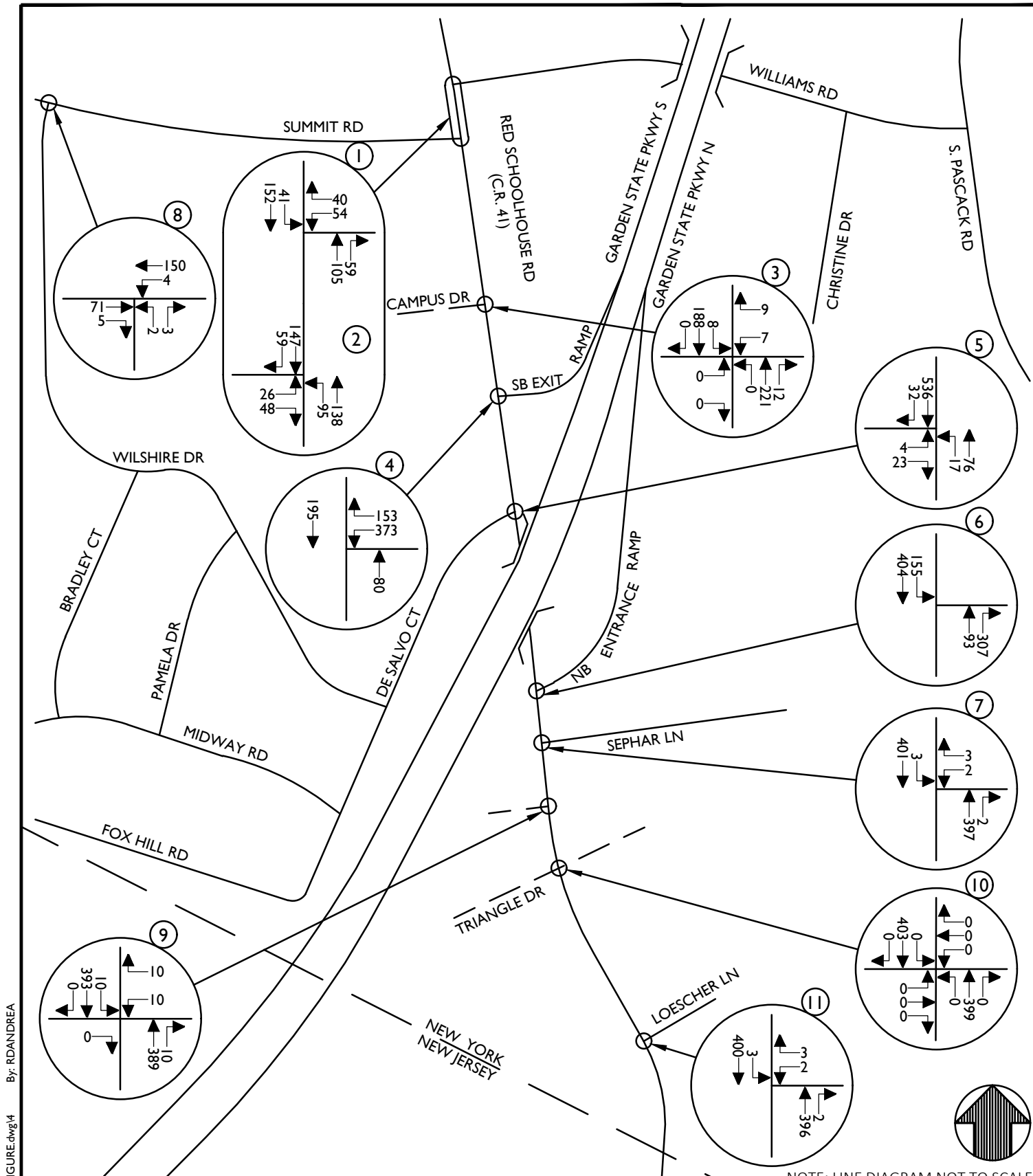
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PROJECT NUMBER:	DRAWING NAME:		
20003327A	200811PWVG_FIGURE		
SHEET TITLE:			
2020 EXISTING TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			
3			



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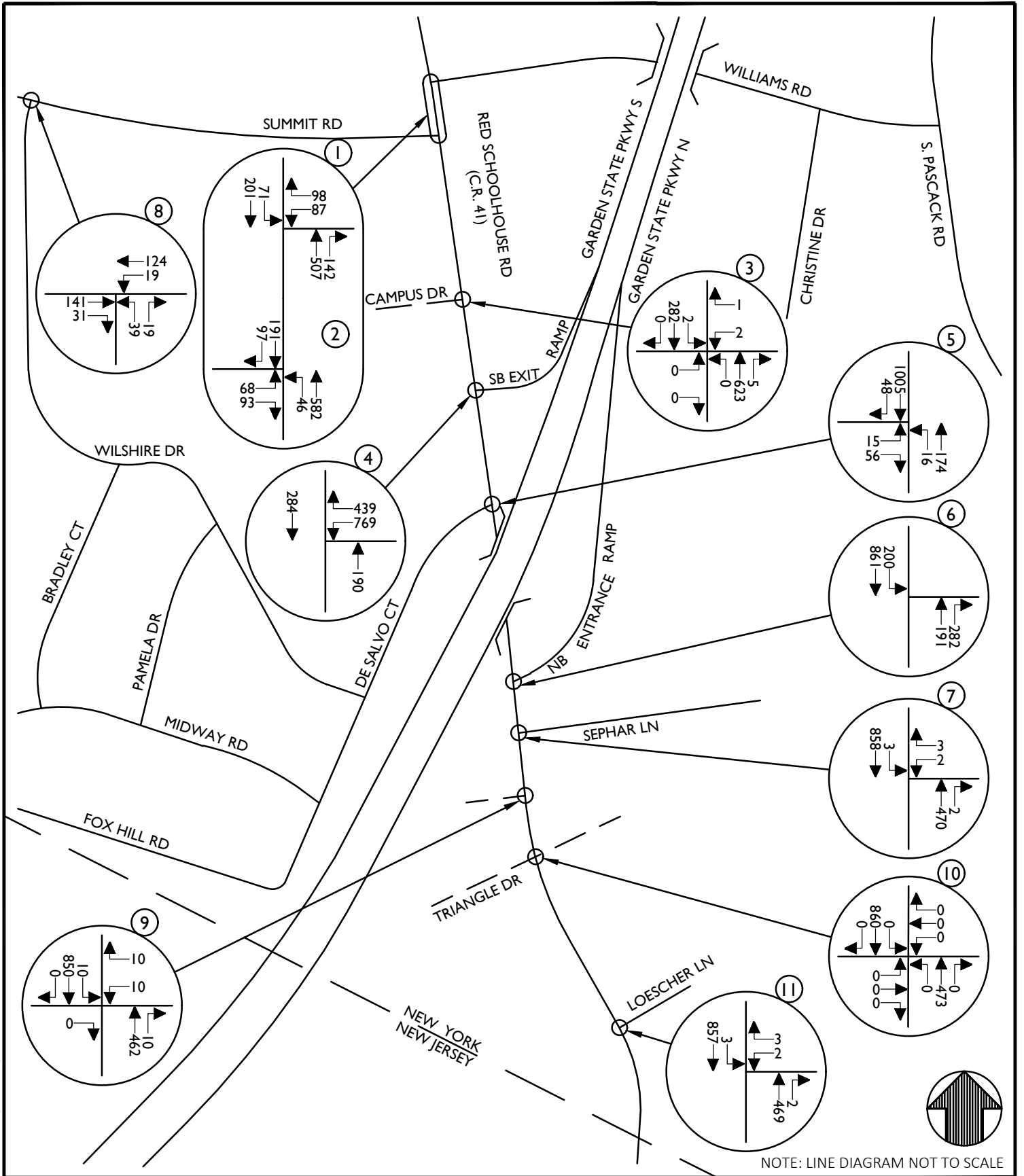
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SHEET TITLE:			
2020 EXISTING TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			
4			



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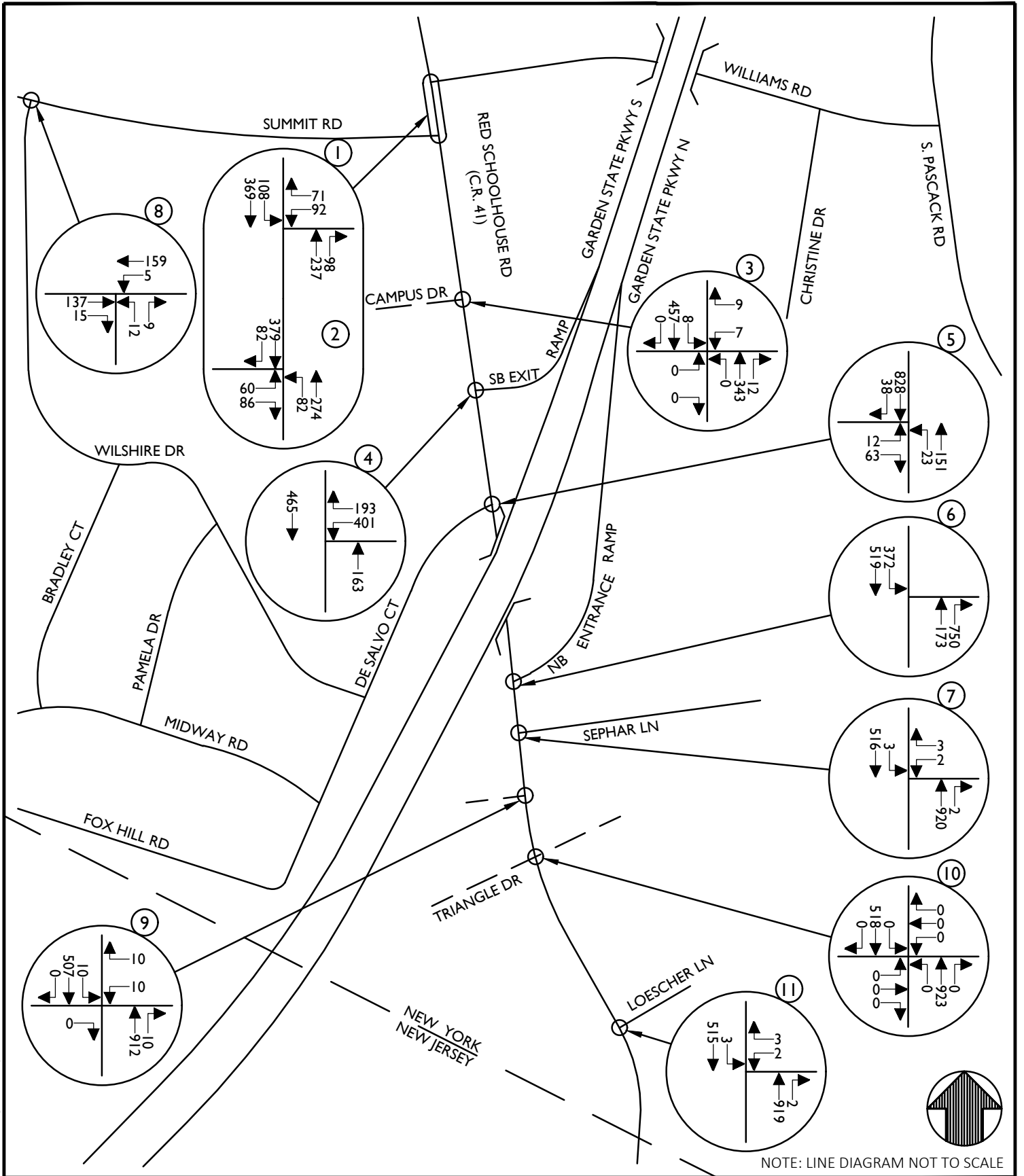
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20003327A	200811PWG_FIGURE		
SHEET TITLE:			
2025 NO-BUILD TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER:			
5			



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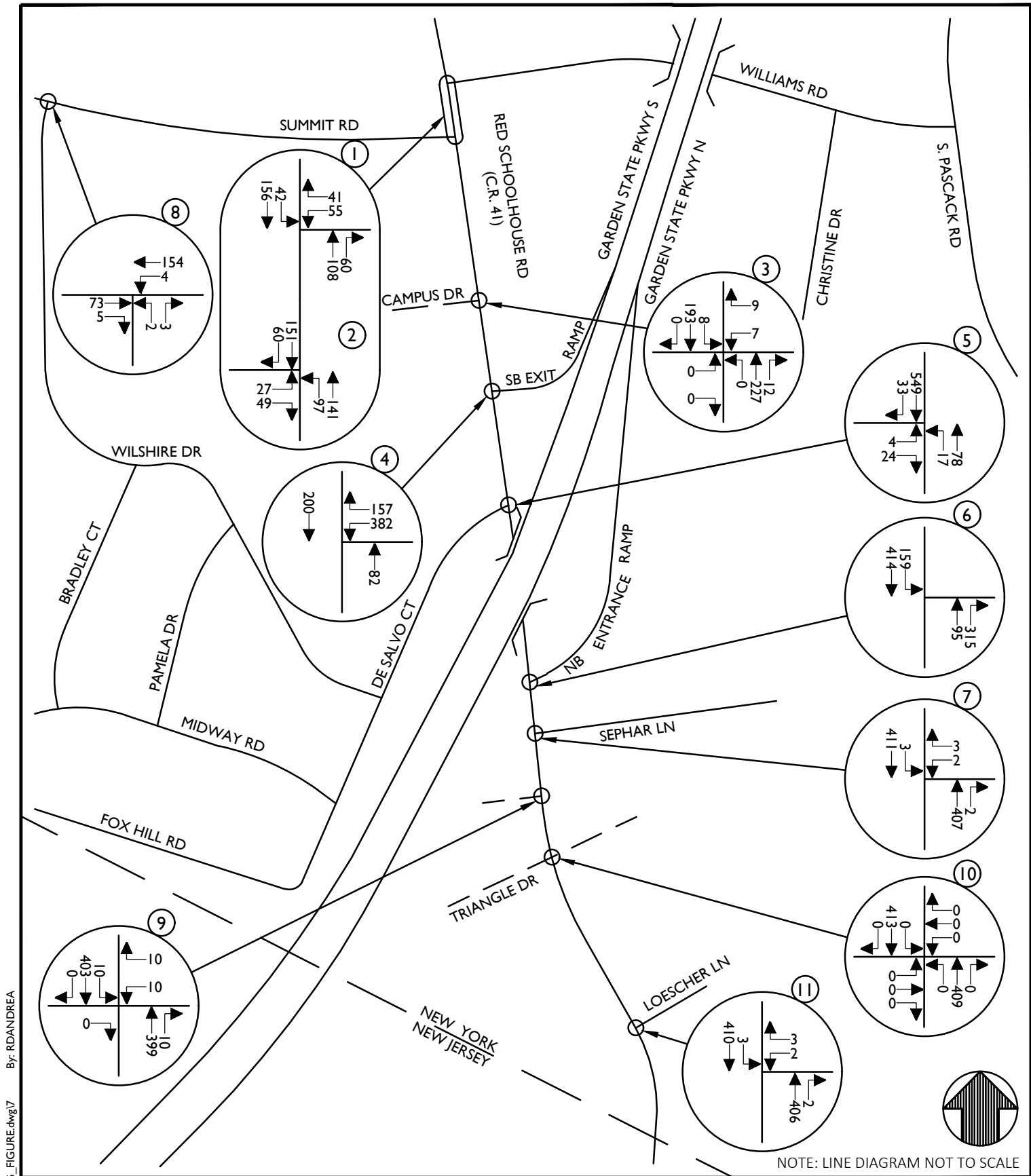
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2025 NO-BUILD TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			
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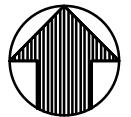
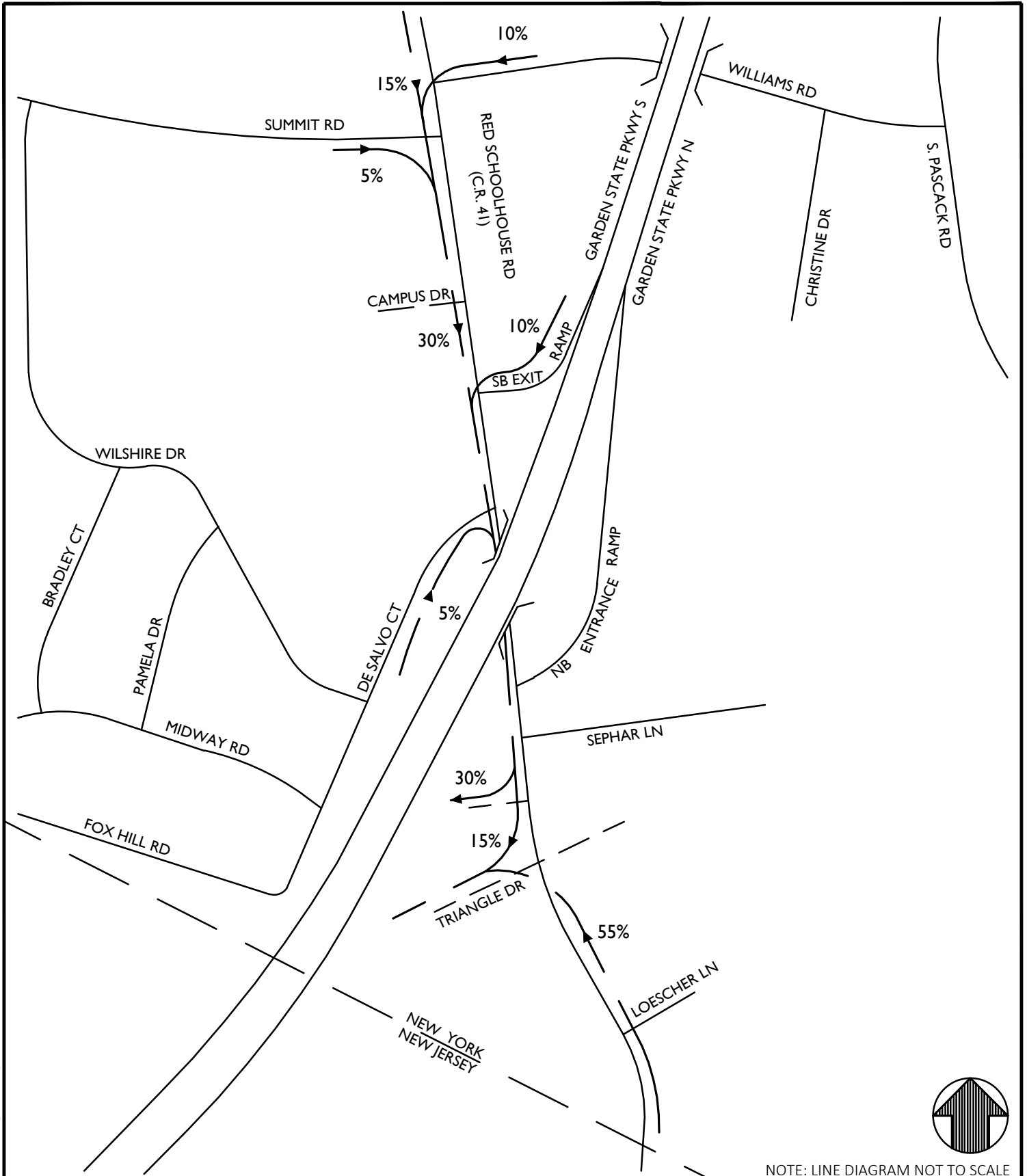
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SHEET NUMBER:			7



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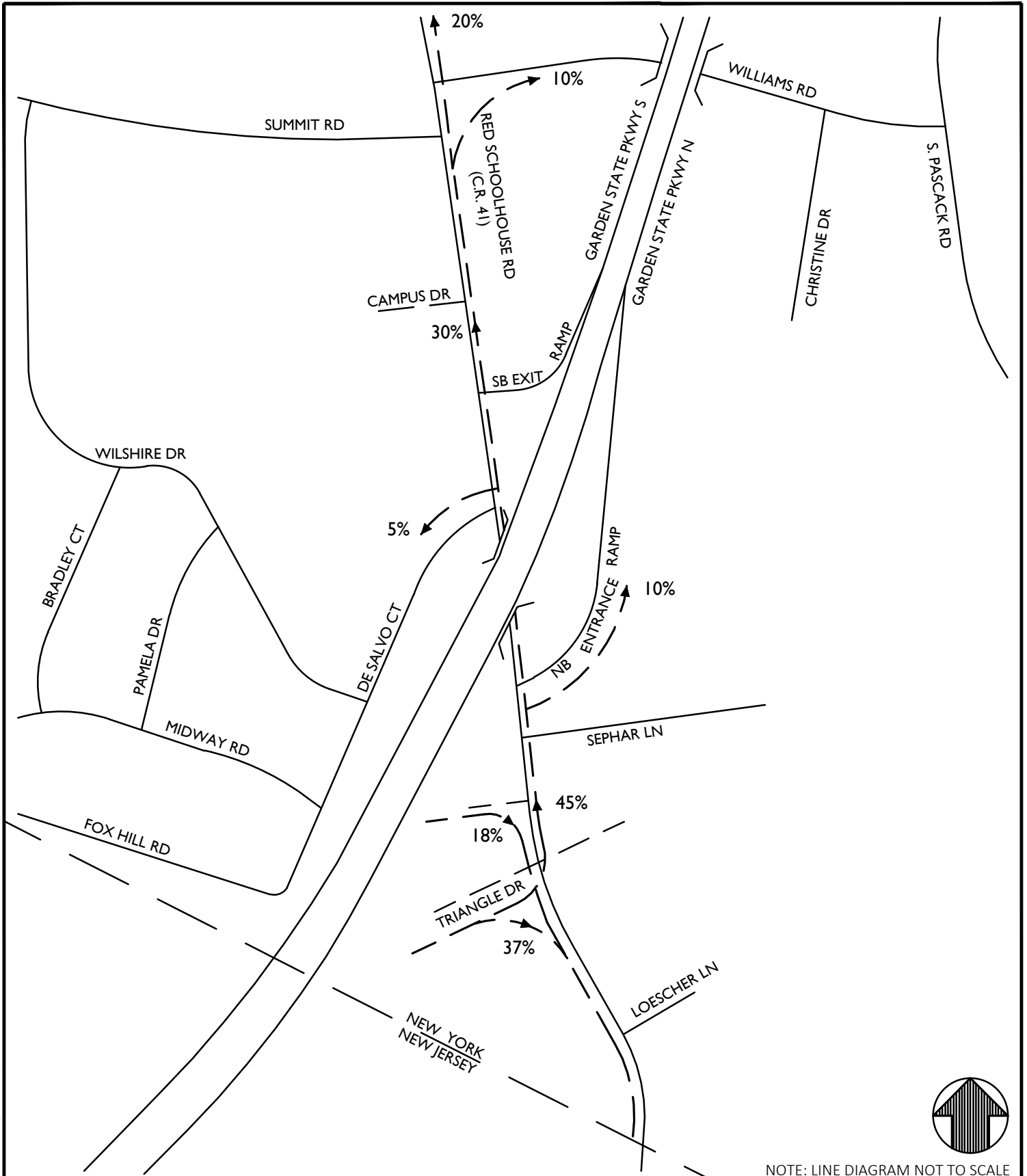
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SHEET NUMBER:
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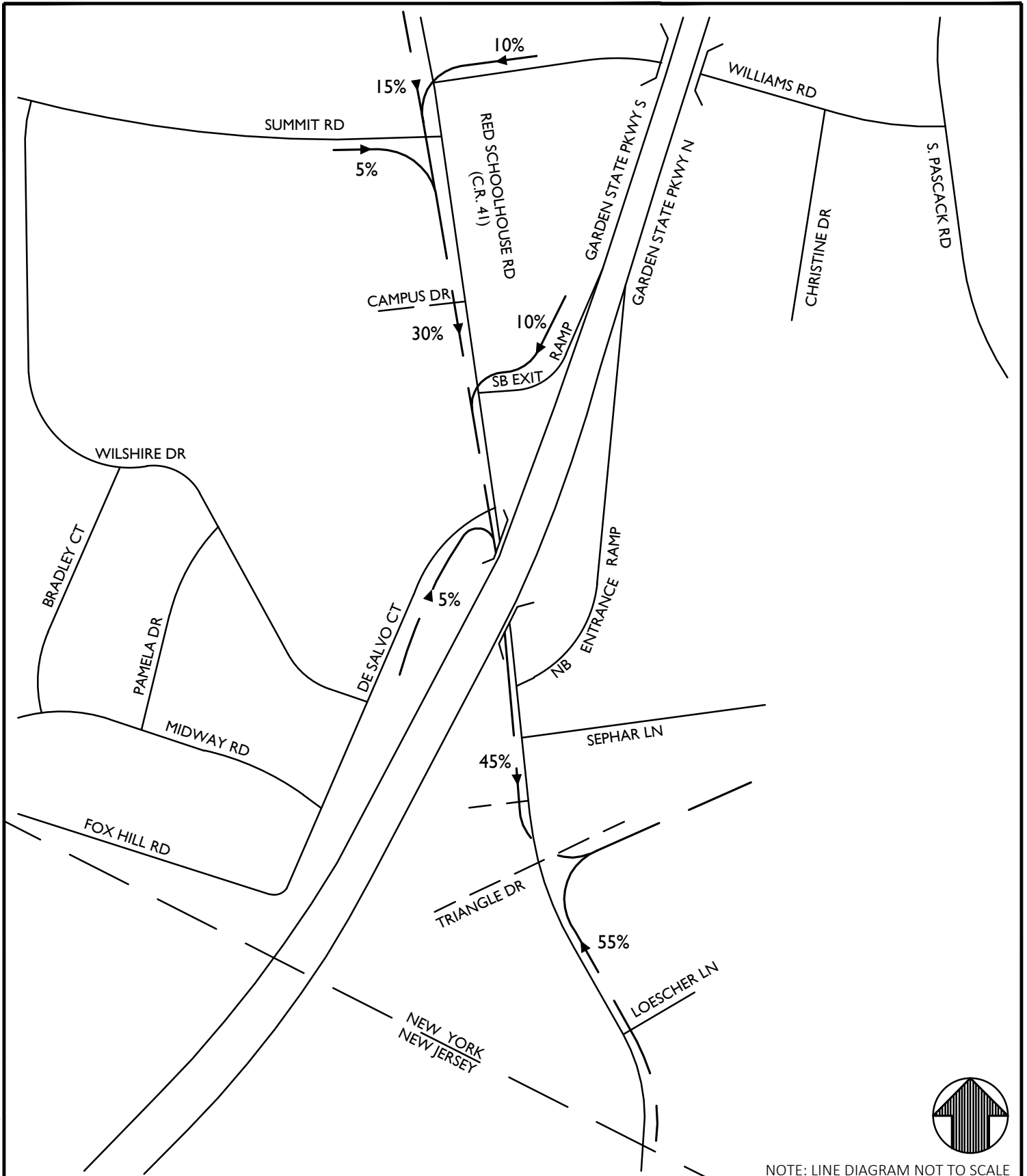
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SHEET NUMBER:
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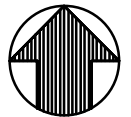
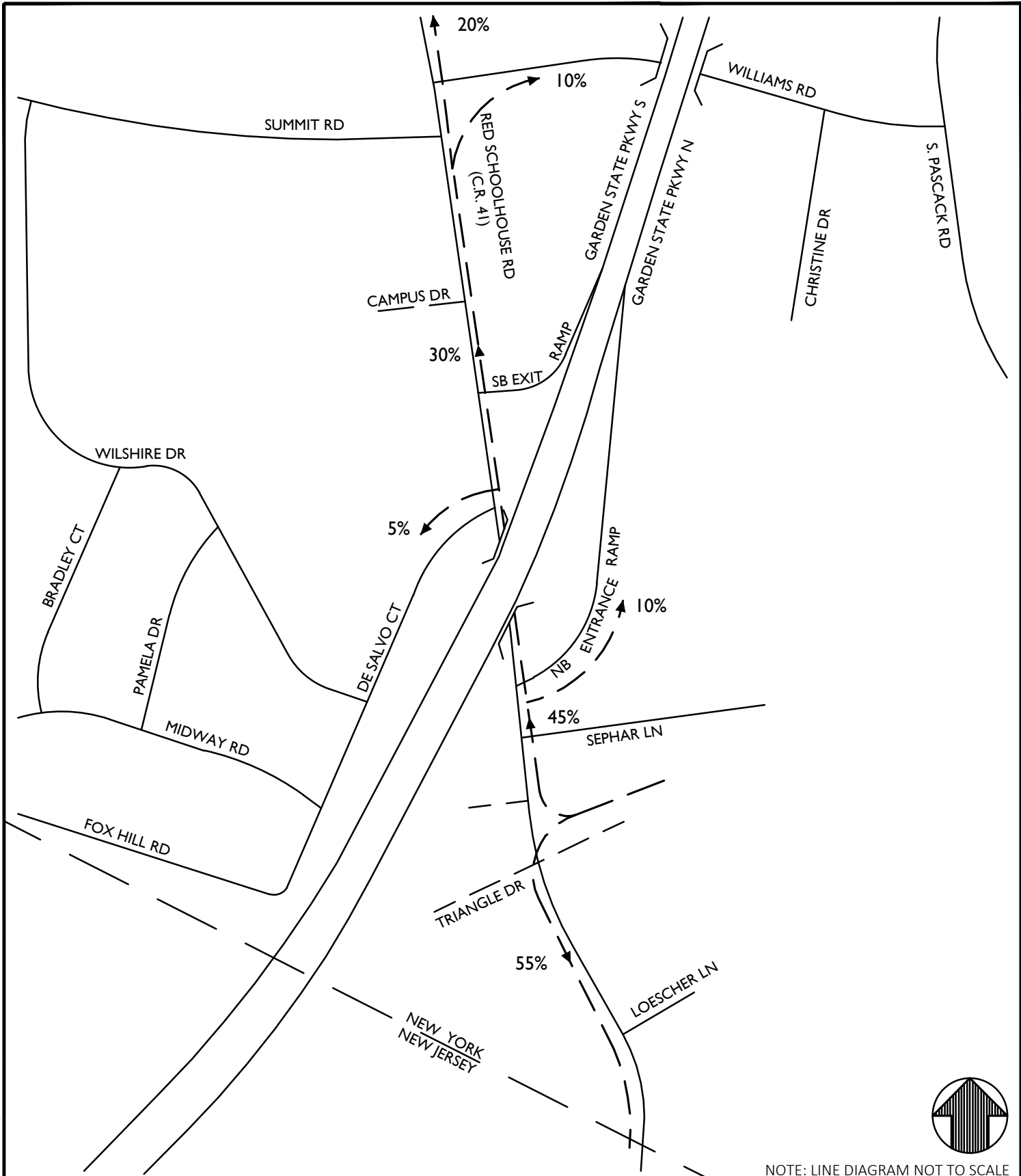
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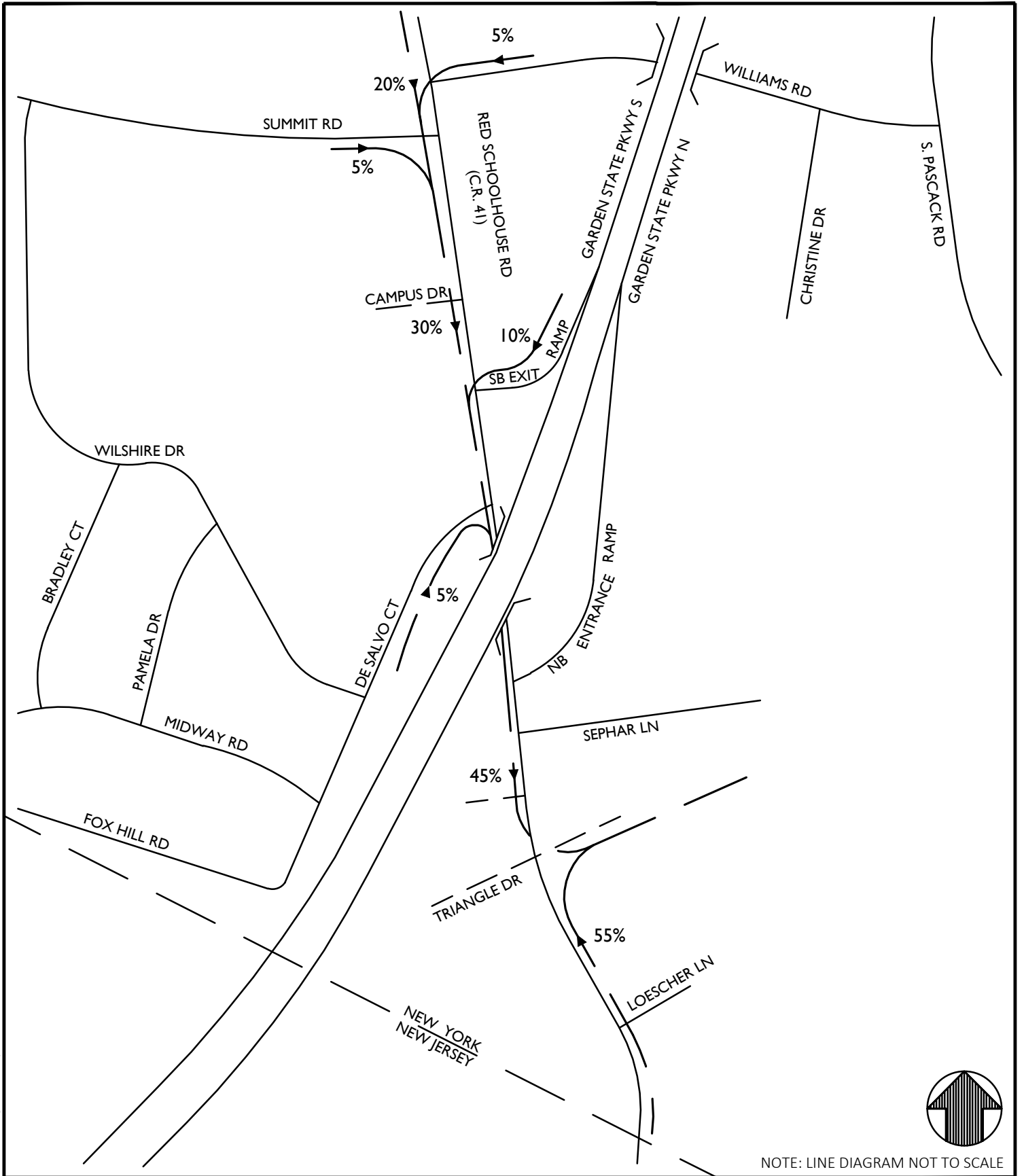
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SHEET NUMBER:
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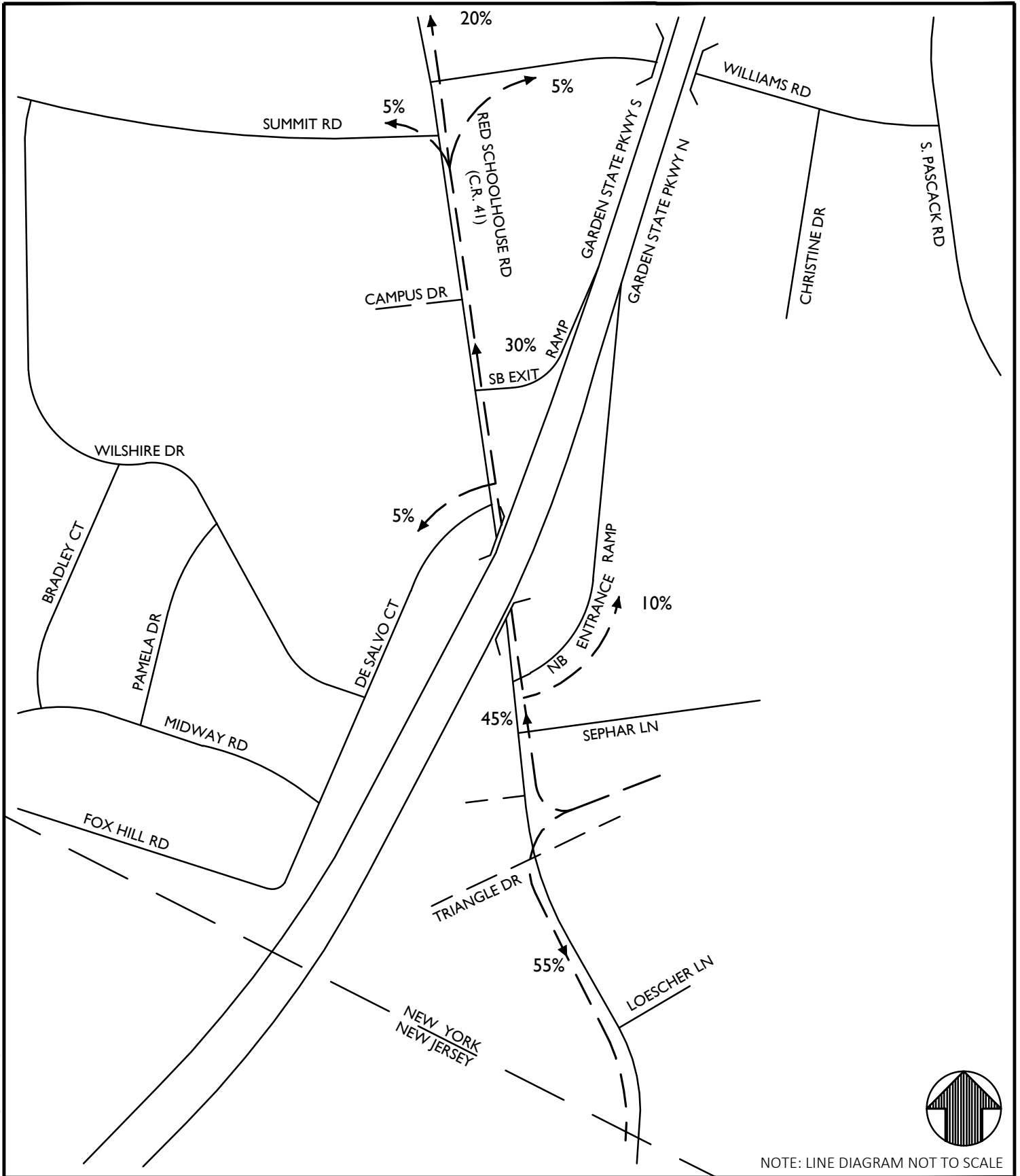
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SHEET NUMBER:
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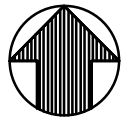
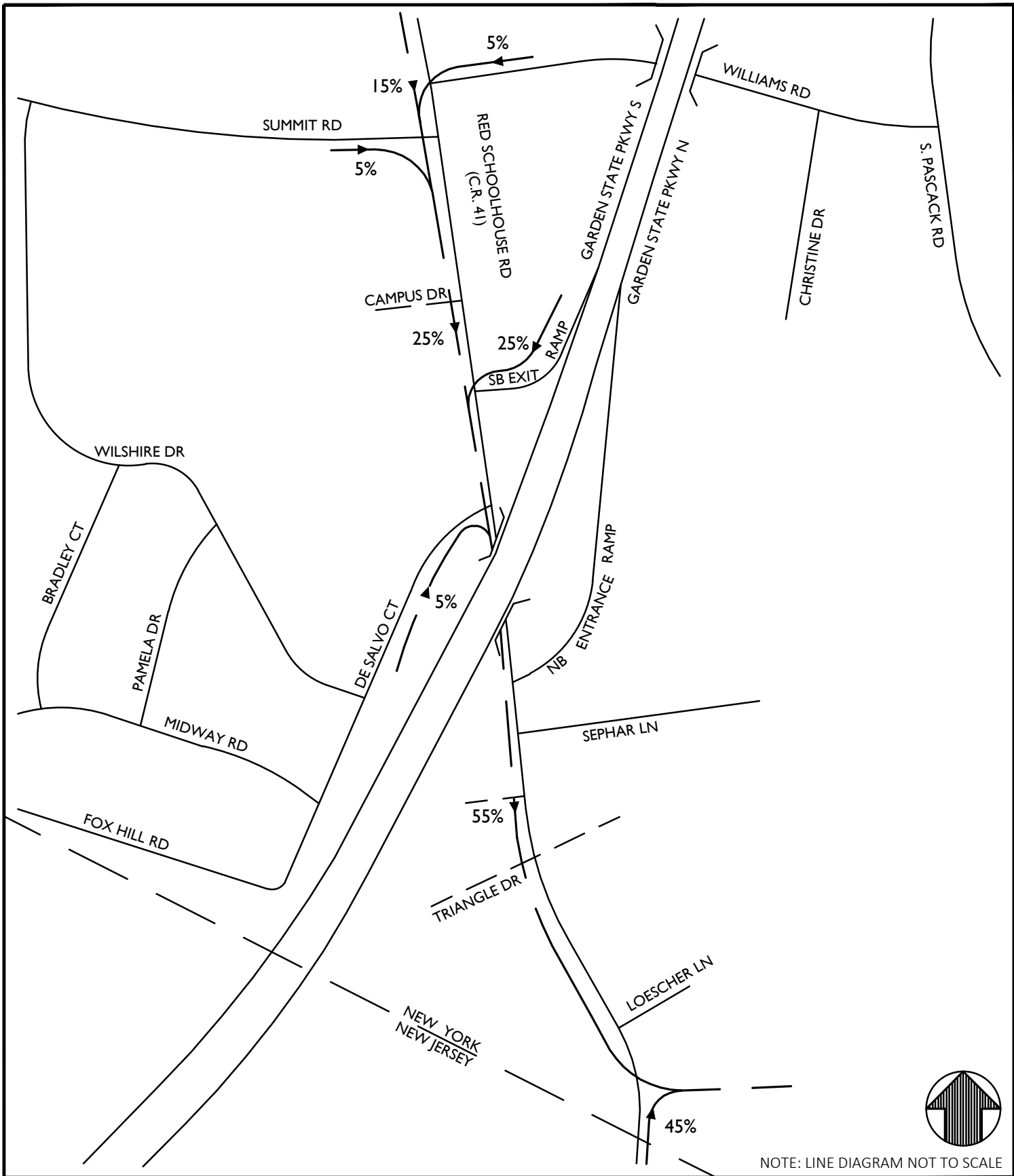
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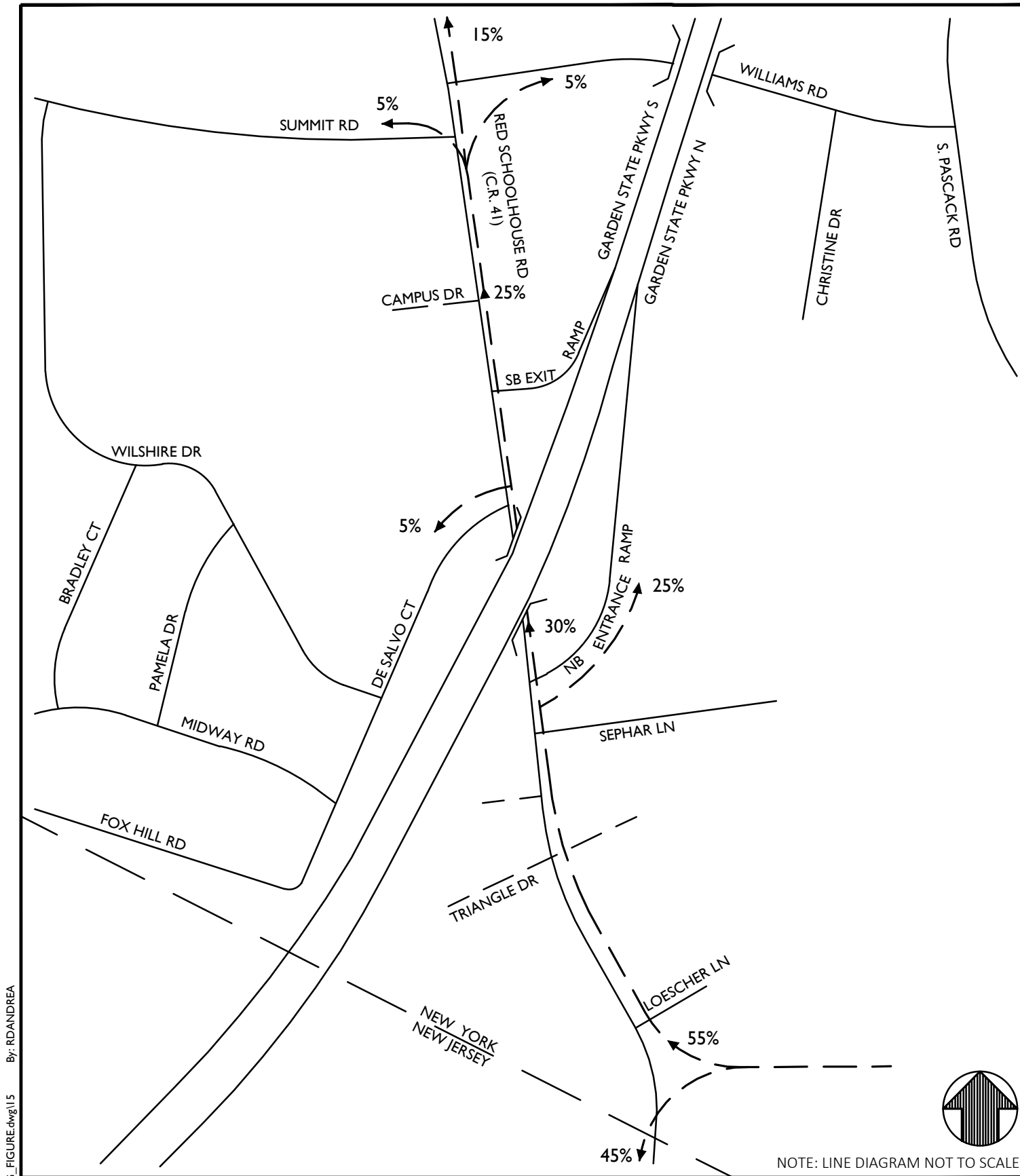
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 FUTURE HORSE FARM
 DEVELOPMENT

SHEET NUMBER:
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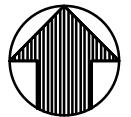
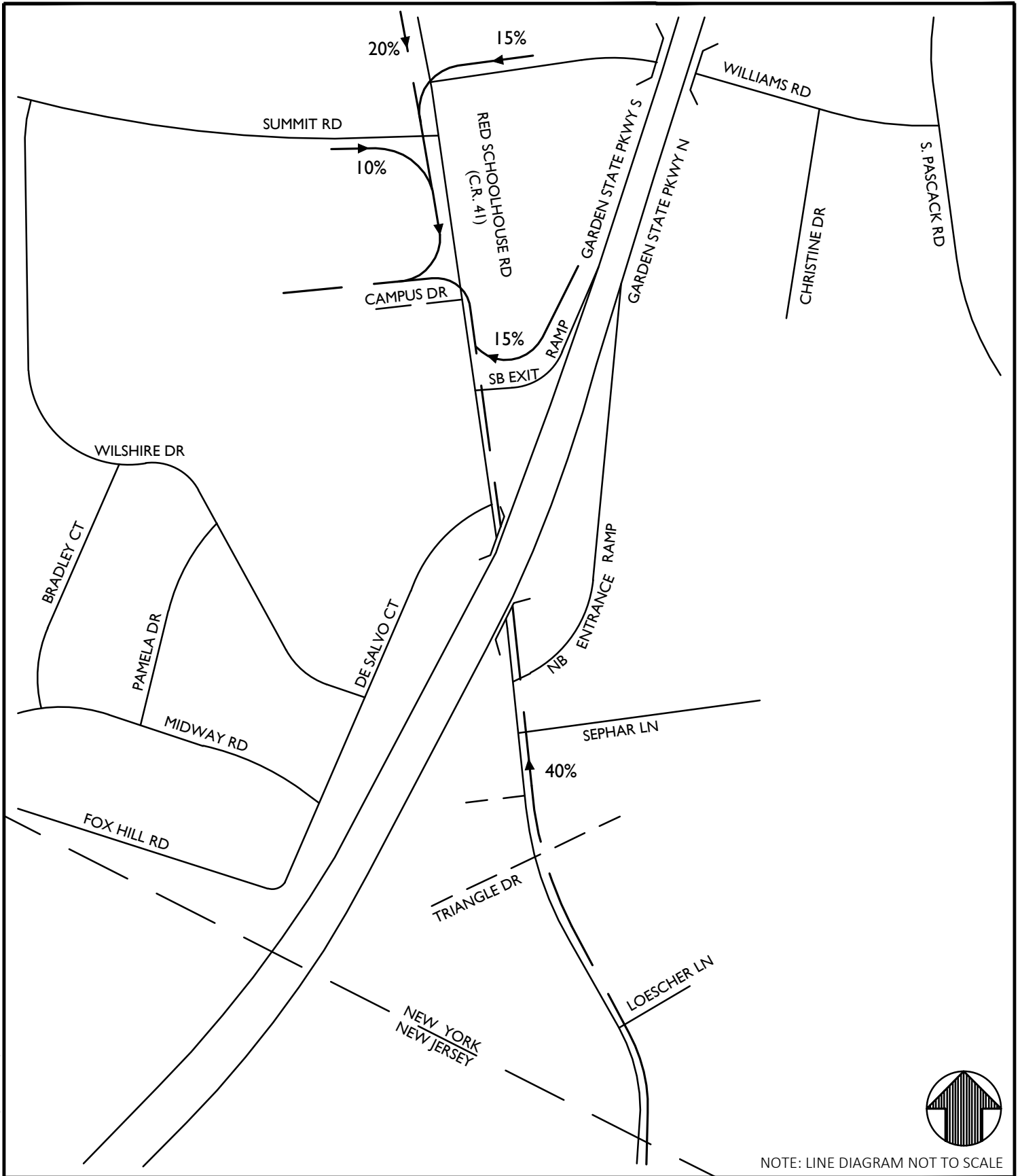
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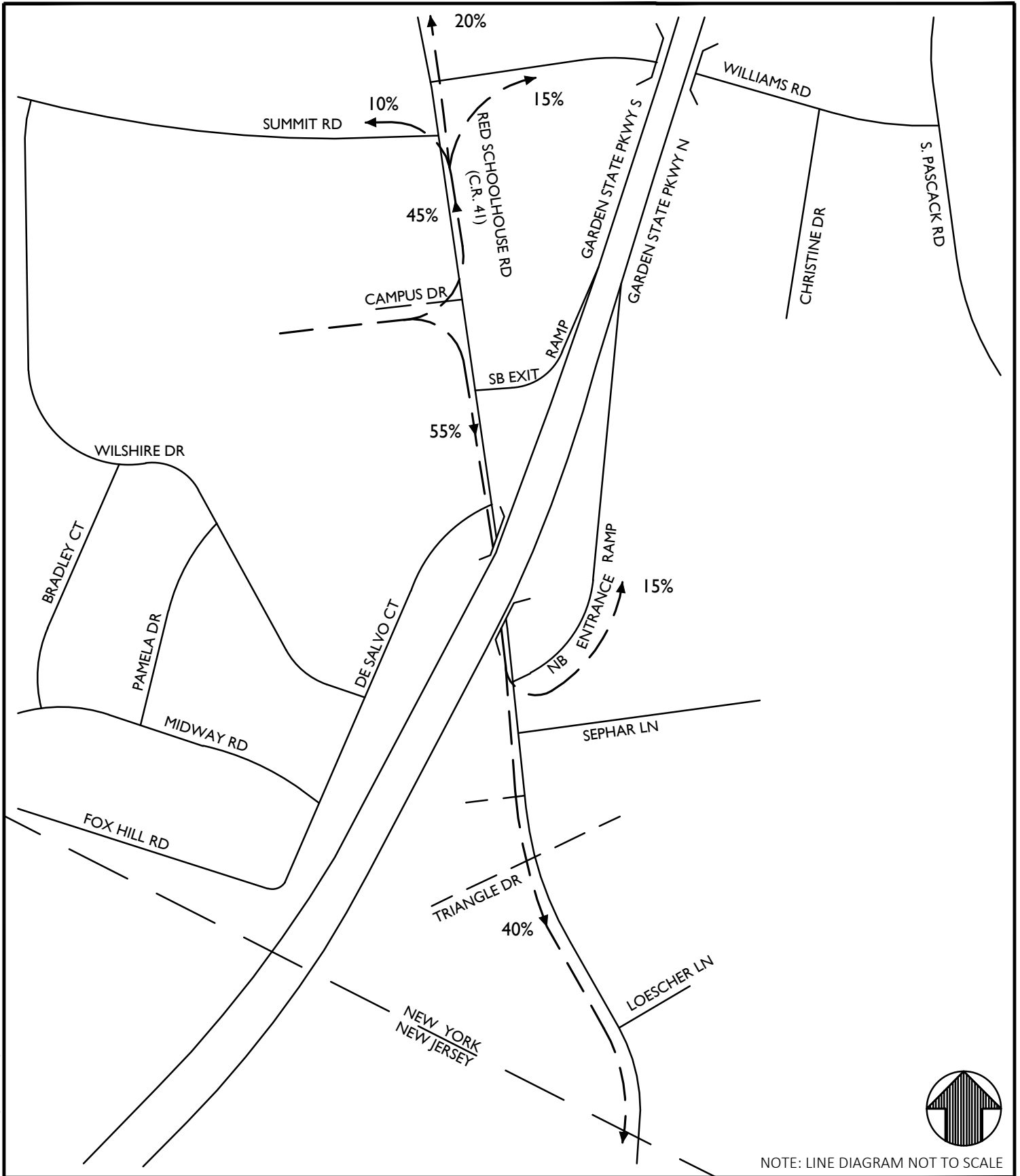
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SHEET TITLE:			
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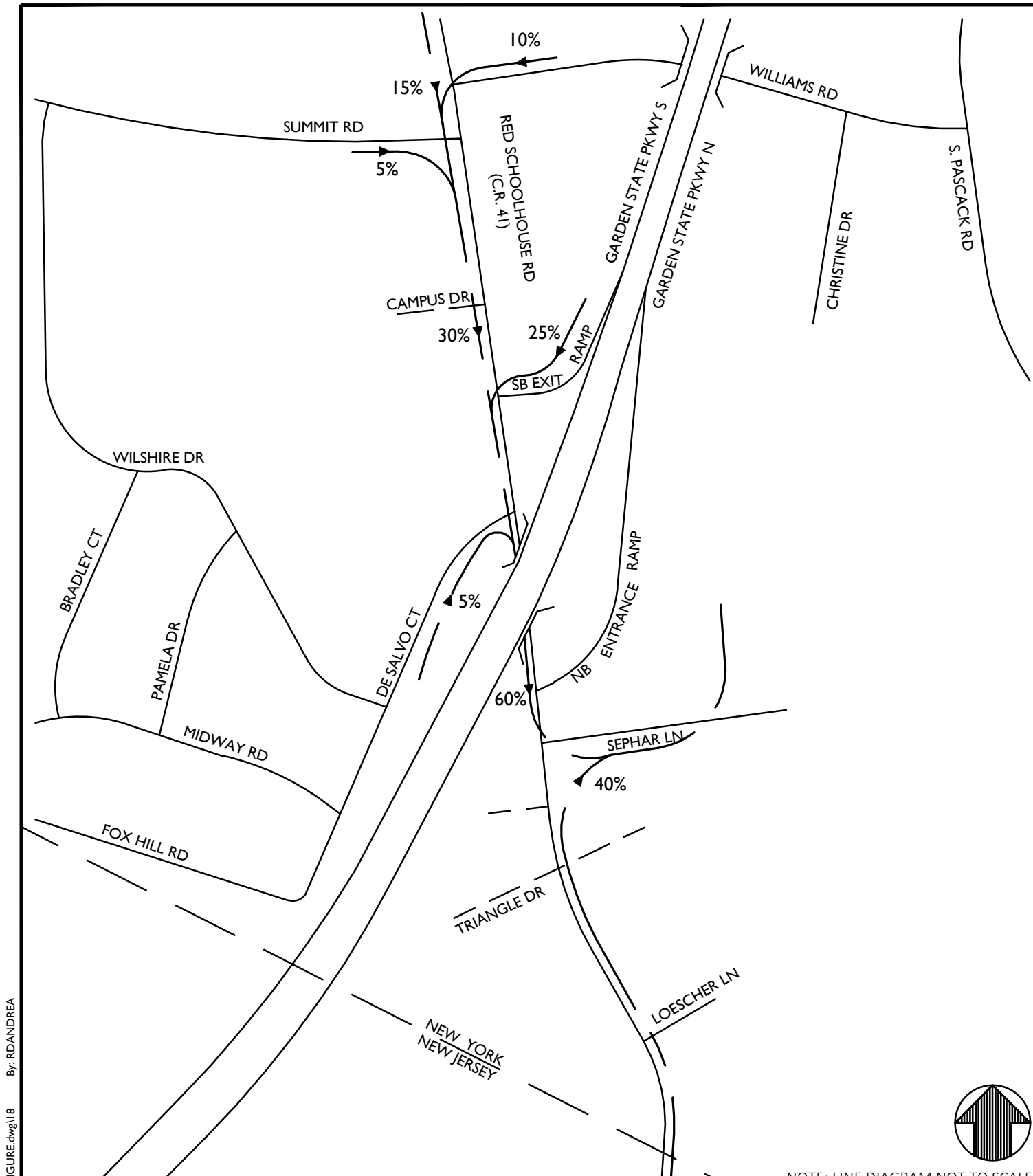
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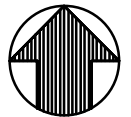
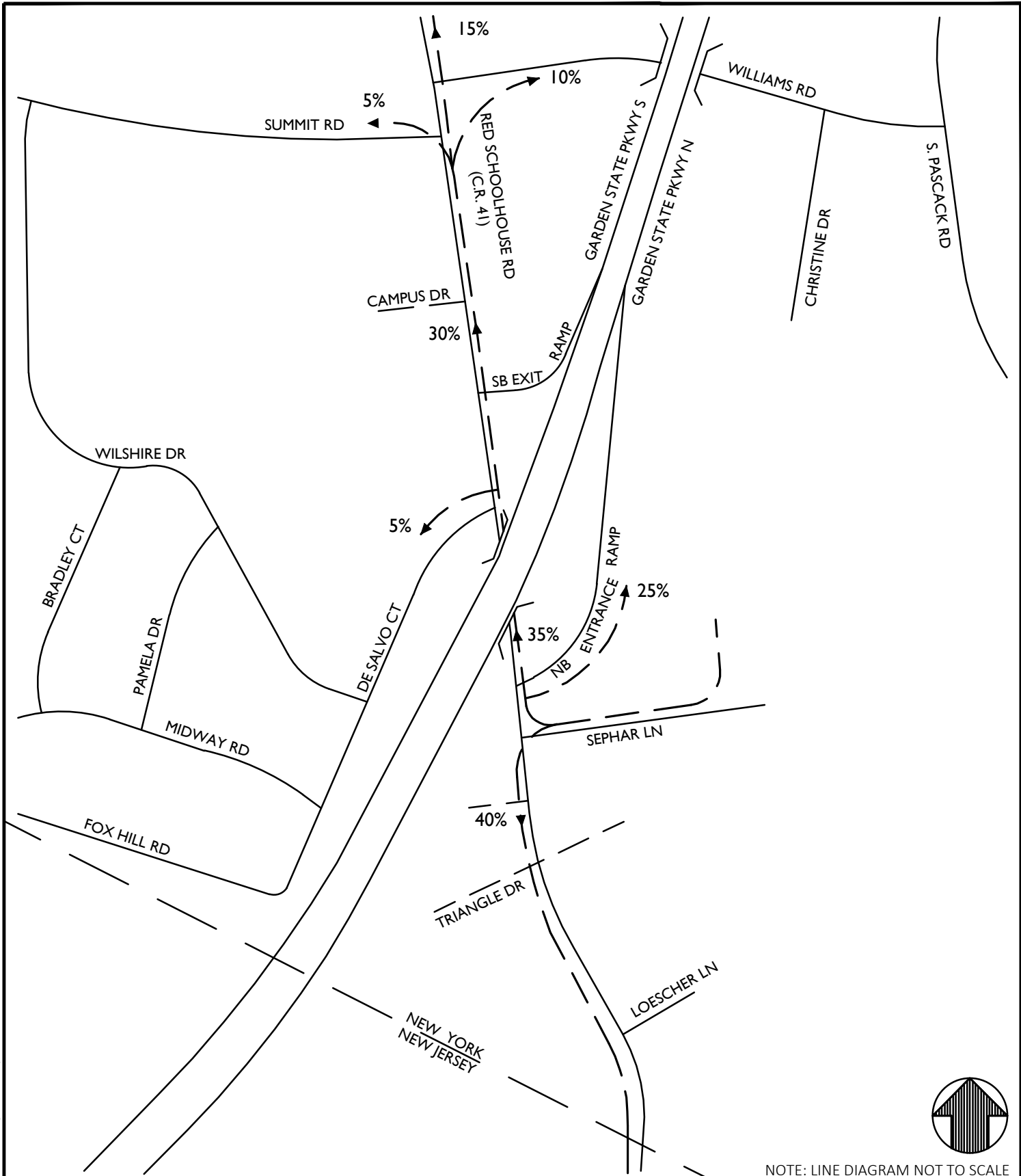
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ARRIVAL DISTRIBUTION CORPORATE COMMERCE PARK			
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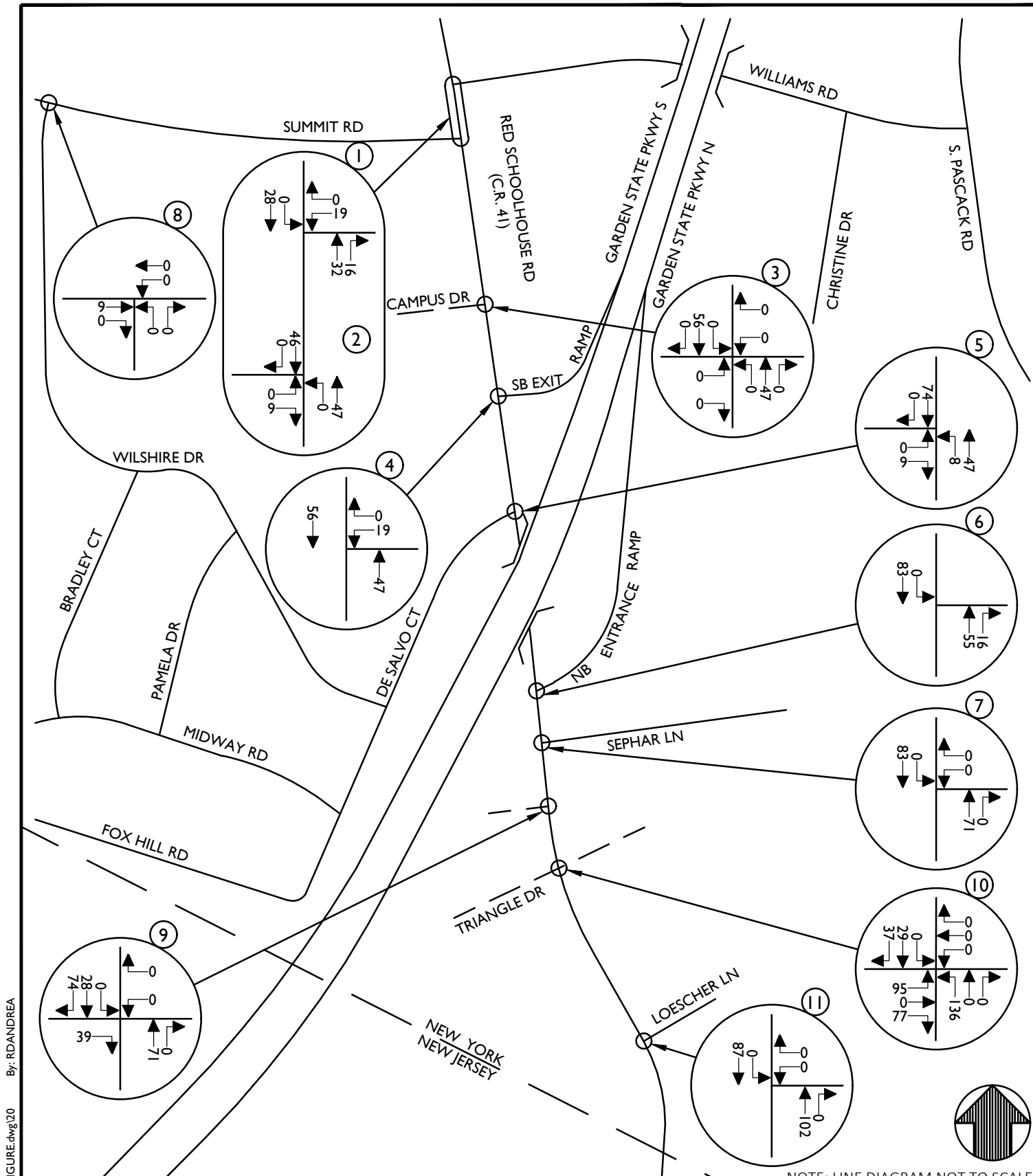
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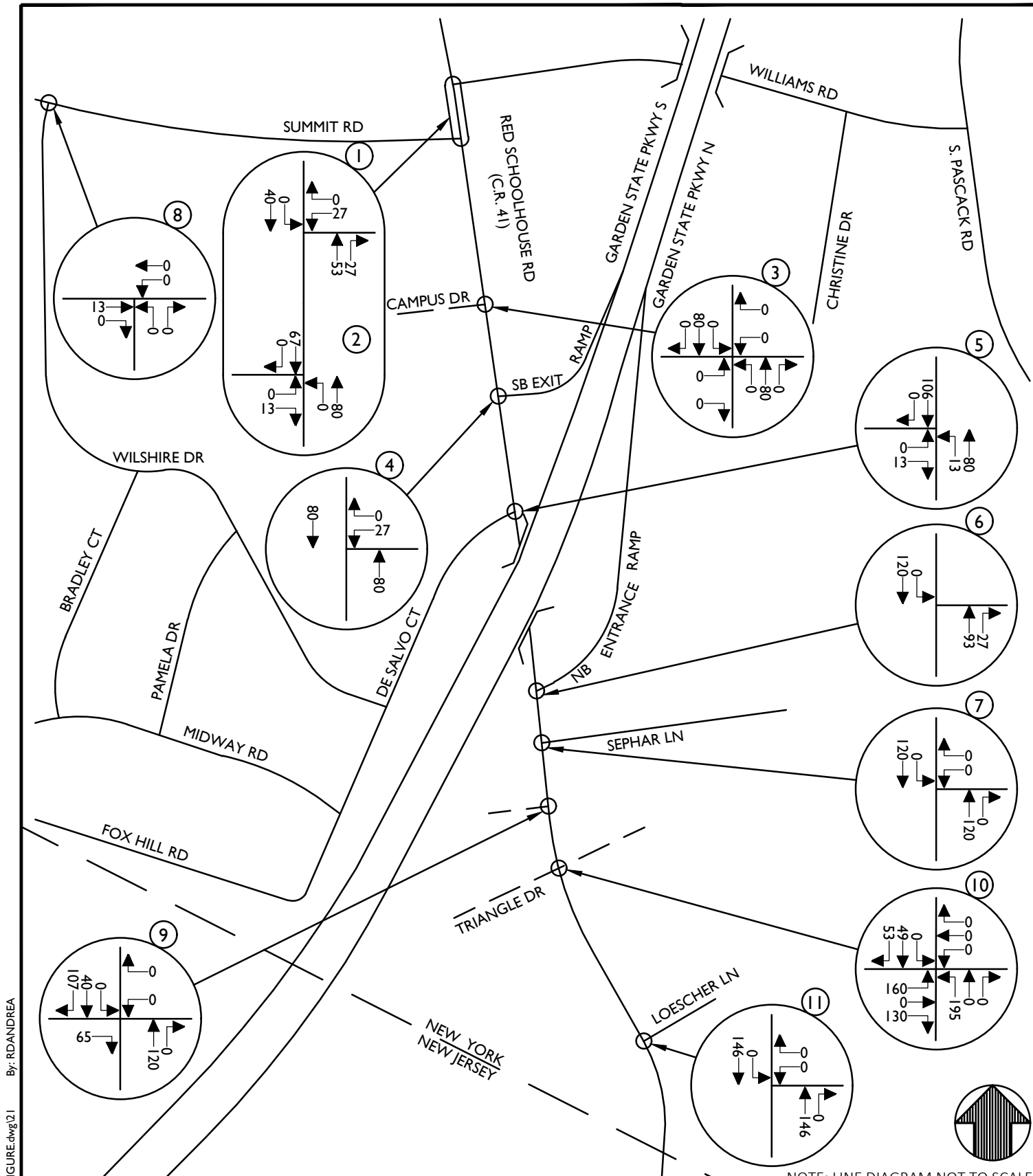
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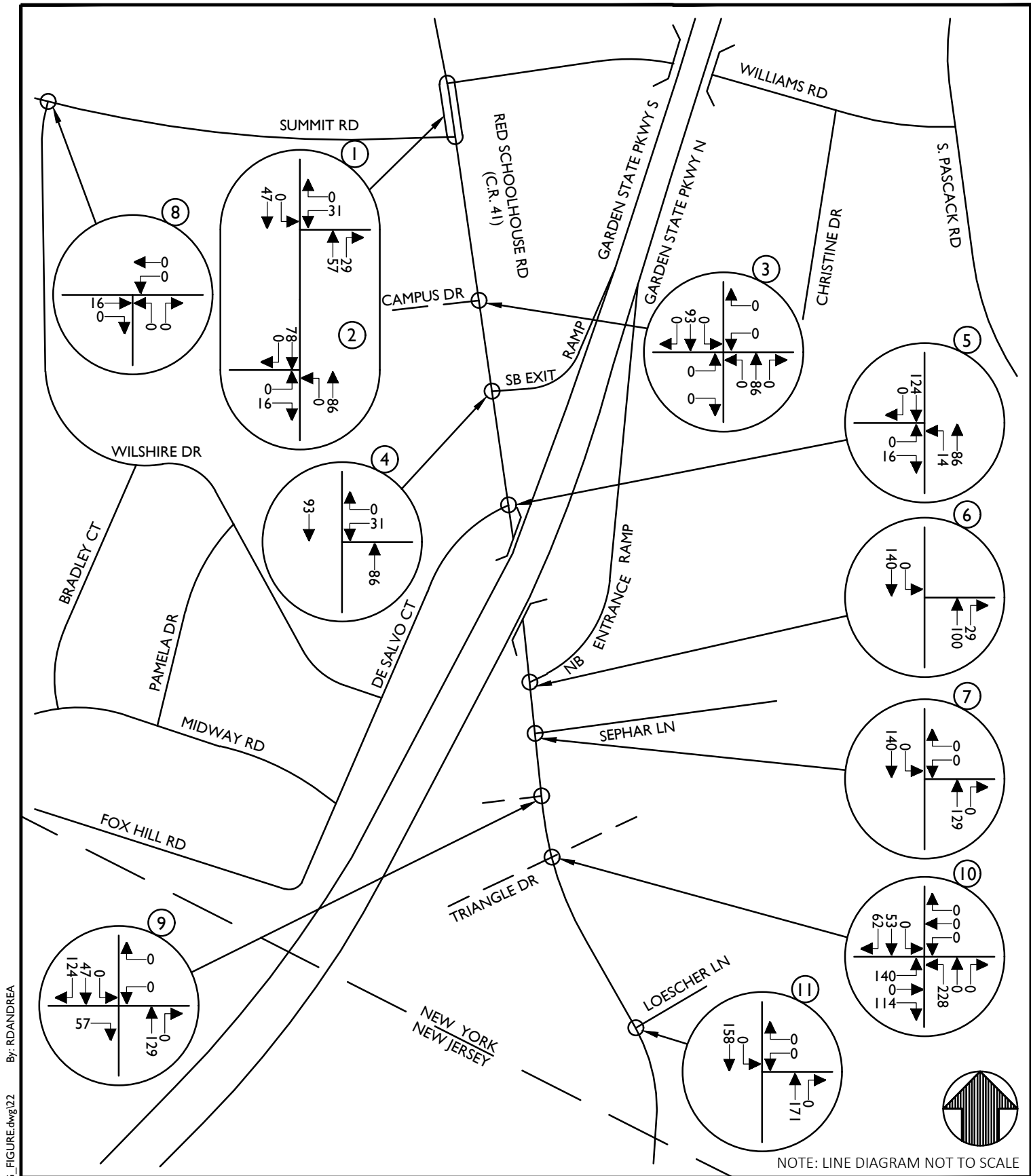
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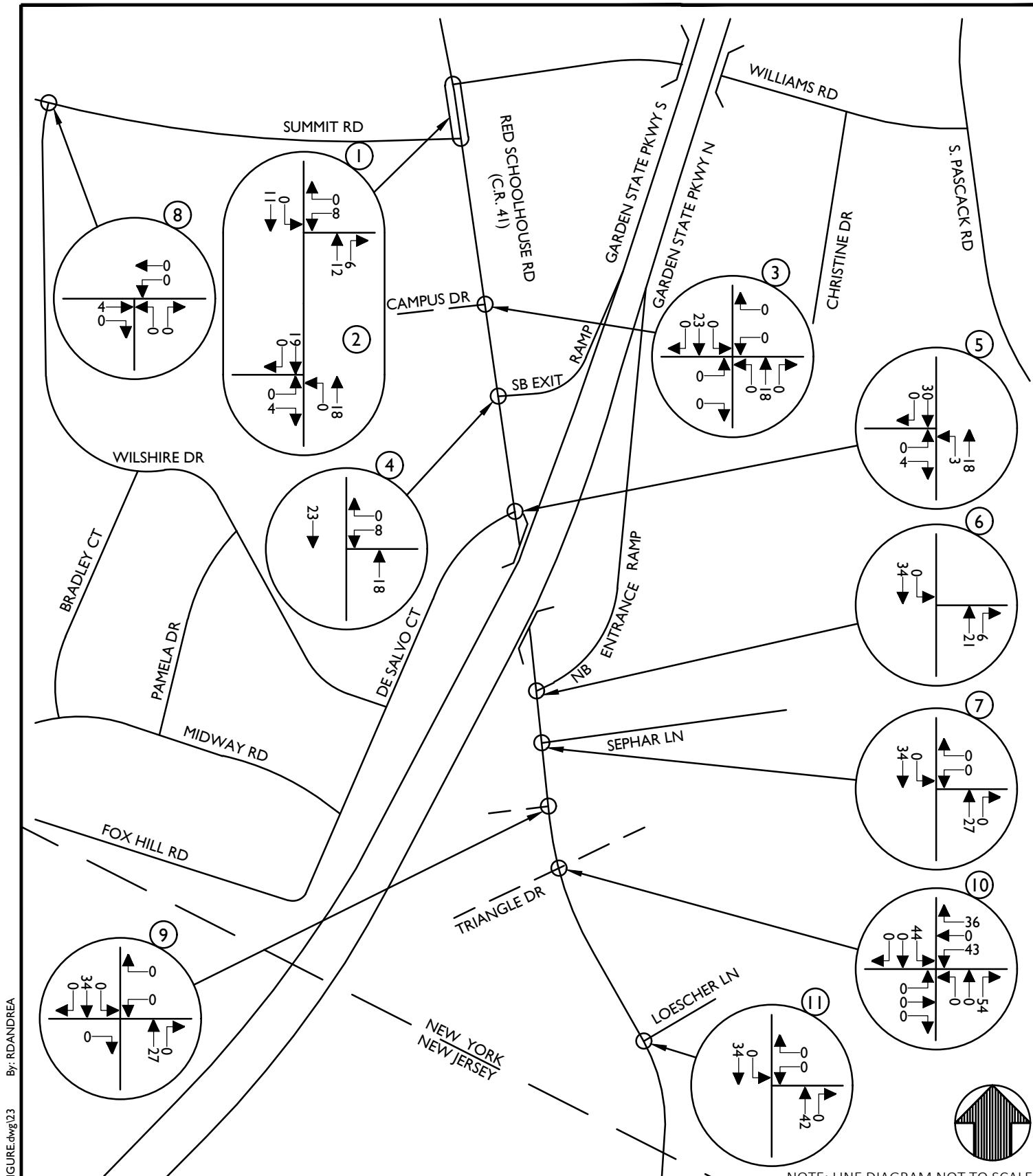
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 TRAFFIC VOLUMES
 SATURDAY PEAK HOUR**

SHEET NUMBER:
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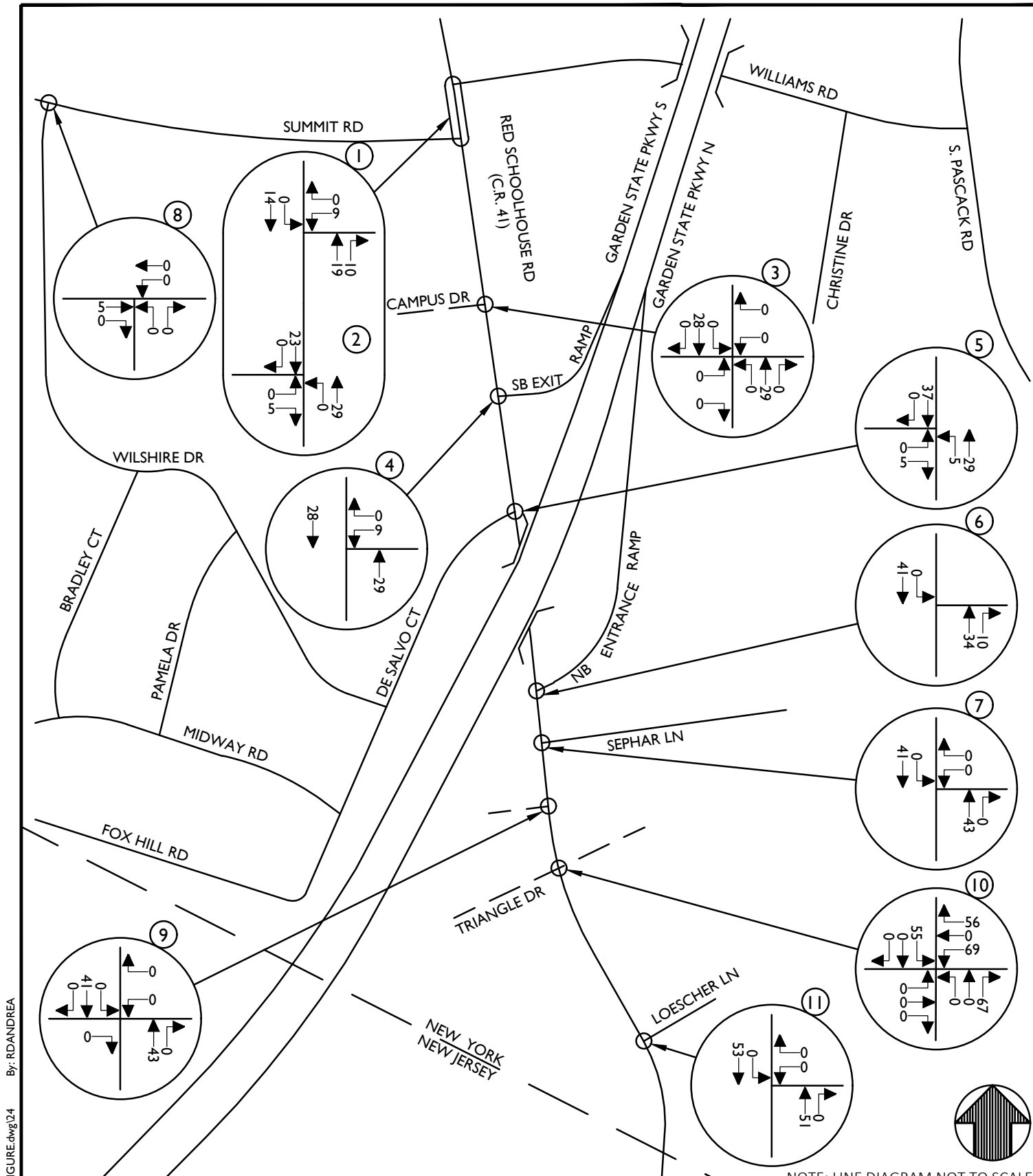
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 COMMERCIAL TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR

SHEET NUMBER:
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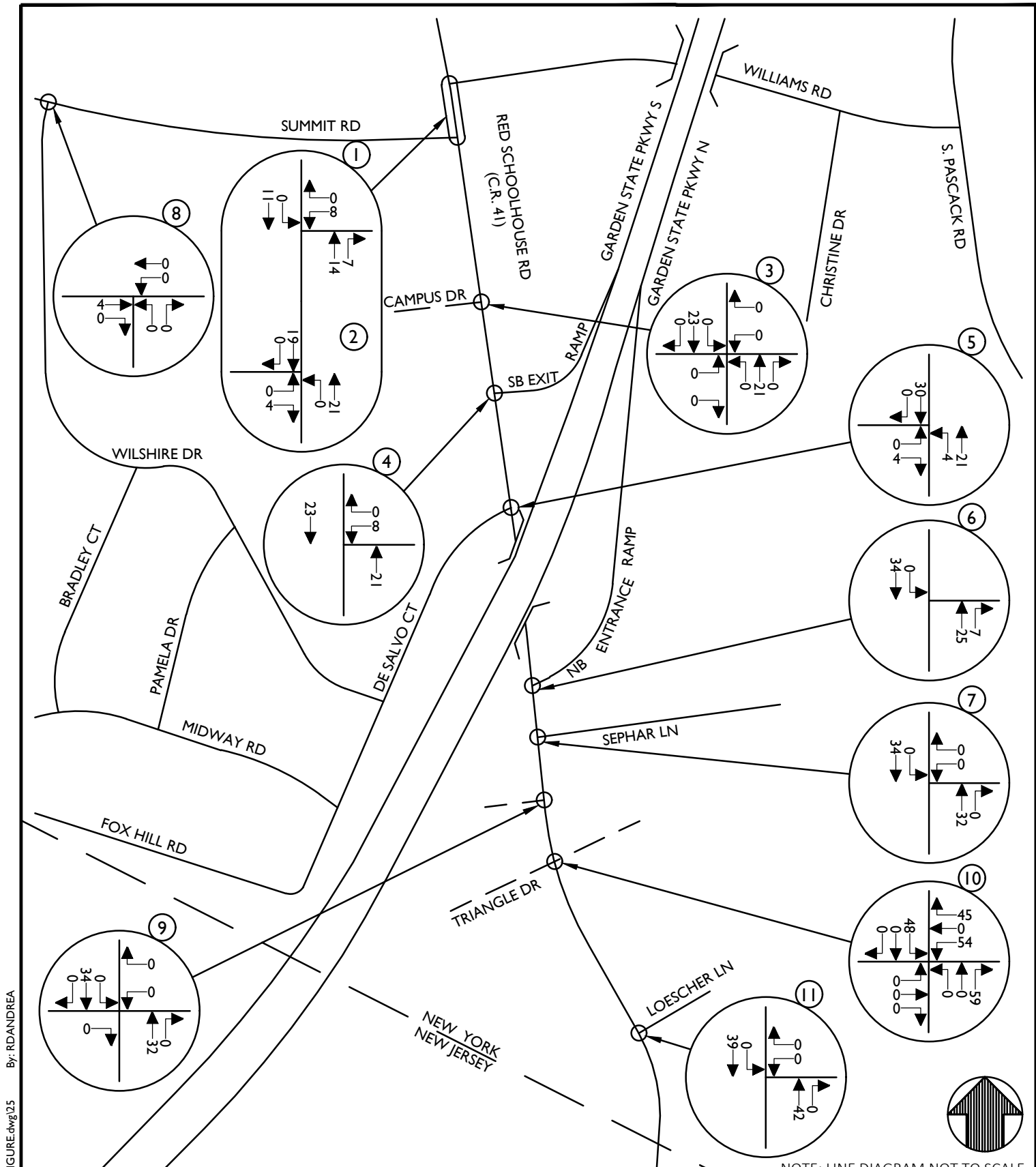
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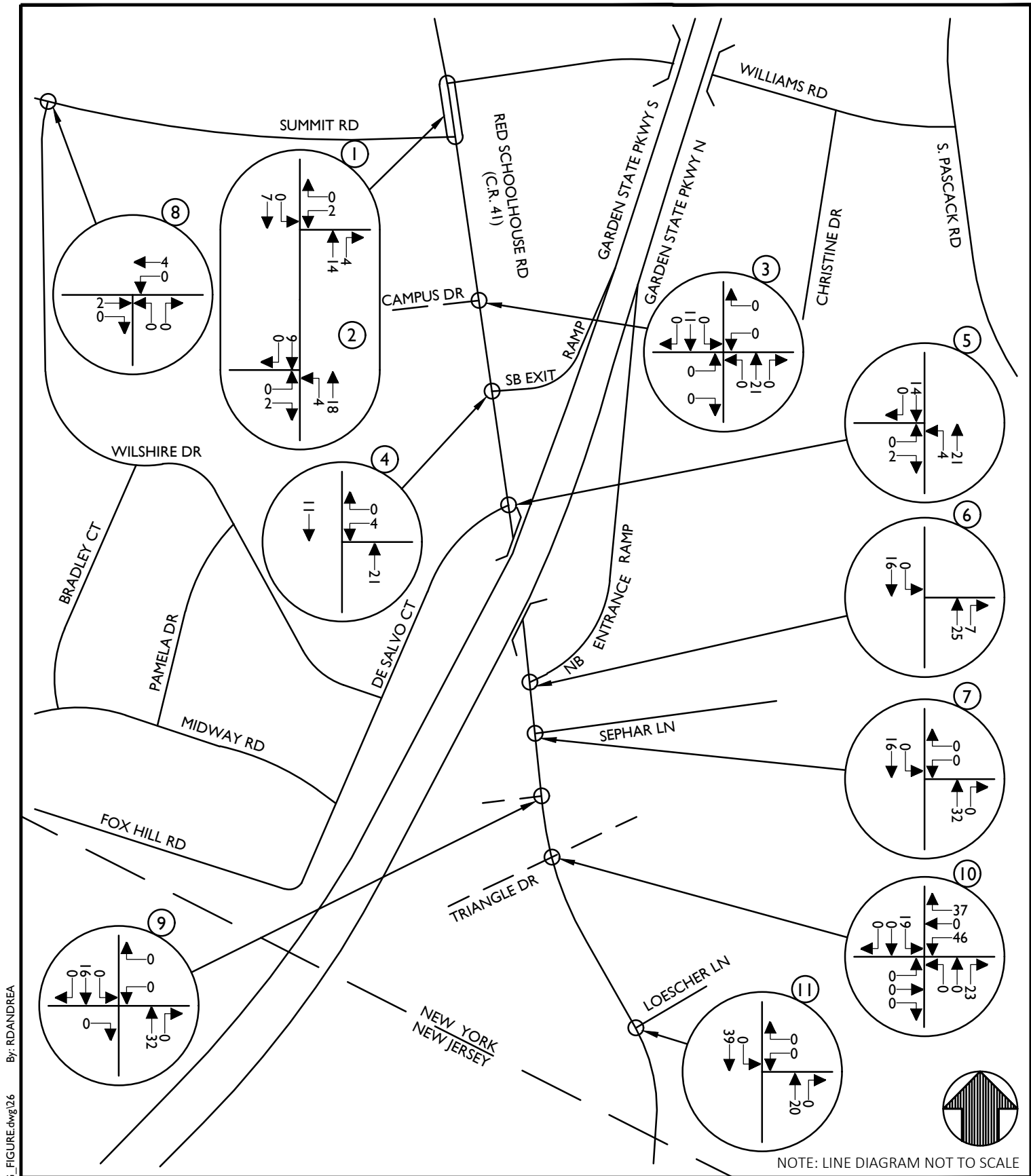
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 SATURDAY PEAK HOUR**

SHEET NUMBER:
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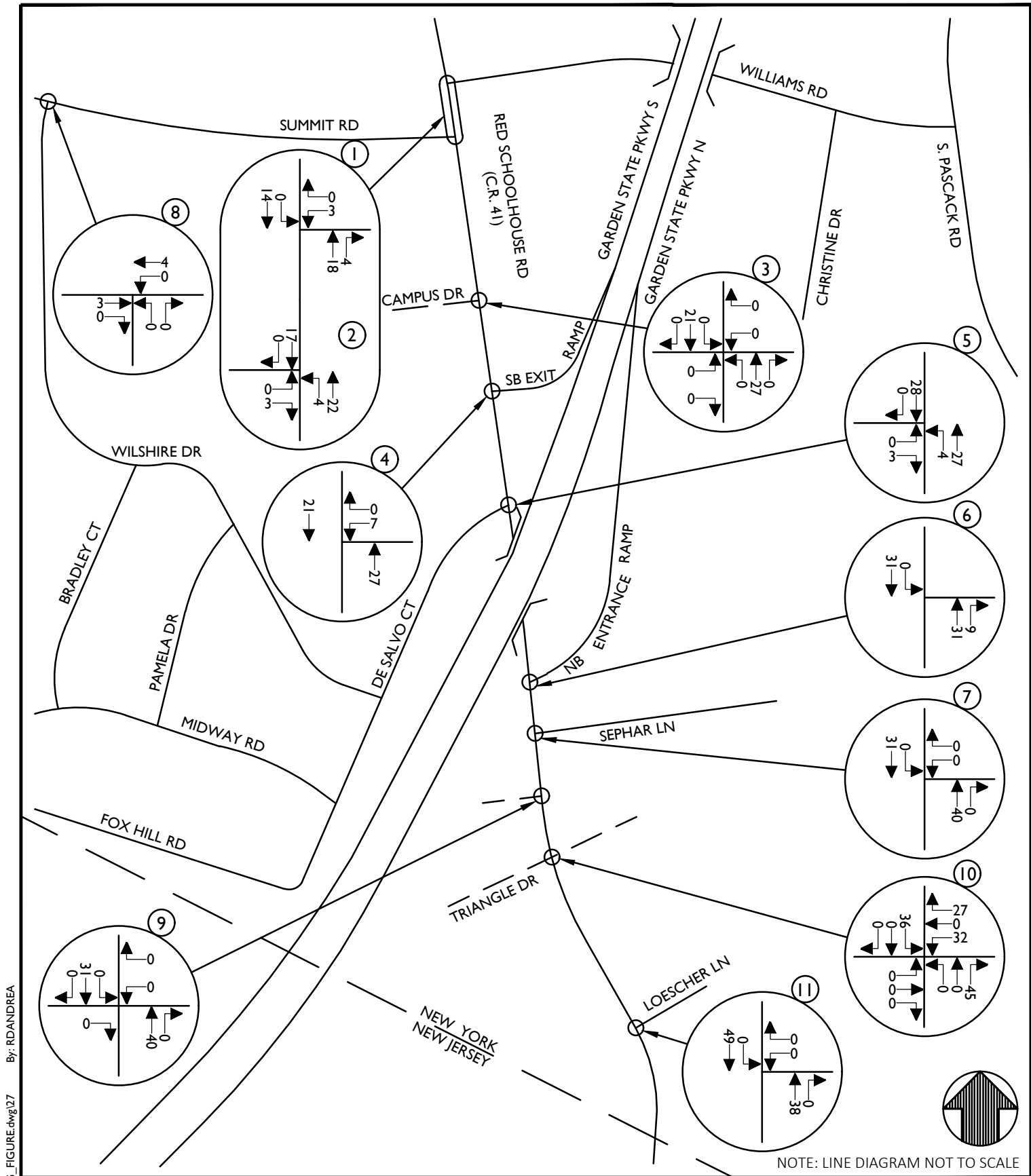
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EQUESTRIAN ESTATES RESIDENTIAL TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
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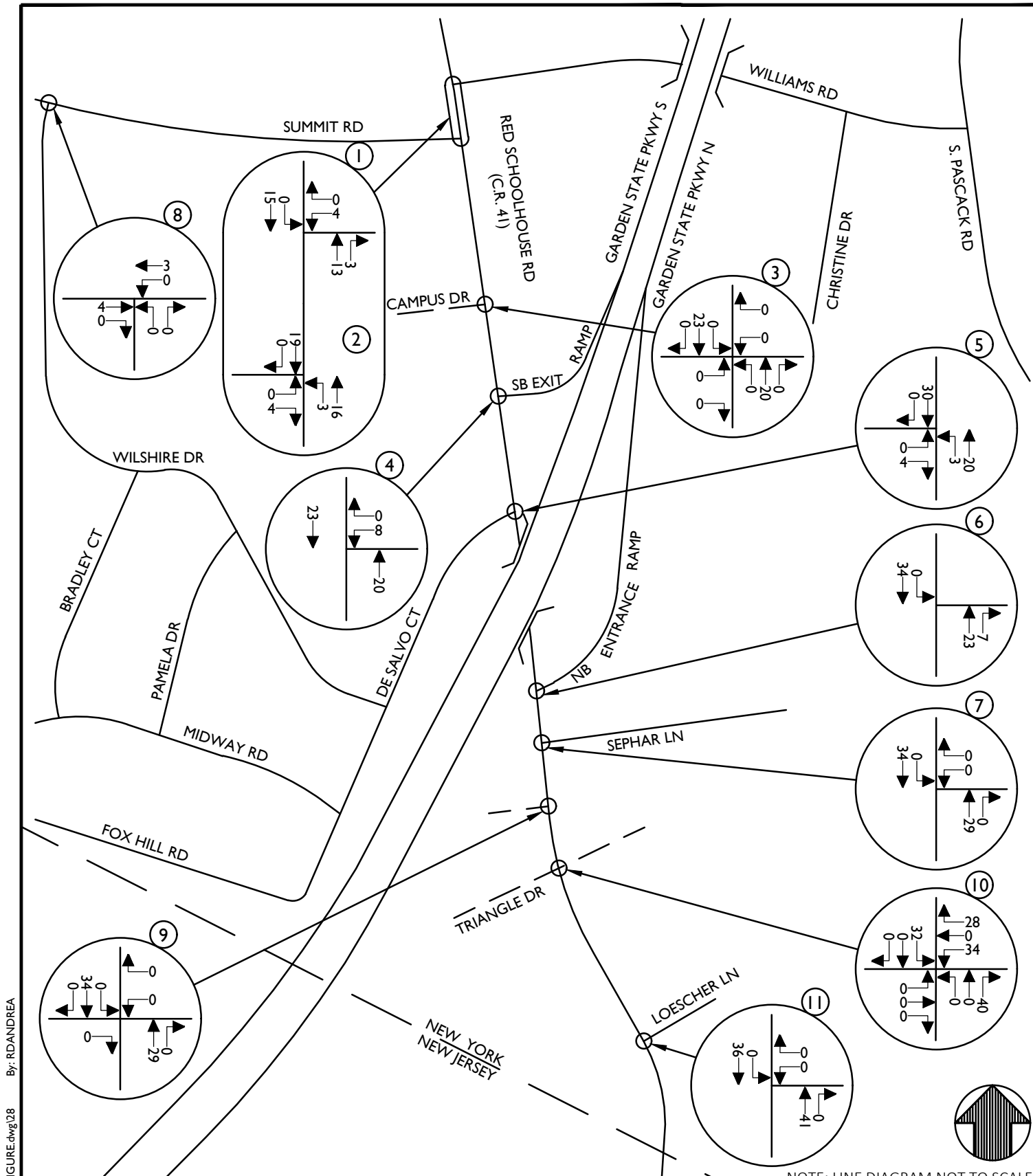
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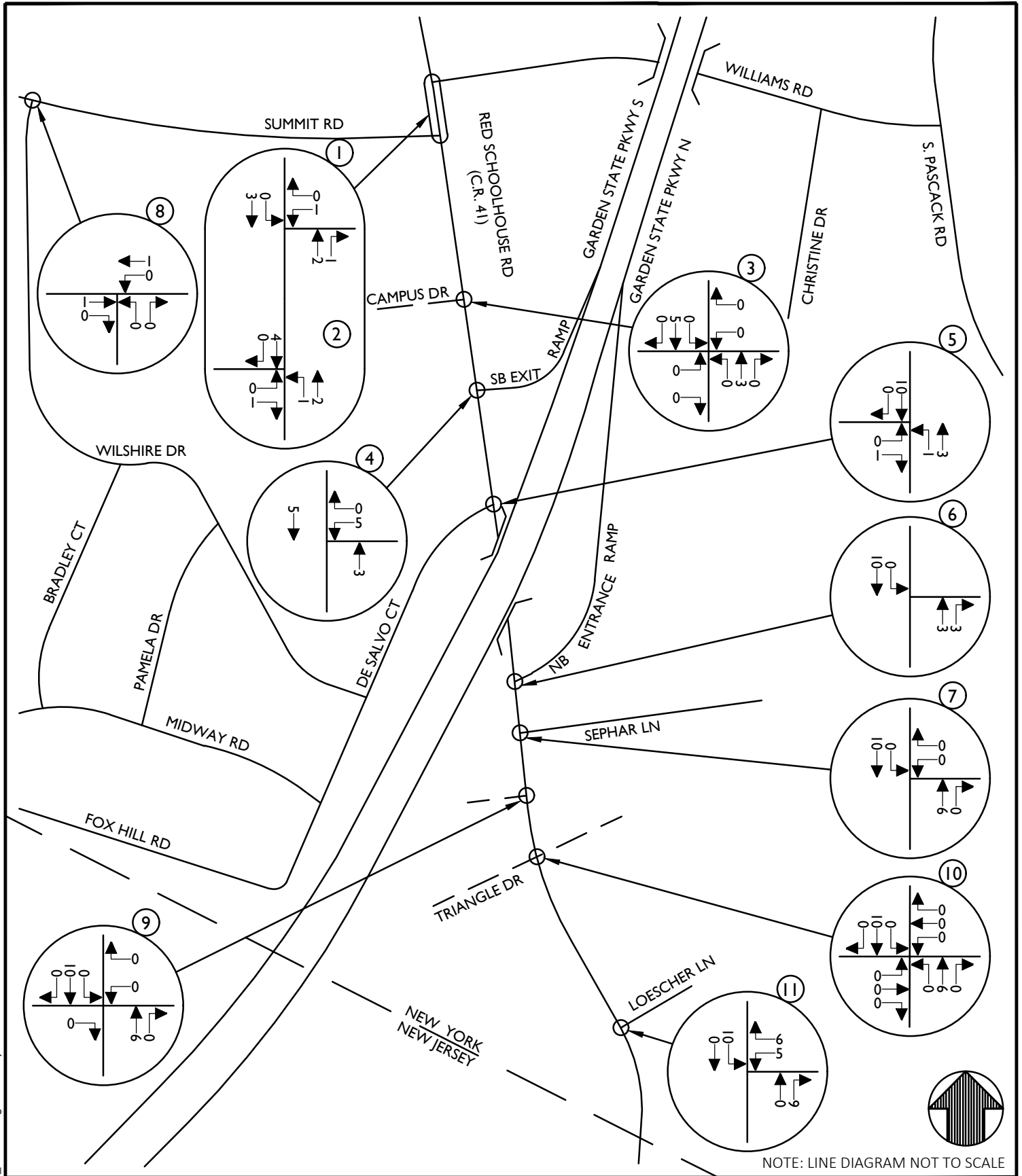
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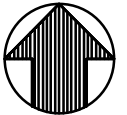
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PROJECT NUMBER:	DRAWING NAME:		
20003327A	200811PWVG_FIGURE		
SHEET TITLE:			
EQUESTRIAN ESTATES RESIDENTIAL TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			
28			



NOTE: LINE DIAGRAM NOT TO SCALE



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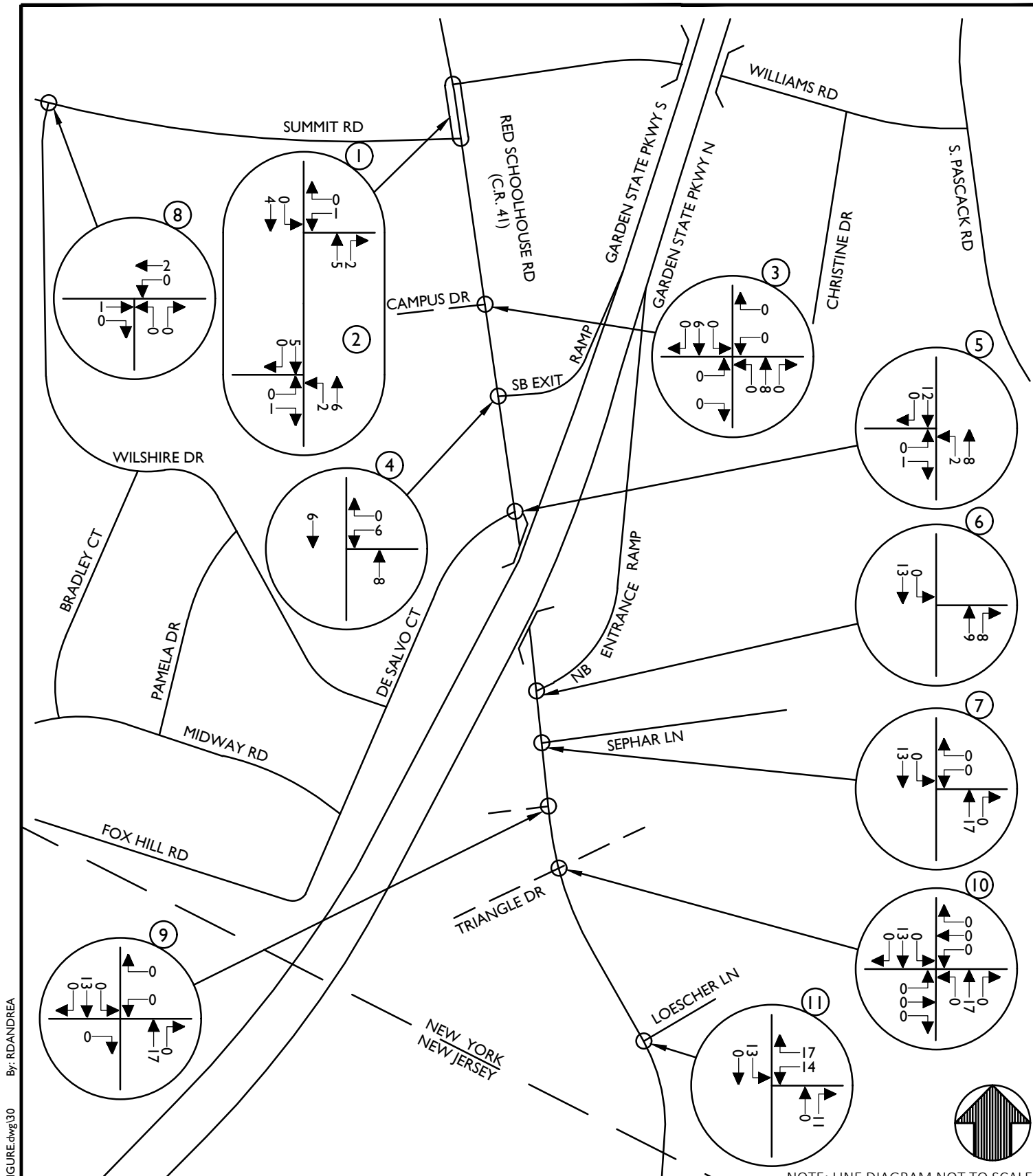
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20003327A	200811PWG_FIGURE		

SHEET TITLE:
**FUTURE HORSE FARM DEV.
 TRAFFIC VOLUMES
 WEEKDAY PEAK AM HOUR**

SHEET NUMBER:

29



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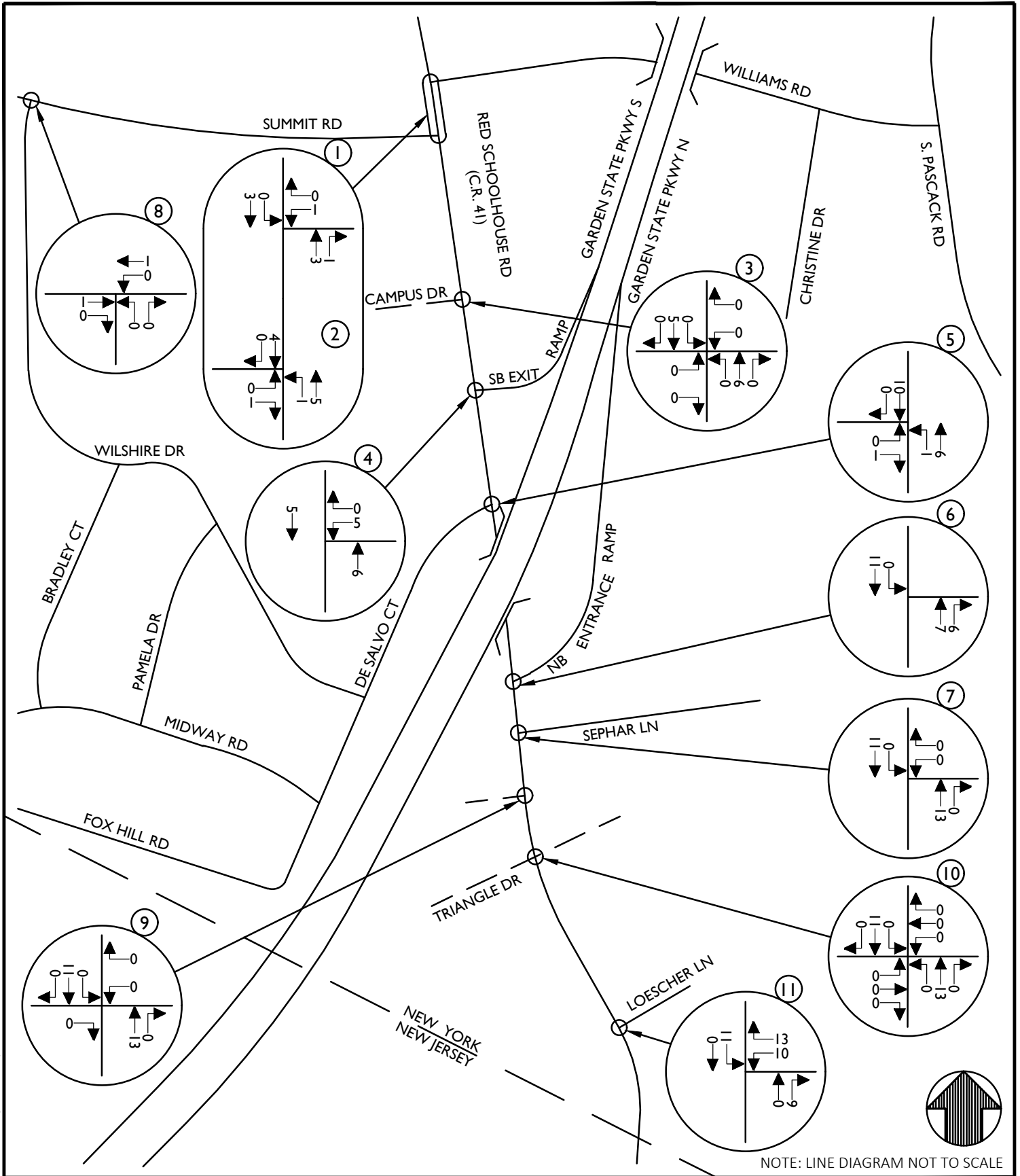
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PROJECT NUMBER:	DRAWING NAME:		
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SHEET TITLE:			
FUTURE HORSE FARM DEV. TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			
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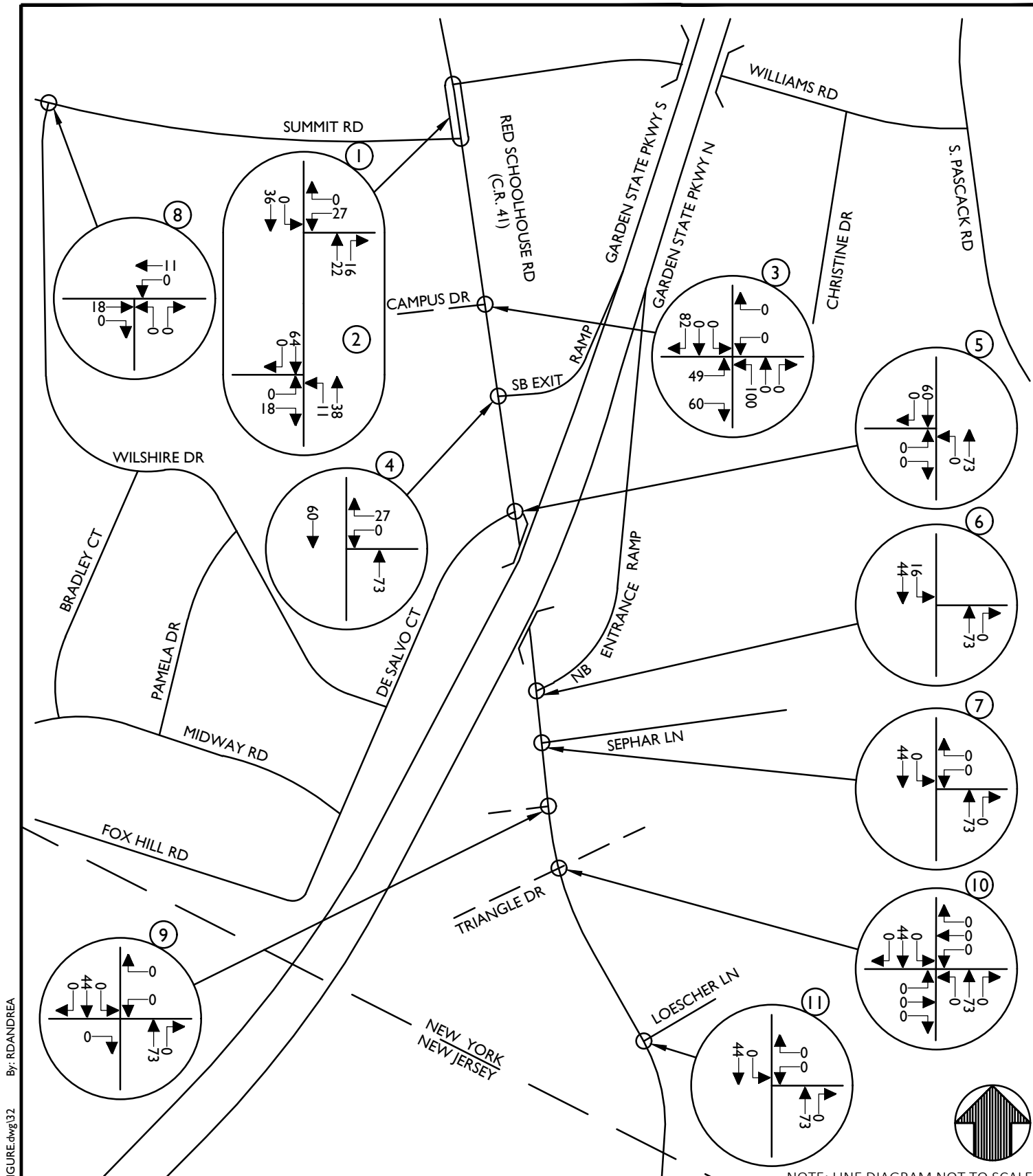
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PROJECT NUMBER: 20003327A		DRAWING NAME: 200811PWG_FIGURE	
SHEET TITLE: FUTURE HORSE FARM DEV. TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			31



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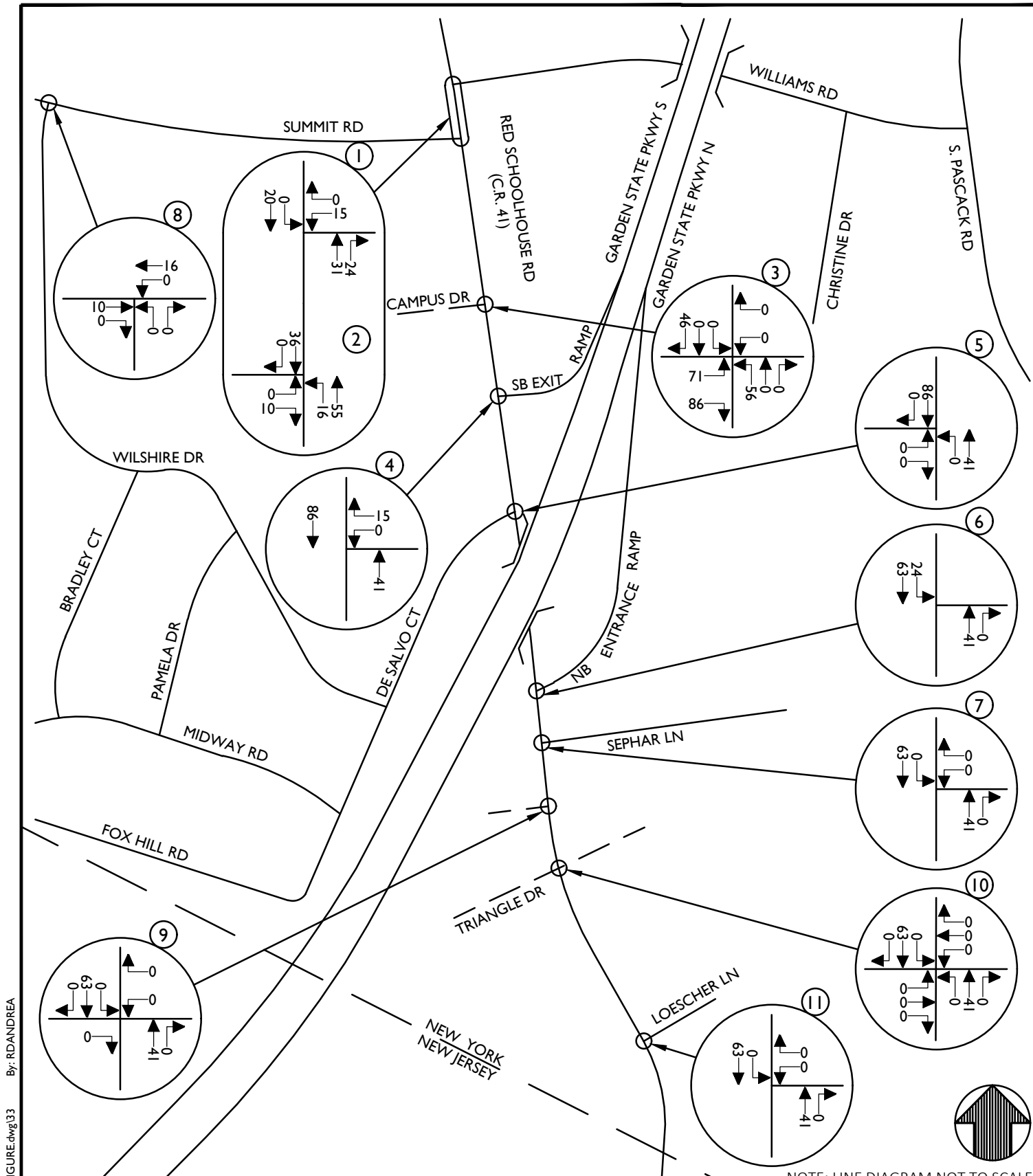
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PROJECT NUMBER:	DRAWING NAME:		
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SHEET TITLE:			
WELLINGTON SCHOOLS CAMPUS TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER:			
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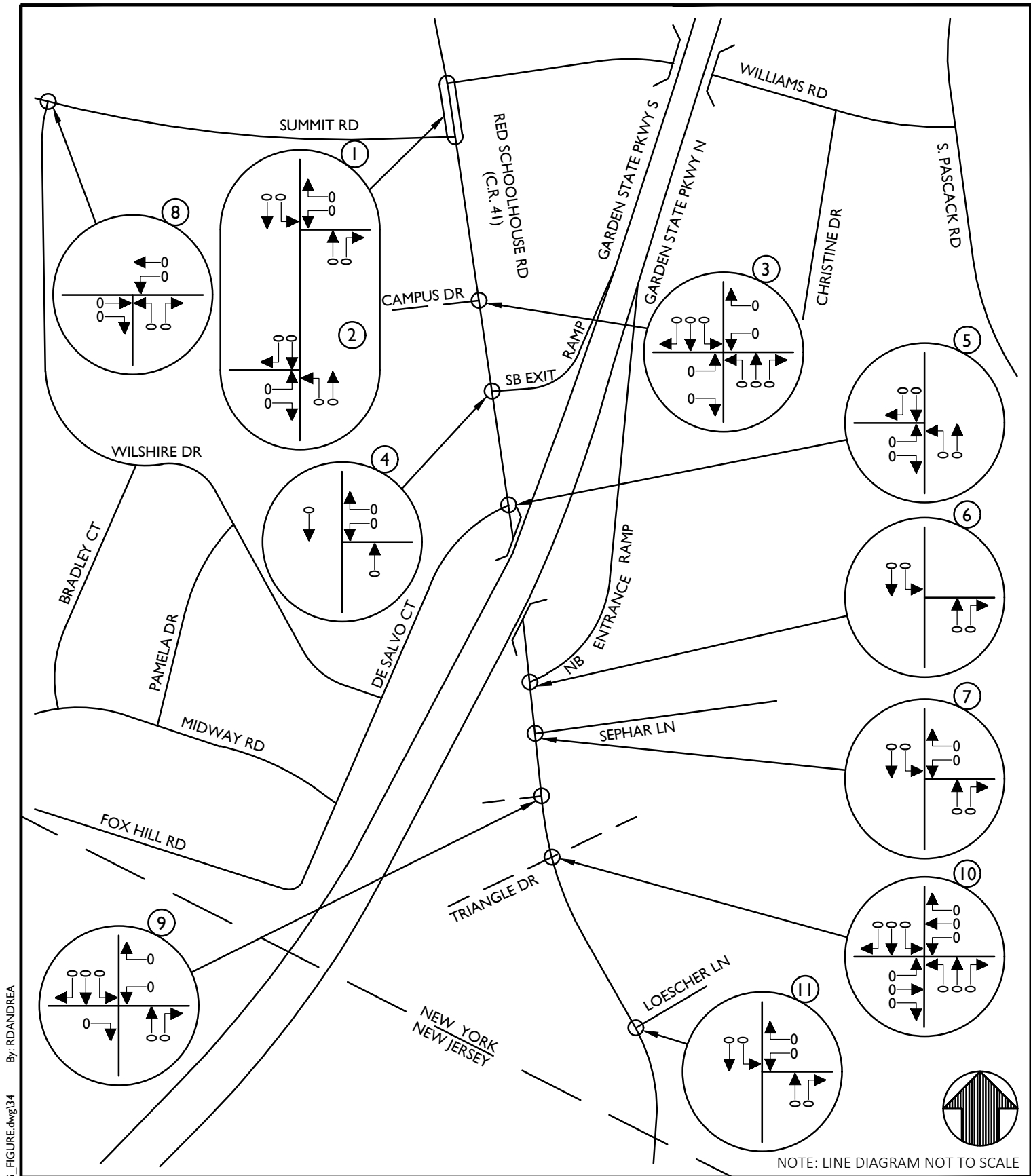
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PROJECT NUMBER: 20003327A		DRAWING NAME: 200811PWG_FIGURE	
SHEET TITLE: WELLINGTON SCHOOLS CAMPUS TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			33



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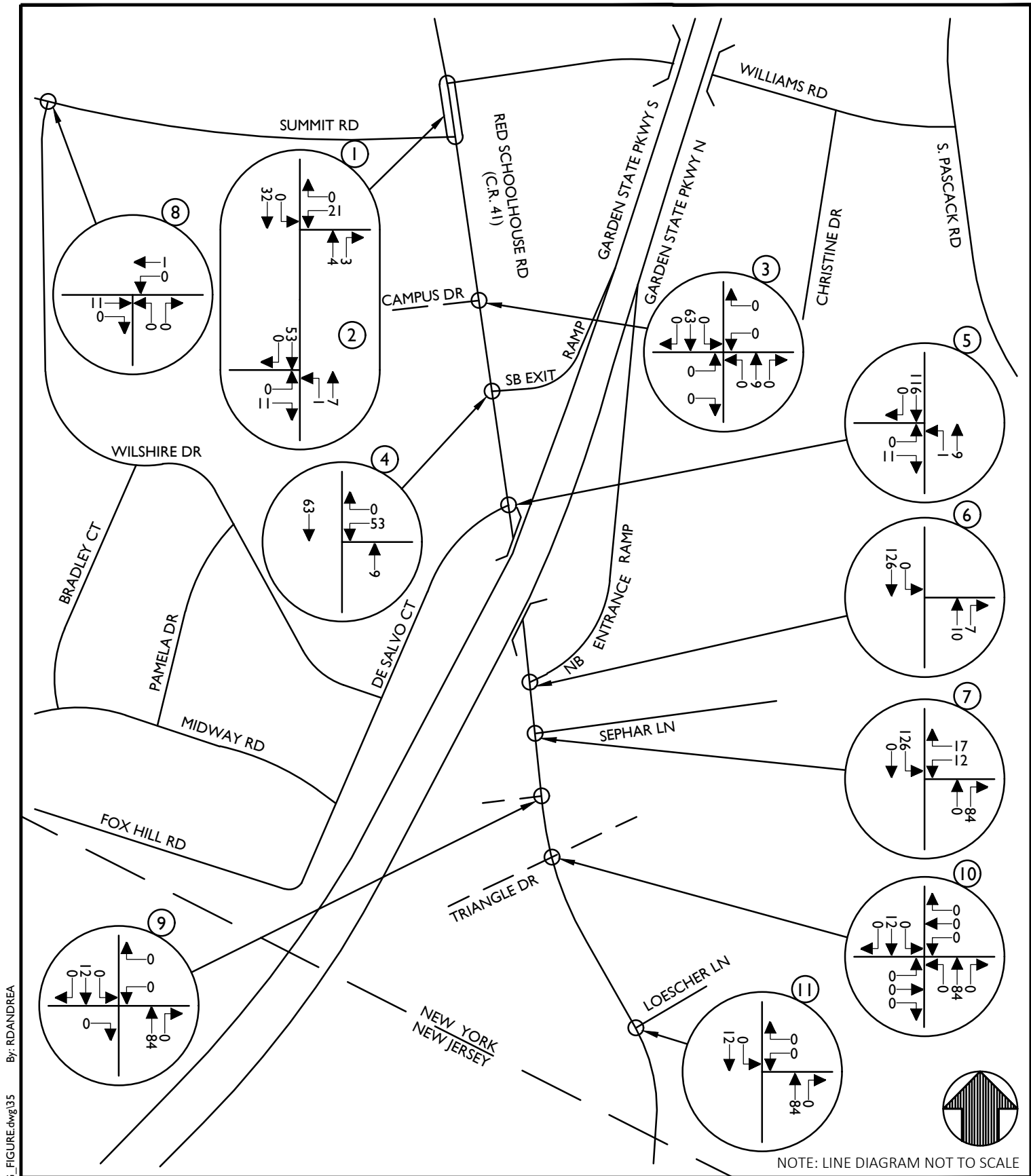
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PROJECT NUMBER:	DRAWING NAME:		
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SHEET TITLE:			
WELLINGTON SCHOOLS CAMPUS TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			
34			



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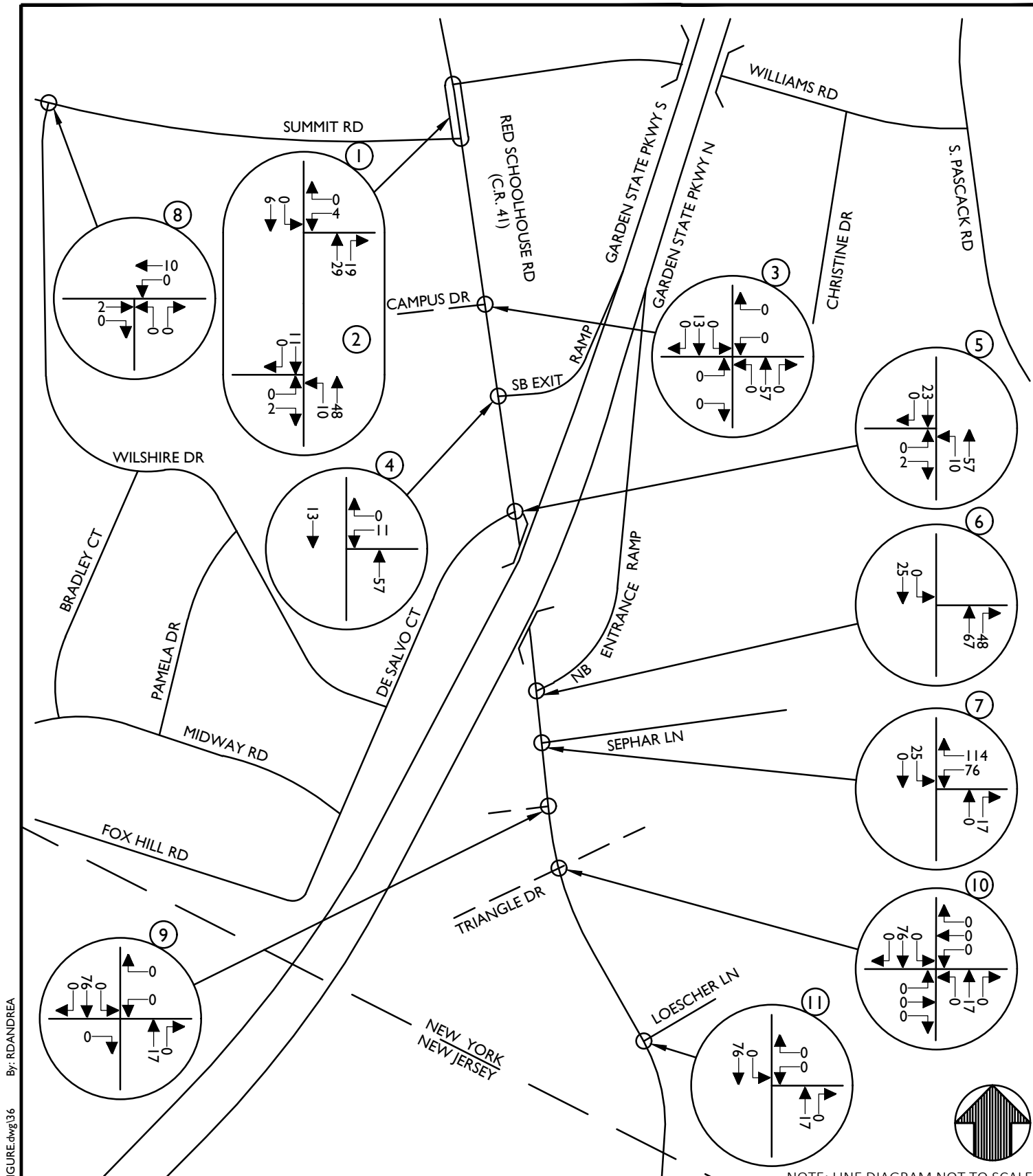
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SHEET TITLE:
**CORPORATE COMMERCE PARK
TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:
35



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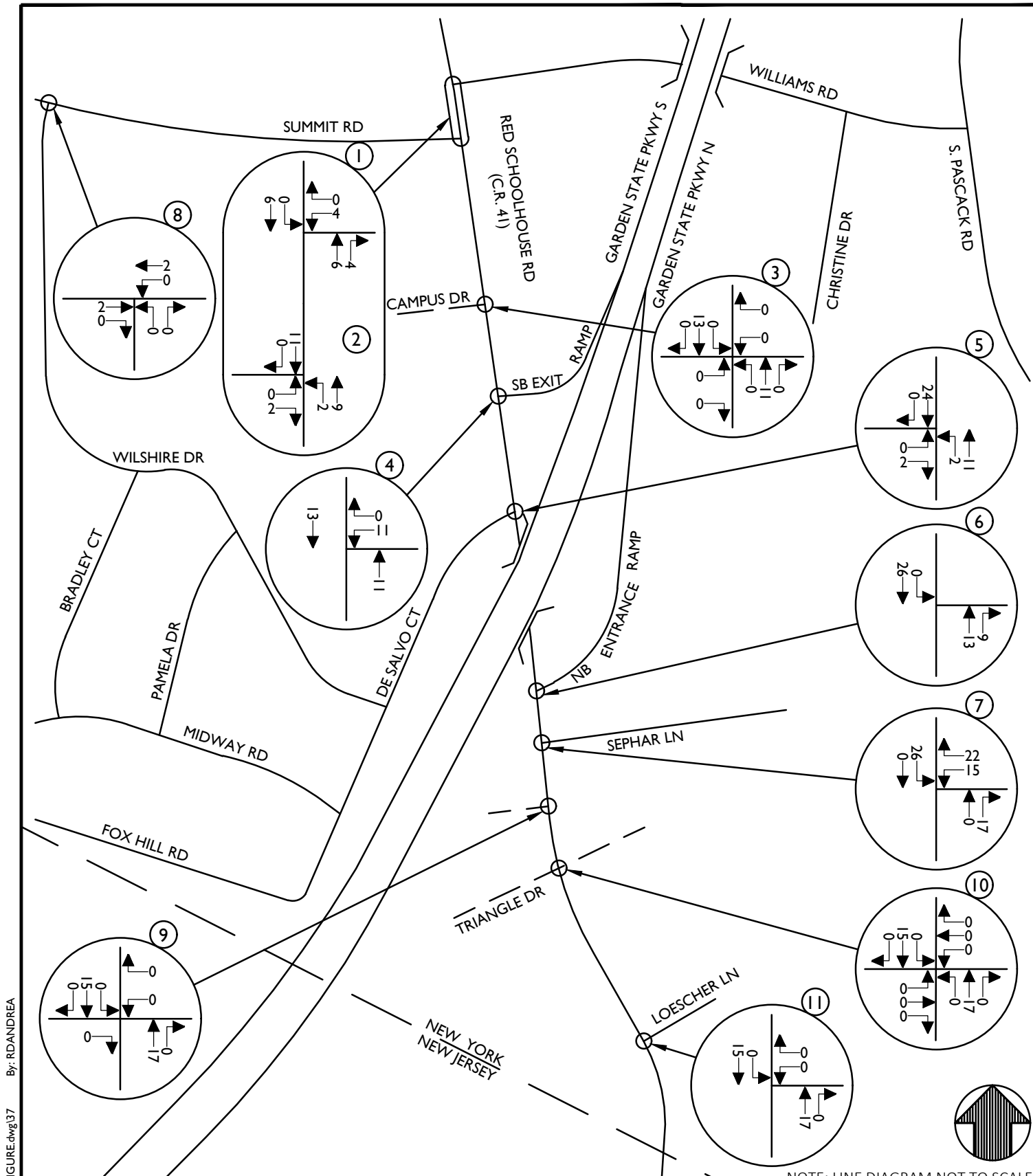
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SHEET TITLE: CORPORATE COMMERCE PARK TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			36



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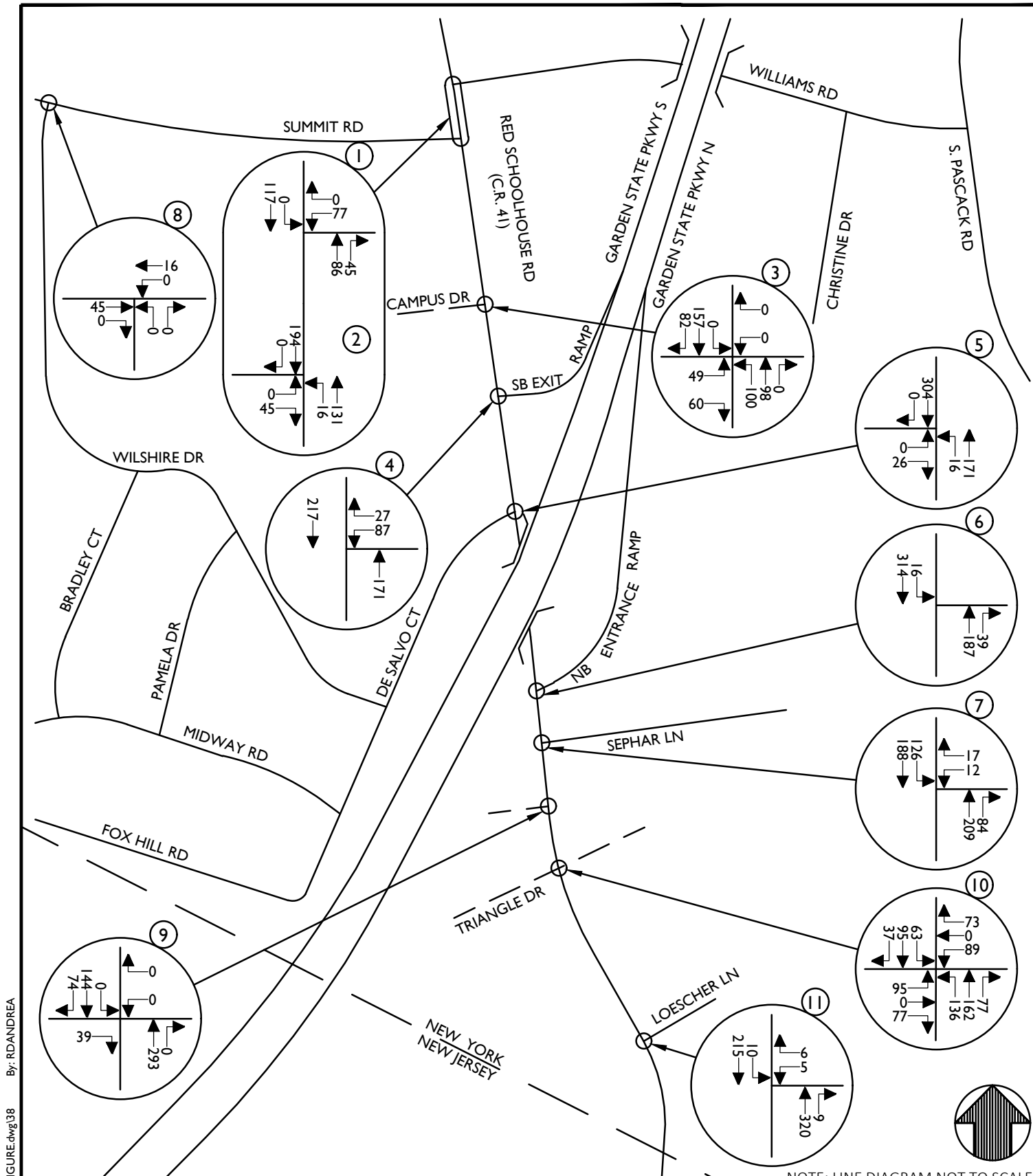
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SHEET TITLE:			
CORPORATE COMMERCE PARK TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			
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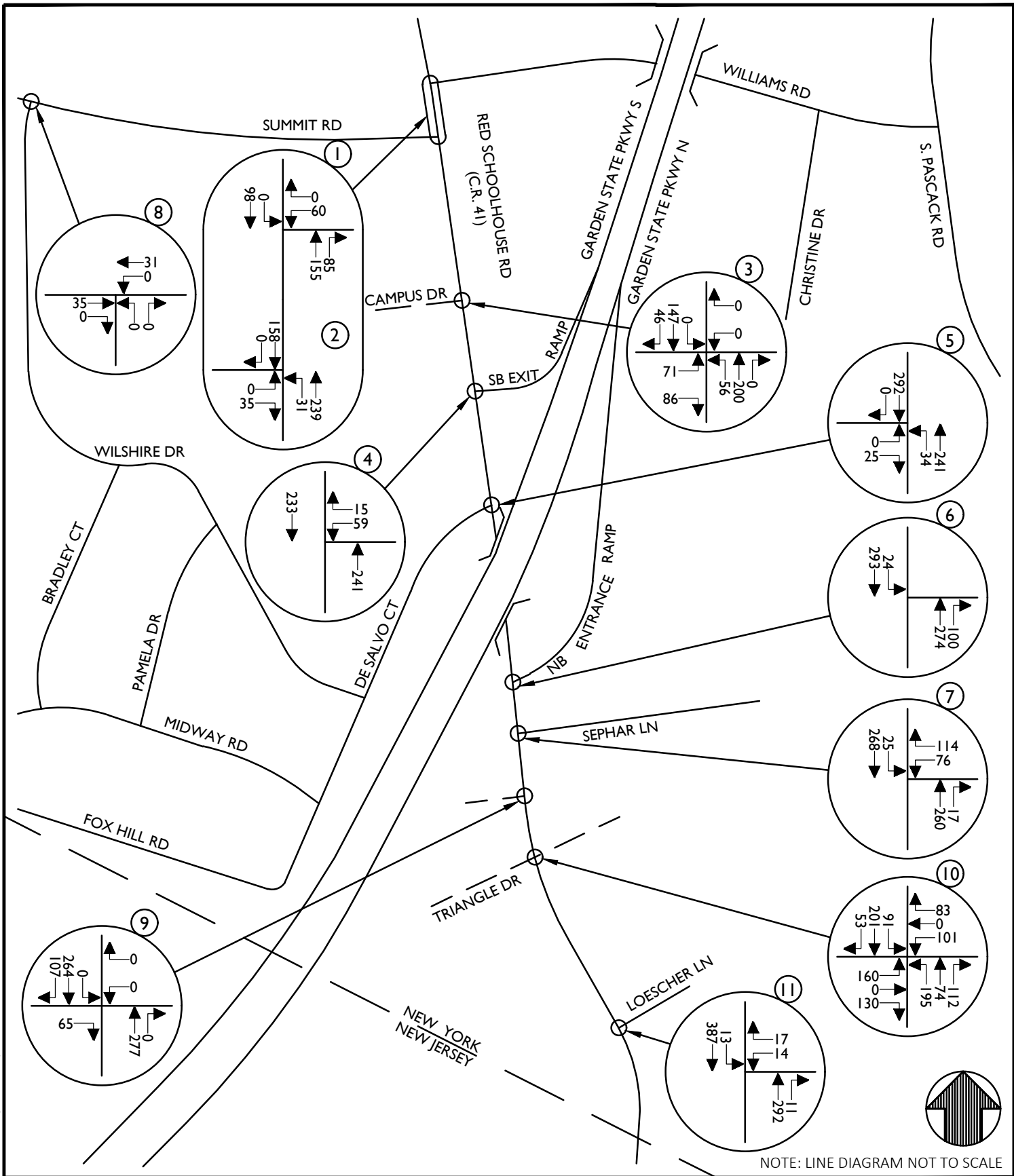
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PROJECT NUMBER:		DRAWING NAME:	
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SHEET TITLE:
**TOTAL AREA DEVELOPMENT
GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:
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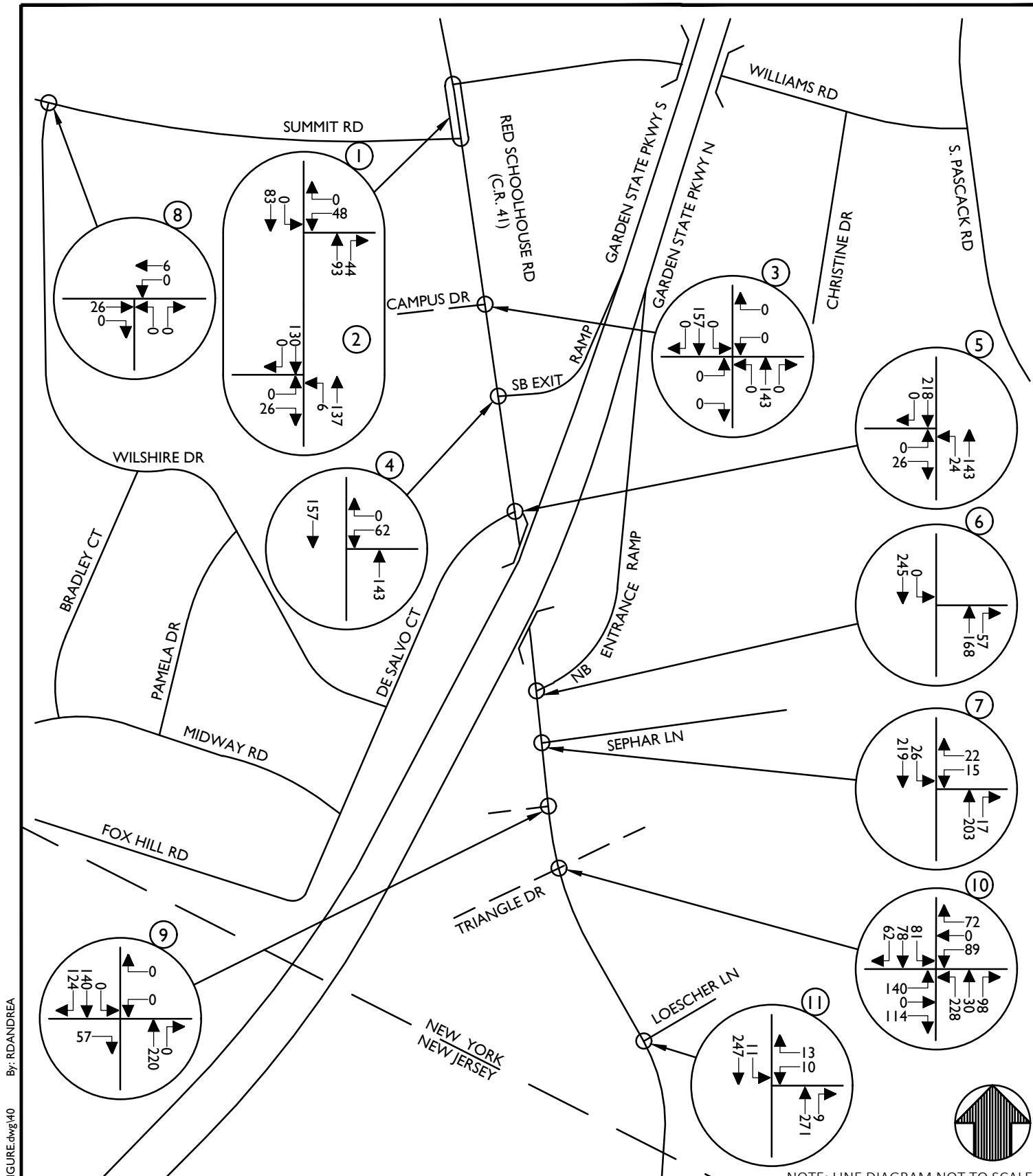
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PROJECT NUMBER:	DRAWING NAME:		
20003327A	200811PWVG_FIGURE		

SHEET TITLE:
**TOTAL AREA DEVELOPMENT
 GENERATED TRAFFIC VOLUMES
 WEEKDAY PEAK PM HOUR**

SHEET NUMBER:
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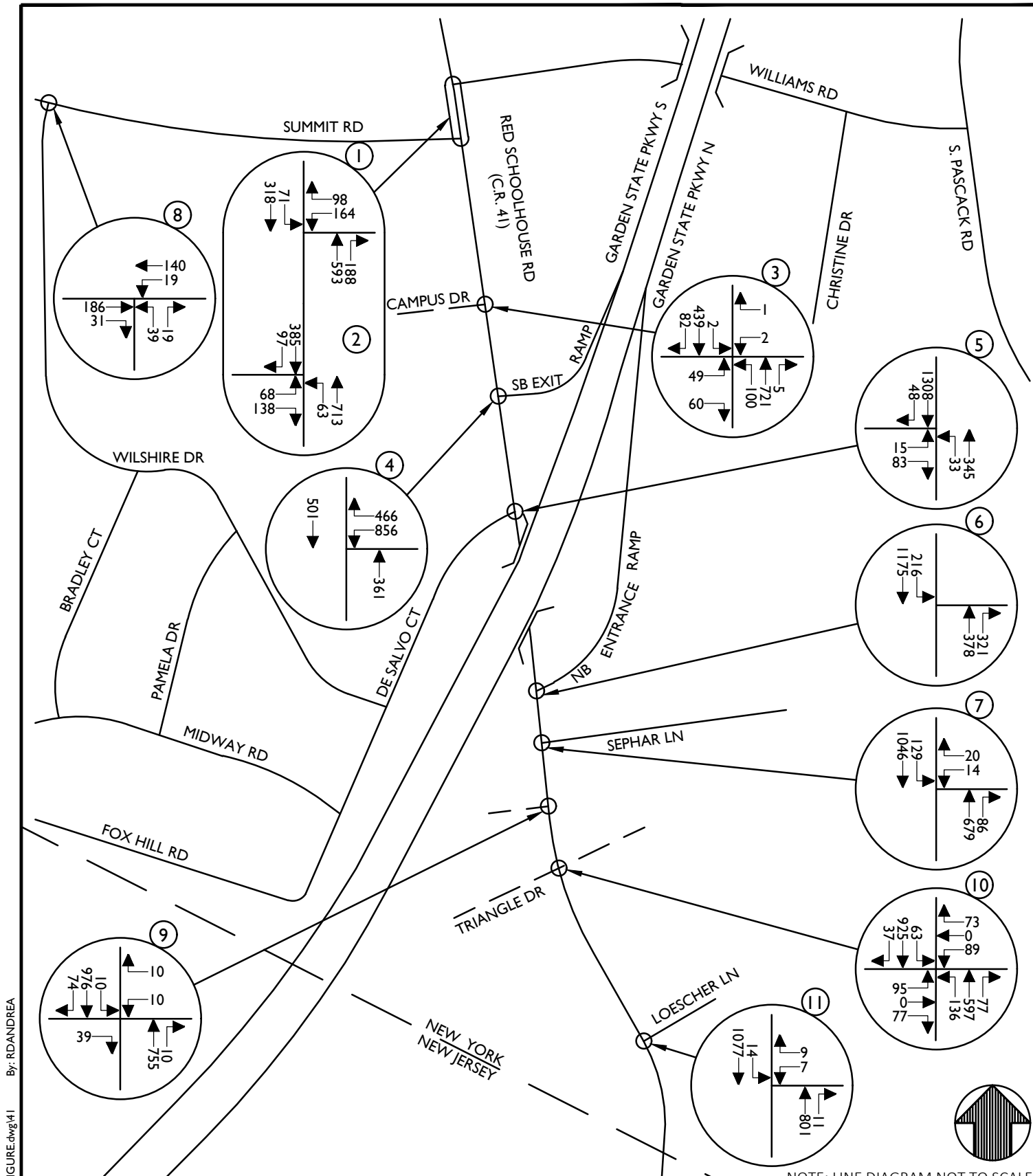
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PROJECT NUMBER: 20003327A		DRAWING NAME: 200811PWG_FIGURE	
SHEET TITLE: TOTAL AREA DEVELOPMENT GENERATED TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			40



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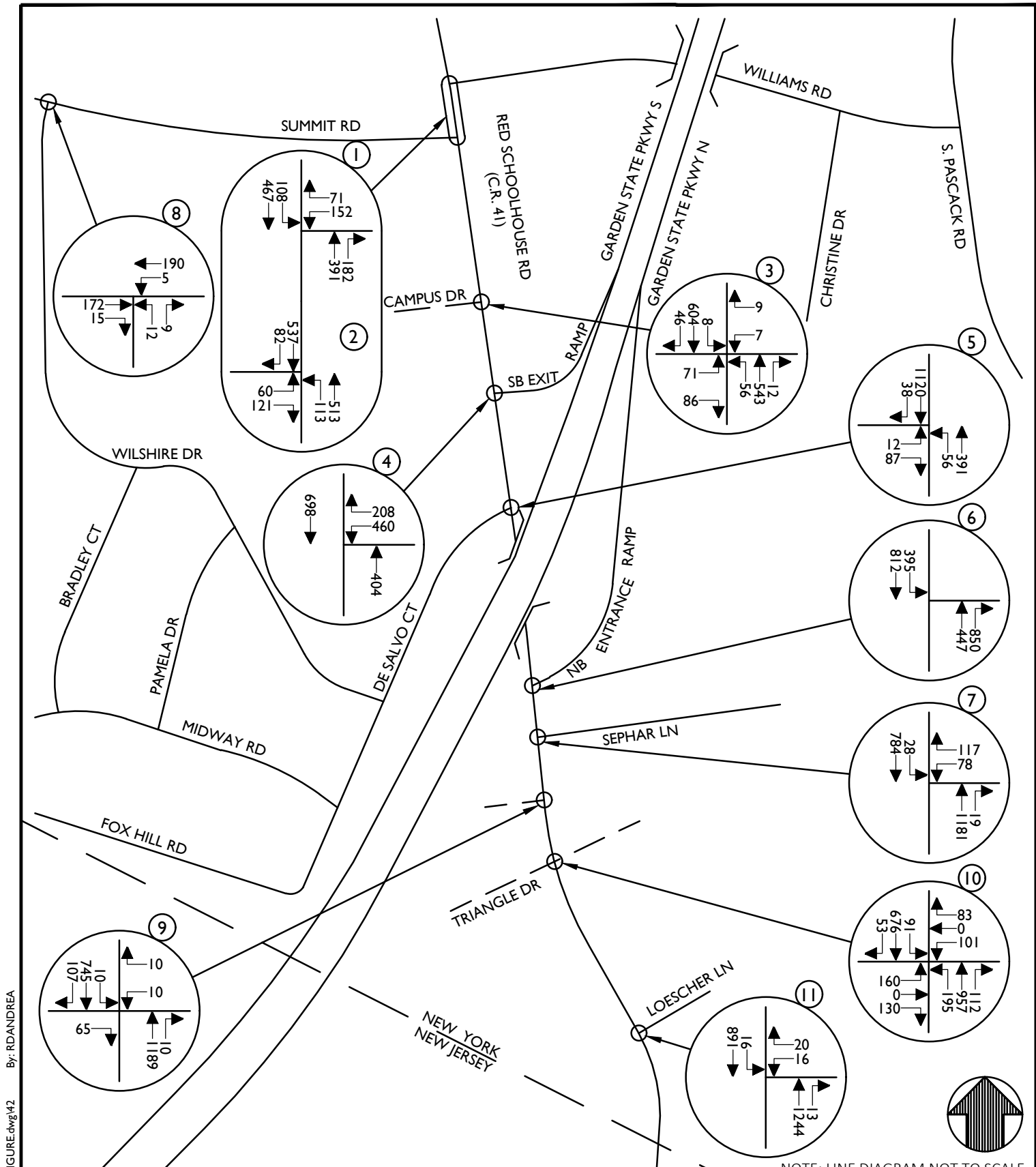
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AS SHOWN	8/11/20	P.W.G.	P.J.G.
PROJECT NUMBER: 20003327A		DRAWING NAME: 200811PWVG_FIGURE	
SHEET TITLE: 2025 BUILD TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER:			41



NOTE: LINE DIAGRAM NOT TO SCALE

3327AReports\Traffic\Figures\2008\IPWG_FIGURE.dwg\42 By: RDANDREA



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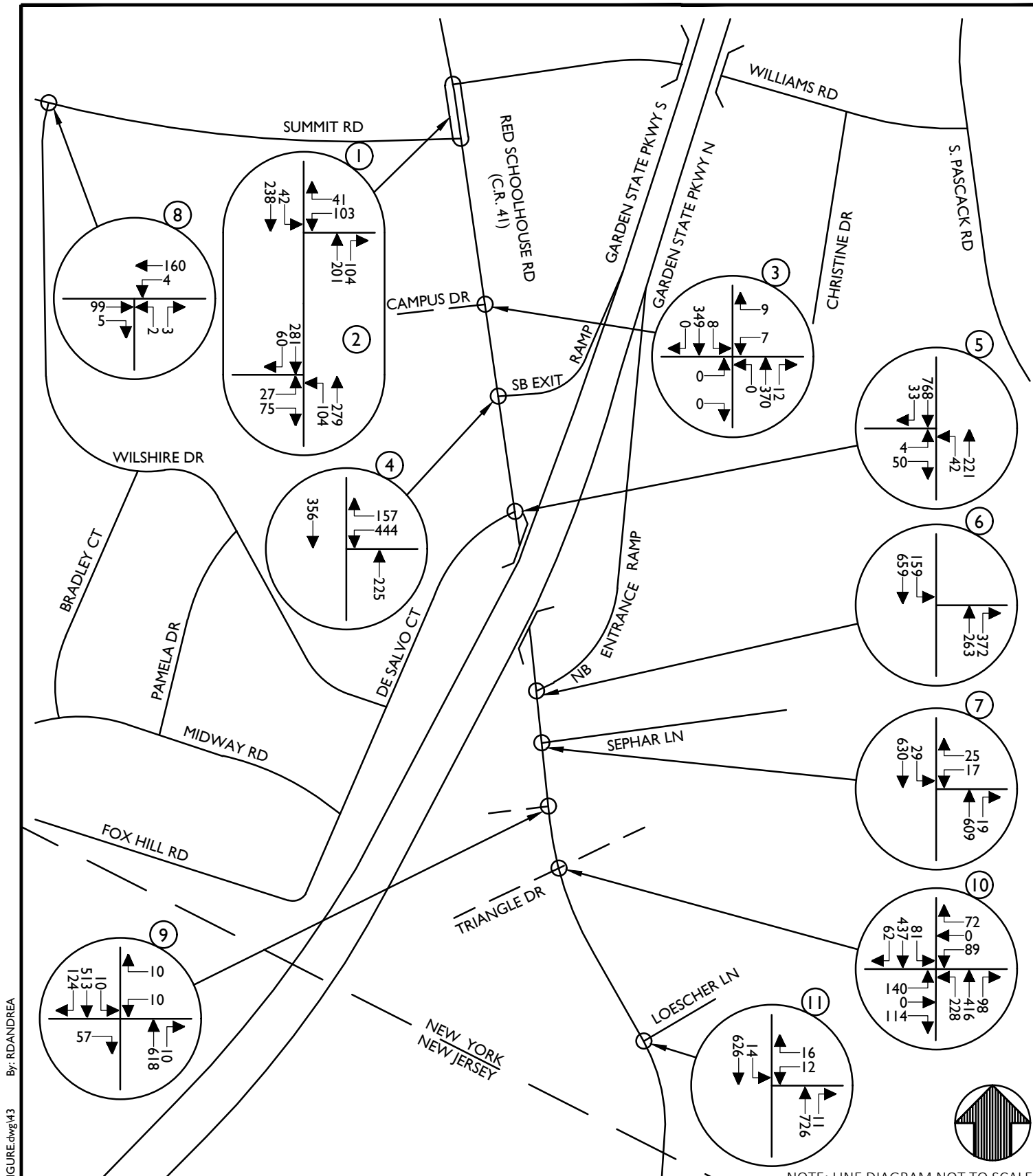
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SHEET TITLE: 2025 BUILD TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			42



NOTE: LINE DIAGRAM NOT TO SCALE

3327AIPerportsTrafficFigures200811PWG_FIGURE.dwg43 By: RDANDREA



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PROJECT NUMBER: 20003327A		DRAWING NAME: 200811PWG_FIGURE	
SHEET TITLE: 2025 BUILD TRAFFIC VOLUMES SATURDAY PEAK HOUR			
SHEET NUMBER:			43



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX C

TABLES

TABLE NO. 1

SUMMARY OF EXISTING ROADWAY CHARACTERISTICS
RED SCHOOLHOUSE ROAD CORRIDOR

ROADWAY	RED SCHOOLHOUSE ROAD	SUMMIT ROAD	WILLIAMS ROAD	DESALVO COURT	SEPHAR LANE
START	NJ STATE LINE	NYS ROUTE 45	RED SCHOOLHOUSE ROAD	FOXHILL ROAD	RED SCHOOLHOUSE ROAD
END	NYS ROUTE 45	RED SCHOOLHOUSE ROAD	PASCACK ROAD	RED SCHOOLHOUSE ROAD	DEAD END
JURISDICTION	ROCKLAND COUNTY HIGHWAY DEPT.	VILLAGE OF CHESTNUT RIDGE	VILLAGE OF CHESTNUT RIDGE	VILLAGE OF CHESTNUT RIDGE	PRIVATE DRIVEWAY
LENGTH	0.94 MILES	0.48 MILES	0.20 MILES	0.25 MILES	0.15 MILES
CLASSIFICATION	URBAN MINOR ARTERIAL	URBAN LOCAL ROAD	URBAN LOCAL ROAD	URBAN LOCAL ROAD	PRIVATE DRIVEWAY
NUMBER OF LANES	2	2	2	2	N/A
PAVEMENT TYPE	ASPHALT	ASPHALT	ASPHALT	ASPHALT	GRAVEL/DIRT
PAVEMENT WIDTH	VARIES 22-30 FT.	22 FT.	VARIES 20-24 FT.	30 FT.	16 FT.
PAVEMENT CONDITION	FAIR/POOR	GOOD/FAIR	GOOD/FAIR	GOOD/FAIR	N/A
SHOULDER WIDTH	N/A	N/A	N/A	N/A	N/A
AADT	8,206 VPD	2,970 VPD	3,325 VPD	-	N/A
PERCENT HEAVY VEHICLES	2.3%	1.0%	3.1%	-	N/A
POSTED SPEED LIMIT	30 MPH	30 MPH	30 MPH	30 MPH	NOT POSTED
CURB CONDITION	INTACT CONCRETE CURB ON EAST SIDE NO CURBING ON WEST SIDE EXCEPT NEAR GSP OVERPASS	GENERALLY CONCRETE OR ASPHALT CURB SOME BROKEN/MISSING SECTIONS	SHALLOW ASPHALT CURB OR NOT PRESENT	NONE	NONE
SIDEWALKS	WEST SIDE BETWEEN DESALVO COURT & GSP NORTHBOUND ON-RAMP ONLY SIDEWALK IN POOR CONDITION AND HAS ADA COMPLIANCE ISSUES	CONCRETE/ ASPHALT SIDEWALK ALONG SOUTH SIDE OF ROADWAY FOR ENTIRE LENGTH	NONE	NONE	NONE
BICYCLE FACILITIES	NONE	NONE	NONE	NONE	NONE
NOTES	---	5-TON WEIGHT RESTRICTION NO LEFT TURNS (7-10 AM) FROM RED SCHOOLHOUSE RD	---	SIGHTLINES OBSTRUCTED BY OVERPASS PILLARS	---

TABLE NO. 2

LEVEL OF SERVICE SUMMARY TABLE
WEEKDAY PEAK AM HOUR

				2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
1	RED SCHOOLHOUSE ROAD & WILLIAMS ROAD	UN SIGNALIZED											
	WILLIAMS ROAD	WB LR	0.58	D	29.6	0.61	D	32.3	1.33	F	221.0	188.7	
	RED SCHOOLHOUSE ROAD	SB LT	0.09	A	9.5	0.09	A	9.6	0.10	B	10.2	0.6	
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>	UN SIGNALIZED											
	WILLIAMS ROAD	WB LR	-	-	-	-	-	-	1.30	F	207.8	175.5	
	RED SCHOOLHOUSE ROAD	SB L	-	-	-	-	-	-	0.10	B	10.2	0.6	
	<u>WITH SOUTHBOUND LEFT TURN LANE & COORDINATED SIGNAL</u>	SIGNALIZED											
	WILLIAMS ROAD	WB LR	-	-	-	-	-	-	0.96	E	74.4	-	
	RED SCHOOLHOUSE ROAD	NB TR	-	-	-	-	-	-	0.73	A	7.2	-	
	RED SCHOOLHOUSE ROAD	SB L	-	-	-	-	-	-	0.40	C	20.0	-	
		T	-	-	-	-	-	-	0.53	C	28.1	-	
		SB APPROACH	-	-	-	-	-	-	-	C	26.6	-	
		OVERALL	-	-	-	-	-	-	-	C	27.1	-	
2	RED SCHOOLHOUSE ROAD & SUMMIT ROAD	UN SIGNALIZED											
	SUMMIT ROAD	EB LR	0.39	C	18.5	0.41	C	19.3	0.76	F	48.0	28.7	
	RED SCHOOLHOUSE ROAD	NB LT	0.04	A	8.1	0.04	A	8.2	0.07	A	8.9	0.7	
	<u>WITH NORTHBOUND LEFT TURN LANE AND SIGNALIZATION</u>	SIGNALIZED											
	SUMMIT ROAD	EB LR	-	-	-	-	-	-	0.68	B	17.0	-	
	RED SCHOOLHOUSE ROAD	NB L	-	-	-	-	-	-	0.23	A	7.1	-	
		T	-	-	-	-	-	-	0.65	A	5.4	-	
		NB APPROACH	-	-	-	-	-	-	-	A	5.6	-	
	RED SCHOOLHOUSE ROAD	SB TR	-	-	-	-	-	-	0.81	B	11.9	-	
		OVERALL	-	-	-	-	-	-	-	A	9.2	-	
	<u>WITH NORTHBOUND LEFT TURN LANE AND COORDINATED SIGNAL</u>	SIGNALIZED											
	SUMMIT ROAD	EB LR	-	-	-	-	-	-	0.79	D	46.3	-	
	RED SCHOOLHOUSE ROAD	NB L	-	-	-	-	-	-	0.28	B	15.4	-	
		T	-	-	-	-	-	-	0.98	E	64.8	-	
		NB APPROACH	-	-	-	-	-	-	-	E	59.0	-	
	RED SCHOOLHOUSE ROAD	SB TR	-	-	-	-	-	-	0.54	A	3.8	-	
		OVERALL	-	-	-	-	-	-	-	D	39.5	-	
3	RED SCHOOLHOUSE ROAD & WELLINGTON SCHOOLS CAMPUS ACCESS/ PROMENADE AT CHESTNUT RIDGE	UN SIGNALIZED											
	WELLINGTON SITE ACCESS	EB L	-	-	-	-	-	-	0.66	F	110.6	-	
		R	-	-	-	-	-	-	0.12	B	12.3	-	
	PROMENADE AT CHESTNUT RIDGE	WB LR	0.01	C	16.3	0.01	C	16.7	0.04	E	44.7	28.0	
	RED SCHOOLHOUSE ROAD	NB LTR	-	-	-	-	-	-	0.11	A	9.0	-	
	RED SCHOOLHOUSE ROAD	SB LTR	0.00	A	8.9	0.00	A	9.0	0.01	A	9.3	0.3	
	<u>WITH LEFT TURN LANE</u>												
	WELLINGTON SITE ACCESS	EB L	-	-	-	-	-	-	0.65	F	108.1	-	
		R	-	-	-	-	-	-	0.12	B	12.3	-	
	PROMENADE AT CHESTNUT RIDGE	WB LR	-	-	-	-	-	-	0.04	E	44.2	27.5	
	RED SCHOOLHOUSE ROAD	NB LT	-	-	-	-	-	-	0.11	A	9.0	-	
	RED SCHOOLHOUSE ROAD	SB LTR	-	-	-	-	-	-	0.00	A	9.5	0.5	

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

2) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 2 (CONTINUED)

LEVEL OF SERVICE SUMMARY TABLE
WEEKDAY PEAK AM HOUR

				2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
4	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY SB EXIT RAMP	SIGNALIZED											
	EXIT RAMP	WB	L	0.93	C	32.6	0.94	C	34.5	1.00	D	48.7	14.2
			R	0.60	B	15.4	0.61	B	15.5	0.62	B	15.3	-0.2
			<i>WB APPROACH</i>	-	C	26.4	-	C	27.6	-	D	36.9	9.3
	RED SCHOOLHOUSE ROAD	NB	T	0.26	B	16.3	0.27	B	16.9	0.53	C	21.7	4.8
	RED SCHOOLHOUSE ROAD	SB	T	0.44	B	18.9	0.46	B	19.7	0.83	C	33.7	14.0
			OVERALL	-	C	24.0	-	C	25.1	-	C	33.7	8.6
	<u>WITH IMPROVEMENT</u>												
	EXIT RAMP	WB	LL	-	-	-	-	-	0.58	B	10.2	-24.3	
			R	-	-	-	-	-	0.70	B	11.3	-4.2	
			<i>WB APPROACH</i>	-	-	-	-	-	-	B	10.6	-17.0	
	RED SCHOOLHOUSE ROAD	NB	T	-	-	-	-	-	0.58	B	12.3	-4.6	
	RED SCHOOLHOUSE ROAD	SB	T	-	-	-	-	-	0.83	B	15.1	-4.6	
			OVERALL	-	-	-	-	-	-	B	11.9	-13.2	
5	RED SCHOOLHOUSE ROAD & DESALVO COURT	UNSIGNALIZED											
	DESALVO COURT	EB	LR	0.34	D	29.6	0.36	D	31.2	0.85	F	110.8	79.6
	RED SCHOOLHOUSE ROAD	NB	LT	0.03	B	10.8	0.03	B	11.0	0.08	C	13.4	2.4
	<u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTER/RIGHT TURN EXIT ONLY</u>												
	DESALVO COURT	EB	R	-	-	-	-	-	0.66	F	62.0	30.8	
6	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY NB ENTRANCE RAMP ²	UNSIGNALIZED											
	RED SCHOOLHOUSE ROAD	NB	TR	-	-	-	-	-	-	-	-	-	-
	RED SCHOOLHOUSE ROAD	SB	LT	-	-	-	-	-	-	-	-	-	-
7	RED SCHOOLHOUSE ROAD & SEPHAR LANE	UNSIGNALIZED											
	SEPHAR LANE	WB	LR	0.02	C	18.7	0.02	C	19.2	0.64	F	141.8	122.6
	RED SCHOOLHOUSE ROAD	SB	LT	0.00	A	8.4	0.00	A	8.4	0.18	B	10.4	2.0
	<u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTER/RIGHT TURN EXIT ONLY</u>												
	SEPHAR LANE	WB	R	-	-	-	-	-	0.04	B	12.2	-7.0	
	<u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u>												
	SEPHAR LANE	WB	LR	-	-	-	-	-	0.61	A	6.7	-	
	RED SCHOOLHOUSE ROAD	NB	T	-	-	-	-	-	0.43	A	8.9	-	
			TR	-	-	-	-	-	0.44	A	8.7	-	
			<i>NB APPROACH</i>	-	-	-	-	-	-	A	8.8	-	
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	0.30	A	5.4	-	
			TR	-	-	-	-	-	0.83	C	17.7	-	
			<i>NB APPROACH</i>	-	-	-	-	-	-	B	14.6	-	
			OVERALL	-	-	-	-	-	-	B	12.5	-	
8	SUMMIT ROAD & WILSHIRE DRIVE	UNSIGNALIZED											
	SUMMIT ROAD	WB	LT	0.02	A	8.0	0.02	A	8.0	0.02	A	8.1	0.1
	WILSHIRE DR	NB	LR	0.11	B	11.4	0.11	B	11.3	0.13	B	12.3	1.0
	<u>WITH DIVERTED TRAFFIC</u>												
	SUMMIT ROAD	WB	LT	-	-	-	-	-	0.06	A	8.3	0.3	
	WILSHIRE DR	NB	LR	-	-	-	-	-	0.14	B	13.3	2.0	

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) HCM METHODOLOGY REQUIRES A SEPARATE LEFT TURN LANE FOR LEVEL OF SERVICE ANALYSIS. LEVEL OF SERVICE NOT COMPUTED.
- 3) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 2 (CONTINUED)

LEVEL OF SERVICE SUMMARY TABLE
WEEKDAY PEAK AM HOUR

			2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
			V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
9	RED SCHOOLHOUSE ROAD & TRIANGLE DRIVE NORTH	UNSIGNALIZED										
	TRIANGLE DRIVE NORTH	EB R	-	-	-	-	-	-	0.16	C	20.7	-
	DRIVEWAY	WB LR	0.09	C	21.9	0.10	C	22.8	0.28	F	69.2	-
	RED SCHOOLHOUSE ROAD	SB LTR	0.01	A	8.4	0.01	A	8.5	0.01	A	9.6	-
	<u>WITH JUG HANDLE²</u>											
	JUG HANDLE APPROACH	EB LT	-	-	-	-	-	-	0.62	D	39.6	-
	DRIVEWAY	WB LR	-	-	-	-	-	-	0.07	D	35.2	-
	RED SCHOOLHOUSE ROAD	NB TR	-	-	-	-	-	-	0.39	B	11.4	-
	RED SCHOOLHOUSE ROAD	SB T	-	-	-	-	-	-	0.96	D	38.9	-
	OVERALL		-	-	-	-	-	-	-	C	29.0	-
	<u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u>											
	TRIANGLE DRIVE NORTH	EB LR	-	-	-	-	-	-	0.14	B	11.3	-
	DRIVEWAY	WB LR	-	-	-	-	-	-	0.07	A	8.1	-
	RED SCHOOLHOUSE ROAD	NB LT	-	-	-	-	-	-	0.48	B	10.0	-
		TR	-	-	-	-	-	-	0.50	A	9.8	-
		<i>NB APPROACH</i>	-	-	-	-	-	-	-	A	9.9	-
	RED SCHOOLHOUSE ROAD	SB LT	-	-	-	-	-	-	0.57	A	9.2	-
		TR	-	-	-	-	-	-	0.61	A	9.7	-
		<i>SB APPROACH</i>	-	-	-	-	-	-	-	A	9.5	-
	OVERALL		-	-	-	-	-	-	-	A	9.6	-
10	RED SCHOOLHOUSE ROAD & TRIANGLE PROPERTIES ACCESS/ EQUESTRIAN ESTATES ACCESS	SIGNALIZED										
	TRIANGLE PROPERTIES	EB L	-	-	-	-	-	-	0.50	D	45.9	-
		TR	-	-	-	-	-	-	0.27	A	1.4	-
		<i>EB APPROACH</i>	-	-	-	-	-	-	-	C	21.4	-
	EQUESTRIAN ESTATES	WB L	-	-	-	-	-	-	0.67	E	58.0	-
		TR	-	-	-	-	-	-	0.14	A	0.5	-
		<i>WB APPROACH</i>	-	-	-	-	-	-	-	C	34.3	-
	RED SCHOOLHOUSE ROAD	NB L	-	-	-	-	-	-	0.47	B	10.1	-
		TR	-	-	-	-	-	-	0.60	B	13.5	-
		<i>NB APPROACH</i>	-	-	-	-	-	-	-	B	12.9	-
	RED SCHOOLHOUSE ROAD	SB L	-	-	-	-	-	-	0.14	A	7.2	-
		T	-	-	-	-	-	-	0.81	C	33.0	-
		R	-	-	-	-	-	-	0.04	A	4.3	-
		<i>SB APPROACH</i>	-	-	-	-	-	-	-	C	30.2	-
	OVERALL		-	-	-	-	-	-	-	C	23.2	-
11	RED SCHOOLHOUSE ROAD & LOESCHER LANE (FUTURE HORSE FARM)	UNSIGNALIZED										
	LOESCHER LANE	WB LR	0.02	C	18.6	0.02	C	19.2	0.16	E	45.5	-
	RED SCHOOLHOUSE ROAD	SB LT	0.00	A	8.4	0.00	A	8.4	0.02	A	9.8	-
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>											
	LOESCHER LANE	WB LR	-	-	-	-	-	-	0.16	E	44.2	-
	RED SCHOOLHOUSE ROAD	SB LT	-	-	-	-	-	-	0.02	A	9.8	-

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) HCM RESULTS ARE UNDEFINED FOR THIS INTERSECTION. SYNCHRO ANALYSIS METHODOLOGY USED FOR CAPACITY ANALYSIS RESULTS.
- 3) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 3

LEVEL OF SERVICE SUMMARY TABLE
WEEKDAY PEAK PM HOUR

				2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
1	RED SCHOOLHOUSE ROAD & WILLIAMS ROAD	UN SIGNALIZED											
	WILLIAMS ROAD	WB	LR	0.53	D	27.2	0.56	D	29.3	1.43	F	272.3	243.0
	RED SCHOOLHOUSE ROAD	SB	LT	0.10	A	8.4	0.11	A	8.5	0.13	A	9.5	1.0
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>		UN SIGNALIZED										
	WILLIAMS ROAD	WB	LR	-	-	-	-	-	-	1.32	F	223.7	194.4
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	-	0.13	A	9.5	1.0
	<u>WITH SOUTHBOUND LEFT TURN LANE & COORDINATED SIGNAL</u>		SIGNALIZED										
	WILLIAMS ROAD	WB	LR	-	-	-	-	-	-	0.75	D	49.1	-
	RED SCHOOLHOUSE ROAD	NB	TR	-	-	-	-	-	-	0.61	A	4.1	-
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	-	0.43	B	18.4	-
		T	-	-	-	-	-	-	-	0.83	D	41.4	-
		SB APPROACH	-	-	-	-	-	-	-	-	D	37.1	-
		OVERALL	-	-	-	-	-	-	-	-	C	25.3	-
2	RED SCHOOLHOUSE ROAD & SUMMIT ROAD	UN SIGNALIZED											
	SUMMIT ROAD	EB	LR	0.41	C	20.6	0.43	C	21.6	0.91	F	85.1	63.5
	RED SCHOOLHOUSE ROAD	NB	LT	0.09	A	8.8	0.09	A	8.8	0.14	A	9.7	0.9
	<u>WITH NORTHBOUND LEFT TURN LANE AND SIGNALIZATION</u>		SIGNALIZED										
	SUMMIT ROAD	EB	LR	-	-	-	-	-	-	0.68	B	19.9	-
	RED SCHOOLHOUSE ROAD	NB	L	-	-	-	-	-	-	0.42	B	8.9	-
		T	-	-	-	-	-	-	-	0.46	A	4.2	-
		NB APPROACH	-	-	-	-	-	-	-	-	A	5.4	-
	RED SCHOOLHOUSE ROAD	SB	TR	-	-	-	-	-	-	0.84	B	12.5	-
		OVERALL	-	-	-	-	-	-	-	-	B	10.1	-
	<u>WITH NORTHBOUND LEFT TURN LANE AND COORDINATED SIGNALIZATION</u>		SIGNALIZED										
	SUMMIT ROAD	EB	LR	-	-	-	-	-	-	0.70	D	36.7	-
	RED SCHOOLHOUSE ROAD	NB	L	-	-	-	-	-	-	0.69	C	31.4	-
	T	-	-	-	-	-	-	-	0.85	D	41.9	-	
	NB APPROACH	-	-	-	-	-	-	-	-	D	39.3	-	
RED SCHOOLHOUSE ROAD	SB	TR	-	-	-	-	-	-	0.71	A	6.1	-	
	OVERALL	-	-	-	-	-	-	-	-	C	25.1	-	
3	RED SCHOOLHOUSE ROAD & WELLINGTON SCHOOLS CAMPUS ACCESS/ PROMENADE AT CHESTNUT RIDGE	UN SIGNALIZED											
	WELLINGTON SITE ACCESS	EB	L	-	-	-	-	-	-	0.66	F	110.6	-
			R	-	-	-	-	-	-	0.21	C	15.1	-
	PROMENADE AT CHESTNUT RIDGE	WB	LR	0.04	B	13.3	0.04	B	13.5	0.12	D	44.7	31.2
	RED SCHOOLHOUSE ROAD	NB	LTR	-	-	-	-	-	-	0.07	A	9.3	-
	RED SCHOOLHOUSE ROAD	SB	LTR	0.01	A	8.1	0.01	A	8.1	0.01	A	9.3	1.2
	<u>WITH LEFT TURN LANE</u>												
	WELLINGTON SITE ACCESS	EB	L	-	-	-	-	-	-	0.82	F	128.6	-
			R	-	-	-	-	-	-	0.21	C	15.1	-
	PROMENADE AT CHESTNUT RIDGE	WB	LR	-	-	-	-	-	-	0.13	E	35.3	21.8
RED SCHOOLHOUSE ROAD	NB	LTR	-	-	-	-	-	-	0.07	A	9.4	-	
RED SCHOOLHOUSE ROAD	SB	LTR	-	-	-	-	-	-	0.01	A	8.9	0.8	

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

2) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 3 (CONTINUED)

LEVEL OF SERVICE SUMMARY TABLE
WEEKDAY PEAK PM HOUR

	2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD			
	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY				
4	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY SB EXIT RAMP			SIGNALIZED									
	EXIT RAMP	WB	L	0.81	C	21.4	0.81	C	21.4	0.82	C	20.7	-0.7
			R	0.43	B	16.7	0.44	B	16.7	0.41	B	15.5	-1.2
		<i>WB APPROACH</i>		-	B	19.8	-	B	19.8	-	B	19.1	-0.7
	RED SCHOOLHOUSE ROAD	NB	T	0.17	A	6.6	0.17	A	6.8	0.44	A	10.0	3.2
	RED SCHOOLHOUSE ROAD	SB	T	0.47	A	9.2	0.55	B	10.7	0.76	B	16.3	5.6
		OVERALL		-	B	14.0	-	B	14.6	-	B	15.9	1.3
	<u>WITH IMPROVEMENT</u>												
	EXIT RAMP	WB	LL	-	-	-	-	-	-	0.50	B	11.0	-10.4
			R	-	-	-	-	-	-	0.48	B	11.1	-5.6
		<i>WB APPROACH</i>		-	-	-	-	-	-	-	B	11.0	-8.8
	RED SCHOOLHOUSE ROAD	NB	T	-	-	-	-	-	-	0.54	A	6.5	-0.3
	RED SCHOOLHOUSE ROAD	SB	T	-	-	-	-	-	-	0.81	A	8.4	-2.3
		OVERALL		-	-	-	-	-	-	-	A	8.8	-5.8
5	RED SCHOOLHOUSE ROAD & DESALVO COURT			UNSIGNALIZED									
	DESALVO COURT	EB	LR	0.23	C	19.6	0.28	C	22.2	0.55	E	46.1	23.9
	RED SCHOOLHOUSE ROAD	NB	LT	0.03	A	9.7	0.03	B	10.1	0.10	B	11.7	1.6
	<u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTER/RIGHT TURN EXIT ONLY</u>												
DESALVO COURT	EB	R	-	-	-	-	-	-	0.43	D	30.8	8.6	
6	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY NB ENTRANCE RAMP ²			UNSIGNALIZED									
	RED SCHOOLHOUSE ROAD	NB	TR	-	-	-	-	-	-	-	-	-	-
	RED SCHOOLHOUSE ROAD	SB	LT	-	-	-	-	-	-	-	-	-	-
7	RED SCHOOLHOUSE ROAD & SEPHAR LANE			UNSIGNALIZED									
	SEPHAR LANE	WB	LR	0.03	C	23.9	0.03	C	24.8	2.55	F	812.7	787.9
	RED SCHOOLHOUSE ROAD	SB	LT	0.01	B	10.1	0.01	B	10.2	0.06	B	12.2	2.0
	<u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTER/RIGHT TURN EXIT ONLY</u>												
	SEPHAR LANE	WB	R	-	-	-	-	-	-	0.43	D	25.8	1.0
	<u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u>												
	SEPHAR LANE	WB	LR	-	-	-	-	-	-	0.68	E	36.7	-
	RED SCHOOLHOUSE ROAD	NB	T	-	-	-	-	-	-	0.72	C	18.1	-
			TR	-	-	-	-	-	-	0.75	C	18.2	-
		<i>NB APPROACH</i>		-	-	-	-	-	-	-	C	18.1	-
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	-	0.39	A	6.7	-
		TR	-	-	-	-	-	-	0.66	B	11.3	-	
	<i>SB APPROACH</i>		-	-	-	-	-	-	-	A	9.7	-	
	OVERALL		-	-	-	-	-	-	-	C	15.6	-	
8	SUMMIT ROAD & WILSHIRE DRIVE			UNSIGNALIZED									
	SUMMIT ROAD	WB	LT	0.00	A	7.5	0.00	A	7.6	0.00	A	7.6	0.0
	WILSHIRE DR	NB	LR	0.03	B	10.0	0.03	B	10.1	0.03	B	10.5	0.4
	<u>WITH DIVERTED TRAFFIC</u>												
	SUMMIT ROAD	WB	LT	-	-	-	-	-	-	0.05	A	7.8	0.2
WILSHIRE DR	NB	LR	-	-	-	-	-	-	0.04	B	11.4	1.3	

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) HCM METHODOLOGY REQUIRES A SEPARATE LEFT TURN LANE FOR LEVEL OF SERVICE ANALYSIS. LEVEL OF SERVICE NOT COMPUTED.
- 4) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 3 (CONTINUED)

LEVEL OF SERVICE SUMMARY TABLE
WEEKDAY PEAK PM HOUR

				2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
9	RED SCHOOLHOUSE ROAD & TRIANGLE DRIVE NORTH	UNSIGNALIZED											
	TRIANGLE DRIVE NORTH	EB	R	-	-	-	-	-	-	0.19	C	16.6	-
	DRIVEWAY	WB	LR	0.12	D	28.2	0.13	D	29.3	0.44	F	127.5	98.2
	RED SCHOOLHOUSE ROAD	SB	LTR	0.02	B	10.2	0.02	B	10.3	0.02	B	11.9	1.6
	<u>WITH JUG HANDLE²</u>												
	JUG HANDLE APPROACH	EB	LT	-	-	-	-	-	-	0.54	C	21.6	-
	DRIVEWAY	WB	LR	-	-	-	-	-	-	0.05	B	18.9	-
	RED SCHOOLHOUSE ROAD	NB	TR	-	-	-	-	-	-	0.56	A	6.4	-
	RED SCHOOLHOUSE ROAD	SB	T	-	-	-	-	-	-	0.61	A	7.0	-
		OVERALL		-	-	-	-	-	-	-	A	9.6	-
	<u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u>												
	TRIANGLE DRIVE NORTH	EB	LR	-	-	-	-	-	-	0.18	B	10.6	-
	DRIVEWAY	WB	LR	-	-	-	-	-	-	0.07	B	13.0	-
	RED SCHOOLHOUSE ROAD	NB	LT	-	-	-	-	-	-	0.74	C	19.0	-
			TR	-	-	-	-	-	-	0.76	C	19.3	-
		<i>NB APPROACH</i>		-	-	-	-	-	-	-	C	19.2	-
	RED SCHOOLHOUSE ROAD	SB	LT	-	-	-	-	-	-	0.51	A	8.0	-
			TR	-	-	-	-	-	-	0.54	A	8.4	-
		<i>SB APPROACH</i>		-	-	-	-	-	-	-	A	8.2	-
		OVERALL		-	-	-	-	-	-	-	B	13.4	-
10	RED SCHOOLHOUSE ROAD & TRIANGLE PROPERTIES ACCESS/ EQUESTRIAN ESTATES ACCESS	SIGNALIZED											
	TRIANGLE PROPERTIES	EB	L	-	-	-	-	-	-	0.62	D	50.9	-
			TR	-	-	-	-	-	-	0.62	C	45.4	-
		<i>EB APPROACH</i>		-	-	-	-	-	-	-	D	47.9	-
	EQUESTRIAN ESTATES	WB	L	-	-	-	-	-	-	1.14	F	167.1	-
			TR	-	-	-	-	-	-	0.26	D	39.6	-
		<i>WB APPROACH</i>		-	-	-	-	-	-	-	F	126.9	-
	RED SCHOOLHOUSE ROAD	NB	L	-	-	-	-	-	-	0.40	A	9.4	-
			TR	-	-	-	-	-	-	0.99	D	47.5	-
		<i>NB APPROACH</i>		-	-	-	-	-	-	-	D	41.6	-
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	-	0.67	C	30.8	-
			T	-	-	-	-	-	-	0.50	B	13.0	-
			R	-	-	-	-	-	-	0.06	A	9.3	-
		<i>SB APPROACH</i>		-	-	-	-	-	-	-	B	15.1	-
		OVERALL		-	-	-	-	-	-	-	D	44.2	-
11	RED SCHOOLHOUSE ROAD & LOESCHER LANE (FUTURE HORSE FARM)	UNSIGNALIZED											
	LOESCHER LANE	WB	LR	0.03	C	23.9	0.03	C	24.8	0.60	F	122.6	-
	RED SCHOOLHOUSE ROAD	SB	LT	0.01	B	10.1	0.01	B	10.2	0.04	B	12.4	-
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>												
	LOESCHER LANE	WB	LR	-	-	-	-	-	-	0.58	F	113.5	-
	RED SCHOOLHOUSE ROAD	SB	LT	-	-	-	-	-	-	0.04	B	12.4	-

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

3) HCM RESULTS ARE UNDEFINED FOR THIS INTERSECTION. SYNCHRO ANALYSIS METHODOLOGY USED FOR CAPACITY ANALYSIS RESULTS.

4) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 4

LEVEL OF SERVICE SUMMARY TABLE
SATURDAY PEAK HOUR

				2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
1	RED SCHOOLHOUSE ROAD & WILLIAMS ROAD	UNSIGNALIZED											
	WILLIAMS ROAD	WB	LR	0.16	B	11.3	0.16	B	11.4	0.34	C	16.5	5.1
	RED SCHOOLHOUSE ROAD	SB	LT	0.03	A	7.7	0.03	A	7.7	0.04	A	8.1	0.4
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>		UNSIGNALIZED										
	WILLIAMS ROAD	WB	LR	-	-	-	-	-	-	0.32	C	15.9	4.5
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	-	0.04	A	8.2	0.5
	<u>WITH SOUTHBOUND LEFT TURN LANE & COORDINATED SIGNAL</u>		SIGNALIZED										
	WILLIAMS ROAD	WB	LR	-	-	-	-	-	-	0.53	C	31.5	-
	RED SCHOOLHOUSE ROAD	NB	TR	-	-	-	-	-	-	0.30	A	0.8	-
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	-	0.11	B	11.4	-
		T		-	-	-	-	-	-	0.61	C	29.4	-
		SB APPROACH		-	-	-	-	-	-	-	C	26.7	-
		OVERALL		-	-	-	-	-	-	-	B	16.8	-
	2	RED SCHOOLHOUSE ROAD & SUMMIT ROAD	UNSIGNALIZED										
SUMMIT ROAD		EB	LR	0.12	B	11.3	0.13	B	11.4	0.22	B	14.0	2.6
RED SCHOOLHOUSE ROAD		NB	LT	0.08	A	7.9	0.08	A	7.9	0.09	A	8.3	0.4
<u>WITH NORTHBOUND LEFT TURN LANE AND SIGNALIZATION</u>		SIGNALIZED											
SUMMIT ROAD		EB	LR	-	-	-	-	-	-	0.68	B	15.8	-
RED SCHOOLHOUSE ROAD		NB	L	-	-	-	-	-	-	0.30	A	6.0	-
		T		-	-	-	-	-	-	0.27	A	3.2	-
		NB APPROACH		-	-	-	-	-	-	-	A	4.2	-
RED SCHOOLHOUSE ROAD		SB	TR	-	-	-	-	-	-	0.75	B	10.7	-
		OVERALL		-	-	-	-	-	-	-	A	8.1	-
<u>WITH NORTHBOUND LEFT TURN LANE AND COORDINATED SIGNALIZATION</u>		SIGNALIZED											
SUMMIT ROAD		EB	LR	-	-	-	-	-	-	0.43	B	18.1	-
RED SCHOOLHOUSE ROAD		NB	L	-	-	-	-	-	-	0.37	B	13.6	-
		T		-	-	-	-	-	-	0.41	C	20.5	-
	NB APPROACH		-	-	-	-	-	-	-	B	18.1	-	
RED SCHOOLHOUSE ROAD	SB	TR	-	-	-	-	-	-	0.54	A	4.6	-	
	OVERALL		-	-	-	-	-	-	-	B	12.8	-	
3	RED SCHOOLHOUSE ROAD & WELLINGTON SCHOOLS CAMPUS ACCESS/ PROMENADE AT CHESTNUT RIDGE	UNSIGNALIZED											
	WELLINGTON SITE ACCESS	EB	L	-	-	-	-	-	-	0.66	A	110.6	-
			R	-	-	-	-	-	-	0.00	A	0.0	-
	PROMENADE AT CHESTNUT RIDGE	WB	LR	0.03	B	10.6	0.03	B	10.7	0.04	B	44.7	34.0
	RED SCHOOLHOUSE ROAD	NB	LT	-	-	-	-	-	-	0.00	A	0.0	-
	RED SCHOOLHOUSE ROAD	SB	LTR	0.01	A	7.8	0.01	A	7.8	0.01	A	9.3	1.5
	<u>WITH LEFT TURN LANE</u>												
	WELLINGTON SITE ACCESS	EB	L	-	-	-	-	-	-	0.00	A	0.0	-
			R	-	-	-	-	-	-	0.00	A	0.0	-
	PROMENADE AT CHESTNUT RIDGE	WB	LR	-	-	-	-	-	-	0.05	B	14.7	4.0
RED SCHOOLHOUSE ROAD	NB	LT	-	-	-	-	-	-	0.00	A	0.0	-	
RED SCHOOLHOUSE ROAD	SB	LTR	-	-	-	-	-	-	0.01	A	8.3	0.5	

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.

2) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 4 (CONTINUED)

LEVEL OF SERVICE SUMMARY TABLE
SATURDAY PEAK HOUR

				2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD	
				V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY		
4	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY SB EXIT RAMP			SIGNALIZED										
		EXIT RAMP	WB L	0.80	C	21.5	0.81	C	21.5	0.83	C	20.9	-0.6	
			R	0.36	B	16.4	0.38	B	16.4	0.33	B	14.8	-1.6	
		<i>WB APPROACH</i>			-	B	20.0	-	B	20.0	-	B	19.3	-0.7
		RED SCHOOLHOUSE ROAD	NB T	0.08	A	5.8	0.08	A	5.9	0.25	A	8.3	2.4	
		RED SCHOOLHOUSE ROAD	SB T	0.20	A	6.4	0.23	A	6.9	0.41	A	9.7	2.8	
		OVERALL			-	B	15.3	-	B	15.4	-	B	14.3	-1.1
		<u>WITH ADDITIONAL LEFT TURN LANE</u>												
		EXIT RAMP	WB L	-	-	-	-	-	-	0.47	A	7.7	-13.8	
			R	-	-	-	-	-	-	0.37	A	7.5	-8.9	
		<i>WB APPROACH</i>			-	-	-	-	-	-	A	7.7	-12.3	
		RED SCHOOLHOUSE ROAD	NB T	-	-	-	-	-	-	0.47	A	7.2	1.3	
		RED SCHOOLHOUSE ROAD	SB T	-	-	-	-	-	-	0.70	A	8.3	1.4	
		OVERALL			-	-	-	-	-	-	A	7.7	-7.7	
5	RED SCHOOLHOUSE ROAD & DESALVO COURT			UNSIGNALIZED										
		DESALVO COURT	EB LR	0.06	B	12.8	0.06	B	12.9	0.18	C	18.2	5.3	
		RED SCHOOLHOUSE ROAD	NB LT	0.02	A	8.7	0.02	A	8.7	0.06	A	10.0	1.3	
		<u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTER/RIGHT TURN EXIT ONLY</u>												
	DESALVO COURT	EB R	-	-	-	-	-	-	0.16	C	17.0	4.1		
6	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY NB ENTRANCE RAMP ²			UNSIGNALIZED										
		RED SCHOOLHOUSE ROAD	NB TR	-	-	-	-	-	-	-	-	-	-	
		RED SCHOOLHOUSE ROAD	SB LT	-	-	-	-	-	-	-	-	-	-	
7	RED SCHOOLHOUSE ROAD & SEPHAR LANE			UNSIGNALIZED										
		SEPHAR LANE	WB LR	0.01	B	13.1	0.01	B	13.3	0.19	C	23.6	10.3	
		RED SCHOOLHOUSE ROAD	SB LT	0.00	A	8.2	0.00	A	8.2	0.04	A	9.1	0.9	
		<u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTER/RIGHT TURN EXIT ONLY</u>												
		SEPHAR LANE	WB R	-	-	-	-	-	-	0.05	B	11.5	-1.8	
		<u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u>												
		SEPHAR LANE	WB LR	-	-	-	-	-	-	0.10	A	9.0	-	
		RED SCHOOLHOUSE ROAD	NB T	-	-	-	-	-	-	0.73	B	14.9	-	
			TR	-	-	-	-	-	-	0.02	A	3.2	-	
		<i>NB APPROACH</i>			-	-	-	-	-	-	B	14.6	-	
		RED SCHOOLHOUSE ROAD	SB L	-	-	-	-	-	-	0.15	A	3.9	-	
		TR	-	-	-	-	-	-	0.50	A	7.7	-		
	<i>SB APPROACH</i>			-	-	-	-	-	-	A	6.8	-		
	OVERALL			-	-	-	-	-	-	B	10.6	-		
8	SUMMIT ROAD & WILSHIRE DRIVE			UNSIGNALIZED										
		SUMMIT ROAD	WB LT	0.00	A	7.4	0.00	A	7.4	0.00	A	7.4	0.0	
		WILSHIRE DRIVE	NB LR	0.01	A	9.2	0.01	A	9.2	0.01	A	9.4	0.2	
		<u>WITH DIVERTED TRAFFIC</u>												
		SUMMIT ROAD	WB LT	-	-	-	-	-	-	0.04	A	7.8	0.4	
	WILSHIRE DRIVE	NB LR	-	-	-	-	-	-	0.01	B	10.3	1.1		

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) HCM METHODOLOGY REQUIRES A SEPARATE LEFT TURN LANE FOR LEVEL OF SERVICE ANALYSIS. LEVEL OF SERVICE NOT COMPUTED.
- 3) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

TABLE NO. 4 (CONTINUED)

LEVEL OF SERVICE SUMMARY TABLE
SATURDAY PEAK HOUR

				2020 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY	
9	RED SCHOOLHOUSE ROAD & TRIANGLE DRIVE NORTH	UNSIGNALIZED											
	TRIANGLE DRIVE NORTH	EB	R	-	-	-	-	-	-	0.12	B	12.7	-
	DRIVEWAY	WB	LR	0.05	B	14.1	0.05	B	14.3	0.11	D	25.1	10.8
	RED SCHOOLHOUSE ROAD	SB	TR	0.01	A	8.2	0.01	A	8.3	0.01	A	9.0	0.7
	<u>WITH JUG HANDLE²</u>												
	JUG HANDLE APPROACH	EB	LT	-	-	-	-	-	-	0.48	D	39.4	-
	DRIVEWAY	WB	LR	-	-	-	-	-	-	0.10	D	36.9	-
	RED SCHOOLHOUSE ROAD	NB	TR	-	-	-	-	-	-	0.24	A	0.0	-
	RED SCHOOLHOUSE ROAD	SB	T	-	-	-	-	-	-	0.37	A	3.6	-
		OVERALL		-	-	-	-	-	-	-	A	7.9	-
	<u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u>												
	TRIANGLE DRIVE NORTH	EB	LR	-	-	-	-	-	-	0.09	A	5.9	-
	DRIVEWAY	WB	LR	-	-	-	-	-	-	0.03	A	5.8	-
	RED SCHOOLHOUSE ROAD	NB	LT	-	-	-	-	-	-	0.30	A	6.2	-
			TR	-	-	-	-	-	-	0.31	A	6.1	-
		<i>NB APPROACH</i>		-	-	-	-	-	-	-	A	6.2	-
	RED SCHOOLHOUSE ROAD	SB	LT	-	-	-	-	-	-	0.32	A	5.7	-
			TR	-	-	-	-	-	-	0.34	A	5.7	-
		<i>SB APPROACH</i>		-	-	-	-	-	-	-	A	5.7	-
		OVERALL		-	-	-	-	-	-	-	A	5.9	-
10	RED SCHOOLHOUSE ROAD & TRIANGLE PROPERTIES ACCESS/ EQUESTRIAN ESTATES ACCESS	SIGNALIZED											
	TRIANGLE PROPERTIES	EB	L	-	-	-	-	-	-	0.66	D	47.3	-
			TR	-	-	-	-	-	-	0.26	A	0.9	-
		<i>EB APPROACH</i>		-	-	-	-	-	-	-	C	21.8	-
	EQUESTRIAN ESTATES	WB	L	-	-	-	-	-	-	0.71	E	56.9	-
			TR	-	-	-	-	-	-	0.12	A	0.4	-
		<i>WB APPROACH</i>		-	-	-	-	-	-	-	C	34.0	-
	RED SCHOOLHOUSE ROAD	NB	L	-	-	-	-	-	-	0.38	A	6.9	-
			TR	-	-	-	-	-	-	0.51	B	14.2	-
		<i>NB APPROACH</i>		-	-	-	-	-	-	-	B	12.0	-
	RED SCHOOLHOUSE ROAD	SB	L	-	-	-	-	-	-	0.17	A	5.6	-
			T	-	-	-	-	-	-	0.38	B	15.7	-
			R	-	-	-	-	-	-	0.07	A	8.0	-
		<i>SB APPROACH</i>		-	-	-	-	-	-	-	B	13.1	-
		OVERALL		-	-	-	-	-	-	-	B	16.3	-
11	RED SCHOOLHOUSE ROAD & LOESCHER LANE (FUTURE HORSE FARM)	UNSIGNALIZED											
	LOESCHER LANE	WB	LR	0.01	B	13.1	0.01	B	13.2	0.15	D	25.1	-
	RED SCHOOLHOUSE ROAD	SB	LT	0.00	A	8.2	0.00	A	8.2	0.02	A	9.5	-
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>												
	LOESCHER LANE	WB	LR	-	-	-	-	-	-	0.14	C	24.9	-
	RED SCHOOLHOUSE ROAD	SB	LT	-	-	-	-	-	-	0.02	A	9.5	-

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE APPROACH INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) HCM RESULTS ARE UNDEFINED FOR THIS INTERSECTION. SYNCHRO ANALYSIS METHODOLOGY USED FOR CAPACITY ANALYSIS RESULTS.
- 4) SEE APPENDIX D FOR CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD CORRIDOR.

**TABLE 5
QUEUE SUMMARY TABLE**

STORAGE LENGTH (FT.)	2020 EXISTING						2025 NO-BUILD						2025 BUILD							
	AM		PM		SAT		AM		PM		SAT		AM		PM		SAT			
	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%		
1	RED SCHOOLHOUSE ROAD & WILLIAMS ROAD	UNSIGNALIZED																		
	WILLIAMS ROAD WB LR 500+		-	88	-	75	-	15	-	95	-	83	-	15	-	388	-	378	-	38
	RED SCHOOLHOUSE ROAD SB LT 230+		-	8	-	8	-	3	-	8	-	8	-	3	-	8	-	13	-	3
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>	UNSIGNALIZED																		
	WILLIAMS ROAD WB LR 500+		-	-	-	-	-	-	-	-	-	-	-	-	-	378	-	355	-	35
	RED SCHOOLHOUSE ROAD SB L 100		-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	13	-	3
	<u>WITH SOUTHBOUND LEFT TURN LANE & COORDINATED SIGNAL</u>	SIGNALIZED																		
	WILLIAMS ROAD WB LR 500+		-	-	-	-	-	-	-	-	-	-	-	-	206	394	139	247	50	127
	RED SCHOOLHOUSE ROAD NB TR 165		-	-	-	-	-	-	-	-	-	-	-	-	25	38	11	34	1	0
	RED SCHOOLHOUSE ROAD SB L 100		-	-	-	-	-	-	-	-	-	-	-	-	24	49	40	71	9	29
	TR 230+		-	-	-	-	-	-	-	-	-	-	-	-	170	272	299	440	90	180
2	RED SCHOOLHOUSE ROAD & SUMMIT ROAD	UNSIGNALIZED																		
	SUMMIT ROAD EB LR 350+		-	45	-	50	-	10	-	48	-	53	-	10	-	143	-	190	-	20
	RED SCHOOLHOUSE ROAD NB LT 165+		-	3	-	8	-	5	-	3	-	8	-	5	-	5	-	13	-	8
	<u>WITH NORTHBOUND LEFT TURN LANE & SIGNALIZATION</u>	SIGNALIZED																		
	SUMMIT ROAD EB LR 350+		-	-	-	-	-	-	-	-	-	-	-	-	30	117	30	99	6	45
	RED SCHOOLHOUSE ROAD NB L 100		-	-	-	-	-	-	-	-	-	-	-	-	9	32	17	49	11	32
	T 165+		-	-	-	-	-	-	-	-	-	-	-	-	105	276	67	158	23	58
	RED SCHOOLHOUSE ROAD SB TR 165		-	-	-	-	-	-	-	-	-	-	-	-	122	295	206	391	71	162
	<u>WITH NORTHBOUND LEFT TURN LANE & COORDINATED TRAFFIC SIGNAL</u>	SIGNALIZED																		
	SUMMIT ROAD EB LR 350+		-	-	-	-	-	-	-	-	-	-	-	-	81	189	70	146	11	59
	RED SCHOOLHOUSE ROAD NB L 100		-	-	-	-	-	-	-	-	-	-	-	-	33	62	65	149	33	78
	T 165+		-	-	-	-	-	-	-	-	-	-	-	-	523	749	331	511	96	194
	RED SCHOOLHOUSE ROAD SB TR 165		-	-	-	-	-	-	-	-	-	-	-	-	28	35	19	72	2	0

NOTES:

1) ALL QUEUE LENGTHS ARE EXPRESSED IN UNITS OF FEET. IT IS ASSUMED THAT A QUEUED VEHICLE OCCUPIES 25 FT.

TABLE 5 (CONTINUED)
QUEUE SUMMARY TABLE

	STORAGE LENGTH (FT.)	2020 EXISTING						2025 NO-BUILD						2025 BUILD							
		AM		PM		SAT		AM		PM		SAT		AM		PM		SAT			
		50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%		
3	RED SCHOOLHOUSE ROAD & WELLINGTONS SCHOOLS CAMPUS/ PROMENADE AT CHESTNUT RIDGE	UNSIGNALIZED																			
	WELLINGTON SCHOOLS EB L 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	-	103	-	0	
	WELLINGTON SCHOOLS R 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	20	-	0	
	PROMENADE AT CHESTNUT RIDGE WB LR 50	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	3	-	10	-	3
	RED SCHOOLHOUSE ROAD NB LTR 435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	5	-	0	
	RED SCHOOLHOUSE ROAD SB LTR 210+	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
	<u>WITH LEFT TURN LANE</u>	UNSIGNALIZED																			
	WELLINGTON SCHOOLS EB L 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	-	110	-	0	
	WELLINGTON SCHOOLS R 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	20	-	0	
	PROMENADE AT CHESTNUT RIDGE WB LR 50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	10	-	3	
	RED SCHOOLHOUSE ROAD NB L 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	5	-	0	
	RED SCHOOLHOUSE ROAD TR 435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	0	
	RED SCHOOLHOUSE ROAD SB L 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	0	
	RED SCHOOLHOUSE ROAD TR 210+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	0	
4	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY OFF RAMP	SIGNALIZED																			
	GSP OFF-RAMP WB L 595	333	576	125	209	117	195	349	599	129	213	121	201	435	704	155	247	162	246		
	GSP OFF-RAMP R 280	0	43	0	33	0	31	0	43	0	34	0	31	51	125	0	33	0	28		
	RED SCHOOLHOUSE ROAD NB T 480	66	114	27	73	12	39	68	116	28	76	13	41	144	226	97	223	50	123		
	RED SCHOOLHOUSE ROAD SB T 435	108	178	95	221	33	85	111	183	105	253	35	91	236	414	216	539	88	204		
	<u>WITH IMPROVEMENT</u>	SIGNALIZED																			
	GSP OFF-RAMP WB LL 595	-	-	-	-	-	-	-	-	-	-	-	-	122	197	67	104	31	74		
	GSP OFF-RAMP R 280	-	-	-	-	-	-	-	-	-	-	-	-	51	142	3	42	0	27		
	RED SCHOOLHOUSE ROAD NB T 480	-	-	-	-	-	-	-	-	-	-	-	-	104	233	72	156	35	92		
	RED SCHOOLHOUSE ROAD SB T 435	-	-	-	-	-	-	-	-	-	-	-	-	153	386	135	296	51	135		
5	RED SCHOOLHOUSE ROAD & DESALVO COURT	UNSIGNALIZED																			
	DESALVO COURT EB LR 500+	-	38	-	23	-	5	-	40	-	28	-	5	-	133	-	73	-	15		
	RED SCHOOLHOUSE ROAD NB LT 320	-	3	-	3	-	3	-	3	-	3	-	3	-	8	-	8	-	5		
	<u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTRY/EXIT ONLY</u>	UNSIGNALIZED																			
	DESALVO COURT EB R 200	-	-	-	-	-	-	-	-	-	-	-	-	-	93	-	50	-	15		

NOTES:

1) ALL QUEUE LENGTHS ARE EXPRESSED IN UNITS OF FEET. IT IS ASSUMED THAT A QUEUED VEHICLE OCCUPIES 25 FT.

TABLE 5 (CONTINUED)
QUEUE SUMMARY TABLE

	STORAGE LENGTH (FT.)	2020 EXISTING						2025 NO-BUILD						2025 BUILD						
		AM		PM		SAT		AM		PM		SAT		AM		PM		SAT		
		50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	
6	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY NB ENTRANCE RAMP ² RED SCHOOLHOUSE ROAD SB LT 320	UN SIGNALIZED	-	19	-	95	-	13	-	20	-	96	-	14	-	31	-	742	-	17
7	RED SCHOOLHOUSE ROAD & SEPHAR LANE SEPHAR LANE WB LR 100+ RED SCHOOLHOUSE ROAD SB LT 215 <u>WITH INTERSECTION MODIFICATION - RIGHT TURN ENTRY/EXIT ONLY</u> SEPHAR LANE WB R 100+ <u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u> SEPHAR LANE WB LR 100+ RED SCHOOLHOUSE ROAD NB T 275 TR 200 RED SCHOOLHOUSE ROAD SB LT 215 T 200	UN SIGNALIZED	-	3	-	3	-	0	-	3	-	3	-	0	-	65	-	503	-	18
			-	0	-	0	-	0	-	0	-	0	-	0	-	15	-	5	-	3
			-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	50	-	3
			-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	125	-	0
			-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	150	-	175
			-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	175	-	0
			-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	50	-	25
			-	-	-	-	-	-	-	-	-	-	-	-	-	275	-	125	-	75
8	SUMMIT ROAD & WILSHIRE DRIVE SUMMIT ROAD WB LT 75+ WILSHIRE DR NB LR 100+ <u>WITH DIVERTED TRAFFIC</u> SUMMIT ROAD WB LT 75+ WILSHIRE DR NB LR 100+	UN SIGNALIZED	-	3	-	0	-	0	-	3	-	0	-	0	-	3	-	0	-	0
			-	10	-	3	-	0	-	10	-	3	-	0	-	10	-	3	-	0
			-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	5	-	3
			-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	3	-	0

NOTES:

1) ALL QUEUE LENGTHS ARE EXPRESSED IN UNITS OF FEET. IT IS ASSUMED THAT A QUEUED VEHICLE OCCUPIES 25 FT. OF QUEUE STORAGE LENGTH.

TABLE 5 (CONTINUED)

QUEUE SUMMARY TABLE

STORAGE LENGTH (FT.)	2020 EXISTING						2025 NO-BUILD						2025 BUILD							
	AM		PM		SAT		AM		PM		SAT		AM		PM		SAT			
	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%	50%	95%		
9	RED SCHOOLHOUSE ROAD & TRIANGLE DRIVE NORTH UNSIGNALIZED																			
	TRIANGLE DRIVE NORTH	EB	R	100	-	-	-	-	-	-	-	-	-	-	-	13	-	18	-	10
	DRIVEWAY	WB	LR	50	-	8	-	10	-	5	-	8	-	10	-	5	-	40	-	10
	RED SCHOOLHOUSE ROAD	SB	LTR	300	-	0	-	0	-	0	-	0	-	0	-	0	-	3	-	0
	<u>WITH JUG HANDLE²</u>																			
	JUG HANDLE APPROACH	EB	LT	445	-	-	-	-	-	-	-	-	-	-	255	453	172	364	64	113
	DRIVEWAY	WB	LR	50	-	-	-	-	-	-	-	-	-	-	0	18	0	9	0	19
	RED SCHOOLHOUSE ROAD	NB	TR	575	-	-	-	-	-	-	-	-	-	-	164	120	312	325	36	180
	RED SCHOOLHOUSE ROAD	SB	T	300	-	-	-	-	-	-	-	-	-	-	547	882	198	317	86	173
	<u>WITH ALTERNATE ROUNDABOUT IMPROVEMENT</u>																			
	TRIANGLE DRIVE NORTH	EB	LR	100+	-	-	-	-	-	-	-	-	-	-	0	-	25	-	0	
	DRIVEWAY	WB	LR	50	-	-	-	-	-	-	-	-	-	-	0	-	0	-	0	
	RED SCHOOLHOUSE ROAD	NB	LT	575	-	-	-	-	-	-	-	-	-	-	75	-	175	-	25	
			TR	200	-	-	-	-	-	-	-	-	-	-	75	-	200	-	25	
	RED SCHOOLHOUSE ROAD	SB	LT	300	-	-	-	-	-	-	-	-	-	-	100	-	75	-	25	
			TR	200	-	-	-	-	-	-	-	-	-	-	100	-	75	-	50	
10	RED SCHOOLHOUSE ROAD & TRIANGLE PROPERTIES ACCESS/EQUESTRIAN ESTATES ACCESS SIGNALIZED																			
	TRIANGLE PROPERTIES	EB	L	100	-	-	-	-	-	-	-	-	-	-	60	108	123	204	82	132
			TR	100	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0
	EQUESTRIAN ESTATES	WB	L	100	-	-	-	-	-	-	-	-	-	-	68	120	178	329	62	111
			TR	100	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0
	RED SCHOOLHOUSE ROAD	NB	L	100	-	-	-	-	-	-	-	-	-	-	20	56	47	73	40	88
			TR	275+	-	-	-	-	-	-	-	-	-	-	247	436	957	1257	171	332
	RED SCHOOLHOUSE ROAD	SB	L	100	-	-	-	-	-	-	-	-	-	-	16	21	31	61	1	59
			T	575	-	-	-	-	-	-	-	-	-	-	438	499	286	463	123	322
			R	100	-	-	-	-	-	-	-	-	-	-	0	0	0	7	3	39
11	RED SCHOOLHOUSE ROAD & LOESCHER LANE (FUTURE HORSE FARM) UNSIGNALIZED																			
	LOESCHER LANE	WB	LR	100	-	3	-	3	-	0	-	3	-	0	-	15	-	63	-	13
	RED SCHOOLHOUSE ROAD	SB	LT	215+	-	0	-	0	-	0	-	0	-	0	-	3	-	3	-	3
	<u>WITH SOUTHBOUND LEFT TURN LANE</u>																			
	LOESCHER LANE	WB	LR	100	-	-	-	-	-	-	-	-	-	-	-	13	-	60	-	13
	RED SCHOOLHOUSE ROAD	SB	LT	215+	-	-	-	-	-	-	-	-	-	-	-	3	-	3	-	3

NOTES:

1) ALL QUEUE LENGTHS ARE EXPRESSED IN UNITS OF FEET. IT IS ASSUMED THAT A QUEUED VEHICLE OCCUPIES 25 FT. OF QUEUE STORAGE LENGTH.

TABLE NO. 6

**ACCIDENT SUMMARY - TOWN ACCIDENT DATA
VARIOUS INTERSECTIONS IN THE VILLAGE OF CHESTNUT RIDGE
JANUARY 1, 2016 THROUGH JULY 21, 2020**

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS	# OF VEHICLES-INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
RED SCHOOLHOUSE ROAD NORTH OF WILLIAMS ROAD (NON-INTERSECTION ACCIDENTS)											
RED SCHOOLHOUSE RD	IMMEDIATELY N. OF WILLIAMS RD	06/15/17	03:14pm	NONE	PDO & I	2-1	DAYLIGHT	DRY	CLEAR	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	IMMEDIATELY N. OF WILLIAMS RD	06/19/18	04:38pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN (AGAINST OTHER CAR)	NOT APPLICABLE
RED SCHOOLHOUSE ROAD AT WILLIAMS ROAD											
WILLIAMS RD	AT INT. W/ RED SCHOOLHOUSE RD	06/03/16	09:09am	STOP SIGN	N/R	2-0	DAYLIGHT	WET	RAIN	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ WILLIAMS RD	08/09/16	05:14pm	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN (WITH OTHER CAR)	NOT ENTERED
RED SCHOOLHOUSE RD	AT INT. W/ WILLIAMS RD	02/14/17	07:48am	STOP SIGN	PDO & I	2-1	DAYLIGHT	DRY	CLOUDY	RIGHT ANGLE	UNSAFE SPEED
RED SCHOOLHOUSE RD	AT INT. W/ WILLIAMS RD	09/09/17	08:32am	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ WILLIAMS RD	01/22/20	07:10pm	NONE	N/R	3-0	DARK-ROAD LIGHTED	DRY	CLEAR	OTHER	FOLLOWING TOO CLOSELY
RED SCHOOLHOUSE ROAD BETWEEN WILLIAMS ROAD & SUMMIT ROAD (NON-INTERSECTION ACCIDENTS)											
RED SCHOOLHOUSE RD	BTW. WILLIAMS RD & SUMMIT RD	10/31/18	08:39am	NONE	PDO & I	2-1	DAYLIGHT	DRY	CLEAR	UNKNOWN	FAILURE TO YIELD RIGHT OF WAY
RED SCHOOLHOUSE ROAD AT SUMMIT ROAD											
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	01/06/17	01:20pm	STOP SIGN	I	2-3	DAYLIGHT	DRY	CLOUDY	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	04/26/17	12:02am	STOP SIGN	PDO	2-0	DARK-ROAD LIGHTED	WET	RAIN	RIGHT ANGLE	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	09/13/17	06:10pm	STOP SIGN	N/R	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	01/13/18	04:51pm	STOP SIGN	PDO	2-0	DUSK	DRY	CLEAR	OTHER	TRAFFIC CONTROL DEVICES DISREGARDED
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	03/05/18	04:02pm	STOP SIGN	PDO	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN (AGAINST OTHER CAR)	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	03/18/18	08:40pm	STOP SIGN	PDO & I	2-2	DARK-ROAD LIGHTED	DRY	CLEAR	RIGHT ANGLE	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	04/02/18	03:50pm	STOP SIGN	PDO	2-0	DAYLIGHT	WET	CLEAR	RIGHT ANGLE	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	02/19/19	05:45pm	STOP SIGN	PDO & I	2-1	DARK-ROAD LIGHTED	DRY	CLEAR	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ SUMMIT RD	02/21/20	01:50pm	STOP SIGN	PDO & I	2-1	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY
RED SCHOOLHOUSE ROAD AT 146 RED SCHOOLHOUSE ROAD DRIVEWAY											
RED SCHOOLHOUSE RD	AT 146 RED SCHOOLHOUSE RD	06/27/16	05:27pm	NONE	N/R	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT 146 RED SCHOOLHOUSE RD	07/07/18	07:49am	NO PASSING ZONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	NOT APPLICABLE
RED SCHOOLHOUSE ROAD AT PROMENADE AT CHESTNUT RIDGE DRIVEWAY											
RED SCHOOLHOUSE RD	AT INT. W/ PROMENADE AT CHESTNUT RIDGE	11/06/16	07:11pm	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
RED SCHOOLHOUSE RD	INT. W/ PROMENADE AT CHESTNUT RIDGE	11/17/17	12:18pm	NONE	N/R	1-0	DAYLIGHT	DRY	CLEAR	OTHER	OVERSIZED VEHICLE
RED SCHOOLHOUSE RD	INT. W/ PROMENADE AT CHESTNUT RIDGE	10/05/18	05:19pm	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	OVERSIZED VEHICLE
RED SCHOOLHOUSE ROAD AT GSP SOUTHBOUND OFF-RAMP											
RED SCHOOLHOUSE RD	AT INT. W/ GSP SB RAMP	12/10/19	04:45pm	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	WET	RAIN	LEFT TURN (WITH OTHER CAR)	FAILURE TO YIELD RIGHT OF WAY
RED SCHOOLHOUSE ROAD AT DESALVO COURT											
RED SCHOOLHOUSE RD	AT INT. W/ DE SALVO CT	01/05/16	05:10pm	NONE	PDO	4-0	DARK-ROAD LIGHTED	DRY	CLEAR	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ DE SALVO CT	11/21/19	05:27pm	STOP SIGN	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	FAILURE TO YIELD RIGHT OF WAY
RED SCHOOLHOUSE RD	AT INT. W/ DE SALVO CT	01/08/20	04:11pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	FOLLOWING TOO CLOSELY

TABLE NO. 6

**ACCIDENT SUMMARY - TOWN ACCIDENT DATA
VARIOUS INTERSECTIONS IN THE VILLAGE OF CHESTNUT RIDGE
JANUARY 1, 2016 THROUGH JULY 21, 2020**

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS	# OF VEHICLES-INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
RED SCHOOLHOUSE ROAD BETWEEN DESALVO CT. & GSPH NORTHBOUND ON-RAMP (NON-INTERSECTION ACCIDENTS)											
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	06/03/16	09:20am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	WET	RAIN	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	12/12/16	04:19pm	NONE	PDO	2-0	DAYLIGHT	WET	CLOUDY	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	12/14/16	09:02am	NONE	I	2-1	DAYLIGHT	DRY	CLEAR	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	12/28/16	02:22pm	TRAFFIC SIGNAL	N/R	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	FOLLOWING TOO CLOSELY
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	02/17/17	08:55am	NONE	PDO	3-0	DAYLIGHT	DRY	CLEAR	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	10/24/17	07:45pm	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	WET	CLOUDY	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	05/15/18	09:00am	NONE	I	3-2	DAYLIGHT	DRY	CLOUDY	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	10/04/18	05:15pm	NONE	PDO	2-0	DAYLIGHT	WET	RAIN	REAR END	DRIVER INATTENTION
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	06/10/19	01:15pm	NONE	PDO & I	2-2	DAYLIGHT	WET	RAIN	UNKNOWN	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	08/21/19	08:10pm	RR CROSSING GATES	PDO & I	2-2	DARK-ROAD UNLIGHTED	DRY	CLEAR	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	12/12/19	06:00pm	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	S. OF DE SALVO CT	02/09/20	02:52pm	NONE	PDO	1-0	DAYLIGHT	DRY	CLOUDY	OTHER	UNSAFE SPEED
RED SCHOOLHOUSE ROAD AT GSP NORTHBOUND ON-RAMP											
RED SCHOOLHOUSE RD	AT INT. W/ GSP NB RAMP	07/31/17	08:40am	NONE	N/R	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ GSP NB RAMP	01/26/18	04:40pm	TRAFFIC SIGNAL	PDO	2-0	DUSK	DRY	CLEAR	REAR END	BACKING UNSAFELY
RED SCHOOLHOUSE RD	AT INT. W/ GSP NB RAMP	05/21/18	12:40pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
RED SCHOOLHOUSE RD	AT INT. W/ GSP NB RAMP	12/07/18	05:25pm	TRAFFIC SIGNAL	N/R	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ GSP NB RAMP	02/16/19	11:02pm	TRAFFIC SIGNAL	PDO	1-0	DARK-ROAD LIGHTED	DRY	CLOUDY	OTHER	ALCOHOL INVOLVEMENT
RED SCHOOLHOUSE ROAD BETWEEN GSP NORTHBOUND ON-RAMP AND SEPHAR LANE (NON-INTERSECTION ACCIDENTS)											
RED SCHOOLHOUSE RD	IMMEDIATELY N. OF SEPHAR LN	01/18/17	06:00pm	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	PAVEMENT DEFECTIVE
RED SCHOOLHOUSE RD	IMMEDIATELY N. OF SEPHAR LN	11/06/17	10:32am	NONE	N/R	2-0	DAYLIGHT	WET	RAIN	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE ROAD AT SEPHAR LANE											
RED SCHOOLHOUSE RD	AT INT. W/ SEPHAR LN	04/12/16	05:34pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ SEPHAR LN	10/03/17	07:41am	STOP SIGN	N/R	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN (AGAINST OTHER CAR)	DRIVER INATTENTION
RED SCHOOLHOUSE ROAD BETWEEN SEPHAR LANE AND LOESCHER LANE (NON-INTERSECTION ACCIDENTS)											
RED SCHOOLHOUSE RD	IMMEDIATELY N. OF RONWOOD RD	04/01/16	09:40am	NO PASSING ZONE	N/R	2-0	DAYLIGHT	WET	CLOUDY	REAR END	NOT APPLICABLE
RED SCHOOLHOUSE RD	IMMEDIATELY N. OF LOESCHER LN	11/11/16	08:15am	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
RED SCHOOLHOUSE RD	CHESTNUT RIDGE TRANSPORTATION DRIVE	01/21/17	11:22am	NONE	N/R	3-0	DAYLIGHT	DRY	CLEAR	OTHER	NOT APPLICABLE
RED SCHOOLHOUSE RD	AT INT. W/ BEST FRIENDS PET HOTEL	09/13/18	07:50am	NONE	PDO & I	2-1	DAYLIGHT	WET	CLOUDY	HEAD ON	NOT APPLICABLE
RED SCHOOLHOUSE RD	IMMEDIATELY N. OF RONWOOD RD	11/07/19	06:05pm	NONE	PDO	1-0	DARK-ROAD LIGHTED	WET	RAIN	OTHER	ANIMAL'S ACTION
RED SCHOOLHOUSE ROAD AT LOESCHER LANE											
RED SCHOOLHOUSE RD	AT INT. W/ LOESCHER LN	11/28/19	12:50pm	NONE	PDO	1-0	DAYLIGHT	DRY	CLOUDY	OTHER	ANIMAL'S ACTION
GARDEN STATE PKWY	GARDEN STATE PKWY	10/12/19	12:31pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	FOLLOWING TOO CLOSELY

TABLE NO. 7

SIGHT DISTANCE SUMMARY TABLE
 RED SCHOOLHOUSE ROAD STUDY AREA INTERSECTIONS

INTERSECTION	DIRECTION	85TH PERCENTILE SPEED (MPH)	AVAILABLE SIGHT DISTANCE		AASHTO REQUIRED SIGHT DISTANCES		
			EXISTING (FT)	PROPOSED (FT)	STOPPING SIGHT DISTANCE (FT)	INTERSECTION SIGHT DISTANCE (FT)	
1 RED SCHOOLHOUSE ROAD AT WILLIAMS ROAD	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (SOUTH)	40	425	445	305	445
		LOOKING RIGHT (NORTH)	40	500	500	305	445
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	395	395	305	325
		REAR END	40	500	500	305	-
2 RED SCHOOLHOUSE ROAD AT SUMMIT ROAD	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (NORTH)	40	275	445	305	445
		LOOKING RIGHT (SOUTH)	40	500+	500+	305	445
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	500+	500+	305	325
		REAR END	40	500+	500+	305	-
3 RED SCHOOLHOUSE ROAD AT WELLINGTON SCHOOLS ACCESS	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (NORTH)	40	-	500+	305	445
		LOOKING RIGHT (SOUTH)	40	-	500+	305	445
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	-	500+	305	325
		REAR END	40	-	500+	305	-
4 RED SCHOOLHOUSE ROAD AT GSP SB OFF-RAMP	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (SOUTH)	40	500+	500+	305	445
		LOOKING RIGHT (NORTH)	40	500+	500+	305	445
5 RED SCHOOLHOUSE ROAD AT DESALVO COURT	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (NORTH)	40	500+	500+	305	445
		LOOKING RIGHT (SOUTH)	40	115	115	305	445
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	500+	500+	305	325
		REAR END	40	500+	500+	305	-
6 RED SCHOOLHOUSE ROAD AT GSP NB ON-RAMP	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	500+	500+	305	325
		REAR END	40	500+	500+	305	-

NOTES:

- 1) EXISTING AND PROPOSED AVAILABLE SIGHT DISTANCES ARE BASED ON FIELD OBSERVATIONS AND MEASUREMENTS TAKEN AT EACH INTERSECTION LOCATION.
- 2) AASHTO REQUIRED SIGHT DISTANCES ARE BASED SIGHT DISTANCE CRITERIA CONTAINED IN THE AASHTO "GREEN BOOK" (A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 7TH EDITION DATED 2018).

TABLE NO. 7 (CONTINUED)

**SIGHT DISTANCE SUMMARY TABLE
RED SCHOOLHOUSE ROAD STUDY AREA INTERSECTIONS**

INTERSECTION	DIRECTION	85TH PERCENTILE SPEED (MPH)	AVAILABLE SIGHT DISTANCE		AASHTO REQUIRED SIGHT DISTANCES		
			EXISTING (FT)	PROPOSED (FT)	STOPPING SIGHT DISTANCE (FT)	INTERSECTION SIGHT DISTANCE (FT)	
7 SUMMIT ROAD AT WILSHIRE DRIVE	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (WEST)	35	150	290	250	390
		LOOKING RIGHT (EAST)	35	200	390	250	390
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	35	310	310	250	285
		REAR END	35	315	315	250	-
8 RED SCHOOLHOUSE ROAD AT SEPHAR LANE	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (SOUTH)	40	150	450+	305	445
		LOOKING RIGHT (NORTH)	40	200	450+	305	445
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	500+	500+	305	325
		REAR END	40	500+	500+	305	-
9 RED SCHOOLHOUSE ROAD AT LOESCHER LANE (FUTURE HORSE FARM)	LEFT TURN FROM MINOR ROAD	LOOKING LEFT (SOUTH)	40	400	400	305	445
		LOOKING RIGHT (NORTH)	40	500+	500+	305	445
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	235	235	305	325
		REAR END	40	500+	500+	305	-
10 RED SCHOOLHOUSE ROAD AT TRIANGLE PROPERTIES/EQUESTRIAN ESTATES	LEFT TURN FROM MINOR ROAD	LOOKING NORTH	40	-	500+	305	445
		LOOKING SOUTH	40	-	500+	305	445
	LEFT TURN FROM MAJOR ROAD	LEFT TURN AHEAD	40	-	500+	305	325
		REAR END	40	-	500+	305	-

NOTES:

- 1) EXISTING AND PROPOSED AVAILABLE SIGHT DISTANCES ARE BASEED ON FIELD OBSERVATIONS AND MEASUREMENTS TAKEN AT EACH INTERSECTION LOCATION.
- 2) AASHTO REQUIRED SIGHT DISTANCES ARE BASED SIGHT DISTANCE CRITERIA CONTAINED IN THE AASHTO "GREEN BOOK" (A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 7TH EDITION DATED 2018).

TABLE NO. 8

PROPOSED AREA DEVELOPMENTS
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

AREA TRAFFIC STUDY - RED SCHOOLHOUSE ROAD VILLAGE OF CHESTNUT RIDGE	ENTRY			EXIT		
	HTGR ¹	VOLUME	NEW TRIPS ²	HTGR ¹	VOLUME	NEW TRIPS ²
WELLINGTON SCHOOLS CAMPUS						
K-8 GIRLS' ELEMENTARY SCHOOL ³ 1000 STUDENTS (ITE LAND USE 522)						
WEEKDAY AM PEAK HOUR	0.14	144	144	0.10	98	98
WEEKDAY PM PEAK HOUR	0.09	86	86	0.12	124	124
SATURDAY PEAK HOUR	0.00	0	0	0.00	0	0
BOYS' HIGH SCHOOL 328 STUDENTS (ITE LAND USE 550)						
WEEKDAY AM PEAK HOUR	0.10	38	38	0.03	11	11
WEEKDAY PM PEAK HOUR	0.04	16	16	0.08	33	33
SATURDAY PEAK HOUR	0.00	0	0	0.00	0	0
WELLINGTON SCHOOLS SUBTOTAL						
WEEKDAY AM PEAK HOUR	-	182	182	-	109	109
WEEKDAY PM PEAK HOUR	-	102	102	-	157	157
SATURDAY PEAK HOUR	-	0	0	-	0	0
CORPORATE COMMERCE PARK						
CORPORATE PARK 150,950 S.F. (ITE LAND USE 710)						
WEEKDAY AM PEAK HOUR	1.39	210	210	0.07	29	29
WEEKDAY PM PEAK HOUR	0.11	42	42	0.48	190	190
SATURDAY PEAK HOUR	0.11	43	43	0.09	37	37
TRIANGLE PROPERTIES						
SHOPPING CENTER 137,500 S.F. (ITE LAND USE 820)						
WEEKDAY AM PEAK HOUR	1.80	247	185	1.53	210	158
WEEKDAY PM PEAK HOUR	2.58	355	266	2.58	355	266
SATURDAY PEAK HOUR	3.01	414	311	2.78	382	287

NOTES:

- 1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10TH EDITION, 2017. THE SPECIFIC ITE LAND USE CATEGORY REFERENCED FOR EACH USE TYPE IS LISTED IN THE TABLE ABOVE.
- 2) "NEW TRIPS" INCLUDES A 15% INTERNAL TRIP CREDIT FOR ALL LAND USES WITHIN THE EQUESTRIAN ESTATES DEVELOPMENT BASED ON NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL. "NEW TRIPS" ALSO REFLECTS A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO THE TRIANGLE PROPERTIES SHOPPING CENTER AND EQUESTRIAN ESTATES RETAIL USE TO ACCOUNT FOR TRIPS ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG RED SCHOOLHOUSE ROAD.
- 3) ITE LAND USE CODE 522 - MIDDLE SCHOOL/JUNIOR HIGH SCHOOL- RATES UTILIZED TO ACCOUNT FOR ANTICIPATED STUDENT BUSSING. ASSUMES COMMITMENT TO STAGGERED RELEASE AND BUSING AS OUTLINED IN PDE MEMO DATED JULY 15, 2020. WITHOUT THESE PROVISIONS TRIP GENERATION RATES COULD BE APPROXIMATELY 20% HIGHER.

**TABLE NO. 8
(CONTINUED)**

**PROPOSED AREA DEVELOPMENTS
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES**

AREA TRAFFIC STUDY - RED SCHOOLHOUSE ROAD VILLAGE OF CHESTNUT RIDGE	ENTRY			EXIT		
	HTGR ¹	VOLUME	NEW TRIPS ²	HTGR ¹	VOLUME	NEW TRIPS ²
EQUESTRIAN ESTATES						
RETAIL 29,524 S.F. (ITE LAND USE 820)						
WEEKDAY AM PEAK HOUR	2.91	86	52	2.47	73	44
WEEKDAY PM PEAK HOUR	3.96	117	70	3.96	117	70
SATURDAY PEAK HOUR	4.17	123	74	3.83	113	68
OFFICE 15,000 S.F. (ITE LAND USE 710)						
WEEKDAY AM PEAK HOUR	1.93	29	25	1.33	20	17
WEEKDAY PM PEAK HOUR	1.73	26	22	2.00	30	26
SATURDAY PEAK HOUR	0.20	3	3	0.20	3	3
APARTMENTS 84 DWELLING UNITS (ITE LAND USE 220)						
WEEKDAY AM PEAK HOUR	0.15	13	11	0.42	35	30
WEEKDAY PM PEAK HOUR	0.40	34	29	0.27	23	20
SATURDAY PEAK HOUR	0.35	29	25	0.35	29	25
TOWNHOMES 62 DWELLING UNITS (ITE LAND USE 220)						
WEEKDAY AM PEAK HOUR	0.16	10	9	0.42	26	22
WEEKDAY PM PEAK HOUR	0.40	25	21	0.27	17	14
SATURDAY PEAK HOUR	0.27	17	14	0.27	17	14

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10TH EDITION, 2017. THE SPECIFIC ITE LAND USE CATEGORY REFERENCED FOR EACH USE TYPE IS LISTED IN THE TABLE ABOVE.

2) "NEW TRIPS" INCLUDES A 15% INTERNAL TRIP CREDIT FOR ALL LAND USES WITHIN THE EQUESTRIAN ESTATES DEVELOPMENT BASED ON NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL. "NEW TRIPS" ALSO REFLECTS A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO THE TRIANGLE PROPERTIES SHOPPING CENTER AND EQUESTRIAN ESTATES RETAIL USE TO ACCOUNT FOR TRIPS ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG RED SCHOOLHOUSE ROAD.

**TABLE NO. 8
(CONTINUED)**

**PROPOSED AREA DEVELOPMENTS
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES**

AREA TRAFFIC STUDY - RED SCHOOLHOUSE ROAD VILLAGE OF CHESTNUT RIDGE	ENTRY			EXIT		
	HTGR ¹	VOLUME	NEW TRIPS ²	HTGR ¹	VOLUME	NEW TRIPS ²
EQUESTRIAN ESTATES (CONTINUED)						
SINGLE FAMILY HOME 2 DWELLING UNITS (ITE LAND USE 210)						
WEEKDAY AM PEAK HOUR	0.50	1	1	1.00	2	2
WEEKDAY PM PEAK HOUR	1.00	2	2	0.50	1	1
SATURDAY PEAK HOUR	0.50	1	1	0.50	1	1
SENIOR APARTMENTS 118 DWELLING UNITS (ITE LAND USE 252)						
WEEKDAY AM PEAK HOUR	0.15	18	15	0.17	20	17
WEEKDAY PM PEAK HOUR	0.17	20	17	0.15	18	15
SATURDAY PEAK HOUR	0.21	25	21	0.13	15	13
<i>EQUESTRIAN ESTATES SUBTOTAL</i>						
<i>WEEKDAY AM PEAK HOUR</i>	-	157	112	-	176	132
<i>WEEKDAY PM PEAK HOUR</i>	-	224	161	-	206	146
<i>SATURDAY PEAK HOUR</i>	-	198	138	-	178	123

NOTES:

- 1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10TH EDITION, 2017. THE SPECIFIC ITE LAND USE CATEGORY REFERENCED FOR EACH USE TYPE IS LISTED IN THE TABLE ABOVE.
- 2) "NEW TRIPS" INCLUDES A 15% INTERNAL TRIP CREDIT FOR ALL LAND USES WITHIN THE EQUESTRIAN ESTATES DEVELOPMENT BASED ON NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL. "NEW TRIPS" ALSO REFLECTS A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO THE TRIANGLE PROPERTIES SHOPPING CENTER AND EQUESTRIAN ESTATES RETAIL USE TO ACCOUNT FOR TRIPS ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG RED SCHOOLHOUSE ROAD.

**TABLE NO. 8
(CONTINUED)**

**PROPOSED AREA DEVELOPMENTS
HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES**

AREA TRAFFIC STUDY - RED SCHOOLHOUSE ROAD VILLAGE OF CHESTNUT RIDGE	ENTRY			EXIT		
	HTGR ¹	VOLUME	NEW TRIPS ²	HTGR ¹	VOLUME	NEW TRIPS ²
FUTURE HORSE FARM DEVELOPMENT						
SENIOR ASSISTED LIVING 160 DWELLING UNITS (ITE LAND USE 252)						
WEEKDAY AM PEAK HOUR	0.12	19	19	0.06	10	10
WEEKDAY PM PEAK HOUR	0.15	24	24	0.19	30	30
SATURDAY PEAK HOUR	0.13	20	20	0.14	23	23
TOTAL SITE GENERATED TRAFFIC FOR ALL AREA DEVELOPMENTS						
WEEKDAY AM PEAK HOUR	-	815	708	-	534	437
WEEKDAY PM PEAK HOUR	-	747	596	-	938	789
SATURDAY PEAK HOUR	-	675	511	-	620	470

NOTES:

- 1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 10TH EDITION, 2017. THE SPECIFIC ITE LAND USE CATEGORY REFERENCED FOR EACH USE TYPE IS LISTED IN THE TABLE ABOVE.
- 2) "NEW TRIPS" INCLUDES A 15% INTERNAL TRIP CREDIT FOR ALL LAND USES WITHIN THE EQUESTRIAN ESTATES DEVELOPMENT BASED ON NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION TOOL. "NEW TRIPS" ALSO REFLECTS A 25% PASS-BY/DIVERTED LINK TRIP CREDIT APPLIED TO THE TRIANGLE PROPERTIES SHOPPING CENTER AND EQUESTRIAN ESTATES RETAIL USE TO ACCOUNT FOR TRIPS ATTRACTED FROM THE EXISTING TRAFFIC STREAMS ALONG RED SCHOOLHOUSE ROAD.

TABLE NO. 9

TRAFFIC VOLUME CONTRIBUTIONS FOR BACKGROUND GROWTH AND
PLANNED DEVELOPMENTS BY INTERSECTION

		2025 BUILD (VOLUME)			2025 BUILD (%)		
		AM	PM	SAT	AM	PM	SAT
1	RED SCHOOLHOUSE ROAD & WILLIAMS ROAD						
	BACKGROUND GROWTH	27	24	11	8%	6%	4%
	WELLINGTON SCHOOLS CAMPUS	102	91	0	29%	22%	0%
	CORPORATE COMMERCE PARK	60	58	20	17%	14%	7%
	TRIANGLE PROPERTIES	94	146	164	27%	35%	59%
	EQUESTRIAN ESTATES	64	91	75	18%	22%	27%
	FUTURE HORSE FARM DEVELOPMENT	6	11	9	2%	3%	3%
	TOTAL VOLUME INCREASE	352	421	279	-	-	-
2	RED SCHOOLHOUSE ROAD & SUMMIT ROAD						
	BACKGROUND GROWTH	26	23	13	6%	5%	4%
	WELLINGTON SCHOOLS CAMPUS	131	117	0	32%	24%	0%
	CORPORATE COMMERCE PARK	72	70	24	17%	14%	8%
	TRIANGLE PROPERTIES	103	160	179	25%	33%	57%
	EQUESTRIAN ESTATES	73	104	86	18%	21%	27%
	FUTURE HORSE FARM DEVELOPMENT	7	14	11	2%	3%	3%
	TOTAL VOLUME INCREASE	412	487	313	-	-	-
3	RED SCHOOLHOUSE ROAD & WELLINGTON SCHOOLS CAMPUS ACCESS/ PROMENADE AT CHESTNUT RIDGE						
	BACKGROUND GROWTH	22	20	11	4%	3%	4%
	WELLINGTON SCHOOLS CAMPUS	291	259	0	51%	41%	0%
	CORPORATE COMMERCE PARK	72	70	24	13%	11%	8%
	TRIANGLE PROPERTIES	103	160	179	18%	25%	58%
	EQUESTRIAN ESTATES	73	104	86	13%	17%	28%
	FUTURE HORSE FARM DEVELOPMENT	7	14	11	1%	2%	3%
	TOTAL VOLUME INCREASE	568	626	311	-	-	-

NOTES:

- 1) THE VOLUME SUMMARIES AND PERCENTAGE CONTRIBUTION FOR EACH INTERSECTION ARE BASED ON THE VOLUMES SHOWN ON FIGURES 4 THROUGH 40 CONTAINED IN APPENDIX "B" AND THE TRIP GENERATION ESTIMATES EACH OF THE AREA DEVELOPMENTS AS SUMMARIZED IN TABLE NO. 8 CONTAINED IN APPENDIX "C"
- 2) BACKGROUND GROWTH VOLUMES AER BASED ON AN INCREASE OF THE 2020 EXISTING TRAFFIC VOLUMES BY THE 0.5% PER YEAR GROWTH RATE TO THE 2025 DESIGN YEAR.

**TABLE NO. 9
(CONTINUED)**

**TRAFFIC VOLUME CONTRIBUTIONS FOR BACKGROUND GROWTH AND
PLANNED DEVELOPMENTS BY INTERSECTION**

		2025 BUILD (VOLUME)			2025 BUILD (%)		
		AM	PM	SAT	AM	PM	SAT
4	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY SB EXIT RAMP						
	BACKGROUND GROWTH	41	30	20	8%	5%	5%
	WELLINGTON SCHOOLS CAMPUS	160	142	0	29%	25%	0%
	CORPORATE COMMERCE PARK	124	80	35	23%	14%	9%
	TRIANGLE PROPERTIES	121	186	211	22%	32%	55%
	EQUESTRIAN ESTATES	84	120	101	16%	21%	26%
	FUTURE HORSE FARM DEVELOPMENT	12	20	16	2%	3%	4%
	TOTAL VOLUME INCREASE	543	578	382	-	-	-
5	RED SCHOOLHOUSE ROAD & DESALVO COURT						
	BACKGROUND GROWTH	32	27	17	6%	4%	4%
	WELLINGTON SCHOOLS CAMPUS	133	127	0	24%	21%	0%
	CORPORATE COMMERCE PARK	136	92	39	25%	15%	9%
	TRIANGLE PROPERTIES	139	213	240	25%	34%	56%
	EQUESTRIAN ESTATES	97	137	115	18%	22%	27%
	FUTURE HORSE FARM DEVELOPMENT	13	22	18	2%	4%	4%
	TOTAL VOLUME INCREASE	550	618	429	-	-	-
6	RED SCHOOLHOUSE ROAD & GARDEN STATE PARKWAY NB ENTRANCE RAMP						
	BACKGROUND GROWTH	37	44	24	6%	6%	5%
	WELLINGTON SCHOOLS CAMPUS	133	127	0	22%	17%	0%
	CORPORATE COMMERCE PARK	143	139	48	24%	19%	10%
	TRIANGLE PROPERTIES	154	239	269	26%	33%	55%
	EQUESTRIAN ESTATES	110	156	129	18%	21%	26%
	FUTURE HORSE FARM DEVELOPMENT	16	30	24	3%	4%	5%
	TOTAL VOLUME INCREASE	594	735	493	-	-	-

NOTES:

- 1) THE VOLUME SUMMARIES AND PERCENTAGE CONTRIBUTION FOR EACH INTERSECTION ARE BASED ON THE VOLUMES SHOWN ON FIGURES 4 THROUGH 40 CONTAINED IN APPENDIX "B" AND THE TRIP GENERATION ESTIMATES EACH OF THE AREA DEVELOPMENTS AS SUMMARIZED IN TABLE NO. 8 CONTAINED IN APPENDIX "C"
- 2) BACKGROUND GROWTH VOLUMES AER BASED ON AN INCREASE OF THE 2020 EXISTING TRAFFIC VOLUMES BY THE 0.5% PER YEAR GROWTH RATE TO THE 2025 DESIGN YEAR.

**TABLE NO. 9
(CONTINUED)**

**TRAFFIC VOLUME CONTRIBUTIONS FOR BACKGROUND GROWTH AND
PLANNED DEVELOPMENTS BY INTERSECTION**

		2025 BUILD (VOLUME)			2025 BUILD (%)		
		AM	PM	SAT	AM	PM	SAT
7	RED SCHOOLHOUSE ROAD & SEPHAR LANE						
	BACKGROUND GROWTH	33	35	20	5%	4%	4%
	WELLINGTON SCHOOLS CAMPUS	116	104	0	17%	13%	0%
	CORPORATE COMMERCE PARK	239	232	80	36%	29%	15%
	TRIANGLE PROPERTIES	154	239	269	23%	30%	52%
	EQUESTRIAN ESTATES	110	156	129	16%	20%	25%
	FUTURE HORSE FARM DEVELOPMENT	16	30	24	2%	4%	5%
	TOTAL VOLUME INCREASE	668	796	522	-	-	-
8	SUMMIT ROAD & WILSHIRE DRIVE						
	BACKGROUND GROWTH	9	8	6	13%	11%	15%
	WELLINGTON SCHOOLS CAMPUS	29	26	0	42%	35%	0%
	CORPORATE COMMERCE PARK	12	12	4	17%	16%	10%
	TRIANGLE PROPERTIES	9	13	16	13%	18%	41%
	EQUESTRIAN ESTATES	9	13	11	13%	17%	28%
	FUTURE HORSE FARM DEVELOPMENT	1	3	2	2%	4%	6%
	TOTAL VOLUME INCREASE	70	74	38	-	-	-
9	RED SCHOOLHOUSE ROAD & TRIANGLE DRIVE NORTH						
	BACKGROUND GROWTH	33	36	21	6%	5%	4%
	WELLINGTON SCHOOLS CAMPUS	116	104	0	20%	14%	0%
	CORPORATE COMMERCE PARK	96	93	32	16%	12%	6%
	TRIANGLE PROPERTIES	211	331	357	36%	44%	64%
	EQUESTRIAN ESTATES	110	156	129	19%	21%	23%
	FUTURE HORSE FARM DEVELOPMENT	16	30	24	3%	4%	4%
	TOTAL VOLUME INCREASE	582	749	562	-	-	-

NOTES:

- 1) THE VOLUME SUMMARIES AND PERCENTAGE CONTRIBUTION FOR EACH INTERSECTION ARE BASED ON THE VOLUMES SHOWN ON FIGURES 4 THROUGH 40 CONTAINED IN APPENDIX "B" AND THE TRIP GENERATION ESTIMATES EACH OF THE AREA DEVELOPMENTS AS SUMMARIZED IN TABLE NO. 8 CONTAINED IN APPENDIX "C"
- 2) BACKGROUND GROWTH VOLUMES AER BASED ON AN INCREASE OF THE 2020 EXISTING TRAFFIC VOLUMES BY THE 0.5% PER YEAR GROWTH RATE TO THE 2025 DESIGN YEAR.

**TABLE NO. 9
(CONTINUED)**

**TRAFFIC VOLUME CONTRIBUTIONS FOR BACKGROUND GROWTH AND
PLANNED DEVELOPMENTS BY INTERSECTION**

		2025 BUILD (VOLUME)			2025 BUILD (%)		
		AM	PM	SAT	AM	PM	SAT
10	RED SCHOOLHOUSE ROAD & TRIANGLE PROPERTIES ACCESS/ EQUESTRIAN ESTATES ACCESS						
	BACKGROUND GROWTH	33	35	20	3%	3%	2%
	WELLINGTON SCHOOLS CAMPUS	116	104	0	12%	8%	0%
	CORPORATE COMMERCE PARK	96	93	32	10%	8%	3%
	TRIANGLE PROPERTIES	373	587	596	40%	48%	59%
	EQUESTRIAN ESTATES	302	387	340	32%	31%	34%
	FUTURE HORSE FARM DEVELOPMENT	16	30	24	2%	2%	2%
	TOTAL VOLUME INCREASE	936	1235	1012	-	-	-
11	RED SCHOOLHOUSE ROAD & LOESCHER LANE (FUTURE HORSE FARM)						
	BACKGROUND GROWTH	33	35	20	5%	5%	3%
	WELLINGTON SCHOOLS CAMPUS	116	104	0	20%	13%	0%
	CORPORATE COMMERCE PARK	96	93	32	16%	12%	6%
	TRIANGLE PROPERTIES	189	293	329	32%	38%	57%
	EQUESTRIAN ESTATES	134	190	157	22%	25%	27%
	FUTURE HORSE FARM DEVELOPMENT	29	54	43	5%	7%	7%
	TOTAL VOLUME INCREASE	596	769	581	-	-	-

NOTES:

- 1) THE VOLUME SUMMARIES AND PERCENTAGE CONTRIBUTION FOR EACH INTERSECTION ARE BASED ON THE VOLUMES SHOWN ON FIGURES 4 THROUGH 40 CONTAINED IN APPENDIX "B" AND THE TRIP GENERATION ESTIMATES EACH OF THE AREA DEVELOPMENTS AS SUMMARIZED IN TABLE NO. 8 CONTAINED IN APPENDIX "C"
- 2) BACKGROUND GROWTH VOLUMES AER BASED ON AN INCREASE OF THE 2020 EXISTING TRAFFIC VOLUMES BY THE 0.5% PER YEAR GROWTH RATE TO THE 2025 DESIGN YEAR.

TABLE NO. 10

SUMMARY OF RED SCHOOLHOUSE ROAD IMPROVEMENTS AND ANTICIPATED BUDGET COSTS

LOCATION	IMPROVEMENT DESCRIPTION¹	BUDGET COST²
RED SCHOOLHOUSE ROAD/WILLIAMS ROAD (SHEET NO. CP-1)	CONSTRUCTION OF SEPARATE SOUTHBOUND LEFT TURN LANE ON RED SCHOOLHOUSE ROAD	\$200,000.00
RED SCHOOLHOUSE ROAD/SUMMIT ROAD (SHEET NO. CP-1)	CONSTRUCTION OF SEPARATE NORTHBOUND LEFT TURN LANE ON RED SCHOOLHOUSE ROAD	\$350,000.00
	TRAFFIC SIGNAL INSTALLATION	\$200,000.00
	INSTALL SIDEWALK WITH ADA RAMPS	\$100,000.00
RED SCHOOLHOUSE ROAD/WELLINGTON SCHOOLS CAMPUS/PROMENADE AT CHESTNUT RIDGE (SHEET NO. CP-2)	CONSTRUCTION OF SEPARATE LEFT TURN LANES NORTHBOUND AND SOUTHBOUND ON RED SCHOOLHOUSE ROAD	\$500,000.00
	CONSTRUCT SIDEWALK ON WEST SIDE OF RED SCHOOLHOUSE ROAD FROM SUMMIT ROAD TO DESALVO COURT	\$220,000.00
RED SCHOOLHOUSE ROAD/GSP SB OFF RAMP ³ (SHEET NO. CP-3)	MODIFY TRAFFIC SIGNAL ACTUATION/TIMINGS	\$60,000.00
	WIDEN RAMP TO PROVIDE DUAL LEFT TURN LANE ON PARKWAY EXIT INCLUDING TWO LANE RECEIVER ON SOUTHBOUND RED SCHOOLHOUSE ROAD	\$550,000.00
	REPLACE TRAFFIC SIGNAL	\$200,000.00
RED SCHOOLHOUSE ROAD/DESALVO COURT ³ (SHEET NO. CP-3)	CREATE A RIGHT-TURN ENTRY/RIGHT-TURN EXIT TO ELIMINATE LEFT TURN CONFLICTS	\$100,000.00
RED SCHOOLHOUSE ROAD/GSP NB ON RAMP ³ (SHEET NO. CP-3)	WIDEN RED SCHOOLHOUSE ROAD TO PROVIDE SEPARATE CHANNLEIZED NORTHBOUND RIGHT TURN LANE ON RED SCHOOLHOUSE ROAD WITH ADDED RECEIVING LANE ON GSP ON-RAMP TO PROVIDE FEE RIGHT TURN MOVEMENT	\$450,000.00
RED SCHOOLHOUSE ROAD AT SEPHAR LANE/CORPORATE COMMERCE PARK ACCESS ³ (SHEET NO. CP-4)	CONSTRUCTION OF "JUG HANDLE" WITH TRAFFIC SIGNAL TO ACCOMMODATE U-TURNS TO GSP AND TO RED SCHOOLHOUSE ROAD NORTHBOUND	\$950,000.00
	INSTALL TRAFFIC SIGNAL	\$200,000.00

NOTES:

- 1) SEE CONCEPTUAL IMPROVEMENT SKETCHES AS IDENTIFIED ABOVE AND CONTAINED IN APPENDIX I.
- 2) REPRESENTS "BALL PARK" BUDGETARY ESTIMATES BASED ON COST OF OTHER RECENTLY COMPLETED IMPROVEMENTS OF SIMILAR NATURE AS WELL AS AVAILABLE NYSDOT UNIT PRICE INFORMATION. ACTUAL COSTS WILL BE DEPENDENT ON LOCATION OF SPECIFIC FACTORS INCLUDING EXISTING UTILITIES, GRADING, DRAINAGE, AND ANY ENVIRONMENTAL CONSTRAINTS.
- 3) IMPROVEMENTS IN AND AROUND THE GSP INTERCHANGE RAMPS WILL REQUIRE REVIEW AND APPROVAL AS WELL AS PERMITTING FROM THE NYSTA.
- 4) ALL PROPOSED IMPROVEMENTS INCLUDING PROPOSED PROJECT ACCESS CONNECTIONS WILL REQUIRE REVIEW AND APPROVAL OF THE RCHD.

TABLE NO. 10 (CONTINUED)

SUMMARY OF RED SCHOOLHOUSE ROAD IMPROVEMENTS AND ANTICIPATED BUDGET COSTS

LOCATION	IMPROVEMENT DESCRIPTION ¹	BUDGET COST ²
RED SCHOOLHOUSE ROAD AT TRIANGLE PROPERTIES/ EQUESTRIAN ESTATES ACCESS (SHEET NO. CP-5)	CONSTRUCTION OF 4-WAY INTERSECTION WITH WIDENING OF SEPARATE LEFT TURN LANES ON RED SCHOOL HOUSE ROAD	\$600,000.00
	INSTALL NEW TRAFFIC SIGNAL	\$200,000.00
RED SCHOOLHOUSE ROAD AT LOESCHER LANE/FUTURE HORSE FARM DEVELOPMENT ACCESS (SHEET NO. CP-6)	POSSIBLE LEFT TURN LANE WIDENING	\$450,000.00
SUMMIT ROAD/WILSHIRE DRIVE	STRIPING, SIGNING, AND SIGHT DISTANCE IMPROVEMENTS	\$25,000.00
TOTAL		\$5,355,000.00
GSP INTERCHANGE AND UNDERPASS AREA ³ (SHEET NO. CP-7)	WIDEN RED SCHOOLHOUSE ROAD ON WEST SIDE OF GSP OVERPASS SUPPORT COLUMNS TO ACCOMMODATE ADDED LANE AND DEDICATED PEDESTRIAN/BICYCLE FACILITIES.	\$1,250,000.00
	TOTAL	
ALTERNATE IMPROVEMENTS		
SUMMIT ROAD REPLACEMENT SIDEWALK	REPLACEMENT OF APPROXIMATELY 750 LF OF EXISTING ASPHALT SIDEWALK ON SOUTH SIDE OF SUMMIT ROAD WITH NEW FULLY ADA COMPLIANT CONCRETE SIDEWALK	\$60,000.00
RED SCHOOLHOUSE ROAD AT SEPHAR LANE/CORPORATE COMMERCE PARK ACCESS ^{3,5} (SHEET NO. CP-4A)	ALTERNATE CONSTRUCTION OF ROUNDABOUT TO SERVE TRIANGLE PROPERTIES/CORPORATE COMMERCE PARK	\$900,000.00
RED SCHOOLHOUSE ROAD AT TRIANGLE PROPERTIES ACCESS (SHEET NO. CP-4B) ⁵	ALTERNATE CONSTRUCTION OF ROUNDABOUT TO SERVE TRIANGLE PROPERTIES/EQUESTRIAN ESTATES ACCESS	\$900,000.00

NOTES:

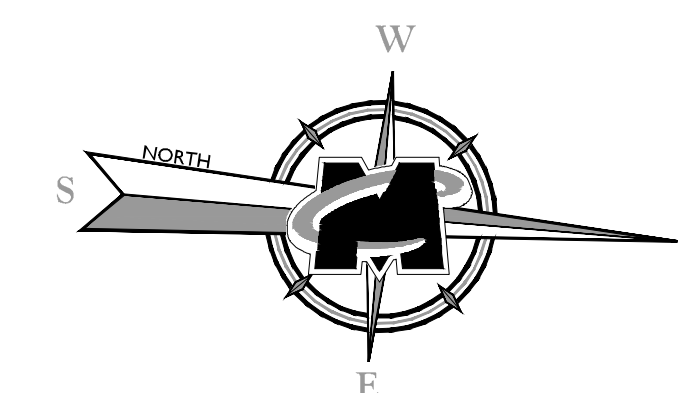
- 1) SEE CONCEPTUAL IMPROVEMENT SKETCHES AS IDENTIFIED ABOVE AND CONTAINED IN APPENDIX I.
- 2) REPRESENTS "BALL PARK" BUDGETARY ESTIMATES BASED ON COST OF OTHER RECENTLY COMPLETED IMPROVEMENTS OF SIMILAR NATURE AS WELL AS AVAILABLE NYSDOT UNIT PRICE INFORMATION. ACTUAL COSTS WILL BE DEPENDENT ON LOCATION OF SPECIFIC FACTORS INCLUDING EXISTING UTILITIES, GRADING, DRAINAGE, AND ANY ENVIRONMENTAL CONSTRAINTS.
- 3) IMPROVEMENTS IN AND AROUND THE GSP INTERCHANGE RAMPS WILL REQUIRE REVIEW AND APPROVAL AS WELL AS PERMITTING FROM THE NYSTA.
- 4) ALL PROPOSED IMPROVEMENTS INCLUDING PROPOSED PROJECT ACCESS CONNECTIONS WILL REQUIRE REVIEW AND APPROVAL OF THE RCHD.
- 5) ALTERNATE ROUNDABOUT IMPROVEMENTS AT SEPHAR LANE AND/OR TRIANGLE PROPERTIES ACCESS WOULD REPLACE "JUG HANDLE" ALTERNATIVE AND REQUIRED TRAFFIC SIGNAL INSTALLATION.



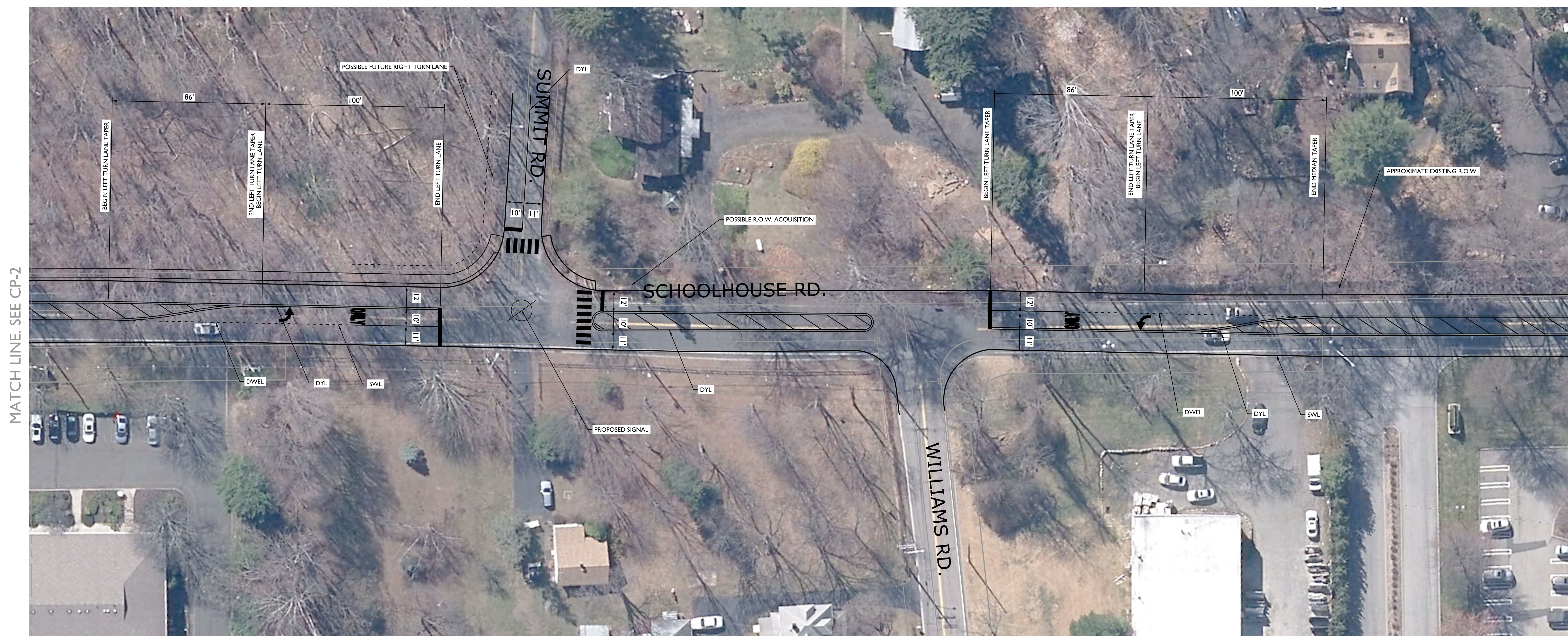
RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX D

PRELIMINARY CONCEPTUAL IMPROVEMENT PLANS



811 PROTECT YOURSELF
 ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
 Know what's below.
 Call before you dig.
 FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

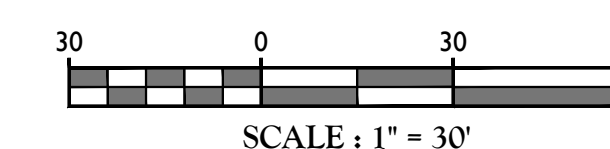


MATCH LINE. SEE CP-2

- NOTES:**
- PROPERTY BOUNDARIES ARE APPROXIMATE. BOUNDARIES OBTAINED FROM ROCKLAND COUNTY HIGHWAY DEPARTMENT RECORD PLANS**
 - IMAGERY OBTAINED FROM: ORTHOS.DHSES.NY.GOV**

STRIPING LEGEND:

- DYL - DOUBLE YELLOW LINE 4"
- SWL - SOLID WHITE LINE 4"
- DWEL - DOTTED WHITE EXTENSION LINE 4"
- DYEL - DOTTED YELLOW EXTENSION LINE 4"



 - WHITE SYMBOL
ONLY - WHITE LETTERS

REV	DATE	DRAWN BY	DESCRIPTION

PRELIMINARY

CONCEPTUAL IMPROVEMENT PLANS
 FOR
 RED SCHOOLHOUSE ROAD

VILLAGE OF CHESTNUT RIDGE
 ROCKLAND COUNTY
 NEW YORK

WESTCHESTER OFFICE
 400 Columbus Avenue
 Suite 180E
 Valhalla, NY 10595
 Phone: 914.347.7500
 Fax: 914.347.7266

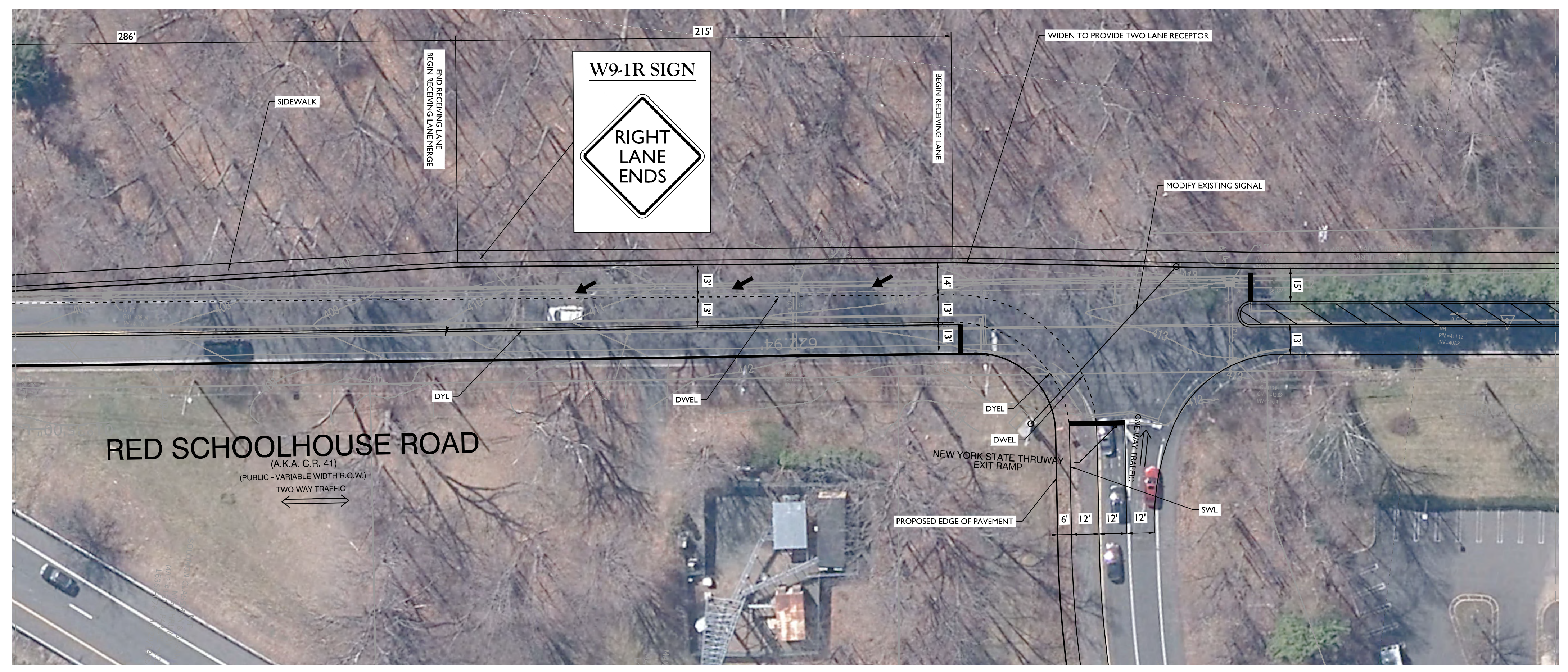
SCALE: AS SHOWN	DATE: 11/3/20	DRAWN BY: P.W.G.	CHECKED BY: P.J.G.
PROJECT NUMBER: 20003327A	DRAWING NAME: R-CNPT-CIP-ULT		

SHEET TITLE:
SUMMIT ROAD & WILLIAMS ROAD

SHEET NUMBER:
CP-1

811 PROTECT YOURSELF
 ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
 Know what's below. Call before you dig.
 FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

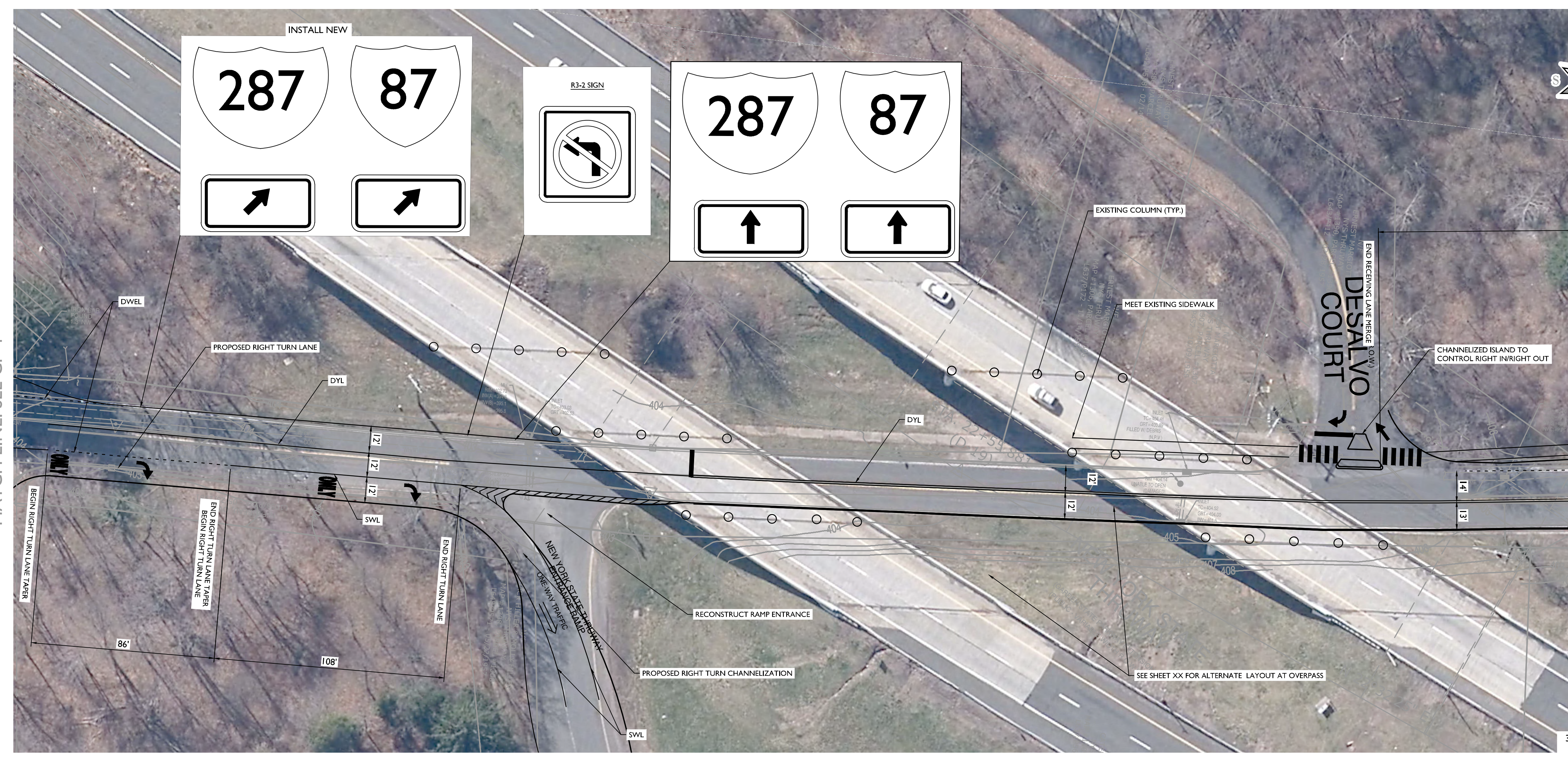
REV	DATE	DRAWN BY	DESCRIPTION



SCALE: 1" = 30'

MATCH LINE. SEE CP-2

- NOTES:**
- PROPERTY BOUNDARIES ARE APPROXIMATE. BOUNDARIES OBTAINED FROM ROCKLAND COUNTY HIGHWAY DEPARTMENT RECORD PLANS**
 - IMAGERY OBTAINED FROM: ORTHOS.DHSES.NY.GOV**
- STRIPING LEGEND:**
- DYL - DOUBLE YELLOW LINE 4"
 - SWL - SOLID WHITE LINE 4"
 - DWEL - DOTTED WHITE EXTENSION LINE 4"
 - DYEL - DOTTED YELLOW EXTENSION LINE 4"



SCALE: 1" = 30'

MATCH LINE. ABOVE

MATCH LINE. SEE CP-4

PRELIMINARY

CONCEPTUAL IMPROVEMENT PLANS FOR RED SCHOOLHOUSE ROAD

VILLAGE OF CHESTNUT RIDGE
 ROCKLAND COUNTY
 NEW YORK

WESTCHESTER OFFICE
 400 Columbus Avenue
 Suite 180E
 Valhalla, NY 10595
 Phone: 914.347.7500
 Fax: 914.347.7266

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	11/3/20	P.W.G.	P.J.G.
PROJECT NUMBER:	DRAWING NAME:		
20003327A	R-CNPT-CIP-ULT		

SHEET TITLE:
GARDEN STATE PARKWAY INTERCHANGE AREA

SHEET NUMBER:
CP-3



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX E

LEVEL OF SERVICE STANDARDS

LEVEL OF SERVICE STANDARDS

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

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

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

LOS C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable, or the cycle length is moderate.

LOS D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective, or the cycle length is long.

LOS E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long.

LOS F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long.

A lane group can incur a delay less than 80 s/veh when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

The Level of Service Criteria for signalized intersections are given in Exhibit 19-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 19-8

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
≤10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

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



LEVEL OF SERVICE CRITERIA
FOR TWO-WAY STOP-CONTROLLED (TWSC) UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) for a two-way stop-controlled (TWSC) intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. LOS is not defined for the intersection as a whole or for major-street approaches.

The Level of Service Criteria for TWSC unsignalized intersections are given in Exhibit 20-2 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 20-2

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

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 for the intersection as a whole.

As Exhibit 20-2 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.



LEVEL OF SERVICE CRITERIA

FOR ALL-WAY STOP-CONTROLLED (AWSC) UNSIGNALIZED INTERSECTIONS

The Levels of Service (LOS) for all-way stop-controlled (AWSC) intersections are given in Exhibit 21-8. As the exhibit notes, LOS F is assigned if the volume-to-capacity (v/c) ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

The Level of Service Criteria for AWSC unsignalized intersections are given in Exhibit 21-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 21-8

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

For approaches and intersection wide assessment, LOS is defined solely by control delay.

LEVEL OF SERVICE CRITERIA
FOR ROUNDABOUTS

Roundabouts share the same basic control delay with two-way and all-way stop-controlled intersections, adjusting for the effect of yield control.

The Level of Service Criteria for Roundabouts are given in Exhibit 21-1 from the *Highway Capacity Manual*, 6th Edition, published by the Transportation Research Board.

Exhibit 21-1

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

For approaches and intersectionwide assessment, LOS is defined by control delay

As Exhibit 21-1 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX F

CAPACITY ANALYSIS



RED SCHOOLHOUSE ROAD CORRIDOR

2020 EXISTING CONDITIONS CAPACITY ANALYSIS

**WEEKDAY AM PEAK HOUR
WEEKDAY PM PEAK HOUR
SATURDAY PEAK HOUR**

2020 Existing Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	85	95	495	139	69	196
Future Volume (vph)	85	95	495	139	69	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.929		0.970			
Flt Protected	0.977					0.987
Satd. Flow (prot)	1591	0	1937	0	0	1661
Flt Permitted	0.977					0.987
Satd. Flow (perm)	1591	0	1937	0	0	1661
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	10%	7%	4%	7%	10%	19%
Adj. Flow (vph)	91	102	532	149	74	211
Shared Lane Traffic (%)						
Lane Group Flow (vph)	193	0	681	0	0	285
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.2%
Analysis Period (min)	15
	ICU Level of Service C

2020 Existing Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	5.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	85	95	495	139	69	196
Future Vol, veh/h	85	95	495	139	69	196
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	10	7	4	7	10	19
Mvmt Flow	91	102	532	149	74	211

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	966	607	0	0	681	0
Stage 1	607	-	-	-	-	-
Stage 2	359	-	-	-	-	-
Critical Hdwy	6.5	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	273	487	-	-	875	-
Stage 1	529	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	247	487	-	-	875	-
Mov Cap-2 Maneuver	247	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	689	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.6	0	2.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	334	875
HCM Lane V/C Ratio	-	-	0.579	0.085
HCM Control Delay (s)	-	-	29.6	9.5
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	3.5	0.3

2020 Existing Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak AM Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	91	45	568	186	95
Future Volume (vph)	66	91	45	568	186	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.922				0.954	
Flt Protected	0.979			0.996		
Satd. Flow (prot)	1536	0	0	1910	1528	0
Flt Permitted	0.979			0.996		
Satd. Flow (perm)	1536	0	0	1910	1528	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	10%	14%	5%	21%	14%
Adj. Flow (vph)	70	97	48	604	198	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	0	0	652	299	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	67.2%
Analysis Period (min)	15
	ICU Level of Service C

2020 Existing Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	66	91	45	568	186	95
Future Vol, veh/h	66	91	45	568	186	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	5	10	14	5	21	14
Mvmt Flow	70	97	48	604	198	101

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	949	249	299	0	0
Stage 1	249	-	-	-	-
Stage 2	700	-	-	-	-
Critical Hdwy	6.45	6.3	4.24	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.39	2.326	-	-
Pot Cap-1 Maneuver	285	771	1197	-	-
Stage 1	785	-	-	-	-
Stage 2	487	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	268	771	1197	-	-
Mov Cap-2 Maneuver	268	-	-	-	-
Stage 1	738	-	-	-	-
Stage 2	487	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1197	-	431	-	-
HCM Lane V/C Ratio	0.04	-	0.388	-	-
HCM Control Delay (s)	8.1	0	18.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.8	-	-

2020 Existing Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	1	608	5	2	275
Future Volume (vph)	2	1	608	5	2	275
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955		0.999			
Flt Protected	0.968					
Satd. Flow (prot)	1722	0	1861	0	0	1863
Flt Permitted	0.968					
Satd. Flow (perm)	1722	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	171		535			595
Travel Time (s)	3.9		12.2			13.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1	661	5	2	299
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	666	0	0	301
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	42.3%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak AM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	1	608	5	2	275
Future Vol, veh/h	2	1	608	5	2	275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	661	5	2	299











Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	967	664	0	0	666
Stage 1	664	-	-	-	-
Stage 2	303	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	282	461	-	-	923
Stage 1	512	-	-	-	-
Stage 2	749	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	281	461	-	-	923
Mov Cap-2 Maneuver	281	-	-	-	-
Stage 1	510	-	-	-	-
Stage 2	749	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	323	923
HCM Lane V/C Ratio	-	-	0.01	0.002
HCM Control Delay (s)	-	-	16.3	8.9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0	0

2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	750	428	185	0	0	277
Future Volume (vph)	750	428	185	0	0	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1568	1894	0	0	1638
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1568	1894	0	0	1638
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		455				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			535
Travel Time (s)	9.5		13.4			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	3%	7%	0%	0%	16%
Adj. Flow (vph)	798	455	197	0	0	295
Shared Lane Traffic (%)						
Lane Group Flow (vph)	798	455	197	0	0	295
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020

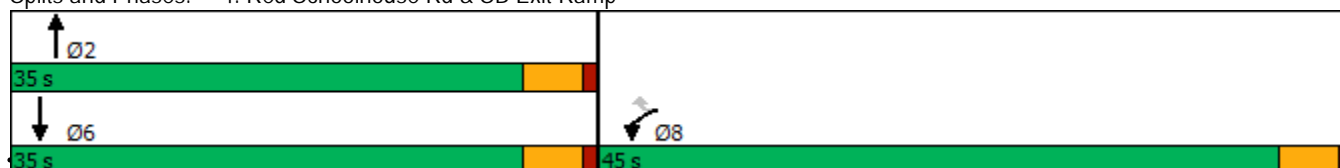


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	37.9	37.9	31.1			31.1
Actuated g/C Ratio	0.49	0.49	0.40			0.40
v/c Ratio	0.92	0.45	0.26			0.45
Control Delay	35.3	2.7	17.4			20.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	35.3	2.7	17.4			20.3
LOS	D	A	B			C
Approach Delay	23.5		17.4			20.3
Approach LOS	C		B			C
Queue Length 50th (ft)	333	0	66			108
Queue Length 95th (ft)	#576	43	114			178
Internal Link Dist (ft)	338		511			455
Turn Bay Length (ft)						
Base Capacity (vph)	945	1049	764			661
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.84	0.43	0.26			0.45

Intersection Summary











Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 77.1
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 22.3
 Intersection LOS: C
 Intersection Capacity Utilization 62.8%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	750	428	185	0	0	277
Future Volume (veh/h)	750	428	185	0	0	277
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1856	1868	0	0	1663
Adj Flow Rate, veh/h	798	455	197	0	0	295
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	7	0	0	16
Cap, veh/h	869	767	761	0	0	677
Arrive On Green	0.49	0.49	0.41	0.00	0.00	0.41
Sat Flow, veh/h	1781	1572	1868	0	0	1663
Grp Volume(v), veh/h	798	455	197	0	0	295
Grp Sat Flow(s),veh/h/ln	1781	1572	1868	0	0	1663
Q Serve(g_s), s	31.7	15.9	5.3	0.0	0.0	9.7
Cycle Q Clear(g_c), s	31.7	15.9	5.3	0.0	0.0	9.7
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	869	767	761	0	0	677
V/C Ratio(X)	0.92	0.59	0.26	0.00	0.00	0.44
Avail Cap(c_a), veh/h	960	847	761	0	0	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	18.1	14.1	14.9	0.0	0.0	16.3
Incr Delay (d2), s/veh	12.8	0.9	0.8	0.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.6	5.3	2.3	0.0	0.0	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.9	15.0	15.8	0.0	0.0	18.3
LnGrp LOS	C	B	B	A	A	B
Approach Vol, veh/h	1253		197			295
Approach Delay, s/veh	25.1		15.8			18.3
Approach LOS	C		B			B
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		35.0				35.0
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		30.5				30.5
Max Q Clear Time (g_c+I1), s		7.3				11.7
Green Ext Time (p_c), s		1.1				1.6
Green Ext Time (p_c), s						3.0
Intersection Summary						
HCM 6th Ctrl Delay			22.9			
HCM 6th LOS			C			

2020 Existing Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	55	16	170	980	47
Future Volume (vph)	15	55	16	170	980	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.893				0.994	
Flt Protected	0.990			0.996		
Satd. Flow (prot)	1550	0	0	1854	1901	0
Flt Permitted	0.990			0.996		
Satd. Flow (perm)	1550	0	0	1854	1901	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	8%	0%	6%	6%	5%
Adj. Flow (vph)	16	60	17	185	1065	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	0	202	1116	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	65.3%
Analysis Period (min)	15
	ICU Level of Service C

2020 Existing Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	15	55	16	170	980	47
Future Vol, veh/h	15	55	16	170	980	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	27	8	0	6	6	5
Mvmt Flow	16	60	17	185	1065	51

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1310	1091	1116	0	-	0
Stage 1	1091	-	-	-	-	-
Stage 2	219	-	-	-	-	-
Critical Hdwy	6.67	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	155	254	633	-	-	-
Stage 1	288	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	150	254	633	-	-	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.6	0.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	633	-	221	-	-
HCM Lane V/C Ratio	0.027	-	0.344	-	-
HCM Control Delay (s)	10.8	0	29.6	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.5	-	-

2020 Existing Traffic Volumes
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak AM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (vph)	0	0	186	276	195	840
Future Volume (vph)	0	0	186	276	195	840
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.919			
Flt Protected						0.991
Satd. Flow (prot)	0	0	1731	0	0	1709
Flt Permitted						0.991
Satd. Flow (perm)	0	0	1731	0	0	1709
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	6%	3%	13%	5%
Adj. Flow (vph)	0	0	198	294	207	894
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	492	0	0	1101
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	88.4%
Analysis Period (min)	15
	ICU Level of Service E

2020 Existing Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	459	2	3	837
Future Volume (vph)	2	3	459	2	3	837
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		338			308
Travel Time (s)	12.8		7.7			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	499	2	3	910
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	501	0	0	913
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	56.4%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	459	2	3	837
Future Vol, veh/h	2	3	459	2	3	837
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	499	2	3	910

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1416	500	0	0	501	0
Stage 1	500	-	-	-	-	-
Stage 2	916	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	151	571	-	-	1063	-
Stage 1	609	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	150	571	-	-	1063	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	390	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	269	1063
HCM Lane V/C Ratio	-	-	0.02	0.003
HCM Control Delay (s)	-	-	18.7	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2020 Existing Traffic Volumes
8: Wilshire Dr & Summit Road

Peak AM Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	138	30	19	121	38	19
Future Volume (vph)	138	30	19	121	38	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.976			0.956		
Flt Protected				0.993	0.968	
Satd. Flow (prot)	1714	0	0	1709	1469	0
Flt Permitted				0.993	0.968	
Satd. Flow (perm)	1714	0	0	1709	1469	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	170			402	431	
Travel Time (s)	3.9			9.1	9.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	23%	26%	8%	24%	11%
Adj. Flow (vph)	170	37	23	149	47	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	0	0	172	70	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	138	30	19	121	38	19
Future Vol, veh/h	138	30	19	121	38	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	23	26	8	24	11
Mvmt Flow	170	37	23	149	47	23

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	207	0	384
Stage 1	-	-	-	-	189
Stage 2	-	-	-	-	195
Critical Hdwy	-	-	4.36	-	6.64
Critical Hdwy Stg 1	-	-	-	-	5.64
Critical Hdwy Stg 2	-	-	-	-	5.64
Follow-up Hdwy	-	-	2.434	-	3.716
Pot Cap-1 Maneuver	-	-	1234	-	578
Stage 1	-	-	-	-	793
Stage 2	-	-	-	-	788
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1234	-	566
Mov Cap-2 Maneuver	-	-	-	-	566
Stage 1	-	-	-	-	777
Stage 2	-	-	-	-	788

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	633	-	-	1234	-
HCM Lane V/C Ratio	0.111	-	-	0.019	-
HCM Control Delay (s)	11.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

2020 Existing Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak AM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	10	451	10	10	829
Future Volume (vph)	10	10	451	10	10	829
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.997			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1694	0	1857	0	0	1861
Flt Permitted	0.976					0.999
Satd. Flow (perm)	1694	0	1857	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	203		321			338
Travel Time (s)	4.6		7.3			7.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	490	11	11	901
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	501	0	0	912
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	61.6%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	10	10	451	10	10	829
Future Vol, veh/h	10	10	451	10	10	829
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	490	11	11	901

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1419	496	0	0	501	0
Stage 1	496	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	151	574	-	-	1063	-
Stage 1	612	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	148	574	-	-	1063	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	387	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	235	1063
HCM Lane V/C Ratio	-	-	0.093	0.01
HCM Control Delay (s)	-	-	21.9	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

2020 Existing Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	458	2	3	836
Future Volume (vph)	2	3	458	2	3	836
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	254		513			398
Travel Time (s)	5.8		11.7			9.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	498	2	3	909
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	500	0	0	912
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	56.4%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
11: Red Schoolhouse Rd & Loescher Ln

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	458	2	3	836
Future Vol, veh/h	2	3	458	2	3	836
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	498	2	3	909

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1414	499	0	0	500
Stage 1	499	-	-	-	-
Stage 2	915	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	152	572	-	-	1064
Stage 1	610	-	-	-	-
Stage 2	390	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	151	572	-	-	1064
Mov Cap-2 Maneuver	151	-	-	-	-
Stage 1	606	-	-	-	-
Stage 2	390	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	270	1064
HCM Lane V/C Ratio	-	-	0.02	0.003
HCM Control Delay (s)	-	-	18.6	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2020 Existing Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	90	69	231	95	105	360
Future Volume (vph)	90	69	231	95	105	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941		0.961			
Flt Protected	0.973					0.989
Satd. Flow (prot)	1597	0	1916	0	0	1845
Flt Permitted	0.973					0.989
Satd. Flow (perm)	1597	0	1916	0	0	1845
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	12%	5%	6%	2%	6%	5%
Adj. Flow (vph)	101	78	260	107	118	404
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	367	0	0	522
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.9%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	5.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	90	69	231	95	105	360
Future Vol, veh/h	90	69	231	95	105	360
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	12	5	6	2	6	5
Mvmt Flow	101	78	260	107	118	404

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	954	314	0	0	367
Stage 1	314	-	-	-	-
Stage 2	640	-	-	-	-
Critical Hdwy	6.52	6.25	-	-	4.16
Critical Hdwy Stg 1	5.52	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-
Follow-up Hdwy	3.608	3.345	-	-	2.254
Pot Cap-1 Maneuver	275	719	-	-	1170
Stage 1	719	-	-	-	-
Stage 2	507	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	239	719	-	-	1170
Mov Cap-2 Maneuver	239	-	-	-	-
Stage 1	626	-	-	-	-
Stage 2	507	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.2	0	1.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	336	1170
HCM Lane V/C Ratio	-	-	0.532	0.101
HCM Control Delay (s)	-	-	27.2	8.4
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	3	0.3

2020 Existing Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak PM Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	84	80	267	370	80
Future Volume (vph)	59	84	80	267	370	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.921				0.976	
Flt Protected	0.980			0.989		
Satd. Flow (prot)	1580	0	0	1927	1810	0
Flt Permitted	0.980			0.989		
Satd. Flow (perm)	1580	0	0	1927	1810	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	7%	4%	4%	3%	0%
Adj. Flow (vph)	66	94	90	300	416	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	160	0	0	390	506	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	61.2%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	59	84	80	267	370	80
Future Vol, veh/h	59	84	80	267	370	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	7	4	4	3	0
Mvmt Flow	66	94	90	300	416	90

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	941	461	506	0	-	0
Stage 1	461	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	6.42	6.27	4.14	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.363	2.236	-	-	-
Pot Cap-1 Maneuver	292	590	1049	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	622	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	262	590	1049	-	-	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	622	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.6	2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1049	-	389	-	-
HCM Lane V/C Ratio	0.086	-	0.413	-	-
HCM Control Delay (s)	8.8	0	20.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2	-	-

2020 Existing Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	9	335	12	8	446
Future Volume (vph)	7	9	335	12	8	446
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.995			
Flt Protected	0.978					0.999
Satd. Flow (prot)	1685	0	1853	0	0	1861
Flt Permitted	0.978					0.999
Satd. Flow (perm)	1685	0	1853	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	257		535			595
Travel Time (s)	5.8		12.2			13.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	10	364	13	9	485
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	377	0	0	494
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	39.9%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak PM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	7	9	335	12	8	446
Future Vol, veh/h	7	9	335	12	8	446
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	364	13	9	485











Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	874	371	0	0	377	0
Stage 1	371	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	320	675	-	-	1181	-
Stage 1	698	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	317	675	-	-	1181	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	452	1181
HCM Lane V/C Ratio	-	-	0.038	0.007
HCM Control Delay (s)	-	-	13.3	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	391	188	159	0	0	454
Future Volume (vph)	391	188	159	0	0	454
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1615	1859	0	0	1845
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1615	1859	0	0	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		200				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			535
Travel Time (s)	9.5		13.4			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	9%	0%	0%	3%
Adj. Flow (vph)	416	200	169	0	0	483
Shared Lane Traffic (%)						
Lane Group Flow (vph)	416	200	169	0	0	483
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2020 Existing Traffic Volumes
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
 12/10/2020

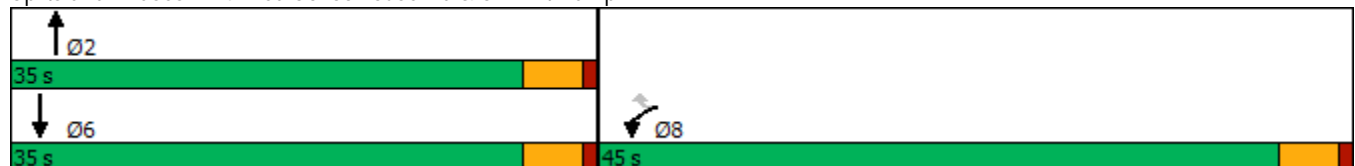


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	19.4	19.4	31.3			31.3
Actuated g/C Ratio	0.33	0.33	0.53			0.53
v/c Ratio	0.71	0.30	0.17			0.49
Control Delay	24.3	3.6	9.1			12.2
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.3	3.6	9.1			12.2
LOS	C	A	A			B
Approach Delay	17.6		9.1			12.2
Approach LOS	B		A			B
Queue Length 50th (ft)	125	0	27			95
Queue Length 95th (ft)	206	33	73			221
Internal Link Dist (ft)	338		511			455
Turn Bay Length (ft)						
Base Capacity (vph)	1246	1196	989			982
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.33	0.17	0.17			0.49

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 58.7
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 14.4
 Intersection LOS: B
 Intersection Capacity Utilization 52.2%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/10/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	391	188	159	0	0	454
Future Volume (veh/h)	391	188	159	0	0	454
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1900	1837	0	0	1856
Adj Flow Rate, veh/h	416	200	169	0	0	483
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	9	0	0	3
Cap, veh/h	528	477	1027	0	0	1038
Arrive On Green	0.30	0.30	0.56	0.00	0.00	0.56
Sat Flow, veh/h	1781	1610	1837	0	0	1856
Grp Volume(v), veh/h	416	200	169	0	0	483
Grp Sat Flow(s),veh/h/ln	1781	1610	1837	0	0	1856
Q Serve(g_s), s	11.9	5.5	2.5	0.0	0.0	8.6
Cycle Q Clear(g_c), s	11.9	5.5	2.5	0.0	0.0	8.6
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	528	477	1027	0	0	1038
V/C Ratio(X)	0.79	0.42	0.16	0.00	0.00	0.47
Avail Cap(c_a), veh/h	1317	1191	1027	0	0	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	15.7	5.9	0.0	0.0	7.3
Incr Delay (d2), s/veh	2.7	0.6	0.3	0.0	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	1.9	0.8	0.0	0.0	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	16.3	6.3	0.0	0.0	8.8
LnGrp LOS	C	B	A	A	A	A
Approach Vol, veh/h	616		169			483
Approach Delay, s/veh	19.2		6.3			8.8
Approach LOS	B		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		35.0				20.4
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		30.5				40.5
Max Q Clear Time (g_c+I1), s		4.5				10.6
Green Ext Time (p_c), s		0.9				3.0
						2.1
Intersection Summary						
HCM 6th Ctrl Delay			13.5			
HCM 6th LOS			B			

2020 Existing Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak PM Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	61	22	147	808	37
Future Volume (vph)	12	61	22	147	808	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.887				0.994	
Flt Protected	0.992			0.993		
Satd. Flow (prot)	1603	0	0	1838	1958	0
Flt Permitted	0.992			0.993		
Satd. Flow (perm)	1603	0	0	1838	1958	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	3%	0%	7%	3%	0%
Adj. Flow (vph)	12	63	23	152	833	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	75	0	0	175	871	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.9%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	12	61	22	147	808	37
Future Vol, veh/h	12	61	22	147	808	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	33	3	0	7	3	0
Mvmt Flow	12	63	23	152	833	38

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1050	852	871	0	-	0
Stage 1	852	-	-	-	-	-
Stage 2	198	-	-	-	-	-
Critical Hdwy	6.73	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	220	358	783	-	-	-
Stage 1	370	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	358	783	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.6	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	783	-	322	-	-
HCM Lane V/C Ratio	0.029	-	0.234	-	-
HCM Control Delay (s)	9.7	0	19.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

2020 Existing Traffic Volumes
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↕			↕
Traffic Volume (vph)	0	0	169	732	363	506
Future Volume (vph)	0	0	169	732	363	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.890			
Flt Protected						0.980
Satd. Flow (prot)	0	0	1714	0	0	1629
Flt Permitted						0.980
Satd. Flow (perm)	0	0	1714	0	0	1629
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	1%	21%	3%
Adj. Flow (vph)	0	0	178	771	382	533
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	949	0	0	915
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	107.4%
Analysis Period (min)	15
	ICU Level of Service G

2020 Existing Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	898	2	3	503
Future Volume (vph)	2	3	898	2	3	503
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919					
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1863	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		327			308
Travel Time (s)	12.8		7.4			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	976	2	3	547
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	978	0	0	550
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	57.4%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	898	2	3	503
Future Vol, veh/h	2	3	898	2	3	503
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	976	2	3	547

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1530	977	0	0	978	0
Stage 1	977	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	129	304	-	-	706	-
Stage 1	365	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	128	304	-	-	706	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	196	706
HCM Lane V/C Ratio	-	-	0.028	0.005
HCM Control Delay (s)	-	-	23.9	10.1
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0

2020 Existing Traffic Volumes
8: Wilshire Dr & Summit Road

Peak PM Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	134	15	5	155	12	9
Future Volume (vph)	134	15	5	155	12	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987			0.941		
Flt Protected				0.999	0.973	
Satd. Flow (prot)	1839	0	0	1861	1706	0
Flt Permitted				0.999	0.973	
Satd. Flow (perm)	1839	0	0	1861	1706	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	170			402	431	
Travel Time (s)	3.9			9.1	9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	146	16	5	168	13	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	162	0	0	173	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.2%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	134	15	5	155	12	9
Future Vol, veh/h	134	15	5	155	12	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	146	16	5	168	13	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	162	0	332
Stage 1	-	-	-	-	154
Stage 2	-	-	-	-	178
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1417	-	663
Stage 1	-	-	-	-	874
Stage 2	-	-	-	-	853
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1417	-	660
Mov Cap-2 Maneuver	-	-	-	-	660
Stage 1	-	-	-	-	871
Stage 2	-	-	-	-	853

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	743	-	-	1417	-
HCM Lane V/C Ratio	0.031	-	-	0.004	-
HCM Control Delay (s)	10	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

2020 Existing Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	10	890	10	10	495
Future Volume (vph)	10	10	890	10	10	495
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.998			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1694	0	1859	0	0	1861
Flt Permitted	0.976					0.999
Satd. Flow (perm)	1694	0	1859	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	214		331			327
Travel Time (s)	4.9		7.5			7.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	967	11	11	538
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	978	0	0	549
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	57.4%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	10	10	890	10	10	495
Future Vol, veh/h	10	10	890	10	10	495
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	967	11	11	538

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1533	973	0	0	978	0
Stage 1	973	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	128	306	-	-	706	-
Stage 1	366	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	125	306	-	-	706	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	572	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.2	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	177	706
HCM Lane V/C Ratio	-	-	0.123	0.015
HCM Control Delay (s)	-	-	28.2	10.2
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	0.4	0

2020 Existing Traffic Volumes
11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	897	2	3	502
Future Volume (vph)	2	3	897	2	3	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919					
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1863	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	254		513			398
Travel Time (s)	5.8		11.7			9.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	975	2	3	546
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	977	0	0	549
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	57.3%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	897	2	3	502
Future Vol, veh/h	2	3	897	2	3	502
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	975	2	3	546

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1528	976	0	0	977	0
Stage 1	976	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	129	305	-	-	706	-
Stage 1	365	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	128	305	-	-	706	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	196	706
HCM Lane V/C Ratio	-	-	0.028	0.005
HCM Control Delay (s)	-	-	23.9	10.1
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0

2020 Existing Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	54	40	105	59	41	152
Future Volume (vph)	54	40	105	59	41	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.943		0.951			
Flt Protected	0.972					0.989
Satd. Flow (prot)	1742	0	1918	0	0	1912
Flt Permitted	0.972					0.989
Satd. Flow (perm)	1742	0	1918	0	0	1912
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	4%	3%	0%	2%
Adj. Flow (vph)	61	45	119	67	47	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	106	0	186	0	0	220
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	34.8%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	54	40	105	59	41	152
Future Vol, veh/h	54	40	105	59	41	152
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	4	3	0	2
Mvmt Flow	61	45	119	67	47	173

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	420	153	0	0	186	0
Stage 1	153	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	594	898	-	-	1401	-
Stage 1	880	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	572	898	-	-	1401	-
Mov Cap-2 Maneuver	572	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	677	1401
HCM Lane V/C Ratio	-	-	0.158	0.033
HCM Control Delay (s)	-	-	11.3	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

2020 Existing Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak SAT Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	26	48	95	138	147	59
Future Volume (vph)	26	48	95	138	147	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.912				0.962	
Flt Protected	0.983			0.980		
Satd. Flow (prot)	1618	0	0	1951	1802	0
Flt Permitted	0.983			0.980		
Satd. Flow (perm)	1618	0	0	1951	1802	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			605	229	
Travel Time (s)	13.2			13.8	5.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	0%	0%	3%	2%	0%
Adj. Flow (vph)	28	52	102	148	158	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	0	250	221	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	38.2%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	26	48	95	138	147	59
Future Vol, veh/h	26	48	95	138	147	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, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	0	0	3	2	0
Mvmt Flow	28	52	102	148	158	63

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	542	190	221	0	0
Stage 1	190	-	-	-	-
Stage 2	352	-	-	-	-
Critical Hdwy	6.45	6.2	4.1	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.3	2.2	-	-
Pot Cap-1 Maneuver	496	857	1360	-	-
Stage 1	835	-	-	-	-
Stage 2	705	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	455	857	1360	-	-
Mov Cap-2 Maneuver	455	-	-	-	-
Stage 1	767	-	-	-	-
Stage 2	705	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	3.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1360	-	654	-	-
HCM Lane V/C Ratio	0.075	-	0.122	-	-
HCM Control Delay (s)	7.9	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

2020 Existing Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak SAT Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	9	221	12	8	188
Future Volume (vph)	7	9	221	12	8	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.993			
Flt Protected	0.978					0.998
Satd. Flow (prot)	1685	0	1850	0	0	1859
Flt Permitted	0.978					0.998
Satd. Flow (perm)	1685	0	1850	0	0	1859
Link Speed (mph)	30		30			30
Link Distance (ft)	280		525			605
Travel Time (s)	6.4		11.9			13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	10	240	13	9	204
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	253	0	0	213
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	26.4%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak SAT Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	7	9	221	12	8	188
Future Vol, veh/h	7	9	221	12	8	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	240	13	9	204











Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	469	247	0	0	253
Stage 1	247	-	-	-	-
Stage 2	222	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	553	792	-	-	1312
Stage 1	794	-	-	-	-
Stage 2	815	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	549	792	-	-	1312
Mov Cap-2 Maneuver	549	-	-	-	-
Stage 1	788	-	-	-	-
Stage 2	815	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	664	1312
HCM Lane V/C Ratio	-	-	0.026	0.007
HCM Control Delay (s)	-	-	10.6	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	373	153	80	0	0	195
Future Volume (vph)	373	153	80	0	0	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1615	1859	0	0	1845
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1615	1859	0	0	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		163				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			525
Travel Time (s)	9.5		13.4			11.9
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	9%	0%	0%	3%
Adj. Flow (vph)	397	163	85	0	0	207
Shared Lane Traffic (%)						
Lane Group Flow (vph)	397	163	85	0	0	207
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/10/2020

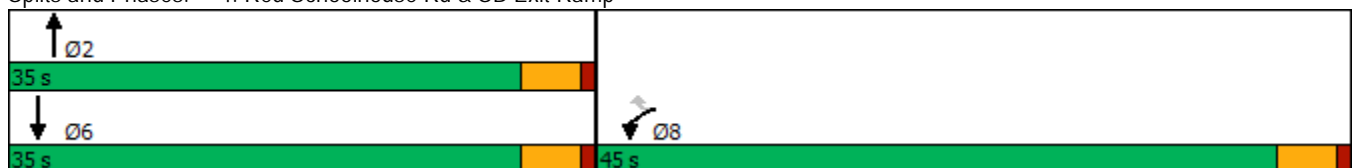


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	18.4	18.4	31.2			31.2
Actuated g/C Ratio	0.32	0.32	0.54			0.54
v/c Ratio	0.70	0.26	0.08			0.21
Control Delay	24.3	3.8	8.2			8.8
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.3	3.8	8.2			8.8
LOS	C	A	A			A
Approach Delay	18.3		8.2			8.8
Approach LOS	B		A			A
Queue Length 50th (ft)	117	0	12			33
Queue Length 95th (ft)	195	31	39			85
Internal Link Dist (ft)	338		511			445
Turn Bay Length (ft)						
Base Capacity (vph)	1266	1202	1006			998
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.31	0.14	0.08			0.21

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 57.7
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 15.0
 Intersection Capacity Utilization 37.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2020 Existing Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/10/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	373	153	80	0	0	195
Future Volume (veh/h)	373	153	80	0	0	195
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1900	1837	0	0	1856
Adj Flow Rate, veh/h	397	163	85	0	0	207
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	9	0	0	3
Cap, veh/h	507	458	1045	0	0	1055
Arrive On Green	0.28	0.28	0.57	0.00	0.00	0.57
Sat Flow, veh/h	1781	1610	1837	0	0	1856
Grp Volume(v), veh/h	397	163	85	0	0	207
Grp Sat Flow(s),veh/h/ln	1781	1610	1837	0	0	1856
Q Serve(g_s), s	11.2	4.4	1.1	0.0	0.0	3.0
Cycle Q Clear(g_c), s	11.2	4.4	1.1	0.0	0.0	3.0
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	507	458	1045	0	0	1055
V/C Ratio(X)	0.78	0.36	0.08	0.00	0.00	0.20
Avail Cap(c_a), veh/h	1340	1211	1045	0	0	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	15.5	5.3	0.0	0.0	5.7
Incr Delay (d2), s/veh	2.7	0.5	0.2	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	1.5	0.4	0.0	0.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	16.0	5.5	0.0	0.0	6.1
LnGrp LOS	C	B	A	A	A	A
Approach Vol, veh/h	560		85			207
Approach Delay, s/veh	19.3		5.5			6.1
Approach LOS	B		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		35.0				35.0
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		30.5				30.5
Max Q Clear Time (g_c+I1), s		3.1				5.0
Green Ext Time (p_c), s		0.4				1.2
Intersection Summary						
HCM 6th Ctrl Delay			14.7			
HCM 6th LOS			B			

2020 Existing Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	23	17	76	536	32
Future Volume (vph)	4	23	17	76	536	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.884				0.992	
Flt Protected	0.993			0.991		
Satd. Flow (prot)	1606	0	0	1841	1955	0
Flt Permitted	0.993			0.991		
Satd. Flow (perm)	1606	0	0	1841	1955	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	3%	0%	7%	3%	0%
Adj. Flow (vph)	4	24	18	78	553	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	96	586	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.1%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	23	17	76	536	32
Future Vol, veh/h	4	23	17	76	536	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	33	3	0	7	3	0
Mvmt Flow	4	24	18	78	553	33

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	684	570	586	0	-	0
Stage 1	570	-	-	-	-	-
Stage 2	114	-	-	-	-	-
Critical Hdwy	6.73	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	371	519	999	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	364	519	999	-	-	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	499	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	999	-	488	-	-
HCM Lane V/C Ratio	0.018	-	0.057	-	-
HCM Control Delay (s)	8.7	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

2020 Existing Traffic Volumes
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (vph)	0	0	93	307	155	404
Future Volume (vph)	0	0	93	307	155	404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.896			
Flt Protected						0.986
Satd. Flow (prot)	0	0	1725	0	0	1775
Flt Permitted						0.986
Satd. Flow (perm)	0	0	1725	0	0	1775
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	101	334	168	439
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	435	0	0	607
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.3%
Analysis Period (min)	15
	ICU Level of Service B

2020 Existing Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	397	2	3	401
Future Volume (vph)	2	3	397	2	3	401
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		327			308
Travel Time (s)	12.8		7.4			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	432	2	3	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	434	0	0	439
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	33.5%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	397	2	3	401
Future Vol, veh/h	2	3	397	2	3	401
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	432	2	3	436

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	875	433	0	0	434	0
Stage 1	433	-	-	-	-	-
Stage 2	442	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	320	623	-	-	1126	-
Stage 1	654	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	319	623	-	-	1126	-
Mov Cap-2 Maneuver	319	-	-	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	648	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	451	1126
HCM Lane V/C Ratio	-	-	0.012	0.003
HCM Control Delay (s)	-	-	13.1	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

2020 Existing Traffic Volumes
8: Wilshire Dr & Summit Road

Peak SAT Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	71	5	4	150	2	3
Future Volume (vph)	71	5	4	150	2	3
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992			0.919		
Flt Protected				0.999	0.980	
Satd. Flow (prot)	1848	0	0	1861	1678	0
Flt Permitted				0.999	0.980	
Satd. Flow (perm)	1848	0	0	1861	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	170			402	431	
Travel Time (s)	3.9			9.1	9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	5	4	163	2	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	0	0	167	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.1%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	71	5	4	150	2	3
Future Vol, veh/h	71	5	4	150	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	5	4	163	2	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	82	0	251 80
Stage 1	-	-	-	-	80 -
Stage 2	-	-	-	-	171 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1515	-	738 980
Stage 1	-	-	-	-	943 -
Stage 2	-	-	-	-	859 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1515	-	736 980
Mov Cap-2 Maneuver	-	-	-	-	736 -
Stage 1	-	-	-	-	940 -
Stage 2	-	-	-	-	859 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	865	-	-	1515	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

2020 Existing Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	10	389	10	10	393
Future Volume (vph)	10	10	389	10	10	393
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.997			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1694	0	1857	0	0	1861
Flt Permitted	0.976					0.999
Satd. Flow (perm)	1694	0	1857	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	282		331			327
Travel Time (s)	6.4		7.5			7.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	423	11	11	427
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	434	0	0	438
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	38.7%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	10	10	389	10	10	393
Future Vol, veh/h	10	10	389	10	10	393
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	423	11	11	427

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	878	429	0	0	434
Stage 1	429	-	-	-	-
Stage 2	449	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	318	626	-	-	1126
Stage 1	657	-	-	-	-
Stage 2	643	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	314	626	-	-	1126
Mov Cap-2 Maneuver	314	-	-	-	-
Stage 1	648	-	-	-	-
Stage 2	643	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	418	1126
HCM Lane V/C Ratio	-	-	0.052	0.01
HCM Control Delay (s)	-	-	14.1	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

2020 Existing Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	396	2	3	400
Future Volume (vph)	2	3	396	2	3	400
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	254		513			398
Travel Time (s)	5.8		11.7			9.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	430	2	3	435
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	432	0	0	438
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	33.4%
Analysis Period (min)	15
	ICU Level of Service A

2020 Existing Traffic Volumes
11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	396	2	3	400
Future Vol, veh/h	2	3	396	2	3	400
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	430	2	3	435

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	872	431	0	0	432	0
Stage 1	431	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	321	624	-	-	1128	-
Stage 1	655	-	-	-	-	-
Stage 2	648	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	320	624	-	-	1128	-
Mov Cap-2 Maneuver	320	-	-	-	-	-
Stage 1	652	-	-	-	-	-
Stage 2	648	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	452	1128
HCM Lane V/C Ratio	-	-	0.012	0.003
HCM Control Delay (s)	-	-	13.1	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0



RED SCHOOLHOUSE ROAD CORRIDOR

2025 NO-BUILD CONDITIONS CAPACITY ANALYSIS

**WEEKDAY AM PEAK HOUR
WEEKDAY PM PEAK HOUR
SATURDAY PEAK HOUR**

2025 No-Build Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	87	98	507	142	71	201
Future Volume (vph)	87	98	507	142	71	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.929		0.970			
Flt Protected	0.977					0.987
Satd. Flow (prot)	1591	0	1937	0	0	1661
Flt Permitted	0.977					0.987
Satd. Flow (perm)	1591	0	1937	0	0	1661
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	10%	7%	4%	7%	10%	19%
Adj. Flow (vph)	94	105	545	153	76	216
Shared Lane Traffic (%)						
Lane Group Flow (vph)	199	0	698	0	0	292
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.7%
Analysis Period (min)	15
	ICU Level of Service C

2025 No-Build Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	87	98	507	142	71	201
Future Vol, veh/h	87	98	507	142	71	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	10	7	4	7	10	19
Mvmt Flow	94	105	545	153	76	216

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	990	622	0	0	698	0
Stage 1	622	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Critical Hdwy	6.5	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	264	478	-	-	862	-
Stage 1	520	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	238	478	-	-	862	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.3	0	2.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	324	862
HCM Lane V/C Ratio	-	-	0.614	0.089
HCM Control Delay (s)	-	-	32.3	9.6
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	3.8	0.3

2025 No-Build Traffic Volumes
 2: Red Schoolhouse Rd & Summit Road

Peak AM Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	68	93	46	582	191	97
Future Volume (vph)	68	93	46	582	191	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.922				0.955	
Flt Protected	0.979			0.996		
Satd. Flow (prot)	1537	0	0	1910	1529	0
Flt Permitted	0.979			0.996		
Satd. Flow (perm)	1537	0	0	1910	1529	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	10%	14%	5%	21%	14%
Adj. Flow (vph)	72	99	49	619	203	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	668	306	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	68.6%
Analysis Period (min)	15
	ICU Level of Service C

2025 No-Build Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	68	93	46	582	191	97
Future Vol, veh/h	68	93	46	582	191	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	5	10	14	5	21	14
Mvmt Flow	72	99	49	619	203	103

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	972	255	306	0	0
Stage 1	255	-	-	-	-
Stage 2	717	-	-	-	-
Critical Hdwy	6.45	6.3	4.24	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.39	2.326	-	-
Pot Cap-1 Maneuver	277	765	1190	-	-
Stage 1	781	-	-	-	-
Stage 2	478	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	260	765	1190	-	-
Mov Cap-2 Maneuver	260	-	-	-	-
Stage 1	732	-	-	-	-
Stage 2	478	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.3	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1190	-	420	-	-
HCM Lane V/C Ratio	0.041	-	0.408	-	-
HCM Control Delay (s)	8.2	0	19.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.9	-	-

2025 No-Build Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	1	623	5	2	282
Future Volume (vph)	2	1	623	5	2	282
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955		0.999			
Flt Protected	0.968					
Satd. Flow (prot)	1722	0	1861	0	0	1863
Flt Permitted	0.968					
Satd. Flow (perm)	1722	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	345		535			595
Travel Time (s)	7.8		12.2			13.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1	677	5	2	307
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	682	0	0	309
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	43.1%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak AM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	1	623	5	2	282
Future Vol, veh/h	2	1	623	5	2	282
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	677	5	2	307











Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	991	680	0	0	682	0
Stage 1	680	-	-	-	-	-
Stage 2	311	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	273	451	-	-	911	-
Stage 1	503	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	272	451	-	-	911	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	313	911
HCM Lane V/C Ratio	-	-	0.01	0.002
HCM Control Delay (s)	-	-	16.6	9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0	0

2025 No-Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	769	439	190	0	0	284
Future Volume (vph)	769	439	190	0	0	284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1568	1894	0	0	1638
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1568	1894	0	0	1638
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		467				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			535
Travel Time (s)	9.5		13.4			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	3%	7%	0%	0%	16%
Adj. Flow (vph)	818	467	202	0	0	302
Shared Lane Traffic (%)						
Lane Group Flow (vph)	818	467	202	0	0	302
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2025 No-Build Traffic Volumes
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
 12/10/2020

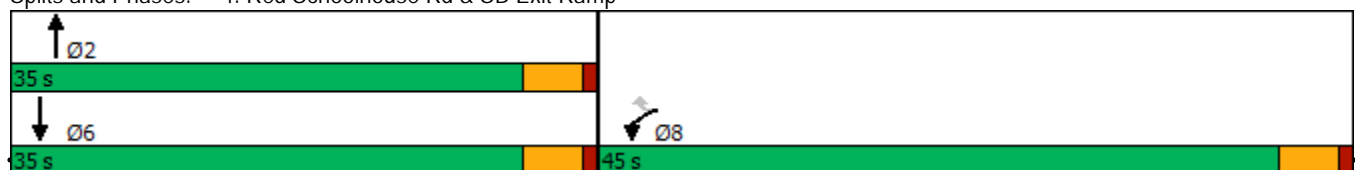


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	38.8	38.8	31.1			31.1
Actuated g/C Ratio	0.50	0.50	0.40			0.40
v/c Ratio	0.93	0.46	0.27			0.46
Control Delay	36.9	2.8	17.7			20.9
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	36.9	2.8	17.7			20.9
LOS	D	A	B			C
Approach Delay	24.5		17.7			20.9
Approach LOS	C		B			C
Queue Length 50th (ft)	349	0	68			111
Queue Length 95th (ft)	#599	43	116			183
Internal Link Dist (ft)	338		511			455
Turn Bay Length (ft)						
Base Capacity (vph)	934	1048	755			653
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.88	0.45	0.27			0.46

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 77.9
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 23.1
 Intersection LOS: C
 Intersection Capacity Utilization 64.2%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 No-Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	769	439	190	0	0	284
Future Volume (veh/h)	769	439	190	0	0	284
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1856	1868	0	0	1663
Adj Flow Rate, veh/h	818	467	202	0	0	302
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	7	0	0	16
Cap, veh/h	881	778	750	0	0	668
Arrive On Green	0.49	0.49	0.40	0.00	0.00	0.40
Sat Flow, veh/h	1781	1572	1868	0	0	1663
Grp Volume(v), veh/h	818	467	202	0	0	302
Grp Sat Flow(s),veh/h/ln	1781	1572	1868	0	0	1663
Q Serve(g_s), s	33.1	16.5	5.6	0.0	0.0	10.2
Cycle Q Clear(g_c), s	33.1	16.5	5.6	0.0	0.0	10.2
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	881	778	750	0	0	668
V/C Ratio(X)	0.93	0.60	0.27	0.00	0.00	0.45
Avail Cap(c_a), veh/h	946	835	750	0	0	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	18.2	14.0	15.5	0.0	0.0	16.9
Incr Delay (d2), s/veh	14.4	1.1	0.9	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	5.5	2.4	0.0	0.0	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.6	15.1	16.4	0.0	0.0	19.1
LnGrp LOS	C	B	B	A	A	B
Approach Vol, veh/h	1285		202			302
Approach Delay, s/veh	26.2		16.4			19.1
Approach LOS	C		B			B
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		35.0			35.0	42.2
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		30.5			30.5	40.5
Max Q Clear Time (g_c+I1), s		7.6			12.2	35.1
Green Ext Time (p_c), s		1.1			1.7	2.6
Intersection Summary						
HCM 6th Ctrl Delay			23.9			
HCM 6th LOS			C			

2025 No-Build Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	56	16	174	1005	48
Future Volume (vph)	15	56	16	174	1005	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.893				0.994	
Flt Protected	0.990			0.996		
Satd. Flow (prot)	1550	0	0	1853	1901	0
Flt Permitted	0.990			0.996		
Satd. Flow (perm)	1550	0	0	1853	1901	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	8%	0%	6%	6%	5%
Adj. Flow (vph)	16	61	17	189	1092	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	0	0	206	1144	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.8%
Analysis Period (min)	15
	ICU Level of Service C

2025 No-Build Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	15	56	16	174	1005	48
Future Vol, veh/h	15	56	16	174	1005	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	27	8	0	6	6	5
Mvmt Flow	16	61	17	189	1092	52

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1341	1118	1144	0	-	0
Stage 1	1118	-	-	-	-	-
Stage 2	223	-	-	-	-	-
Critical Hdwy	6.67	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	149	245	618	-	-	-
Stage 1	280	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	144	245	618	-	-	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	271	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.2	0.9	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	618	-	213	-	-
HCM Lane V/C Ratio	0.028	-	0.362	-	-
HCM Control Delay (s)	11	0	31.2	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

2025 No-Build Traffic Volumes
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak AM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (vph)	0	0	191	282	200	861
Future Volume (vph)	0	0	191	282	200	861
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.919			
Flt Protected						0.991
Satd. Flow (prot)	0	0	1731	0	0	1709
Flt Permitted						0.991
Satd. Flow (perm)	0	0	1731	0	0	1709
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	6%	3%	13%	5%
Adj. Flow (vph)	0	0	203	300	213	916
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	503	0	0	1129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	90.4%
Analysis Period (min)	15
	ICU Level of Service E

2025 No-Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	470	2	3	858
Future Volume (vph)	2	3	470	2	3	858
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		328			308
Travel Time (s)	12.8		7.5			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	511	2	3	933
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	513	0	0	936
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	57.5%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	470	2	3	858
Future Vol, veh/h	2	3	470	2	3	858
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	511	2	3	933

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1451	512	0	0	513
Stage 1	512	-	-	-	-
Stage 2	939	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	144	562	-	-	1052
Stage 1	602	-	-	-	-
Stage 2	380	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	143	562	-	-	1052
Mov Cap-2 Maneuver	143	-	-	-	-
Stage 1	598	-	-	-	-
Stage 2	380	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	259	1052
HCM Lane V/C Ratio	-	-	0.021	0.003
HCM Control Delay (s)	-	-	19.2	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2025 No-Build Traffic Volumes
8: Wilshire Dr & Summit Road

Peak AM Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	141	31	19	124	39	19
Future Volume (vph)	141	31	19	124	39	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.976			0.956		
Flt Protected				0.994	0.967	
Satd. Flow (prot)	1713	0	0	1711	1466	0
Flt Permitted				0.994	0.967	
Satd. Flow (perm)	1713	0	0	1711	1466	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	170			402	431	
Travel Time (s)	3.9			9.1	9.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	23%	26%	8%	24%	11%
Adj. Flow (vph)	174	38	23	153	48	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	212	0	0	176	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.2%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
8: Wilshire Dr & Summit Road

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	141	31	19	124	39	19
Future Vol, veh/h	141	31	19	124	39	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	23	26	8	24	11
Mvmt Flow	174	38	23	153	48	23

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	212	0	392
Stage 1	-	-	-	-	193
Stage 2	-	-	-	-	199
Critical Hdwy	-	-	4.36	-	6.64
Critical Hdwy Stg 1	-	-	-	-	5.64
Critical Hdwy Stg 2	-	-	-	-	5.64
Follow-up Hdwy	-	-	2.434	-	3.716
Pot Cap-1 Maneuver	-	-	1228	-	572
Stage 1	-	-	-	-	790
Stage 2	-	-	-	-	785
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1228	-	561
Mov Cap-2 Maneuver	-	-	-	-	561
Stage 1	-	-	-	-	774
Stage 2	-	-	-	-	785

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	627	-	-	1228	-
HCM Lane V/C Ratio	0.114	-	-	0.019	-
HCM Control Delay (s)	11.5	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

2025 No-Build Traffic Volumes
 9: Red Schoolhouse Rd & Driveway

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	10	462	10	10	850
Future Volume (vph)	10	10	462	10	10	850
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.997			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1694	0	1857	0	0	1861
Flt Permitted	0.976					0.999
Satd. Flow (perm)	1694	0	1857	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	226		331			328
Travel Time (s)	5.1		7.5			7.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	502	11	11	924
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	513	0	0	935
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	62.7%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	10	462	10	10	850
Future Vol, veh/h	10	10	462	10	10	850
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	502	11	11	924

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1454	508	0	0	513
Stage 1	508	-	-	-	-
Stage 2	946	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	143	565	-	-	1052
Stage 1	604	-	-	-	-
Stage 2	377	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	140	565	-	-	1052
Mov Cap-2 Maneuver	140	-	-	-	-
Stage 1	591	-	-	-	-
Stage 2	377	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	224	1052
HCM Lane V/C Ratio	-	-	0.097	0.01
HCM Control Delay (s)	-	-	22.8	8.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

2025 No-Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	469	2	3	857
Future Volume (vph)	2	3	469	2	3	857
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	254		513			398
Travel Time (s)	5.8		11.7			9.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	510	2	3	932
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	512	0	0	935
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	57.5%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak AM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	469	2	3	857
Future Vol, veh/h	2	3	469	2	3	857
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	510	2	3	932

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1449	511	0	0	512	0
Stage 1	511	-	-	-	-	-
Stage 2	938	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	144	563	-	-	1053	-
Stage 1	602	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	143	563	-	-	1053	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	259	1053
HCM Lane V/C Ratio	-	-	0.021	0.003
HCM Control Delay (s)	-	-	19.2	8.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2025 No-Build Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	92	71	237	98	108	369
Future Volume (vph)	92	71	237	98	108	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941		0.961			
Flt Protected	0.973					0.989
Satd. Flow (prot)	1597	0	1916	0	0	1845
Flt Permitted	0.973					0.989
Satd. Flow (perm)	1597	0	1916	0	0	1845
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	12%	5%	6%	2%	6%	5%
Adj. Flow (vph)	103	80	266	110	121	415
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	0	376	0	0	536
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	63.3%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	5.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	92	71	237	98	108	369
Future Vol, veh/h	92	71	237	98	108	369
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	12	5	6	2	6	5
Mvmt Flow	103	80	266	110	121	415

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	978	321	0	0	376	0
Stage 1	321	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Critical Hdwy	6.52	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	266	713	-	-	1161	-
Stage 1	713	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	230	713	-	-	1161	-
Mov Cap-2 Maneuver	230	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	497	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.3	0	1.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	326	1161
HCM Lane V/C Ratio	-	-	0.562	0.105
HCM Control Delay (s)	-	-	29.3	8.5
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	3.3	0.3

2025 No-Build Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak PM Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	86	82	274	379	82
Future Volume (vph)	60	86	82	274	379	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.976	
Flt Protected	0.980			0.989		
Satd. Flow (prot)	1578	0	0	1927	1810	0
Flt Permitted	0.980			0.989		
Satd. Flow (perm)	1578	0	0	1927	1810	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	7%	4%	4%	3%	0%
Adj. Flow (vph)	67	97	92	308	426	92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	164	0	0	400	518	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	62.5%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	86	82	274	379	82
Future Vol, veh/h	60	86	82	274	379	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	7	4	4	3	0
Mvmt Flow	67	97	92	308	426	92

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	964	472	518	0	-	0
Stage 1	472	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.42	6.27	4.14	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.363	2.236	-	-	-
Pot Cap-1 Maneuver	283	582	1038	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	253	582	1038	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	561	-	-	-	-	-
Stage 2	615	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.6	2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1038	-	379	-	-
HCM Lane V/C Ratio	0.089	-	0.433	-	-
HCM Control Delay (s)	8.8	0	21.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.1	-	-

2025 No-Build Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	9	343	12	8	457
Future Volume (vph)	7	9	343	12	8	457
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.995			
Flt Protected	0.978					0.999
Satd. Flow (prot)	1685	0	1853	0	0	1861
Flt Permitted	0.978					0.999
Satd. Flow (perm)	1685	0	1853	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	290		535			595
Travel Time (s)	6.6		12.2			13.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	10	373	13	9	497
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	386	0	0	506
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	40.5%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak PM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	7	9	343	12	8	457
Future Vol, veh/h	7	9	343	12	8	457
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	373	13	9	497











Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	895	380	0	0	386
Stage 1	380	-	-	-	-
Stage 2	515	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	311	667	-	-	1172
Stage 1	691	-	-	-	-
Stage 2	600	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	308	667	-	-	1172
Mov Cap-2 Maneuver	308	-	-	-	-
Stage 1	683	-	-	-	-
Stage 2	600	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	442	1172
HCM Lane V/C Ratio	-	-	0.039	0.007
HCM Control Delay (s)	-	-	13.5	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2025 No-Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	401	193	163	0	0	465
Future Volume (vph)	401	193	163	0	0	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1568	1894	0	0	1638
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1568	1894	0	0	1638
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		205				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			535
Travel Time (s)	9.5		13.4			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	3%	7%	0%	0%	16%
Adj. Flow (vph)	427	205	173	0	0	495
Shared Lane Traffic (%)						
Lane Group Flow (vph)	427	205	173	0	0	495
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2025 No-Build Traffic Volumes
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
 12/10/2020

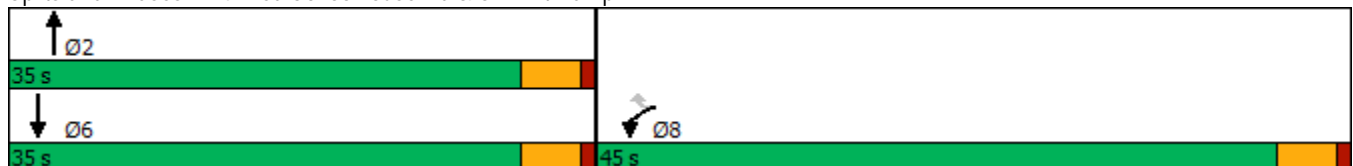


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	19.8	19.8	31.3			31.3
Actuated g/C Ratio	0.33	0.33	0.53			0.53
v/c Ratio	0.72	0.31	0.17			0.57
Control Delay	24.5	3.6	9.3			14.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.5	3.6	9.3			14.3
LOS	C	A	A			B
Approach Delay	17.7		9.3			14.3
Approach LOS	B		A			B
Queue Length 50th (ft)	129	0	28			105
Queue Length 95th (ft)	213	34	76			253
Internal Link Dist (ft)	338		511			455
Turn Bay Length (ft)						
Base Capacity (vph)	1236	1157	1000			865
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.35	0.18	0.17			0.57

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 59.2
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 15.3
 Intersection LOS: B
 Intersection Capacity Utilization 53.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 No-Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/10/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	401	193	163	0	0	465
Future Volume (veh/h)	401	193	163	0	0	465
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1856	1868	0	0	1663
Adj Flow Rate, veh/h	427	205	173	0	0	495
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	7	0	0	16
Cap, veh/h	539	476	1036	0	0	922
Arrive On Green	0.30	0.30	0.55	0.00	0.00	0.55
Sat Flow, veh/h	1781	1572	1868	0	0	1663
Grp Volume(v), veh/h	427	205	173	0	0	495
Grp Sat Flow(s),veh/h/ln	1781	1572	1868	0	0	1663
Q Serve(g_s), s	12.3	5.8	2.5	0.0	0.0	10.6
Cycle Q Clear(g_c), s	12.3	5.8	2.5	0.0	0.0	10.6
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	539	476	1036	0	0	922
V/C Ratio(X)	0.79	0.43	0.17	0.00	0.00	0.54
Avail Cap(c_a), veh/h	1306	1153	1036	0	0	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	15.6	6.1	0.0	0.0	7.9
Incr Delay (d2), s/veh	2.7	0.6	0.3	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	1.9	0.9	0.0	0.0	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	16.3	6.5	0.0	0.0	10.1
LnGrp LOS	C	B	A	A	A	B
Approach Vol, veh/h	632		173			495
Approach Delay, s/veh	19.2		6.5			10.1
Approach LOS	B		A			B
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		35.0			35.0	20.9
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		30.5			30.5	40.5
Max Q Clear Time (g_c+I1), s		4.5			12.6	14.3
Green Ext Time (p_c), s		0.9			3.1	2.1
Intersection Summary						
HCM 6th Ctrl Delay			14.0			
HCM 6th LOS			B			

2025 No-Build Traffic Volumes
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak PM Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	63	23	151	828	38
Future Volume (vph)	12	63	23	151	828	38
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.887				0.994	
Flt Protected	0.992			0.993		
Satd. Flow (prot)	1556	0	0	1853	1901	0
Flt Permitted	0.992			0.993		
Satd. Flow (perm)	1556	0	0	1853	1901	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	8%	0%	6%	6%	5%
Adj. Flow (vph)	13	68	25	164	900	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	81	0	0	189	941	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.1%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak PM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	12	63	23	151	828	38
Future Vol, veh/h	12	63	23	151	828	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	27	8	0	6	6	5
Mvmt Flow	13	68	25	164	900	41

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1135	921	941	0	-	0
Stage 1	921	-	-	-	-	-
Stage 2	214	-	-	-	-	-
Critical Hdwy	6.67	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	200	320	737	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	193	320	737	-	-	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	337	-	-	-	-	-
Stage 2	766	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.2	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	737	-	290	-	-
HCM Lane V/C Ratio	0.034	-	0.281	-	-
HCM Control Delay (s)	10.1	0	22.2	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

2025 No-Build Traffic Volumes
 6: Red Schoolhouse Rd & NB Entrance Ramp

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (vph)	0	0	173	750	372	519
Future Volume (vph)	0	0	173	750	372	519
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.890			
Flt Protected						0.980
Satd. Flow (prot)	0	0	1713	0	0	1765
Flt Permitted						0.980
Satd. Flow (perm)	0	0	1713	0	0	1765
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	188	815	404	564
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1003	0	0	968
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	109.9%
Analysis Period (min)	15
	ICU Level of Service H

2025 No-Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	920	2	3	516
Future Volume (vph)	2	3	920	2	3	516
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919					
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1863	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		323			308
Travel Time (s)	12.8		7.3			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	1000	2	3	561
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	1002	0	0	564
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	58.5%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	920	2	3	516
Future Vol, veh/h	2	3	920	2	3	516
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	1000	2	3	561

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1568	1001	0	0	1002
Stage 1	1001	-	-	-	-
Stage 2	567	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	122	295	-	-	691
Stage 1	355	-	-	-	-
Stage 2	568	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	121	295	-	-	691
Mov Cap-2 Maneuver	121	-	-	-	-
Stage 1	353	-	-	-	-
Stage 2	568	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	187	691
HCM Lane V/C Ratio	-	-	0.029	0.005
HCM Control Delay (s)	-	-	24.8	10.2
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0

2025 No-Build Traffic Volumes
8: Wilshire Dr & Summit Road

Peak PM Hour
12/10/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↘	
Traffic Volume (vph)	137	15	5	159	12	9
Future Volume (vph)	137	15	5	159	12	9
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987			0.941		
Flt Protected				0.999	0.973	
Satd. Flow (prot)	1839	0	0	1861	1706	0
Flt Permitted				0.999	0.973	
Satd. Flow (perm)	1839	0	0	1861	1706	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	170			402	431	
Travel Time (s)	3.9			9.1	9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	16	5	173	13	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	0	178	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	22.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	15	5	159	12	9
Future Vol, veh/h	137	15	5	159	12	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	16	5	173	13	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	165	0	340
Stage 1	-	-	-	-	157
Stage 2	-	-	-	-	183
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1413	-	656
Stage 1	-	-	-	-	871
Stage 2	-	-	-	-	848
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1413	-	653
Mov Cap-2 Maneuver	-	-	-	-	653
Stage 1	-	-	-	-	868
Stage 2	-	-	-	-	848

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	737	-	-	1413	-
HCM Lane V/C Ratio	0.031	-	-	0.004	-
HCM Control Delay (s)	10	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

2025 No-Build Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	10	912	10	10	507
Future Volume (vph)	10	10	912	10	10	507
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.999			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1694	0	1861	0	0	1861
Flt Permitted	0.976					0.999
Satd. Flow (perm)	1694	0	1861	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	297		335			323
Travel Time (s)	6.8		7.6			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	991	11	11	551
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	1002	0	0	562
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	58.6%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	10	10	912	10	10	507
Future Vol, veh/h	10	10	912	10	10	507
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	991	11	11	551

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1570	997	0	0	1002
Stage 1	997	-	-	-	-
Stage 2	573	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	122	296	-	-	691
Stage 1	357	-	-	-	-
Stage 2	564	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	119	296	-	-	691
Mov Cap-2 Maneuver	119	-	-	-	-
Stage 1	349	-	-	-	-
Stage 2	564	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.3	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	170	691
HCM Lane V/C Ratio	-	-	0.128	0.016
HCM Control Delay (s)	-	-	29.3	10.3
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	0.4	0

2025 No-Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	919	2	3	515
Future Volume (vph)	2	3	919	2	3	515
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919					
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1863	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1863	0	0	1863
Link Speed (mph)	30		30		30	
Link Distance (ft)	254		513		398	
Travel Time (s)	5.8		11.7		9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	999	2	3	560
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	1001	0	0	563
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	58.5%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	919	2	3	515
Future Vol, veh/h	2	3	919	2	3	515
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	999	2	3	560

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1566	1000	0	0	1001	0
Stage 1	1000	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	122	295	-	-	692	-
Stage 1	356	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	121	295	-	-	692	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	568	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	187	692
HCM Lane V/C Ratio	-	-	0.029	0.005
HCM Control Delay (s)	-	-	24.8	10.2
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0

2025 No-Build Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	41	108	60	42	156
Future Volume (vph)	55	41	108	60	42	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.952			
Flt Protected	0.972					0.989
Satd. Flow (prot)	1740	0	1920	0	0	1912
Flt Permitted	0.972					0.989
Satd. Flow (perm)	1740	0	1920	0	0	1912
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	4%	3%	0%	2%
Adj. Flow (vph)	63	47	123	68	48	177
Shared Lane Traffic (%)						
Lane Group Flow (vph)	110	0	191	0	0	225
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.4%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
 12/10/2020

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	41	108	60	42	156
Future Vol, veh/h	55	41	108	60	42	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	4	3	0	2
Mvmt Flow	63	47	123	68	48	177

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	430	157	0	0	191	0
Stage 1	157	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	586	894	-	-	1395	-
Stage 1	876	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	564	894	-	-	1395	-
Mov Cap-2 Maneuver	564	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	670	1395
HCM Lane V/C Ratio	-	-	0.163	0.034
HCM Control Delay (s)	-	-	11.4	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

2025 No-Build Traffic Volumes
 2: Red Schoolhouse Rd & Summit Road

Peak SAT Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	49	97	141	151	60
Future Volume (vph)	27	49	97	141	151	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.913				0.961	
Flt Protected	0.983			0.980		
Satd. Flow (prot)	1620	0	0	1951	1800	0
Flt Permitted	0.983			0.980		
Satd. Flow (perm)	1620	0	0	1951	1800	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	0%	0%	3%	2%	0%
Adj. Flow (vph)	29	53	104	152	162	65
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	0	0	256	227	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	38.9%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
2: Red Schoolhouse Rd & Summit Road

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	27	49	97	141	151	60
Future Vol, veh/h	27	49	97	141	151	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	0	0	3	2	0
Mvmt Flow	29	53	104	152	162	65

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	555	195	227	0	0
Stage 1	195	-	-	-	-
Stage 2	360	-	-	-	-
Critical Hdwy	6.45	6.2	4.1	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.3	2.2	-	-
Pot Cap-1 Maneuver	488	851	1353	-	-
Stage 1	831	-	-	-	-
Stage 2	699	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	447	851	1353	-	-
Mov Cap-2 Maneuver	447	-	-	-	-
Stage 1	761	-	-	-	-
Stage 2	699	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	3.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1353	-	644	-	-
HCM Lane V/C Ratio	0.077	-	0.127	-	-
HCM Control Delay (s)	7.9	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

2025 No-Build Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak SAT Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	9	227	12	8	193
Future Volume (vph)	7	9	227	12	8	193
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.993			
Flt Protected	0.978					0.998
Satd. Flow (prot)	1685	0	1850	0	0	1859
Flt Permitted	0.978					0.998
Satd. Flow (perm)	1685	0	1850	0	0	1859
Link Speed (mph)	30		30			30
Link Distance (ft)	369		535			595
Travel Time (s)	8.4		12.2			13.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	10	247	13	9	210
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	260	0	0	219
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	26.6%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
 3: Red Schoolhouse Rd & Promenade at Chestnut Ridge

Peak SAT Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	9	227	12	8	193
Future Vol, veh/h	7	9	227	12	8	193
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	247	13	9	210











Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	482	254	0	0	260
Stage 1	254	-	-	-	-
Stage 2	228	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	543	785	-	-	1304
Stage 1	788	-	-	-	-
Stage 2	810	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	539	785	-	-	1304
Mov Cap-2 Maneuver	539	-	-	-	-
Stage 1	782	-	-	-	-
Stage 2	810	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	654	1304
HCM Lane V/C Ratio	-	-	0.027	0.007
HCM Control Delay (s)	-	-	10.7	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

2025 No-Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	382	157	82	0	0	200
Future Volume (vph)	382	157	82	0	0	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1568	1894	0	0	1638
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1568	1894	0	0	1638
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		167				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			535
Travel Time (s)	9.5		13.4			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	3%	7%	0%	0%	16%
Adj. Flow (vph)	406	167	87	0	0	213
Shared Lane Traffic (%)						
Lane Group Flow (vph)	406	167	87	0	0	213
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2025 No-Build Traffic Volumes
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
 12/10/2020

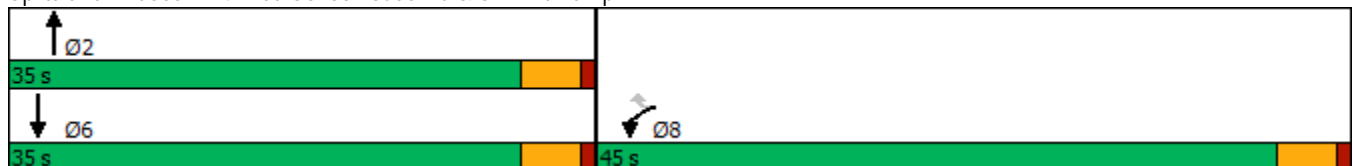


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	18.8	18.8	31.2			31.2
Actuated g/C Ratio	0.32	0.32	0.54			0.54
v/c Ratio	0.71	0.27	0.09			0.24
Control Delay	24.4	3.8	8.4			9.4
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.4	3.8	8.4			9.4
LOS	C	A	A			A
Approach Delay	18.4		8.4			9.4
Approach LOS	B		A			A
Queue Length 50th (ft)	121	0	13			35
Queue Length 95th (ft)	201	31	41			91
Internal Link Dist (ft)	338		511			455
Turn Bay Length (ft)						
Base Capacity (vph)	1259	1163	1018			880
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.32	0.14	0.09			0.24

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 58.1
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 15.2
 Intersection LOS: B
 Intersection Capacity Utilization 38.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 No-Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/10/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	382	157	82	0	0	200
Future Volume (veh/h)	382	157	82	0	0	200
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1856	1868	0	0	1663
Adj Flow Rate, veh/h	406	167	87	0	0	213
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	7	0	0	16
Cap, veh/h	516	455	1055	0	0	939
Arrive On Green	0.29	0.29	0.56	0.00	0.00	0.56
Sat Flow, veh/h	1781	1572	1868	0	0	1663
Grp Volume(v), veh/h	406	167	87	0	0	213
Grp Sat Flow(s),veh/h/ln	1781	1572	1868	0	0	1663
Q Serve(g_s), s	11.5	4.6	1.2	0.0	0.0	3.5
Cycle Q Clear(g_c), s	11.5	4.6	1.2	0.0	0.0	3.5
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	516	455	1055	0	0	939
V/C Ratio(X)	0.79	0.37	0.08	0.00	0.00	0.23
Avail Cap(c_a), veh/h	1330	1174	1055	0	0	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	15.5	5.5	0.0	0.0	6.0
Incr Delay (d2), s/veh	2.7	0.5	0.2	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	1.5	0.4	0.0	0.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	16.0	5.6	0.0	0.0	6.5
LnGrp LOS	C	B	A	A	A	A
Approach Vol, veh/h	573		87			213
Approach Delay, s/veh	19.3		5.6			6.5
Approach LOS	B		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		35.0				35.0
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		30.5				30.5
Max Q Clear Time (g_c+I1), s		3.2				5.5
Green Ext Time (p_c), s		0.4				1.2
Intersection Summary						
HCM 6th Ctrl Delay			14.8			
HCM 6th LOS			B			

2025 No-Build Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	23	17	78	549	33
Future Volume (vph)	4	23	17	78	549	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.884				0.992	
Flt Protected	0.993			0.991		
Satd. Flow (prot)	1558	0	0	1854	1898	0
Flt Permitted	0.993			0.991		
Satd. Flow (perm)	1558	0	0	1854	1898	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	8%	0%	6%	6%	5%
Adj. Flow (vph)	4	25	18	85	597	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	0	103	633	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.9%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	23	17	78	549	33
Future Vol, veh/h	4	23	17	78	549	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	27	8	0	6	6	5
Mvmt Flow	4	25	18	85	597	36

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	736	615	633	0	-	0
Stage 1	615	-	-	-	-	-
Stage 2	121	-	-	-	-	-
Critical Hdwy	6.67	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	352	480	960	-	-	-
Stage 1	494	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	345	480	960	-	-	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	484	-	-	-	-	-
Stage 2	846	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	960	-	454	-	-
HCM Lane V/C Ratio	0.019	-	0.065	-	-
HCM Control Delay (s)	8.8	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

2025 No-Build Traffic Volumes
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (vph)	0	0	95	315	159	414
Future Volume (vph)	0	0	95	315	159	414
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.896			
Flt Protected						0.986
Satd. Flow (prot)	0	0	1725	0	0	1775
Flt Permitted						0.986
Satd. Flow (perm)	0	0	1725	0	0	1775
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	103	342	173	450
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	445	0	0	623
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.6%
Analysis Period (min)	15
	ICU Level of Service B

2025 No-Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	407	2	3	411
Future Volume (vph)	2	3	407	2	3	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		267			308
Travel Time (s)	12.8		6.1			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	442	2	3	447
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	444	0	0	450
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	34.0%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	407	2	3	411
Future Vol, veh/h	2	3	407	2	3	411
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	442	2	3	447

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	896	443	0	0	444	0
Stage 1	443	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	311	615	-	-	1116	-
Stage 1	647	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	310	615	-	-	1116	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	441	1116
HCM Lane V/C Ratio	-	-	0.012	0.003
HCM Control Delay (s)	-	-	13.3	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

2025 No-Build Traffic Volumes
8: Wilshire Dr & Summit Road

Peak SAT Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	73	5	4	154	2	3
Future Volume (vph)	73	5	4	154	2	3
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992			0.919		
Flt Protected				0.999	0.980	
Satd. Flow (prot)	1848	0	0	1861	1678	0
Flt Permitted				0.999	0.980	
Satd. Flow (perm)	1848	0	0	1861	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	170			402	431	
Travel Time (s)	3.9			9.1	9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	5	4	167	2	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	84	0	0	171	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	5	4	154	2	3
Future Vol, veh/h	73	5	4	154	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	5	4	167	2	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	84	0	257 82
Stage 1	-	-	-	-	82 -
Stage 2	-	-	-	-	175 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1513	-	732 978
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	855 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1513	-	730 978
Mov Cap-2 Maneuver	-	-	-	-	730 -
Stage 1	-	-	-	-	938 -
Stage 2	-	-	-	-	855 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	861	-	-	1513	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

2025 No-Build Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	10	399	10	10	403
Future Volume (vph)	10	10	399	10	10	403
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.997			
Flt Protected	0.976					0.999
Satd. Flow (prot)	1694	0	1857	0	0	1861
Flt Permitted	0.976					0.999
Satd. Flow (perm)	1694	0	1857	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	466		391			267
Travel Time (s)	10.6		8.9			6.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	434	11	11	438
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	445	0	0	449
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	39.2%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
9: Red Schoolhouse Rd & Driveway

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	10	10	399	10	10	403
Future Vol, veh/h	10	10	399	10	10	403
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	434	11	11	438

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	900	440	0	0	445
Stage 1	440	-	-	-	-
Stage 2	460	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	309	617	-	-	1115
Stage 1	649	-	-	-	-
Stage 2	636	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	305	617	-	-	1115
Mov Cap-2 Maneuver	305	-	-	-	-
Stage 1	641	-	-	-	-
Stage 2	636	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	1115
HCM Lane V/C Ratio	-	-	0.053	0.01
HCM Control Delay (s)	-	-	14.3	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

2025 No-Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	3	406	2	3	410
Future Volume (vph)	2	3	406	2	3	410
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.999			
Flt Protected	0.980					
Satd. Flow (prot)	1678	0	1861	0	0	1863
Flt Permitted	0.980					
Satd. Flow (perm)	1678	0	1861	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	254		513			398
Travel Time (s)	5.8		11.7			9.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	3	441	2	3	446
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	443	0	0	449
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	34.0%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	2	3	406	2	3	410
Future Vol, veh/h	2	3	406	2	3	410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	441	2	3	446

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	894	442	0	0	443
Stage 1	442	-	-	-	-
Stage 2	452	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	312	615	-	-	1117
Stage 1	648	-	-	-	-
Stage 2	641	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	311	615	-	-	1117
Mov Cap-2 Maneuver	311	-	-	-	-
Stage 1	645	-	-	-	-
Stage 2	641	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	442	1117
HCM Lane V/C Ratio	-	-	0.012	0.003
HCM Control Delay (s)	-	-	13.2	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0



RED SCHOOLHOUSE ROAD CORRIDOR

2025 BUILD CONDITIONS CAPACITY ANALYSIS (NO IMPROVEMENTS)

**WEEKDAY AM PEAK HOUR
WEEKDAY PM PEAK HOUR
SATURDAY PEAK HOUR**

2025 Build Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	164	98	593	188	71	318
Future Volume (vph)	164	98	593	188	71	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950		0.968			
Flt Protected	0.970					0.991
Satd. Flow (prot)	1608	0	1932	0	0	1658
Flt Permitted	0.970					0.991
Satd. Flow (perm)	1608	0	1932	0	0	1658
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	10%	7%	4%	7%	10%	19%
Adj. Flow (vph)	176	105	638	202	76	342
Shared Lane Traffic (%)						
Lane Group Flow (vph)	281	0	840	0	0	418
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	88.4%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	41					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	164	98	593	188	71	318
Future Vol, veh/h	164	98	593	188	71	318
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	10	7	4	7	10	19
Mvmt Flow	176	105	638	202	76	342

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1233	739	0	0	840
Stage 1	739	-	-	-	-
Stage 2	494	-	-	-	-
Critical Hdwy	6.5	6.27	-	-	4.2
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.363	-	-	2.29
Pot Cap-1 Maneuver	188	409	-	-	762
Stage 1	458	-	-	-	-
Stage 2	597	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 165	409	-	-	762
Mov Cap-2 Maneuver	~ 165	-	-	-	-
Stage 1	402	-	-	-	-
Stage 2	597	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	221	0	1.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	212	762
HCM Lane V/C Ratio	-	-	1.329	0.1
HCM Control Delay (s)	-	-	221	10.2
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	15.5	0.3

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2025 Build Traffic Volumes
2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	68	138	63	713	385	97
Future Volume (vph)	68	138	63	713	385	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.909			0.973		
Flt Protected	0.984			0.996		
Satd. Flow (prot)	1516	0	0	1909	1546	0
Flt Permitted	0.984			0.996		
Satd. Flow (perm)	1516	0	0	1909	1546	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	10%	14%	5%	21%	14%
Adj. Flow (vph)	72	147	67	759	410	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	219	0	0	826	513	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	89.4%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes
 2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	7.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	68	138	63	713	385	97
Future Vol, veh/h	68	138	63	713	385	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	5	10	14	5	21	14
Mvmt Flow	72	147	67	759	410	103

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1355	462	513	0	0
Stage 1	462	-	-	-	-
Stage 2	893	-	-	-	-
Critical Hdwy	6.45	6.3	4.24	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.39	2.326	-	-
Pot Cap-1 Maneuver	162	583	994	-	-
Stage 1	628	-	-	-	-
Stage 2	395	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	143	583	994	-	-
Mov Cap-2 Maneuver	143	-	-	-	-
Stage 1	555	-	-	-	-
Stage 2	395	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	48	0.7	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	994	-	289	-	-
HCM Lane V/C Ratio	0.067	-	0.758	-	-
HCM Control Delay (s)	8.9	0	48	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.2	-	5.7	-	-

2025 Build Traffic Volumes

Peak AM Hour

3: Red Schoolhouse Rd & Wellington Site Access/Promenade at Chestnut Ridge

12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	49	0	60	2	0	1	100	721	5	2	439	82
Future Volume (vph)	49	0	60	2	0	1	100	721	5	2	439	82
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Fr _t			0.850		0.955			0.999			0.979	
Fl _t Protected		0.950			0.968			0.994				
Satd. Flow (prot)	0	1770	1583	0	1722	0	0	1850	0	0	1824	0
Fl _t Permitted		0.950			0.968			0.994				
Satd. Flow (perm)	0	1770	1583	0	1722	0	0	1850	0	0	1824	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		347			310			535			595	
Travel Time (s)		7.9			7.0			12.2			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	0	65	2	0	1	109	784	5	2	477	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	65	0	3	0	0	898	0	0	568	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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 Capacity Utilization	85.7%
Analysis Period (min)	15
	ICU Level of Service E

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Vol, veh/h	49	0	60	2	0	1	100	721	5	2	439	82
Future Vol, veh/h	49	0	60	2	0	1	100	721	5	2	439	82
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	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	0	65	2	0	1	109	784	5	2	477	89











Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1531	1533	522	1563	1575	787	566	0	0	789	0	0
Stage 1	526	526	-	1005	1005	-	-	-	-	-	-	-
Stage 2	1005	1007	-	558	570	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	96	116	555	91	110	392	1006	-	-	831	-	-
Stage 1	535	529	-	291	319	-	-	-	-	-	-	-
Stage 2	291	319	-	514	505	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	81	93	555	68	88	392	1006	-	-	831	-	-
Mov Cap-2 Maneuver	81	93	-	68	88	-	-	-	-	-	-	-
Stage 1	432	527	-	235	257	-	-	-	-	-	-	-
Stage 2	234	257	-	452	503	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	56.5		44.7		1.1		0	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1006	-	-	81	555	94	831	-	-
HCM Lane V/C Ratio	0.108	-	-	0.658	0.118	0.035	0.003	-	-
HCM Control Delay (s)	9	0	-	110.6	12.3	44.7	9.3	0	-
HCM Lane LOS	A	A	-	F	B	E	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	3.1	0.4	0.1	0	-	-

2025 Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	856	466	361	0	0	501
Future Volume (vph)	856	466	361	0	0	501
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				
Fl _t Protected	0.950					
Satd. Flow (prot)	1770	1568	1894	0	0	1638
Fl _t Permitted	0.950					
Satd. Flow (perm)	1770	1568	1894	0	0	1638
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		301				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			535
Travel Time (s)	9.5		13.4			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	3%	7%	0%	0%	16%
Adj. Flow (vph)	911	496	384	0	0	533
Shared Lane Traffic (%)						
Lane Group Flow (vph)	911	496	384	0	0	533
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0

2025 Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020

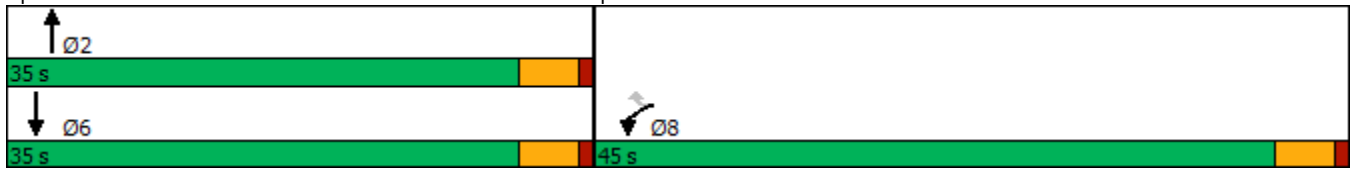


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	41.0	41.0	31.0			31.0
Actuated g/C Ratio	0.51	0.51	0.39			0.39
v/c Ratio	1.00	0.52	0.52			0.84
Control Delay	52.7	6.9	22.0			36.6
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	52.7	6.9	22.0			36.6
LOS	D	A	C			D
Approach Delay	36.6		22.0			36.6
Approach LOS	D		C			D
Queue Length 50th (ft)	~435	51	144			236
Queue Length 95th (ft)	#704	125	226			#414
Internal Link Dist (ft)	338		511			455
Turn Bay Length (ft)						
Base Capacity (vph)	907	950	733			634
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	1.00	0.52	0.52			0.84

Intersection Summary











Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	34.2
Intersection LOS:	C
Intersection Capacity Utilization:	80.5%
ICU Level of Service:	D
Analysis Period (min):	15
~ 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: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	856	466	361	0	0	501
Future Volume (veh/h)	856	466	361	0	0	501
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1856	1868	0	0	1663
Adj Flow Rate, veh/h	911	496	384	0	0	533
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	7	0	0	16
Cap, veh/h	913	806	724	0	0	644
Arrive On Green	0.51	0.51	0.39	0.00	0.00	0.39
Sat Flow, veh/h	1781	1572	1868	0	0	1663
Grp Volume(v), veh/h	911	496	384	0	0	533
Grp Sat Flow(s),veh/h/ln	1781	1572	1868	0	0	1663
Q Serve(g_s), s	40.8	18.0	12.7	0.0	0.0	23.1
Cycle Q Clear(g_c), s	40.8	18.0	12.7	0.0	0.0	23.1
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	913	806	724	0	0	644
V/C Ratio(X)	1.00	0.62	0.53	0.00	0.00	0.83
Avail Cap(c_a), veh/h	913	806	724	0	0	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	13.9	18.9	0.0	0.0	22.1
Incr Delay (d2), s/veh	29.2	1.4	2.8	0.0	0.0	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.2	6.1	5.7	0.0	0.0	10.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.7	15.3	21.7	0.0	0.0	33.7
LnGrp LOS	D	B	C	A	A	C
Approach Vol, veh/h	1407		384			533
Approach Delay, s/veh	36.9		21.7			33.7
Approach LOS	D		C			C
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		35.0				35.0
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		30.5				30.5
Max Q Clear Time (g_c+I1), s		14.7				25.1
Green Ext Time (p_c), s		2.1				1.6
						0.0
Intersection Summary						
HCM 6th Ctrl Delay			33.7			
HCM 6th LOS			C			

2025 Build Traffic Volumes
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	83	33	345	1308	48
Future Volume (vph)	15	83	33	345	1308	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885				0.995	
Flt Protected	0.993			0.996		
Satd. Flow (prot)	1556	0	0	1854	1903	0
Flt Permitted	0.993			0.996		
Satd. Flow (perm)	1556	0	0	1854	1903	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	8%	0%	6%	6%	5%
Adj. Flow (vph)	16	90	36	375	1422	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	106	0	0	411	1474	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	84.4%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	6.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	15	83	33	345	1308	48
Future Vol, veh/h	15	83	33	345	1308	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	27	8	0	6	6	5
Mvmt Flow	16	90	36	375	1422	52

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1895	1448	1474	0	-	0
Stage 1	1448	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.67	6.28	4.1	-	-	-
Critical Hdwy Stg 1	5.67	-	-	-	-	-
Critical Hdwy Stg 2	5.67	-	-	-	-	-
Follow-up Hdwy	3.743	3.372	2.2	-	-	-
Pot Cap-1 Maneuver	66	156	463	-	-	-
Stage 1	190	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	60	156	463	-	-	-
Mov Cap-2 Maneuver	60	-	-	-	-	-
Stage 1	171	-	-	-	-	-
Stage 2	595	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	110.8	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	463	-	125	-	-
HCM Lane V/C Ratio	0.077	-	0.852	-	-
HCM Control Delay (s)	13.4	0	110.8	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.3	-	5.3	-	-

2025 Build Traffic Volumes
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak AM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↕			↕
Traffic Volume (vph)	0	0	378	321	216	1175
Future Volume (vph)	0	0	378	321	216	1175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.938			
Flt Protected						0.992
Satd. Flow (prot)	0	0	1754	0	0	1735
Flt Permitted						0.992
Satd. Flow (perm)	0	0	1754	0	0	1735
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Adj. Flow (vph)	0	0	411	349	235	1277
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	760	0	0	1512
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	120.0%
Analysis Period (min)	15
	ICU Level of Service H

2025 Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	20	679	86	129	1046
Future Volume (vph)	14	20	679	86	129	1046
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920		0.985			
Flt Protected	0.980					0.995
Satd. Flow (prot)	1679	0	1835	0	0	1853
Flt Permitted	0.980					0.995
Satd. Flow (perm)	1679	0	1835	0	0	1853
Link Speed (mph)	30		30			30
Link Distance (ft)	563		400			308
Travel Time (s)	12.8		9.1			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	22	738	93	140	1137
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	0	831	0	0	1277
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	116.5%
Analysis Period (min)	15
	ICU Level of Service H

2025 Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	14	20	679	86	129	1046
Future Vol, veh/h	14	20	679	86	129	1046
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	22	738	93	140	1137

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2202	785	0	0	831
Stage 1	785	-	-	-	-
Stage 2	1417	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	49	393	-	-	801
Stage 1	449	-	-	-	-
Stage 2	224	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	26	393	-	-	801
Mov Cap-2 Maneuver	26	-	-	-	-
Stage 1	236	-	-	-	-
Stage 2	224	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	141.8	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	58	801
HCM Lane V/C Ratio	-	-	0.637	0.175
HCM Control Delay (s)	-	-	141.8	10.4
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.6	0.6

2025 Build Traffic Volumes
8: Wilshire Dr & Summit Rd

Peak AM Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	186	31	19	140	39	19
Future Volume (vph)	186	31	19	140	39	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981			0.956		
Flt Protected				0.994	0.967	
Satd. Flow (prot)	1733	0	0	1715	1466	0
Flt Permitted				0.994	0.967	
Satd. Flow (perm)	1733	0	0	1715	1466	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	248			398	442	
Travel Time (s)	5.6			9.0	10.0	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	23%	26%	8%	24%	11%
Adj. Flow (vph)	230	38	23	173	48	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	268	0	0	196	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.4%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	186	31	19	140	39	19
Future Vol, veh/h	186	31	19	140	39	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	23	26	8	24	11
Mvmt Flow	230	38	23	173	48	23

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	268	0	468
Stage 1	-	-	-	-	249
Stage 2	-	-	-	-	219
Critical Hdwy	-	-	4.36	-	6.64
Critical Hdwy Stg 1	-	-	-	-	5.64
Critical Hdwy Stg 2	-	-	-	-	5.64
Follow-up Hdwy	-	-	2.434	-	3.716
Pot Cap-1 Maneuver	-	-	1169	-	515
Stage 1	-	-	-	-	744
Stage 2	-	-	-	-	768
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1169	-	504
Mov Cap-2 Maneuver	-	-	-	-	504
Stage 1	-	-	-	-	728
Stage 2	-	-	-	-	768

Approach	EB	WB	NB
HCM Control Delay, s	0	1	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	568	-	-	1169	-
HCM Lane V/C Ratio	0.126	-	-	0.02	-
HCM Control Delay (s)	12.3	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

2025 Build Traffic Volumes
 9: Red Schoolhouse Rd & Triangle Properties Access

Peak AM Hour
 12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	39	10	0	10	0	755	10	10	976	74
Future Volume (vph)	0	0	39	10	0	10	0	755	10	10	976	74
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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			0.865		0.932			0.998			0.991	
Flt Protected					0.976							
Satd. Flow (prot)	0	0	1611	0	1694	0	0	1859	0	0	1846	0
Flt Permitted					0.976							
Satd. Flow (perm)	0	0	1611	0	1694	0	0	1859	0	0	1846	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		219			238			536			400	
Travel Time (s)		5.0			5.4			12.2			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	42	11	0	11	0	821	11	11	1061	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	42	0	22	0	0	832	0	0	1152	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
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 Capacity Utilization	73.9%
ICU Level of Service	D
Analysis Period (min)	15

2025 Build Traffic Volumes
 9: Red Schoolhouse Rd & Triangle Properties Access

Peak AM Hour
 12/10/2020

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	0	39	10	0	10	0	755	10	10	976	74
Future Vol, veh/h	0	0	39	10	0	10	0	755	10	10	976	74
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	-	-	Stop	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	42	11	0	11	0	821	11	11	1061	80

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1061	1910	1910	827	-	0	0	832	0	0
Stage 1	-	-	-	827	827	-	-	-	-	-	-	-
Stage 2	-	-	-	1083	1083	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	7.12	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	272	52	68	371	0	-	-	801	-	0
Stage 1	0	0	-	366	386	-	0	-	-	-	-	0
Stage 2	0	0	-	263	293	-	0	-	-	-	-	0
Platoon blocked, %								-	-	-		
Mov Cap-1 Maneuver	-	-	272	43	66	371	-	-	-	801	-	-
Mov Cap-2 Maneuver	-	-	-	43	66	-	-	-	-	-	-	-
Stage 1	-	-	-	366	386	-	-	-	-	-	-	-
Stage 2	-	-	-	215	283	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.7		69.2		0		0.1	
HCM LOS	C		F					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	272	77	801
HCM Lane V/C Ratio	-	-	0.156	0.282	0.014
HCM Control Delay (s)	-	-	20.7	69.2	9.6
HCM Lane LOS	-	-	C	F	A
HCM 95th %tile Q(veh)	-	-	0.5	1	0

2025 Build Traffic Volumes
10: Red Schoolhouse Rd & Ronwood Rd

Peak AM Hour
12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	0	77	89	0	73	136	597	77	63	925	37
Future Volume (vph)	95	0	77	89	0	73	136	597	77	63	925	37
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		200
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850			0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	1831	0	1770	1863	1583
Flt Permitted	0.706			0.702			0.070			0.291		
Satd. Flow (perm)	1315	1583	0	1308	1583	0	130	1831	0	542	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		256			379			11				76
Link Speed (mph)		30			30			30				30
Link Distance (ft)		297			341			588				536
Travel Time (s)		6.8			7.8			13.4				12.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	0	84	97	0	79	148	649	84	68	1005	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	84	0	97	79	0	148	733	0	68	1005	40
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	100		20	100		20	100		20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	15.0		10.0	15.0	15.0
Total Split (s)	23.0	23.0		23.0	23.0		15.0	62.0		15.0	62.0	62.0

2025 Build Traffic Volumes
10: Red Schoolhouse Rd & Ronwood Rd

Peak AM Hour
12/10/2020

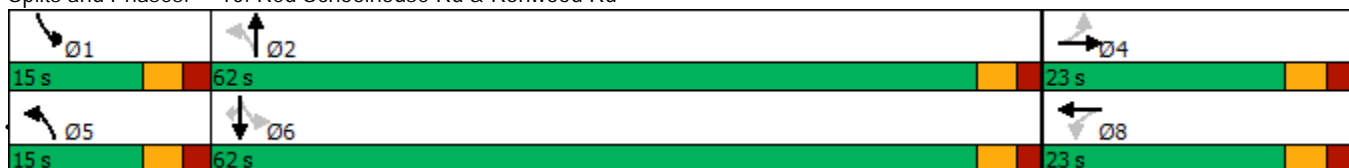


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.0%	23.0%		23.0%	23.0%		15.0%	62.0%		15.0%	62.0%	62.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		10.0	57.0		10.0	57.0	57.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							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
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	13.3	13.3		13.3	13.3		65.6	57.6		59.4	51.9	51.9
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.75	0.66		0.68	0.59	0.59
v/c Ratio	0.52	0.18		0.49	0.14		0.51	0.61		0.14	0.91	0.04
Control Delay	46.4	0.9		45.4	0.5		20.2	12.8		4.2	30.7	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	46.4	0.9		45.4	0.5		20.2	12.8		4.2	30.7	0.6
LOS	D	A		D	A		C	B		A	C	A
Approach Delay		26.0			25.3			14.0			28.0	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	58	0		55	0		26	224		8	464	0
Queue Length 95th (ft)	111	0		105	0		98	408		21	#861	4
Internal Link Dist (ft)		217			261			508			456	
Turn Bay Length (ft)							200			200		200
Base Capacity (vph)	292	551		290	646		308	1281		548	1264	1099
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.35	0.15		0.33	0.12		0.48	0.57		0.12	0.80	0.04

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 87.8
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 22.4
 Intersection LOS: C
 Intersection Capacity Utilization 78.1%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 10: Red Schoolhouse Rd & Ronwood Rd



2025 Build Traffic Volumes
10: Red Schoolhouse Rd & Ronwood Rd

Peak AM Hour
12/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	0	77	89	0	73	136	597	77	63	925	37
Future Volume (veh/h)	95	0	77	89	0	73	136	597	77	63	925	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	0	84	97	0	79	148	649	84	68	1005	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	0	258	245	0	258	308	1004	130	468	1134	961
Arrive On Green	0.16	0.00	0.15	0.16	0.00	0.15	0.08	0.62	0.61	0.06	0.61	0.61
Sat Flow, veh/h	1320	0	1585	1314	0	1585	1781	1623	210	1781	1870	1585
Grp Volume(v), veh/h	103	0	84	97	0	79	148	0	733	68	1005	40
Grp Sat Flow(s),veh/h/ln	1320	0	1585	1314	0	1585	1781	0	1833	1781	1870	1585
Q Serve(g_s), s	5.8	0.0	3.7	5.4	0.0	3.4	2.2	0.0	19.6	1.0	35.3	0.8
Cycle Q Clear(g_c), s	9.2	0.0	3.7	9.1	0.0	3.4	2.2	0.0	19.6	1.0	35.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	250	0	258	245	0	258	308	0	1134	468	1134	961
V/C Ratio(X)	0.41	0.00	0.33	0.40	0.00	0.31	0.48	0.00	0.65	0.15	0.89	0.04
Avail Cap(c_a), veh/h	360	0	390	355	0	390	428	0	1378	611	1406	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	29.0	32.6	0.0	28.9	15.3	0.0	9.4	6.9	12.9	6.1
Incr Delay (d2), s/veh	1.1	0.0	0.7	1.0	0.0	0.7	1.2	0.0	0.8	0.1	6.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.4	1.8	0.0	1.3	1.5	0.0	6.8	0.3	14.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.6	0.0	29.7	33.6	0.0	29.6	16.5	0.0	10.2	7.0	19.0	6.1
LnGrp LOS	C	A	C	C	A	C	B	A	B	A	B	A
Approach Vol, veh/h		187			176			881			1113	
Approach Delay, s/veh		31.9			31.8			11.2			17.8	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	51.8		16.6	9.8	50.8		16.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	57.0		18.0	10.0	57.0		18.0				
Max Q Clear Time (g_c+I1), s	3.0	21.6		11.2	4.2	37.3		11.1				
Green Ext Time (p_c), s	0.1	6.3		0.4	0.2	8.5		0.4				

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

2025 Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak AM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	9	801	11	14	1077
Future Volume (vph)	7	9	801	11	14	1077
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.925		0.998			
Flt Protected	0.978					0.999
Satd. Flow (prot)	1685	0	1859	0	0	1861
Flt Permitted	0.978					0.999
Satd. Flow (perm)	1685	0	1859	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	321		540			588
Travel Time (s)	7.3		12.3			13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	10	871	12	15	1171
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	883	0	0	1186
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	77.9%
Analysis Period (min)	15
	ICU Level of Service D

2025 Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak AM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	9	801	11	14	1077
Future Vol, veh/h	7	9	801	11	14	1077
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	871	12	15	1171

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2078	877	0	0	883
Stage 1	877	-	-	-	-
Stage 2	1201	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	59	348	-	-	766
Stage 1	407	-	-	-	-
Stage 2	285	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	56	348	-	-	766
Mov Cap-2 Maneuver	56	-	-	-	-
Stage 1	384	-	-	-	-
Stage 2	285	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	45.5	0	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	106	766
HCM Lane V/C Ratio	-	-	0.164	0.02
HCM Control Delay (s)	-	-	45.5	9.8
HCM Lane LOS	-	-	E	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

2025 Build Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	152	71	391	182	108	467
Future Volume (vph)	152	71	391	182	108	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.957		0.957			
Flt Protected	0.967					0.991
Satd. Flow (prot)	1602	0	1910	0	0	1850
Flt Permitted	0.967					0.991
Satd. Flow (perm)	1602	0	1910	0	0	1850
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	12%	5%	6%	2%	6%	5%
Adj. Flow (vph)	171	80	439	204	121	525
Shared Lane Traffic (%)						
Lane Group Flow (vph)	251	0	643	0	0	646
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	85.0%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	42.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B			A
Traffic Vol, veh/h	152	71	391	182	108	467
Future Vol, veh/h	152	71	391	182	108	467
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	12	5	6	2	6	5
Mvmt Flow	171	80	439	204	121	525

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1308	541	0	0	643
Stage 1	541	-	-	-	-
Stage 2	767	-	-	-	-
Critical Hdwy	6.52	6.25	-	-	4.16
Critical Hdwy Stg 1	5.52	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-
Follow-up Hdwy	3.608	3.345	-	-	2.254
Pot Cap-1 Maneuver	~ 168	535	-	-	923
Stage 1	564	-	-	-	-
Stage 2	441	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 137	535	-	-	923
Mov Cap-2 Maneuver	~ 137	-	-	-	-
Stage 1	460	-	-	-	-
Stage 2	441	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	255.7	0	1.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	180	923
HCM Lane V/C Ratio	-	-	1.392	0.131
HCM Control Delay (s)	-	-	255.7	9.5
HCM Lane LOS	-	-	F	A
HCM 95th %tile Q(veh)	-	-	15.1	0.5

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2025 Build Traffic Volumes
 2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	121	113	513	537	82
Future Volume (vph)	60	121	113	513	537	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910				0.982	
Flt Protected	0.984			0.991		
Satd. Flow (prot)	1561	0	0	1931	1818	0
Flt Permitted	0.984			0.991		
Satd. Flow (perm)	1561	0	0	1931	1818	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	7%	4%	4%	3%	0%
Adj. Flow (vph)	67	136	127	576	603	92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	0	703	695	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	87.3%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes
2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	11.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	60	121	113	513	537	82
Future Vol, veh/h	60	121	113	513	537	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	7	4	4	3	0
Mvmt Flow	67	136	127	576	603	92

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1479	649	695	0	-	0
Stage 1	649	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Critical Hdwy	6.42	6.27	4.14	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.363	2.236	-	-	-
Pot Cap-1 Maneuver	138	461	891	-	-	-
Stage 1	520	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	109	461	891	-	-	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	411	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	85.1	1.8	0
HCM LOS	F		

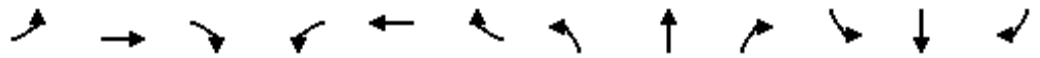
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	891	-	223	-	-
HCM Lane V/C Ratio	0.142	-	0.912	-	-
HCM Control Delay (s)	9.7	0	85.1	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.5	-	7.6	-	-

2025 Build Traffic Volumes

Peak PM Hour

3: Red Schoolhouse Rd & Wellington Site Access/Promenade at Chestnut Ridge

12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	71	0	86	7	0	9	56	543	12	8	604	46
Future Volume (vph)	71	0	86	7	0	9	56	543	12	8	604	46
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Fr _t			0.850		0.925			0.997			0.991	
Fl _t Protected		0.950			0.978			0.995			0.999	
Satd. Flow (prot)	0	1770	1583	0	1685	0	0	1848	0	0	1844	0
Fl _t Permitted		0.950			0.978			0.995			0.999	
Satd. Flow (perm)	0	1770	1583	0	1685	0	0	1848	0	0	1844	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		362			280			535			595	
Travel Time (s)		8.2			6.4			12.2			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	0	93	8	0	10	61	590	13	9	657	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	93	0	18	0	0	664	0	0	716	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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 Capacity Utilization	78.8%
Analysis Period (min)	15
	ICU Level of Service D

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕			↕			↕	
Traffic Vol, veh/h	71	0	86	7	0	9	56	543	12	8	604	46
Future Vol, veh/h	71	0	86	7	0	9	56	543	12	8	604	46
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	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	0	93	8	0	10	61	590	13	9	657	50











Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1424	1425	682	1466	1444	597	707	0	0	603	0	0
Stage 1	700	700	-	719	719	-	-	-	-	-	-	-
Stage 2	724	725	-	747	725	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	113	136	450	106	132	503	891	-	-	975	-	-
Stage 1	430	441	-	420	433	-	-	-	-	-	-	-
Stage 2	417	430	-	405	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	101	120	450	77	117	503	891	-	-	975	-	-
Mov Cap-2 Maneuver	101	120	-	77	117	-	-	-	-	-	-	-
Stage 1	386	434	-	377	388	-	-	-	-	-	-	-
Stage 2	367	386	-	316	424	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	58.2		32.7		0.9		0.1	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	891	-	-	101	450	147	975	-	-
HCM Lane V/C Ratio	0.068	-	-	0.764	0.208	0.118	0.009	-	-
HCM Control Delay (s)	9.3	0	-	110.3	15.1	32.7	8.7	0	-
HCM Lane LOS	A	A	-	F	C	D	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	4.1	0.8	0.4	0	-	-

2025 Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	460	208	404	0	0	698
Future Volume (vph)	460	208	404	0	0	698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1615	1859	0	0	1845
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1615	1859	0	0	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		221				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			535
Travel Time (s)	9.5		13.4			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	9%	0%	0%	3%
Adj. Flow (vph)	489	221	430	0	0	743
Shared Lane Traffic (%)						
Lane Group Flow (vph)	489	221	430	0	0	743
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2025 Build Traffic Volumes
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
 12/10/2020

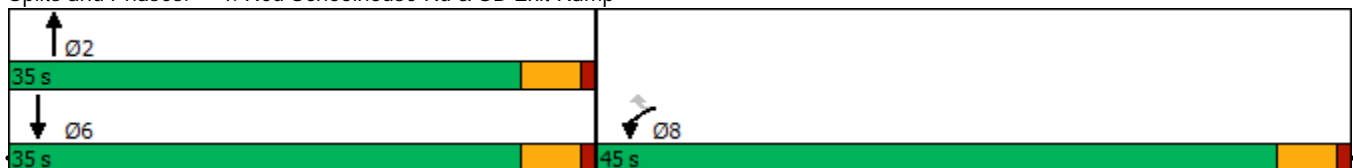


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	23.0	23.0	31.4			31.4
Actuated g/C Ratio	0.37	0.37	0.50			0.50
v/c Ratio	0.75	0.30	0.46			0.80
Control Delay	24.8	3.1	13.8			24.1
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	24.8	3.1	13.8			24.1
LOS	C	A	B			C
Approach Delay	18.1		13.8			24.1
Approach LOS	B		B			C
Queue Length 50th (ft)	155	0	97			216
Queue Length 95th (ft)	247	33	223			#539
Internal Link Dist (ft)	338		511			455
Turn Bay Length (ft)						
Base Capacity (vph)	1176	1147	934			927
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.42	0.19	0.46			0.80

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 62.4
 Natural Cycle: 55
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 19.5
 Intersection LOS: B
 Intersection Capacity Utilization 68.9%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/10/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	460	208	404	0	0	698
Future Volume (veh/h)	460	208	404	0	0	698
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1900	1837	0	0	1856
Adj Flow Rate, veh/h	489	221	430	0	0	743
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	9	0	0	3
Cap, veh/h	597	540	971	0	0	981
Arrive On Green	0.34	0.34	0.53	0.00	0.00	0.53
Sat Flow, veh/h	1781	1610	1837	0	0	1856
Grp Volume(v), veh/h	489	221	430	0	0	743
Grp Sat Flow(s),veh/h/ln	1781	1610	1837	0	0	1856
Q Serve(g_s), s	14.8	6.2	8.5	0.0	0.0	18.5
Cycle Q Clear(g_c), s	14.8	6.2	8.5	0.0	0.0	18.5
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	597	540	971	0	0	981
V/C Ratio(X)	0.82	0.41	0.44	0.00	0.00	0.76
Avail Cap(c_a), veh/h	1245	1125	971	0	0	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	15.0	8.5	0.0	0.0	10.9
Incr Delay (d2), s/veh	2.8	0.5	1.5	0.0	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	2.1	3.1	0.0	0.0	7.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.7	15.5	10.0	0.0	0.0	16.3
LnGrp LOS	C	B	A	A	A	B
Approach Vol, veh/h	710		430			743
Approach Delay, s/veh	19.1		10.0			16.3
Approach LOS	B		A			B
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		35.0				35.0
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		30.5				30.5
Max Q Clear Time (g_c+I1), s		10.5				20.5
Green Ext Time (p_c), s		2.6				3.7
						2.4
Intersection Summary						
HCM 6th Ctrl Delay			15.9			
HCM 6th LOS			B			

2025 Build Traffic Volumes
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak PM Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	87	56	391	1120	38
Future Volume (vph)	12	87	56	391	1120	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.881				0.996	
Flt Protected	0.994			0.994		
Satd. Flow (prot)	1614	0	0	1839	1962	0
Flt Permitted	0.994			0.994		
Satd. Flow (perm)	1614	0	0	1839	1962	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	3%	0%	7%	3%	0%
Adj. Flow (vph)	12	90	58	403	1155	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	0	461	1194	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.5%
Analysis Period (min)	15
	ICU Level of Service D

2025 Build Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	12	87	56	391	1120	38
Future Vol, veh/h	12	87	56	391	1120	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	33	3	0	7	3	0
Mvmt Flow	12	90	58	403	1155	39

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1694	1175	1194	0	-	0
Stage 1	1175	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Critical Hdwy	6.73	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	86	232	592	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	75	232	592	-	-	-
Mov Cap-2 Maneuver	75	-	-	-	-	-
Stage 1	223	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	46.1	1.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	592	-	185	-	-
HCM Lane V/C Ratio	0.098	-	0.552	-	-
HCM Control Delay (s)	11.7	0	46.1	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.3	-	2.9	-	-

2025 Build Traffic Volumes
 6: Red Schoolhouse Rd & NB Entrance Ramp

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↕			↕
Traffic Volume (vph)	0	0	447	850	395	812
Future Volume (vph)	0	0	447	850	395	812
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.912			
Flt Protected						0.984
Satd. Flow (prot)	0	0	1743	0	0	1660
Flt Permitted						0.984
Satd. Flow (perm)	0	0	1743	0	0	1660
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	1%	21%	3%
Adj. Flow (vph)	0	0	471	895	416	855
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1366	0	0	1271
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	147.0%
Analysis Period (min)	15
	ICU Level of Service H

2025 Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	78	117	1181	19	28	784
Future Volume (vph)	78	117	1181	19	28	784
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.998			
Flt Protected	0.980					0.998
Satd. Flow (prot)	1678	0	1859	0	0	1859
Flt Permitted	0.980					0.998
Satd. Flow (perm)	1678	0	1859	0	0	1859
Link Speed (mph)	30		30			30
Link Distance (ft)	563		418			308
Travel Time (s)	12.8		9.5			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	127	1284	21	30	852
Shared Lane Traffic (%)						
Lane Group Flow (vph)	212	0	1305	0	0	882
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	82.1%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/10/2020

Intersection						
Int Delay, s/veh	72					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	78	117	1181	19	28	784
Future Vol, veh/h	78	117	1181	19	28	784
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	127	1284	21	30	852

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2207	1295	0	0	1305
Stage 1	1295	-	-	-	-
Stage 2	912	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	~ 49	198	-	-	530
Stage 1	257	-	-	-	-
Stage 2	392	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 44	198	-	-	530
Mov Cap-2 Maneuver	~ 44	-	-	-	-
Stage 1	230	-	-	-	-
Stage 2	392	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	812.7	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	83	530
HCM Lane V/C Ratio	-	-	2.554	0.057
HCM Control Delay (s)	-	-	\$ 812.7	12.2
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	20.1	0.2

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2025 Build Traffic Volumes
8: Wilshire Dr & Summit Rd

Peak PM Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	172	15	5	190	12	9
Future Volume (vph)	172	15	5	190	12	9
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989			0.941		
Flt Protected				0.999	0.973	
Satd. Flow (prot)	1842	0	0	1861	1706	0
Flt Permitted				0.999	0.973	
Satd. Flow (perm)	1842	0	0	1861	1706	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	148			245	270	
Travel Time (s)	3.4			5.6	6.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	16	5	207	13	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	0	212	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.0%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	172	15	5	190	12	9
Future Vol, veh/h	172	15	5	190	12	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	16	5	207	13	10

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	203	0	412	195
Stage 1	-	-	-	-	195	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1369	-	596	846
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1369	-	594	846
Mov Cap-2 Maneuver	-	-	-	-	594	-
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	819	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	681	-	-	1369	-
HCM Lane V/C Ratio	0.034	-	-	0.004	-
HCM Control Delay (s)	10.5	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

2025 Build Traffic Volumes
9: Red Schoolhouse Rd & Triangle Dr North

Peak PM Hour
12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	65	10	0	10	0	1190	10	10	745	107
Future Volume (vph)	0	0	65	10	0	10	0	1190	10	10	745	107
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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			0.865		0.932			0.999			0.983	
Flt Protected					0.976						0.999	
Satd. Flow (prot)	0	0	1611	0	1694	0	0	1861	0	0	1829	0
Flt Permitted					0.976						0.999	
Satd. Flow (perm)	0	0	1611	0	1694	0	0	1861	0	0	1829	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		291			219			515			418	
Travel Time (s)		6.6			5.0			11.7			9.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	71	11	0	11	0	1293	11	11	810	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	71	0	22	0	0	1304	0	0	937	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
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 Capacity Utilization	73.2%
ICU Level of Service	D
Analysis Period (min)	15

2025 Build Traffic Volumes
 9: Red Schoolhouse Rd & Triangle Dr North

Peak PM Hour
 12/10/2020

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗		↕			↖			↕	
Traffic Vol, veh/h	0	0	65	10	0	10	0	1190	10	10	745	107
Future Vol, veh/h	0	0	65	10	0	10	0	1190	10	10	745	107
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	-	-	Stop	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	71	11	0	11	0	1293	11	11	810	116

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	810	2131	2131	1299	-	0	0	1304	0	0
Stage 1	-	-	-	1299	1299	-	-	-	-	-	-	-
Stage 2	-	-	-	832	832	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	7.12	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	380	36	50	197	0	-	-	531	-	0
Stage 1	0	0	-	199	232	-	0	-	-	-	-	0
Stage 2	0	0	-	363	384	-	0	-	-	-	-	0
Platoon blocked, %												
Mov Cap-1 Maneuver	-	-	380	28	48	197	-	-	-	531	-	-
Mov Cap-2 Maneuver	-	-	-	28	48	-	-	-	-	-	-	-
Stage 1	-	-	-	199	232	-	-	-	-	-	-	-
Stage 2	-	-	-	284	369	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.6		127.5		0		0.2	
HCM LOS	C		F					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	380	49	531
HCM Lane V/C Ratio	-	-	0.186	0.444	0.02
HCM Control Delay (s)	-	-	16.6	127.5	11.9
HCM Lane LOS	-	-	C	F	B
HCM 95th %tile Q(veh)	-	-	0.7	1.6	0.1

2025 Build Traffic Volumes
 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak PM Hour
 12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	0	130	101	0	83	195	957	112	91	676	53
Future Volume (vph)	160	0	130	101	0	83	195	957	112	91	676	53
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		200
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850			0.984				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	1833	0	1770	1863	1583
Flt Permitted	0.695			0.564			0.220			0.072		
Satd. Flow (perm)	1295	1583	0	1051	1583	0	410	1833	0	134	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		340			249			10				76
Link Speed (mph)		30			30			30				30
Link Distance (ft)		297			341			588				515
Travel Time (s)		6.8			7.8			13.4				11.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	0	141	110	0	90	212	1040	122	99	735	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	141	0	110	90	0	212	1162	0	99	735	58
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	100		20	100		20	100		20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	15.0		10.0	15.0	15.0
Total Split (s)	23.0	23.0		23.0	23.0		15.0	62.0		15.0	62.0	62.0

2025 Build Traffic Volumes
 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak PM Hour
 12/10/2020

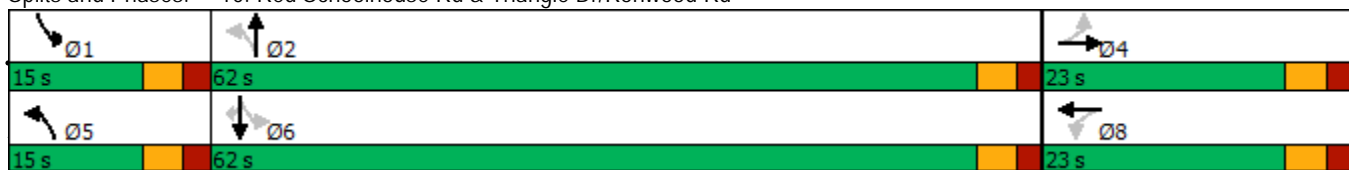


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.0%	23.0%		23.0%	23.0%		15.0%	62.0%		15.0%	62.0%	62.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		10.0	57.0		10.0	57.0	57.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							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
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	16.8	16.8		16.8	16.8		66.4	58.5		63.1	54.7	54.7
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.71	0.63		0.68	0.59	0.59
v/c Ratio	0.75	0.25		0.59	0.18		0.49	1.01		0.41	0.67	0.06
Control Delay	57.8	1.1		49.6	0.8		8.1	49.4		14.8	17.6	1.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	57.8	1.1		49.6	0.8		8.1	49.4		14.8	17.6	1.6
LOS	E	A		D	A		A	D		B	B	A
Approach Delay		32.4			27.7			43.0			16.3	
Approach LOS		C			C			D			B	
Queue Length 50th (ft)	101	0		61	0		35	~790		15	296	0
Queue Length 95th (ft)	#201	0		123	0		57	#1091		53	439	11
Internal Link Dist (ft)		217			261			508			435	
Turn Bay Length (ft)							200			200		200
Base Capacity (vph)	266	595		215	523		456	1153		289	1168	1021
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.65	0.24		0.51	0.17		0.46	1.01		0.34	0.63	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 93.3
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 32.1
 Intersection LOS: C
 Intersection Capacity Utilization 89.5%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ 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: 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd



2025 Build Traffic Volumes
 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak PM Hour
 12/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	0	130	101	0	83	195	957	112	91	676	53
Future Volume (veh/h)	160	0	130	101	0	83	195	957	112	91	676	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	0	141	110	0	90	212	1040	122	99	735	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	0	318	228	0	318	442	1007	118	182	1112	942
Arrive On Green	0.20	0.00	0.19	0.20	0.00	0.19	0.08	0.61	0.60	0.06	0.59	0.59
Sat Flow, veh/h	1307	0	1585	1248	0	1585	1781	1643	193	1781	1870	1585
Grp Volume(v), veh/h	174	0	141	110	0	90	212	0	1162	99	735	58
Grp Sat Flow(s),veh/h/ln	1307	0	1585	1248	0	1585	1781	0	1836	1781	1870	1585
Q Serve(g_s), s	12.3	0.0	7.4	8.0	0.0	4.6	4.2	0.0	58.0	1.9	24.8	1.5
Cycle Q Clear(g_c), s	16.9	0.0	7.4	15.5	0.0	4.6	4.2	0.0	58.0	1.9	24.8	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	275	0	318	228	0	318	442	0	1125	182	1112	942
V/C Ratio(X)	0.63	0.00	0.44	0.48	0.00	0.28	0.48	0.00	1.03	0.54	0.66	0.06
Avail Cap(c_a), veh/h	275	0	318	228	0	318	510	0	1125	283	1146	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	33.6	40.0	0.0	32.5	10.5	0.0	18.4	22.7	12.8	8.1
Incr Delay (d2), s/veh	4.7	0.0	1.0	1.6	0.0	0.5	0.8	0.0	35.6	2.5	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	2.9	2.5	0.0	1.8	1.5	0.0	32.4	1.4	9.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	0.0	34.6	41.6	0.0	33.0	11.3	0.0	54.0	25.2	14.2	8.1
LnGrp LOS	D	A	C	D	A	C	B	A	F	C	B	A
Approach Vol, veh/h		315			200			1374			892	
Approach Delay, s/veh		39.7			37.7			47.4			15.0	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	62.0		23.0	11.4	60.3		23.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	57.0		18.0	10.0	57.0		18.0				
Max Q Clear Time (g_c+I1), s	3.9	60.0		18.9	6.2	26.8		17.5				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.2	6.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			35.4									
HCM 6th LOS			D									

2025 Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	20	1244	13	16	891
Future Volume (vph)	16	20	1244	13	16	891
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.924		0.999			
Flt Protected	0.979					0.999
Satd. Flow (prot)	1685	0	1861	0	0	1861
Flt Permitted	0.979					0.999
Satd. Flow (perm)	1685	0	1861	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	321		540			588
Travel Time (s)	7.3		12.3			13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	22	1352	14	17	968
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	1366	0	0	985
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	76.3%
Analysis Period (min)	15
	ICU Level of Service D

2025 Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
 12/10/2020

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	20	1244	13	16	891
Future Vol, veh/h	16	20	1244	13	16	891
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	22	1352	14	17	968

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2361	1359	0	0	1366
Stage 1	1359	-	-	-	-
Stage 2	1002	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	39	182	-	-	503
Stage 1	239	-	-	-	-
Stage 2	355	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	36	182	-	-	503
Mov Cap-2 Maneuver	36	-	-	-	-
Stage 1	222	-	-	-	-
Stage 2	355	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	122.6	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	65	503
HCM Lane V/C Ratio	-	-	0.602	0.035
HCM Control Delay (s)	-	-	122.6	12.4
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.5	0.1

2025 Build Traffic Volumes
 1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	103	41	201	104	42	238
Future Volume (vph)	103	41	201	104	42	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.961		0.954			
Flt Protected	0.966					0.993
Satd. Flow (prot)	1764	0	1923	0	0	1917
Flt Permitted	0.966					0.993
Satd. Flow (perm)	1764	0	1923	0	0	1917
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	4%	3%	0%	2%
Adj. Flow (vph)	117	47	228	118	48	270
Shared Lane Traffic (%)						
Lane Group Flow (vph)	164	0	346	0	0	318
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	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.0%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes
1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	103	41	201	104	42	238
Future Vol, veh/h	103	41	201	104	42	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	4	3	0	2
Mvmt Flow	117	47	228	118	48	270

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	653	287	0	0	346	0
Stage 1	287	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	435	757	-	-	1224	-
Stage 1	766	-	-	-	-	-
Stage 2	706	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	415	757	-	-	1224	-
Mov Cap-2 Maneuver	415	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	476	1224
HCM Lane V/C Ratio	-	-	0.344	0.039
HCM Control Delay (s)	-	-	16.5	8.1
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.5	0.1

2025 Build Traffic Volumes
 2: Red Schoolhouse Rd & Summit Rd

Peak SAT Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	75	104	279	281	60
Future Volume (vph)	27	75	104	279	281	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.976	
Flt Protected	0.987			0.987		
Satd. Flow (prot)	1612	0	0	1958	1824	0
Flt Permitted	0.987			0.987		
Satd. Flow (perm)	1612	0	0	1958	1824	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			605	229	
Travel Time (s)	13.2			13.8	5.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	0%	0%	3%	2%	0%
Adj. Flow (vph)	29	81	112	300	302	65
Shared Lane Traffic (%)						
Lane Group Flow (vph)	110	0	0	412	367	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	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 Capacity Utilization	55.0%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes
2: Red Schoolhouse Rd & Summit Rd

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	27	75	104	279	281	60
Future Vol, veh/h	27	75	104	279	281	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	5	0	0	3	2	0
Mvmt Flow	29	81	112	300	302	65

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	859	335	367	0	0
Stage 1	335	-	-	-	-
Stage 2	524	-	-	-	-
Critical Hdwy	6.45	6.2	4.1	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.3	2.2	-	-
Pot Cap-1 Maneuver	323	712	1203	-	-
Stage 1	718	-	-	-	-
Stage 2	588	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	287	712	1203	-	-
Mov Cap-2 Maneuver	287	-	-	-	-
Stage 1	638	-	-	-	-
Stage 2	588	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	2.3	0
HCM LOS	B		

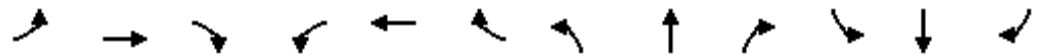
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1203	-	511	-	-
HCM Lane V/C Ratio	0.093	-	0.215	-	-
HCM Control Delay (s)	8.3	0	14	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.8	-	-

2025 Build Traffic Volumes

Peak SAT Hour

3: Red Schoolhouse Rd & Wellington Site Access/Promenade at Chestnut Ridge

12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	0	0	0	7	0	9	0	370	12	8	349	0
Future Volume (vph)	0	0	0	7	0	9	0	370	12	8	349	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Fr _t					0.925			0.996				
Fl _t Protected					0.978						0.999	
Satd. Flow (prot)	0	1863	1863	0	1685	0	0	1855	0	0	1861	0
Fl _t Permitted					0.978						0.999	
Satd. Flow (perm)	0	1863	1863	0	1685	0	0	1855	0	0	1861	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		370			228			525			605	
Travel Time (s)		8.4			5.2			11.9			13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	8	0	10	0	402	13	9	379	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	18	0	0	415	0	0	388	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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 Capacity Utilization	34.8%
Analysis Period (min)	15
	ICU Level of Service A

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕			↕			↕	
Traffic Vol, veh/h	0	0	0	7	0	9	0	370	12	8	349	0
Future Vol, veh/h	0	0	0	7	0	9	0	370	12	8	349	0
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	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	0	10	0	402	13	9	379	0











Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	811	812	379	806	806	409	379	0	0	415	0	0
Stage 1	397	397	-	409	409	-	-	-	-	-	-	-
Stage 2	414	415	-	397	397	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	298	313	668	300	316	642	1179	-	-	1144	-	-
Stage 1	629	603	-	619	596	-	-	-	-	-	-	-
Stage 2	616	592	-	629	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	291	310	668	298	313	642	1179	-	-	1144	-	-
Mov Cap-2 Maneuver	291	310	-	298	313	-	-	-	-	-	-	-
Stage 1	629	597	-	619	596	-	-	-	-	-	-	-
Stage 2	607	592	-	623	597	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	13.8	0	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1179	-	-	-	-	427	1144	-	-
HCM Lane V/C Ratio	-	-	-	-	-	0.041	0.008	-	-
HCM Control Delay (s)	0	-	-	0	0	13.8	8.2	0	-
HCM Lane LOS	A	-	-	A	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1	0	-	-

2025 Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/10/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	444	157	225	0	0	356
Future Volume (vph)	444	157	225	0	0	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1787	1599	1987	0	0	1881
Flt Permitted	0.950					
Satd. Flow (perm)	1787	1599	1987	0	0	1881
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		178				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		591			525
Travel Time (s)	9.5		13.4			11.9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	2%	0%	0%	1%
Adj. Flow (vph)	505	178	256	0	0	405
Shared Lane Traffic (%)						
Lane Group Flow (vph)	505	178	256	0	0	405
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	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	1			1
Detector Template	Left	Right	Thru			Thru
Leading Detector (ft)	20	20	100			100
Trailing Detector (ft)	0	0	0			0
Detector 1 Position(ft)	0	0	0			0
Detector 1 Size(ft)	20	20	100			100
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	22.5	22.5	22.5			22.5
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%

2025 Build Traffic Volumes
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
 12/10/2020

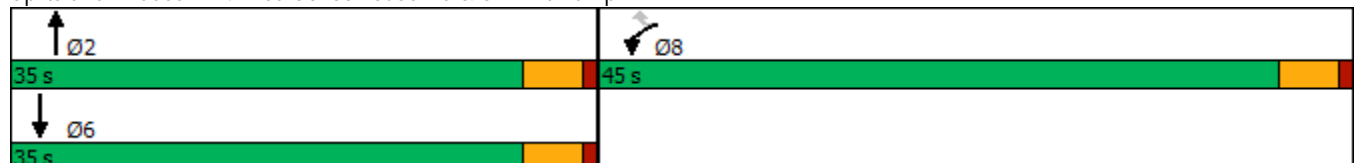


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Maximum Green (s)	40.5	40.5	30.5			30.5
Yellow Time (s)	3.5	3.5	3.5			3.5
All-Red Time (s)	1.0	1.0	1.0			1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5			-0.5
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Recall Mode	None	None	Max			Max
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	23.2	23.2	31.4			31.4
Actuated g/C Ratio	0.37	0.37	0.50			0.50
v/c Ratio	0.76	0.25	0.26			0.43
Control Delay	25.2	3.1	11.6			13.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	25.2	3.1	11.6			13.5
LOS	C	A	B			B
Approach Delay	19.4		11.6			13.5
Approach LOS	B		B			B
Queue Length 50th (ft)	162	0	50			88
Queue Length 95th (ft)	246	28	123			204
Internal Link Dist (ft)	338		511			445
Turn Bay Length (ft)						
Base Capacity (vph)	1182	1117	993			940
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.43	0.16	0.26			0.43

Intersection Summary











Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 62.7
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 16.2
 Intersection LOS: B
 Intersection Capacity Utilization 50.0%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 Build Traffic Volumes
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/10/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	444	157	225	0	0	356
Future Volume (veh/h)	444	157	225	0	0	356
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1885	1885	1945	0	0	1885
Adj Flow Rate, veh/h	505	178	256	0	0	405
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	1	1	2	0	0	1
Cap, veh/h	610	543	1021	0	0	990
Arrive On Green	0.34	0.34	0.52	0.00	0.00	0.52
Sat Flow, veh/h	1795	1598	1945	0	0	1885
Grp Volume(v), veh/h	505	178	256	0	0	405
Grp Sat Flow(s),veh/h/ln	1795	1598	1945	0	0	1885
Q Serve(g_s), s	15.3	4.9	4.3	0.0	0.0	7.7
Cycle Q Clear(g_c), s	15.3	4.9	4.3	0.0	0.0	7.7
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	610	543	1021	0	0	990
V/C Ratio(X)	0.83	0.33	0.25	0.00	0.00	0.41
Avail Cap(c_a), veh/h	1246	1109	1021	0	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	14.5	7.7	0.0	0.0	8.5
Incr Delay (d2), s/veh	3.0	0.3	0.6	0.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	1.6	1.6	0.0	0.0	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.9	14.8	8.3	0.0	0.0	9.7
LnGrp LOS	C	B	A	A	A	A
Approach Vol, veh/h	683		256			405
Approach Delay, s/veh	19.3		8.3			9.7
Approach LOS	B		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		35.0				35.0
Change Period (Y+Rc), s		4.5				4.5
Max Green Setting (Gmax), s		30.5				30.5
Max Q Clear Time (g_c+I1), s		6.3				9.7
Green Ext Time (p_c), s		1.5				2.5
Intersection Summary						
HCM 6th Ctrl Delay			14.3			
HCM 6th LOS			B			

2025 Build Traffic Volumes
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
 12/10/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	50	42	221	768	33
Future Volume (vph)	4	50	42	221	768	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.874				0.994	
Flt Protected	0.997			0.992		
Satd. Flow (prot)	1711	0	0	1884	1995	0
Flt Permitted	0.997			0.992		
Satd. Flow (perm)	1711	0	0	1884	1995	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	591	
Travel Time (s)	4.6			8.0	13.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	4%	1%	0%
Adj. Flow (vph)	4	56	47	246	853	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	0	293	890	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.5%
Analysis Period (min)	15
	ICU Level of Service B

2025 Build Traffic Volumes
5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	50	42	221	768	33
Future Vol, veh/h	4	50	42	221	768	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	4	56	47	246	853	37

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1212	872	890	0	-	0
Stage 1	872	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	203	353	770	-	-	-
Stage 1	412	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	189	353	770	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	383	-	-	-	-	-
Stage 2	725	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	770	-	332	-	-
HCM Lane V/C Ratio	0.061	-	0.181	-	-
HCM Control Delay (s)	10	0	18.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

2025 Build Traffic Volumes
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (vph)	0	0	263	372	159	659
Future Volume (vph)	0	0	263	372	159	659
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.921			
Flt Protected						0.990
Satd. Flow (prot)	0	0	1776	0	0	1789
Flt Permitted						0.990
Satd. Flow (perm)	0	0	1776	0	0	1789
Link Speed (mph)	30		30			30
Link Distance (ft)	250		308			351
Travel Time (s)	5.7		7.0			8.0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	3%	1%	0%	2%
Adj. Flow (vph)	0	0	280	396	169	701
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	676	0	0	870
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	86.8%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	25	609	19	29	630
Future Volume (vph)	17	25	609	19	29	630
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919		0.996			
Flt Protected	0.980					0.998
Satd. Flow (prot)	1678	0	1855	0	0	1859
Flt Permitted	0.980					0.998
Satd. Flow (perm)	1678	0	1855	0	0	1859
Link Speed (mph)	30		30			30
Link Distance (ft)	563		472			308
Travel Time (s)	12.8		10.7			7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	27	662	21	32	685
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	683	0	0	717
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	1.00	1.00	1.00	1.00	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 Capacity Utilization	66.7%
Analysis Period (min)	15
	ICU Level of Service C

2025 Build Traffic Volumes
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/10/2020

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	17	25	609	19	29	630
Future Vol, veh/h	17	25	609	19	29	630
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	27	662	21	32	685

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1422	673	0	0	683	0
Stage 1	673	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	150	455	-	-	910	-
Stage 1	507	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	141	455	-	-	910	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	467	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.6	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	239	910
HCM Lane V/C Ratio	-	-	0.191	0.035
HCM Control Delay (s)	-	-	23.6	9.1
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

2025 Build Traffic Volumes
8: Wilshire Dr & Summit Rd

Peak SAT Hour
12/10/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	99	5	4	160	2	3
Future Volume (vph)	99	5	4	160	2	3
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994			0.919		
Flt Protected				0.999	0.980	
Satd. Flow (prot)	1852	0	0	1861	1678	0
Flt Permitted				0.999	0.980	
Satd. Flow (perm)	1852	0	0	1861	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	111			327	377	
Travel Time (s)	2.5			7.4	8.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	5	4	174	2	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	113	0	0	178	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	99	5	4	160	2	3
Future Vol, veh/h	99	5	4	160	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	5	4	174	2	3

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	113	0	293
Stage 1	-	-	-	-	111
Stage 2	-	-	-	-	182
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1476	-	698
Stage 1	-	-	-	-	914
Stage 2	-	-	-	-	849
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1476	-	696
Mov Cap-2 Maneuver	-	-	-	-	696
Stage 1	-	-	-	-	911
Stage 2	-	-	-	-	849

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	825	-	-	1476	-
HCM Lane V/C Ratio	0.007	-	-	0.003	-
HCM Control Delay (s)	9.4	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

2025 Build Traffic Volumes
9: Red Schoolhouse Rd & Triangle Dr North

Peak SAT Hour
12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	57	10	0	10	0	618	10	10	513	124
Future Volume (vph)	0	0	57	10	0	10	0	618	10	10	513	124
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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			0.865		0.932			0.998			0.974	
Flt Protected					0.976						0.999	
Satd. Flow (prot)	0	0	1611	0	1694	0	0	1859	0	0	1812	0
Flt Permitted					0.976						0.999	
Satd. Flow (perm)	0	0	1611	0	1694	0	0	1859	0	0	1812	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		336			200			461			472	
Travel Time (s)		7.6			4.5			10.5			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	62	11	0	11	0	672	11	11	558	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	62	0	22	0	0	683	0	0	704	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
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 Capacity Utilization	52.8%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes
 9: Red Schoolhouse Rd & Triangle Dr North

Peak SAT Hour
 12/10/2020

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	0	0	57	10	0	10	0	618	10	10	513	124
Future Vol, veh/h	0	0	57	10	0	10	0	618	10	10	513	124
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	-	-	Stop	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	62	11	0	11	0	672	11	11	558	135

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	558	1258	1258	678	-	0	0	683	0	0
Stage 1	-	-	-	678	678	-	-	-	-	-	-	-
Stage 2	-	-	-	580	580	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	7.12	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	529	148	171	452	0	-	-	910	-	0
Stage 1	0	0	-	442	452	-	0	-	-	-	-	0
Stage 2	0	0	-	500	500	-	0	-	-	-	-	0
Platoon blocked, %								-	-			
Mov Cap-1 Maneuver	-	-	529	129	168	452	-	-	-	910	-	-
Mov Cap-2 Maneuver	-	-	-	129	168	-	-	-	-	-	-	-
Stage 1	-	-	-	442	452	-	-	-	-	-	-	-
Stage 2	-	-	-	433	491	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.7		25.1		0		0.2	
HCM LOS	B		D					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	529	201	910
HCM Lane V/C Ratio	-	-	0.117	0.108	0.012
HCM Control Delay (s)	-	-	12.7	25.1	9
HCM Lane LOS	-	-	B	D	A
HCM 95th %tile Q(veh)	-	-	0.4	0.4	0

2025 Build Traffic Volumes
10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak SAT Hour
12/10/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	0	114	89	0	72	228	416	98	81	437	62
Future Volume (vph)	140	0	114	89	0	72	228	416	98	81	437	62
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		0	200		200
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850			0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	1809	0	1770	1863	1583
Flt Permitted	0.706			0.677			0.269			0.342		
Satd. Flow (perm)	1315	1583	0	1261	1583	0	501	1809	0	637	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		485			502			20				76
Link Speed (mph)		30			30			30				30
Link Distance (ft)		297			341			588				461
Travel Time (s)		6.8			7.8			13.4				10.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	152	0	124	97	0	78	248	452	107	88	475	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	124	0	97	78	0	248	559	0	88	475	67
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	100		20	100		20	100		20	100	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	15.0		10.0	15.0	15.0
Total Split (s)	23.0	23.0		23.0	23.0		15.0	62.0		15.0	62.0	62.0

2025 Build Traffic Volumes
 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak SAT Hour
 12/10/2020

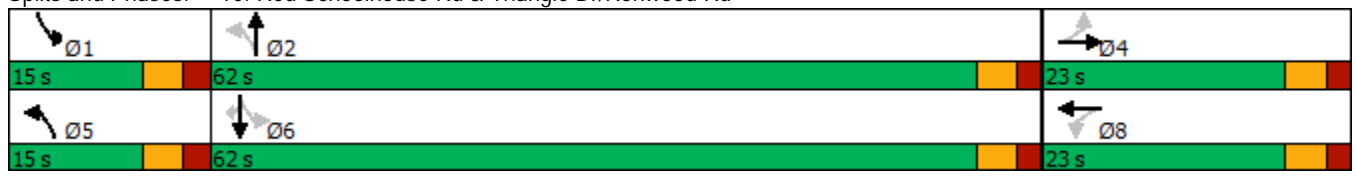


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.0%	23.0%		23.0%	23.0%		15.0%	62.0%		15.0%	62.0%	62.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		10.0	57.0		10.0	57.0	57.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							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
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)	13.2	13.2		13.2	13.2		36.6	28.5		30.9	22.9	22.9
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.62	0.48		0.52	0.39	0.39
v/c Ratio	0.52	0.17		0.35	0.11		0.46	0.63		0.18	0.66	0.10
Control Delay	29.6	0.5		25.7	0.3		7.9	16.7		5.8	20.0	3.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	29.6	0.5		25.7	0.3		7.9	16.7		5.8	20.0	3.3
LOS	C	A		C	A		A	B		A	C	A
Approach Delay		16.5			14.3			14.0			16.3	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	47	0		29	0		30	145		10	133	0
Queue Length 95th (ft)	120	0		80	0		71	288		28	248	17
Internal Link Dist (ft)		217			261			508			381	
Turn Bay Length (ft)							200			200		200
Base Capacity (vph)	440	852		422	863		558	1666		589	1714	1462
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.35	0.15		0.23	0.09		0.44	0.34		0.15	0.28	0.05

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	59.3
Natural Cycle:	50
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization:	60.1%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd



2025 Build Traffic Volumes
10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak SAT Hour
12/10/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	0	114	89	0	72	228	416	98	81	437	62
Future Volume (veh/h)	140	0	114	89	0	72	228	416	98	81	437	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	0	124	97	0	78	248	452	107	88	475	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	402	0	361	359	0	361	545	613	145	458	693	587
Arrive On Green	0.23	0.00	0.21	0.23	0.00	0.21	0.14	0.42	0.40	0.09	0.37	0.37
Sat Flow, veh/h	1321	0	1585	1267	0	1585	1781	1462	346	1781	1870	1585
Grp Volume(v), veh/h	152	0	124	97	0	78	248	0	559	88	475	67
Grp Sat Flow(s),veh/h/ln	1321	0	1585	1267	0	1585	1781	0	1808	1781	1870	1585
Q Serve(g_s), s	4.9	0.0	3.1	3.2	0.0	1.9	3.6	0.0	12.1	1.3	10.0	1.3
Cycle Q Clear(g_c), s	6.8	0.0	3.1	6.3	0.0	1.9	3.6	0.0	12.1	1.3	10.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	402	0	361	359	0	361	545	0	758	458	693	587
V/C Ratio(X)	0.38	0.00	0.34	0.27	0.00	0.22	0.45	0.00	0.74	0.19	0.69	0.11
Avail Cap(c_a), veh/h	641	0	648	589	0	648	712	0	2258	712	2336	1979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	15.5	17.7	0.0	15.0	7.8	0.0	11.4	8.2	12.3	9.6
Incr Delay (d2), s/veh	0.6	0.0	0.6	0.4	0.0	0.3	0.6	0.0	1.4	0.2	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.0	0.9	0.0	0.6	1.0	0.0	4.1	0.4	3.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	16.0	18.1	0.0	15.3	8.4	0.0	12.9	8.4	13.6	9.7
LnGrp LOS	B	A	B	B	A	B	A	A	B	A	B	A
Approach Vol, veh/h		276			175			807			630	
Approach Delay, s/veh		17.1			16.8			11.5			12.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	23.5		14.6	10.7	21.2		14.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	57.0		18.0	10.0	57.0		18.0				
Max Q Clear Time (g_c+I1), s	3.3	14.1		8.8	5.6	12.0		8.3				
Green Ext Time (p_c), s	0.1	4.4		0.8	0.3	3.7		0.5				

Intersection Summary

HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B

2025 Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
 12/10/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	16	726	11	14	626
Future Volume (vph)	12	16	726	11	14	626
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.923		0.998			
Flt Protected	0.979					0.999
Satd. Flow (prot)	1683	0	1859	0	0	1861
Flt Permitted	0.979					0.999
Satd. Flow (perm)	1683	0	1859	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	321		540			588
Travel Time (s)	7.3		12.3			13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	17	789	12	15	680
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	801	0	0	695
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	54.2%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes
 11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
 12/10/2020

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	12	16	726	11	14	626
Future Vol, veh/h	12	16	726	11	14	626
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	17	789	12	15	680

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1505	795	0	0	801	0
Stage 1	795	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	133	388	-	-	822	-
Stage 1	445	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	129	388	-	-	822	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	487	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.1	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	209	822
HCM Lane V/C Ratio	-	-	0.146	0.019
HCM Control Delay (s)	-	-	25.1	9.5
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1



RED SCHOOLHOUSE ROAD CORRIDOR

2025 BUILD CONDITIONS CAPACITY ANALYSIS (WITH IMPROVEMENTS)

**WEEKDAY AM PEAK HOUR
WEEKDAY PM PEAK HOUR
SATURDAY PEAK HOUR**

2025 Build Traffic Volumes w/Corridor Improvements
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	164	98	593	188	71	318
Future Volume (vph)	164	98	593	188	71	318
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950		0.968			
Flt Protected	0.970				0.950	
Satd. Flow (prot)	1608	0	1932	0	1696	1650
Flt Permitted	0.970				0.950	
Satd. Flow (perm)	1608	0	1932	0	1696	1650
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	10%	7%	4%	7%	10%	19%
Adj. Flow (vph)	176	105	638	202	76	342
Shared Lane Traffic (%)						
Lane Group Flow (vph)	281	0	840	0	76	342
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		13			13
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.7%
Analysis Period (min)	15
	ICU Level of Service C

2025 Build Traffic Volumes w/Corridor Improvements
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/22/2020

Intersection						
Int Delay, s/veh	38.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T		T	T
Traffic Vol, veh/h	164	98	593	188	71	318
Future Vol, veh/h	164	98	593	188	71	318
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	10	7	4	7	10	19
Mvmt Flow	176	105	638	202	76	342

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1233	739	0	0	840
Stage 1	739	-	-	-	-
Stage 2	494	-	-	-	-
Critical Hdwy	6.5	6.27	-	-	4.2
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.363	-	-	2.29
Pot Cap-1 Maneuver	188	409	-	-	762
Stage 1	458	-	-	-	-
Stage 2	597	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 169	409	-	-	762
Mov Cap-2 Maneuver	~ 169	-	-	-	-
Stage 1	412	-	-	-	-
Stage 2	597	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	207.8	0	1.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	217	762
HCM Lane V/C Ratio	-	-	1.298	0.1
HCM Control Delay (s)	-	-	207.8	10.2
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	15.1	0.3

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2025 Build Traffic Volumes w/Corridor Improvements
2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	68	138	96	713	385	97
Future Volume (vph)	68	138	96	713	385	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		86			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.909				0.973	
Fl _t Protected	0.984		0.950			
Satd. Flow (prot)	1516	0	1689	1930	1546	0
Fl _t Permitted	0.984		0.274			
Satd. Flow (perm)	1516	0	487	1930	1546	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	107				21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	10%	14%	5%	21%	14%
Adj. Flow (vph)	72	147	102	759	410	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	219	0	102	759	513	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			14	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template	Thru		Left	Thru	Thru	
Leading Detector (ft)	83		83	83	83	
Trailing Detector (ft)	-5		-5	-5	-5	
Detector 1 Position(ft)	-5		-5	-5	-5	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	43		43	43	43	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0		0.0	0.0	0.0	
Turn Type	Prot		pm+pt	NA	NA	

2025 Build Traffic Volumes w/Corridor Improvements
 2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
 12/22/2020

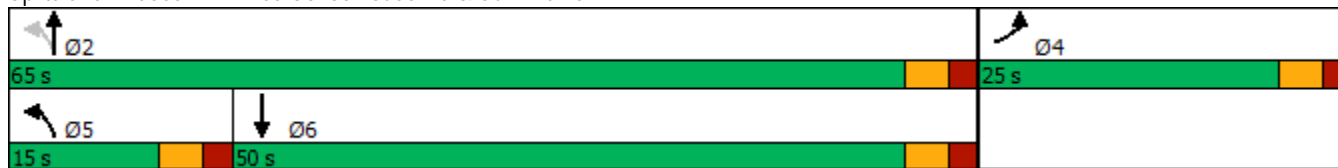


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases			2			
Detector Phase	4		5	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	10.0		10.0	15.0	15.0	
Total Split (s)	25.0		15.0	65.0	50.0	
Total Split (%)	27.8%		16.7%	72.2%	55.6%	
Maximum Green (s)	20.0		10.0	60.0	45.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	None	None	
Walk Time (s)				7.0		
Flash Dont Walk (s)				11.0		
Pedestrian Calls (#/hr)				0		
Act Effect Green (s)	11.1		33.4	33.4	24.1	
Actuated g/C Ratio	0.21		0.62	0.62	0.45	
v/c Ratio	0.55		0.20	0.63	0.73	
Control Delay	18.7		5.0	8.8	20.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	18.7		5.0	8.8	20.0	
LOS	B		A	A	C	
Approach Delay	18.7			8.4	20.0	
Approach LOS	B			A	C	
Queue Length 50th (ft)	30		9	105	122	
Queue Length 95th (ft)	117		32	276	295	
Internal Link Dist (ft)	499			515	149	
Turn Bay Length (ft)			100			
Base Capacity (vph)	745		587	1815	1292	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.29		0.17	0.42	0.40	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	53.8
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	13.5
Intersection LOS:	B
Intersection Capacity Utilization:	56.4%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: Red Schoolhouse Rd & Summit Rd



2025 Build Traffic Volumes w/Corridor Improvements
2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
12/22/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	68	138	96	713	385	97
Future Volume (veh/h)	68	138	96	713	385	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1900	1900	1760	1899	1589	1589
Adj Flow Rate, veh/h	72	147	102	759	410	103
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	14	5	21	21
Cap, veh/h	106	217	449	1169	508	128
Arrive On Green	0.19	0.17	0.11	0.62	0.41	0.39
Sat Flow, veh/h	547	1117	1676	1899	1225	308
Grp Volume(v), veh/h	220	0	102	759	0	513
Grp Sat Flow(s),veh/h/ln	1672	0	1676	1899	0	1533
Q Serve(g_s), s	5.2	0.0	1.2	10.8	0.0	12.4
Cycle Q Clear(g_c), s	5.2	0.0	1.2	10.8	0.0	12.4
Prop In Lane	0.33	0.67	1.00			0.20
Lane Grp Cap(c), veh/h	325	0	449	1169	0	635
V/C Ratio(X)	0.68	0.00	0.23	0.65	0.00	0.81
Avail Cap(c_a), veh/h	833	0	708	2750	0	1674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	7.0	5.2	0.0	11.0
Incr Delay (d2), s/veh	0.9	0.0	0.1	0.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.2	2.1	0.0	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.0	0.0	7.1	5.4	0.0	11.9
LnGrp LOS	B	A	A	A	A	B
Approach Vol, veh/h	220			861	513	
Approach Delay, s/veh	17.0			5.6	11.9	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		29.9		12.2	8.5	21.5
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		20.0	10.0	45.0
Max Q Clear Time (g_c+I1), s		12.8		7.2	3.2	14.4
Green Ext Time (p_c), s		3.3		0.6	0.1	2.0
Intersection Summary						
HCM 6th Ctrl Delay			9.2			
HCM 6th LOS			A			
Notes						
User approved volume balancing among the lanes for turning movement.						

2025 Build Traffic Volumes w/Corridor Improvements

Peak AM Hour

3: Red Schoolhouse Rd & Wellington Site Access/Promenade at Chestnut Ridge

12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	0	60	2	0	1	100	754	5	2	439	82
Future Volume (vph)	49	0	60	2	0	1	100	754	5	2	439	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.955			0.999			0.976	
Flt Protected		0.950			0.968		0.950			0.950		
Satd. Flow (prot)	0	1770	1583	0	1722	0	1770	1861	0	1770	1818	0
Flt Permitted		0.950			0.968		0.950			0.950		
Satd. Flow (perm)	0	1770	1583	0	1722	0	1770	1861	0	1770	1818	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		347			299			535			595	
Travel Time (s)		7.9			6.8			12.2			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	0	65	2	0	1	109	820	5	2	477	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	65	0	3	0	109	825	0	2	566	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			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
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 Capacity Utilization	57.0%
ICU Level of Service	B
Analysis Period (min)	15

2025 Build Traffic Volumes w/Corridor Improvements
 3: Red Schoolhouse Rd & Wellington Site Access/Promenade at Chestnut Ridge

Peak AM Hour
 12/22/2020

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↘		↗	↘	
Traffic Vol, veh/h	49	0	60	2	0	1	100	754	5	2	439	82
Future Vol, veh/h	49	0	60	2	0	1	100	754	5	2	439	82
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	-	-	0	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	0	65	2	0	1	109	820	5	2	477	89












Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1567	1569	522	1599	1611	823	566	0	0	825	0	0
Stage 1	526	526	-	1041	1041	-	-	-	-	-	-	-
Stage 2	1041	1043	-	558	570	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	90	111	555	86	104	373	1006	-	-	805	-	-
Stage 1	535	529	-	278	307	-	-	-	-	-	-	-
Stage 2	278	306	-	514	505	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	82	99	555	69	93	373	1006	-	-	805	-	-
Mov Cap-2 Maneuver	82	99	-	69	93	-	-	-	-	-	-	-
Stage 1	477	528	-	248	274	-	-	-	-	-	-	-
Stage 2	247	273	-	452	504	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	55.4		44.2		1		0	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1006	-	-	82	555	95	805	-	-
HCM Lane V/C Ratio	0.108	-	-	0.65	0.118	0.034	0.003	-	-
HCM Control Delay (s)	9	-	-	108.1	12.3	44.2	9.5	-	-
HCM Lane LOS	A	-	-	F	B	E	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3	0.4	0.1	0	-	-

2025 Build Traffic Volumes w/Corridor Improvements
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
 12/22/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 					
Traffic Volume (vph)	856	466	393	0	0	501
Future Volume (vph)	856	466	393	0	0	501
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Storage Length (ft)	0	0		0	0	
Storage Lanes	2	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				
Fl _t Protected	0.950					
Satd. Flow (prot)	3433	1568	1894	0	0	1638
Fl _t Permitted	0.950					
Satd. Flow (perm)	3433	1568	1894	0	0	1638
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		268				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		497			535
Travel Time (s)	9.5		11.3			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	3%	7%	0%	0%	16%
Adj. Flow (vph)	911	496	418	0	0	533
Shared Lane Traffic (%)						
Lane Group Flow (vph)	911	496	418	0	0	533
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2			2
Detector Template						
Leading Detector (ft)	83	83	83			83
Trailing Detector (ft)	-5	-5	-5			-5
Detector 1 Position(ft)	-5	-5	-5			-5
Detector 1 Size(ft)	40	40	40			40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Detector 2 Position(ft)	43	43	43			43
Detector 2 Size(ft)	40	40	40			40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA

2025 Build Traffic Volumes w/Corridor Improvements
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	23.0	23.0	23.0			23.0
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%
Maximum Green (s)	40.0	40.0	30.0			30.0
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0			2.0
Recall Mode	None	None	Min			Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	25.7	25.7	24.3			24.3
Actuated g/C Ratio	0.44	0.44	0.41			0.41
v/c Ratio	0.60	0.59	0.53			0.78
Control Delay	14.9	9.1	17.0			26.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	14.9	9.1	17.0			26.3
LOS	B	A	B			C
Approach Delay	12.8		17.0			26.3
Approach LOS	B		B			C
Queue Length 50th (ft)	122	51	104			153
Queue Length 95th (ft)	197	142	233			#386
Internal Link Dist (ft)	338		417			455
Turn Bay Length (ft)						
Base Capacity (vph)	2500	1214	1068			923
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.36	0.41	0.39			0.58

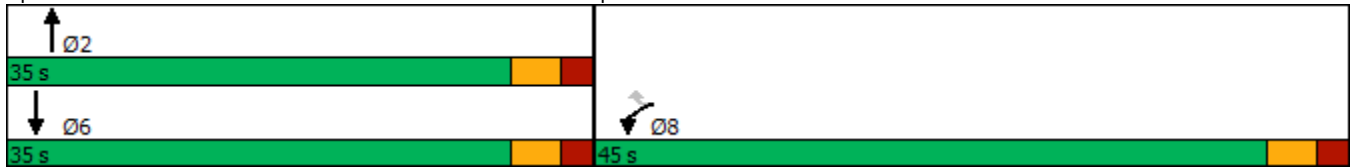
Intersection Summary	
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	58.6
Natural Cycle:	50
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	16.6
Intersection LOS:	B
Intersection Capacity Utilization:	57.5%
ICU Level of Service:	B
Analysis Period (min):	15

2025 Build Traffic Volumes w/Corridor Improvements
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/22/2020












95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 Build Traffic Volumes w/Corridor Improvements
4: Red Schoolhouse Rd & SB Exit Ramp

Peak AM Hour
12/22/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 					
Traffic Volume (veh/h)	856	466	393	0	0	501
Future Volume (veh/h)	856	466	393	0	0	501
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1856	1868	0	0	1663
Adj Flow Rate, veh/h	911	496	418	0	0	533
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	7	0	0	16
Cap, veh/h	1565	712	719	0	0	640
Arrive On Green	0.45	0.45	0.39	0.00	0.00	0.39
Sat Flow, veh/h	3456	1572	1868	0	0	1663
Grp Volume(v), veh/h	911	496	418	0	0	533
Grp Sat Flow(s),veh/h/ln	1728	1572	1868	0	0	1663
Q Serve(g_s), s	9.7	12.5	8.8	0.0	0.0	14.3
Cycle Q Clear(g_c), s	9.7	12.5	8.8	0.0	0.0	14.3
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	1565	712	719	0	0	640
V/C Ratio(X)	0.58	0.70	0.58	0.00	0.00	0.83
Avail Cap(c_a), veh/h	2868	1305	1172	0	0	1043
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	10.8	12.0	0.0	0.0	13.7
Incr Delay (d2), s/veh	0.1	0.5	0.3	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.4	3.0	0.0	0.0	4.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.2	11.3	12.3	0.0	0.0	15.1
LnGrp LOS	B	B	B	A	A	B
Approach Vol, veh/h	1407		418			533
Approach Delay, s/veh	10.6		12.3			15.1
Approach LOS	B		B			B
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		23.0				26.4
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		30.0				40.0
Max Q Clear Time (g_c+I1), s		10.8				16.3
Green Ext Time (p_c), s		1.4				1.7
Green Ext Time (p_c), s						6.9
Intersection Summary						
HCM 6th Ctrl Delay			11.9			
HCM 6th LOS			B			

2025 Build Traffic Volumes w/Corridor Improvements
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
 12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	98	0	393	1308	48
Future Volume (vph)	0	98	0	393	1308	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.995	
Flt Protected						
Satd. Flow (prot)	0	1572	0	1852	1903	0
Flt Permitted						
Satd. Flow (perm)	0	1572	0	1852	1903	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	94	
Travel Time (s)	4.6			8.0	2.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	8%	0%	6%	6%	5%
Adj. Flow (vph)	0	107	0	427	1422	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	107	0	427	1474	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	84.5%
Analysis Period (min)	15
	ICU Level of Service E

2025 Build Traffic Volumes w/Corridor Improvements
5: Red Schoolhouse Rd & DeSalvo Ct

Peak AM Hour
12/22/2020

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	98	0	393	1308	48
Future Vol, veh/h	0	98	0	393	1308	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	27	8	0	6	6	5
Mvmt Flow	0	107	0	427	1422	52

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 1422	-	0 - 0
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	- 6.28	-	- - -
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	- 3.372	-	- - -
Pot Cap-1 Maneuver	0 162	0	- - 0
Stage 1	0	- 0	- - 0
Stage 2	0	- 0	- - 0
Platoon blocked, %			- -
Mov Cap-1 Maneuver	- 162	-	- - -
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	NB	SB
HCM Control Delay, s	62	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 162	-
HCM Lane V/C Ratio	- 0.658	-
HCM Control Delay (s)	- 62	-
HCM Lane LOS	- F	-
HCM 95th %tile Q(veh)	- 3.7	-

2025 Build Traffic Volumes w/Corridor Improvements
 6: Red Schoolhouse Rd & NB Entrance Ramp

Peak AM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑	↗		↑
Traffic Volume (vph)	0	0	393	537	0	1406
Future Volume (vph)	0	0	393	537	0	1406
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			
Flt Protected						
Satd. Flow (prot)	0	0	1870	1589	0	1749
Flt Permitted						
Satd. Flow (perm)	0	0	1870	1589	0	1749
Link Speed (mph)	30		30			30
Link Distance (ft)	251		154			351
Travel Time (s)	5.7		3.5			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Adj. Flow (vph)	0	0	427	584	0	1528
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	427	584	0	1528
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	77.3%
Analysis Period (min)	15
	ICU Level of Service D

2025 Build Traffic Volumes w/Corridor Improvements
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗			↕
Traffic Volume (vph)	0	20	910	215	0	1406
Future Volume (vph)	0	20	910	215	0	1406
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.971			
Flt Protected						
Satd. Flow (prot)	0	1611	3437	0	0	1863
Flt Permitted						
Satd. Flow (perm)	0	1611	3437	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		100			153
Travel Time (s)	12.8		2.3			3.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	22	989	234	0	1528
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	22	1223	0	0	1528
Enter Blocked Intersection	No	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	77.3%
Analysis Period (min)	15
	ICU Level of Service D

2025 Build Traffic Volumes w/Corridor Improvements
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/22/2020

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗			↕
Traffic Vol, veh/h	0	20	910	215	0	1406
Future Vol, veh/h	0	20	910	215	0	1406
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	989	234	0	1528

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	495	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.93	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.319	-
Pot Cap-1 Maneuver	0	521	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	521	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 521	-
HCM Lane V/C Ratio	- 0.042	-
HCM Control Delay (s)	- 12.2	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.1	-

2025 Build Traffic Volumes w/Corridor Improvements
8: Wilshire Dr & Summit Rd

Peak AM Hour
12/22/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	186	31	52	140	39	19
Future Volume (vph)	186	31	52	140	39	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981			0.956		
Flt Protected				0.987	0.967	
Satd. Flow (prot)	1733	0	0	1662	1466	0
Flt Permitted				0.987	0.967	
Satd. Flow (perm)	1733	0	0	1662	1466	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	248			398	442	
Travel Time (s)	5.6			9.0	10.0	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	23%	26%	8%	24%	11%
Adj. Flow (vph)	230	38	64	173	48	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	268	0	0	237	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.2%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes w/Corridor Improvements
8: Wilshire Dr & Summit Rd

Peak AM Hour
12/22/2020

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	186	31	52	140	39	19
Future Vol, veh/h	186	31	52	140	39	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	23	26	8	24	11
Mvmt Flow	230	38	64	173	48	23

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	268	0	550 249
Stage 1	-	-	-	-	249 -
Stage 2	-	-	-	-	301 -
Critical Hdwy	-	-	4.36	-	6.64 6.31
Critical Hdwy Stg 1	-	-	-	-	5.64 -
Critical Hdwy Stg 2	-	-	-	-	5.64 -
Follow-up Hdwy	-	-	2.434	-	3.716 3.399
Pot Cap-1 Maneuver	-	-	1169	-	460 768
Stage 1	-	-	-	-	744 -
Stage 2	-	-	-	-	703 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1169	-	432 768
Mov Cap-2 Maneuver	-	-	-	-	432 -
Stage 1	-	-	-	-	699 -
Stage 2	-	-	-	-	703 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.2	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	504	-	-	1169	-
HCM Lane V/C Ratio	0.142	-	-	0.055	-
HCM Control Delay (s)	13.3	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak AM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	360	10	0	10	0	10	0	755	10	0	962	0
Future Volume (vph)	360	10	0	10	0	10	0	755	10	0	962	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt					0.932			0.998				
Flt Protected	0.950				0.976							
Satd. Flow (prot)	1681	1770	0	0	1694	0	0	3532	0	0	1863	0
Flt Permitted	0.743				0.918							
Satd. Flow (perm)	1315	1770	0	0	1594	0	0	3532	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					22			2				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			220			536			299	
Travel Time (s)		3.3			5.0			12.2			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	391	11	0	11	0	11	0	821	11	0	1046	0
Shared Lane Traffic (%)	0%											
Lane Group Flow (vph)	391	11	0	0	22	0	0	832	0	0	1046	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2			2		1	2	
Detector Template				Left						Left		
Leading Detector (ft)	83	83		20	83			83		20	83	
Trailing Detector (ft)	-5	-5		0	-5			-5		0	-5	
Detector 1 Position(ft)	-5	-5		0	-5			-5		0	-5	
Detector 1 Size(ft)	40	40		20	40			40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)	43	43			43			43			43	
Detector 2 Size(ft)	40	40			40			40			40	
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		

2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak AM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8			2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			10.0		10.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0			15.0		15.0	15.0	
Total Split (s)	35.0	35.0		35.0	35.0			65.0		65.0	65.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%			65.0%		65.0%	65.0%	
Maximum Green (s)	30.0	30.0		30.0	30.0			60.0		60.0	60.0	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	0.0			0.0			-1.0			-1.0	
Total Lost Time (s)	4.0	5.0			5.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Recall Mode	None	None		None	None			Min		C-Min	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)	30.8	29.8			29.8			61.2			61.2	
Actuated g/C Ratio	0.31	0.30			0.30			0.61			0.61	
v/c Ratio	0.97	0.02			0.04			0.39			0.92	
Control Delay	72.8	24.9			10.4			9.0			31.7	
Queue Delay	0.0	0.0			0.1			0.0			3.8	
Total Delay	72.8	24.9			10.5			9.0			35.5	
LOS	E	C			B			A			D	
Approach Delay		71.5			10.5			9.0			35.5	
Approach LOS		E			B			A			D	
Queue Length 50th (ft)	255	5			0			164			547	
Queue Length 95th (ft)	#453	18			18			120			#882	
Internal Link Dist (ft)		63			140			456			219	
Turn Bay Length (ft)												
Base Capacity (vph)	407	531			493			2161			1139	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			160			0			53	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.96	0.02			0.07			0.39			0.96	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 32.0
 Intersection LOS: C
 Intersection Capacity Utilization 75.0%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway



2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak AM Hour
 12/22/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↹			↶↷				↷
Traffic Volume (veh/h)	360	10	0	10	0	10	0	755	10	0	962	0
Future Volume (veh/h)	360	10	0	10	0	10	0	755	10	0	962	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	399	0	0	11	0	11	0	821	11	0	1046	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	0	2	2	2	2	0
Cap, veh/h	648	312	0	164	17	127	0	2092	28	0	1090	0
Arrive On Green	0.18	0.00	0.00	0.17	0.00	0.17	0.00	0.58	0.57	0.00	0.58	0.00
Sat Flow, veh/h	2807	1870	0	659	103	761	0	3684	48	0	1870	0
Grp Volume(v), veh/h	399	0	0	22	0	0	0	406	426	0	1046	0
Grp Sat Flow(s),veh/h/ln	1404	1870	0	1523	0	0	0	1777	1862	0	1870	0
Q Serve(g_s), s	12.2	0.0	0.0	0.0	0.0	0.0	0.0	12.4	12.4	0.0	52.9	0.0
Cycle Q Clear(g_c), s	13.3	0.0	0.0	1.1	0.0	0.0	0.0	12.4	12.4	0.0	52.9	0.0
Prop In Lane	1.00		0.00	0.50		0.50	0.00		0.03	0.00		0.00
Lane Grp Cap(c), veh/h	648	312	0	308	0	0	0	1035	1085	0	1090	0
V/C Ratio(X)	0.62	0.00	0.00	0.07	0.00	0.00	0.00	0.39	0.39	0.00	0.96	0.00
Avail Cap(c_a), veh/h	1022	561	0	507	0	0	0	1084	1136	0	1141	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.78	0.78	0.00	1.00	0.00
Uniform Delay (d), s/veh	39.2	0.0	0.0	35.2	0.0	0.0	0.0	11.3	11.3	0.0	19.8	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	19.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	0.0	0.5	0.0	0.0	0.0	4.6	4.8	0.0	26.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	0.0	35.2	0.0	0.0	0.0	11.4	11.4	0.0	38.9	0.0
LnGrp LOS	D	A	A	D	A	A	A	B	B	A	D	A
Approach Vol, veh/h		399			22			832			1046	
Approach Delay, s/veh		39.6			35.2			11.4			38.9	
Approach LOS		D			D			B			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.3		21.7		62.3		21.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		60.0		30.0		60.0		30.0				
Max Q Clear Time (g_c+I1), s		14.4		15.3		54.9		3.1				
Green Ext Time (p_c), s		3.1		1.4		2.3		0.0				

Intersection Summary

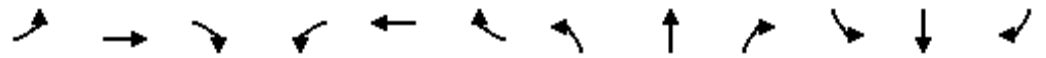
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

2025 Build Traffic Volumes w/Corridor Improvements
10: Red Schoolhouse Rd & Ronwood Rd

Peak AM Hour
12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	0	116	103	0	73	136	597	77	63	872	37
Future Volume (vph)	95	0	116	103	0	73	136	597	77	63	872	37
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		100
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850			0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	1831	0	1770	1863	1583
Flt Permitted	0.706			0.575			0.121			0.286		
Satd. Flow (perm)	1315	1583	0	1071	1583	0	225	1831	0	533	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		266			371			11				76
Link Speed (mph)		30			30			30				30
Link Distance (ft)		297			621			588				536
Travel Time (s)		6.8			14.1			13.4				12.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	0	126	112	0	79	148	649	84	68	948	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	126	0	112	79	0	148	733	0	68	948	40
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2		2	2	2
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83		83	83	83
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Size(ft)	40	40		40	40		40	40		40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	43
Detector 2 Size(ft)	40	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	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	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6

2025 Build Traffic Volumes w/Corridor Improvements
 10: Red Schoolhouse Rd & Ronwood Rd

Peak AM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	15.0		10.0	15.0	15.0
Total Split (s)	25.0	25.0		25.0	25.0		15.0	60.0		15.0	60.0	60.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%		15.0%	60.0%		15.0%	60.0%	60.0%
Maximum Green (s)	20.0	20.0		20.0	20.0		10.0	55.0		10.0	55.0	55.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							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
Recall Mode	None	None		None	None		None	Min		None	C-Min	C-Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effect Green (s)	15.7	15.7		15.7	15.7		75.0	66.8		70.3	62.7	62.7
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.75	0.67		0.70	0.63	0.63
v/c Ratio	0.50	0.27		0.67	0.14		0.47	0.60		0.14	0.81	0.04
Control Delay	45.9	1.4		58.0	0.5		10.1	13.5		7.2	28.6	4.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	4.3	0.0
Total Delay	45.9	1.4		58.0	0.5		10.1	13.5		7.2	33.0	4.3
LOS	D	A		E	A		B	B		A	C	A
Approach Delay		21.4			34.3			12.9			30.2	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	60	0		68	0		20	247		16	438	0
Queue Length 95th (ft)	108	0		120	0		56	436		m21	m499	m0
Internal Link Dist (ft)		217			541			508			456	
Turn Bay Length (ft)							100			100		100
Base Capacity (vph)	276	542		224	625		343	1226		528	1167	1020
Starvation Cap Reductn	0	0		0	0		0	0		0	153	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.37	0.23		0.50	0.13		0.43	0.60		0.13	0.93	0.04

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 70 (70%), Referenced to phase 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 23.2 Intersection LOS: C
 Intersection Capacity Utilization 75.8% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Red Schoolhouse Rd & Ronwood Rd



2025 Build Traffic Volumes w/Corridor Improvements
 1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	152	71	391	182	108	467
Future Volume (vph)	152	71	391	182	108	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.957		0.957			
Flt Protected	0.967				0.950	
Satd. Flow (prot)	1602	0	1910	0	1760	1870
Flt Permitted	0.967				0.950	
Satd. Flow (perm)	1602	0	1910	0	1760	1870
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	12%	5%	6%	2%	6%	5%
Adj. Flow (vph)	171	80	439	204	121	525
Shared Lane Traffic (%)						
Lane Group Flow (vph)	251	0	643	0	121	525
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		13			13
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.4%
Analysis Period (min)	15
	ICU Level of Service B

2025 Build Traffic Volumes w/Corridor Improvements
 1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
 12/22/2020

Intersection						
Int Delay, s/veh	37.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		B		Y	↑
Traffic Vol, veh/h	152	71	391	182	108	467
Future Vol, veh/h	152	71	391	182	108	467
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	12	5	6	2	6	5
Mvmt Flow	171	80	439	204	121	525

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1308	541	0	0	643
Stage 1	541	-	-	-	-
Stage 2	767	-	-	-	-
Critical Hdwy	6.52	6.25	-	-	4.16
Critical Hdwy Stg 1	5.52	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-
Follow-up Hdwy	3.608	3.345	-	-	2.254
Pot Cap-1 Maneuver	~ 168	535	-	-	923
Stage 1	564	-	-	-	-
Stage 2	441	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 146	535	-	-	923
Mov Cap-2 Maneuver	~ 146	-	-	-	-
Stage 1	490	-	-	-	-
Stage 2	441	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	223.7	0	1.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	190	923
HCM Lane V/C Ratio	-	-	1.319	0.131
HCM Control Delay (s)	-	-	223.7	9.5
HCM Lane LOS	-	-	F	A
HCM 95th %tile Q(veh)	-	-	14.2	0.5

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2025 Build Traffic Volumes w/Corridor Improvements
2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	121	169	513	537	82
Future Volume (vph)	60	121	169	513	537	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		86			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910				0.982	
Flt Protected	0.984		0.950			
Satd. Flow (prot)	1561	0	1851	1949	1818	0
Flt Permitted	0.984		0.153			
Satd. Flow (perm)	1561	0	298	1949	1818	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	114				11	
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	7%	4%	4%	3%	0%
Adj. Flow (vph)	67	136	190	576	603	92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	190	576	695	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			14	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template						
Leading Detector (ft)	83		83	83	83	
Trailing Detector (ft)	-5		-5	-5	-5	
Detector 1 Position(ft)	-5		-5	-5	-5	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	43		43	43	43	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0		0.0	0.0	0.0	
Turn Type	Prot		pm+pt	NA	NA	

2025 Build Traffic Volumes w/Corridor Improvements
 2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
 12/22/2020

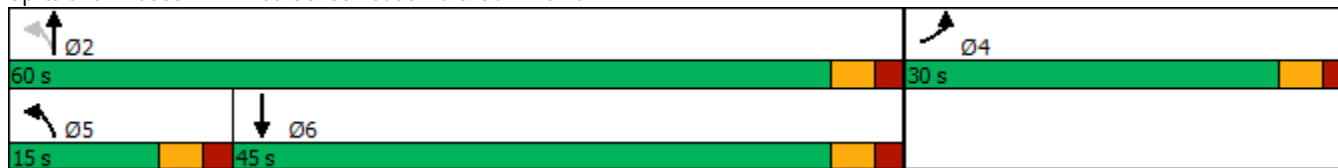


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases			2			
Detector Phase	4		5	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	10.0		10.0	15.0	15.0	
Total Split (s)	30.0		15.0	60.0	45.0	
Total Split (%)	33.3%		16.7%	66.7%	50.0%	
Maximum Green (s)	25.0		10.0	55.0	40.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	-1.0		-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0		4.0	4.0	4.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
Walk Time (s)	7.0				7.0	
Flash Dont Walk (s)	11.0				11.0	
Pedestrian Calls (#/hr)	0				0	
Act Effect Green (s)	10.1		43.1	43.1	28.7	
Actuated g/C Ratio	0.16		0.70	0.70	0.47	
v/c Ratio	0.58		0.41	0.42	0.82	
Control Delay	20.1		6.4	5.3	23.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	20.1		6.4	5.3	23.3	
LOS	C		A	A	C	
Approach Delay	20.1			5.6	23.3	
Approach LOS	C			A	C	
Queue Length 50th (ft)	30		17	67	206	
Queue Length 95th (ft)	99		49	158	391	
Internal Link Dist (ft)	499			515	149	
Turn Bay Length (ft)			100			
Base Capacity (vph)	757		500	1702	1278	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.27		0.38	0.34	0.54	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	61.7
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	14.7
Intersection LOS:	B
Intersection Capacity Utilization:	63.4%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: Red Schoolhouse Rd & Summit Rd



2025 Build Traffic Volumes w/Corridor Improvements
 2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
 12/22/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	121	169	513	537	82
Future Volume (veh/h)	60	121	169	513	537	82
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1900	1900	1914	1914	1856	1856
Adj Flow Rate, veh/h	67	136	190	576	603	92
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	4	4	3	3
Cap, veh/h	98	199	452	1255	719	110
Arrive On Green	0.18	0.16	0.12	0.66	0.46	0.44
Sat Flow, veh/h	549	1115	1823	1914	1572	240
Grp Volume(v), veh/h	204	0	190	576	0	695
Grp Sat Flow(s),veh/h/ln	1672	0	1823	1914	0	1812
Q Serve(g_s), s	5.6	0.0	2.2	7.2	0.0	16.4
Cycle Q Clear(g_c), s	5.6	0.0	2.2	7.2	0.0	16.4
Prop In Lane	0.33	0.67	1.00			0.13
Lane Grp Cap(c), veh/h	299	0	452	1255	0	828
V/C Ratio(X)	0.68	0.00	0.42	0.46	0.00	0.84
Avail Cap(c_a), veh/h	899	0	655	2217	0	1537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	8.6	4.1	0.0	11.6
Incr Delay (d2), s/veh	1.0	0.0	0.2	0.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.6	1.5	0.0	5.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.9	0.0	8.9	4.2	0.0	12.5
LnGrp LOS	B	A	A	A	A	B
Approach Vol, veh/h	204			766	695	
Approach Delay, s/veh	19.9			5.4	12.5	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.7		12.6	9.6	26.1
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		55.0		25.0	10.0	40.0
Max Q Clear Time (g_c+I1), s		9.2		7.6	4.2	18.4
Green Ext Time (p_c), s		2.2		0.6	0.3	2.7
Intersection Summary						
HCM 6th Ctrl Delay			10.1			
HCM 6th LOS			B			
Notes						
User approved volume balancing among the lanes for turning movement.						

2025 Build Traffic Volumes w/Corridor Improvements

Peak PM Hour

3: Red Schoolhouse Rd & Wellington Site Access/Promenade at Chestnut Ridge

12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	0	86	7	0	9	59	599	12	8	604	46
Future Volume (vph)	71	0	86	7	0	9	59	599	12	8	604	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.925			0.997			0.989	
Flt Protected		0.950			0.978		0.950			0.950		
Satd. Flow (prot)	0	1770	1583	0	1685	0	1770	1857	0	1770	1842	0
Flt Permitted		0.950			0.978		0.950			0.950		
Satd. Flow (perm)	0	1770	1583	0	1685	0	1770	1857	0	1770	1842	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		347			335			535			595	
Travel Time (s)		7.9			7.6			12.2			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	0	93	8	0	10	64	651	13	9	657	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	93	0	18	0	64	664	0	9	707	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			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
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 Capacity Utilization	55.7%
ICU Level of Service	B
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↗	↖	↖		↗	↖
Traffic Vol, veh/h	71	0	86	7	0	9	59	599	12	8	604	46
Future Vol, veh/h	71	0	86	7	0	9	59	599	12	8	604	46
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	-	-	0	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	0	93	8	0	10	64	651	13	9	657	50












Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1491	1492	682	1533	1511	658	707	0	0	664	0	0
Stage 1	700	700	-	786	786	-	-	-	-	-	-	-
Stage 2	791	792	-	747	725	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	102	123	450	95	120	464	891	-	-	925	-	-
Stage 1	430	441	-	385	403	-	-	-	-	-	-	-
Stage 2	383	401	-	405	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	94	113	450	71	110	464	891	-	-	925	-	-
Mov Cap-2 Maneuver	94	113	-	71	110	-	-	-	-	-	-	-
Stage 1	399	437	-	357	374	-	-	-	-	-	-	-
Stage 2	348	372	-	318	426	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	66.4		35.3		0.8		0.1	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	891	-	-	94	450	136	925	-	-
HCM Lane V/C Ratio	0.072	-	-	0.821	0.208	0.128	0.009	-	-
HCM Control Delay (s)	9.4	-	-	128.6	15.1	35.3	8.9	-	-
HCM Lane LOS	A	-	-	F	C	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	4.4	0.8	0.4	0	-	-

2025 Build Traffic Volumes w/Corridor Improvements
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/22/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 					
Traffic Volume (vph)	460	208	460	0	0	698
Future Volume (vph)	460	208	460	0	0	698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Storage Length (ft)	0	0		0	0	
Storage Lanes	2	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				
Fl _t Protected	0.950					
Satd. Flow (prot)	3433	1615	1859	0	0	1845
Fl _t Permitted	0.950					
Satd. Flow (perm)	3433	1615	1859	0	0	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		209				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		497			535
Travel Time (s)	9.5		11.3			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	9%	0%	0%	3%
Adj. Flow (vph)	489	221	489	0	0	743
Shared Lane Traffic (%)						
Lane Group Flow (vph)	489	221	489	0	0	743
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2			2
Detector Template						
Leading Detector (ft)	83	83	83			83
Trailing Detector (ft)	-5	-5	-5			-5
Detector 1 Position(ft)	-5	-5	-5			-5
Detector 1 Size(ft)	40	40	40			40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Detector 2 Position(ft)	43	43	43			43
Detector 2 Size(ft)	40	40	40			40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA

2025 Build Traffic Volumes w/Corridor Improvements
 4: Red Schoolhouse Rd & SB Exit Ramp

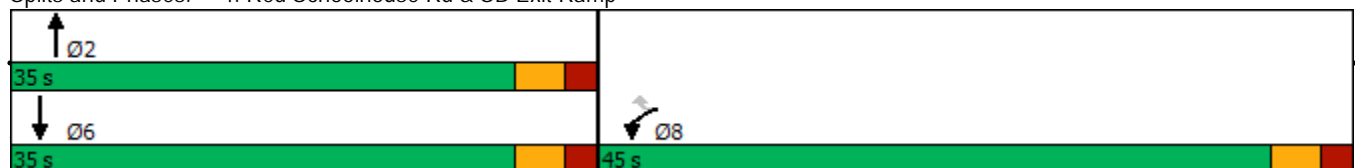
Peak PM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	23.0	23.0	23.0			23.0
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%
Maximum Green (s)	40.0	40.0	30.0			30.0
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0			-1.0
Total Lost Time (s)	4.0	4.0	4.0			4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0			2.0
Recall Mode	None	None	Min			Min
Act Effct Green (s)	13.4	13.4	31.1			31.1
Actuated g/C Ratio	0.26	0.26	0.59			0.59
v/c Ratio	0.56	0.39	0.44			0.68
Control Delay	19.5	5.5	8.2			12.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.5	5.5	8.2			12.3
LOS	B	A	A			B
Approach Delay	15.1		8.2			12.3
Approach LOS	B		A			B
Queue Length 50th (ft)	67	3	72			135
Queue Length 95th (ft)	104	42	156			296
Internal Link Dist (ft)	338		417			455
Turn Bay Length (ft)						
Base Capacity (vph)	2689	1310	1101			1092
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.18	0.17	0.44			0.68












Intersection Summary	
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	52.5
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	12.3
Intersection LOS:	B
Intersection Capacity Utilization:	56.5%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 Build Traffic Volumes w/Corridor Improvements
4: Red Schoolhouse Rd & SB Exit Ramp

Peak PM Hour
12/22/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 					
Traffic Volume (veh/h)	460	208	460	0	0	698
Future Volume (veh/h)	460	208	460	0	0	698
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1900	1837	0	0	1856
Adj Flow Rate, veh/h	489	221	489	0	0	743
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	9	0	0	3
Cap, veh/h	982	457	910	0	0	919
Arrive On Green	0.28	0.28	0.50	0.00	0.00	0.50
Sat Flow, veh/h	3456	1610	1837	0	0	1856
Grp Volume(v), veh/h	489	221	489	0	0	743
Grp Sat Flow(s),veh/h/ln	1728	1610	1837	0	0	1856
Q Serve(g_s), s	4.3	4.1	6.6	0.0	0.0	12.2
Cycle Q Clear(g_c), s	4.3	4.1	6.6	0.0	0.0	12.2
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	982	457	910	0	0	919
V/C Ratio(X)	0.50	0.48	0.54	0.00	0.00	0.81
Avail Cap(c_a), veh/h	3911	1822	1572	0	0	1588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	10.8	6.3	0.0	0.0	7.7
Incr Delay (d2), s/veh	0.1	0.3	0.2	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.1	1.5	0.0	0.0	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.0	11.1	6.5	0.0	0.0	8.4
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	710		489			743
Approach Delay, s/veh	11.0		6.5			8.4
Approach LOS	B		A			A
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		21.9			21.9	14.3
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		30.0			30.0	40.0
Max Q Clear Time (g_c+I1), s		8.6			14.2	6.3
Green Ext Time (p_c), s		1.7			2.7	3.0
Intersection Summary						
HCM 6th Ctrl Delay			8.8			
HCM 6th LOS			A			

2025 Build Traffic Volumes w/Corridor Improvements
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak PM Hour
 12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	99	0	460	1120	38
Future Volume (vph)	0	99	0	460	1120	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.865			0.996	
Fl _t Protected						
Satd. Flow (prot)	0	1649	0	1835	1962	0
Fl _t Permitted						
Satd. Flow (perm)	0	1649	0	1835	1962	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	94	
Travel Time (s)	4.6			8.0	2.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	33%	3%	0%	7%	3%	0%
Adj. Flow (vph)	0	102	0	474	1155	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	102	0	474	1194	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	74.0%
Analysis Period (min)	15
	ICU Level of Service D

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	99	0	460	1120	38
Future Vol, veh/h	0	99	0	460	1120	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	33	3	0	7	3	0
Mvmt Flow	0	102	0	474	1155	39

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 1155	- 0	- 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.23	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.327	- -	- -
Pot Cap-1 Maneuver	0 239	0 -	- 0
Stage 1	0 -	0 -	- 0
Stage 2	0 -	0 -	- 0
Platoon blocked, %		- -	- -
Mov Cap-1 Maneuver	- 239	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s	30.8	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 239	-
HCM Lane V/C Ratio	- 0.427	-
HCM Control Delay (s)	- 30.8	-
HCM Lane LOS	- D	-
HCM 95th %tile Q(veh)	- 2	-

2025 Build Traffic Volumes w/Corridor Improvements
 6: Red Schoolhouse Rd & NB Entrance Ramp

Peak PM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑	↗		↑
Traffic Volume (vph)	0	0	460	1249	0	1219
Future Volume (vph)	0	0	460	1249	0	1219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	1852	1652	0	1783
Flt Permitted						
Satd. Flow (perm)	0	0	1852	1652	0	1783
Link Speed (mph)	30		30			30
Link Distance (ft)	251		154			351
Travel Time (s)	5.7		3.5			8.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	1%	21%	3%
Adj. Flow (vph)	0	0	484	1315	0	1283
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	484	1315	0	1283
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.7%
Analysis Period (min)	15
	ICU Level of Service D

2025 Build Traffic Volumes w/Corridor Improvements
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗		↖	↕
Traffic Volume (vph)	0	117	1592	47	0	1219
Future Volume (vph)	0	117	1592	47	0	1219
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Fr _t		0.865	0.996			
Fl _t Protected						
Satd. Flow (prot)	0	1611	3525	0	0	1863
Fl _t Permitted						
Satd. Flow (perm)	0	1611	3525	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		100			153
Travel Time (s)	12.8		2.3			3.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	127	1730	51	0	1325
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	127	1781	0	0	1325
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	67.5%
Analysis Period (min)	15
	ICU Level of Service C

2025 Build Traffic Volumes w/Corridor Improvements
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/22/2020

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↔			↕
Traffic Vol, veh/h	0	117	1592	47	0	1219
Future Vol, veh/h	0	117	1592	47	0	1219
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	127	1730	51	0	1325

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	865	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.93	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.319	-
Pot Cap-1 Maneuver	0	298	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	298	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.8	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 298	-
HCM Lane V/C Ratio	- 0.427	-
HCM Control Delay (s)	- 25.8	-
HCM Lane LOS	- D	-
HCM 95th %tile Q(veh)	- 2	-

2025 Build Traffic Volumes w/Corridor Improvements
8: Wilshire Dr & Summit Rd

Peak PM Hour
12/22/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	172	15	61	190	12	9
Future Volume (vph)	172	15	61	190	12	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989			0.941		
Flt Protected				0.988	0.973	
Satd. Flow (prot)	1842	0	0	1840	1706	0
Flt Permitted				0.988	0.973	
Satd. Flow (perm)	1842	0	0	1840	1706	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	248			398	442	
Travel Time (s)	5.6			9.0	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	16	66	207	13	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	0	273	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	36.7%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	172	15	61	190	12	9
Future Vol, veh/h	172	15	61	190	12	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	16	66	207	13	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	203	0	534 195
Stage 1	-	-	-	-	195 -
Stage 2	-	-	-	-	339 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1369	-	507 846
Stage 1	-	-	-	-	838 -
Stage 2	-	-	-	-	722 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1369	-	480 846
Mov Cap-2 Maneuver	-	-	-	-	480 -
Stage 1	-	-	-	-	793 -
Stage 2	-	-	-	-	722 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	589	-	-	1369	-
HCM Lane V/C Ratio	0.039	-	-	0.048	-
HCM Control Delay (s)	11.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	-

2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak PM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	435	10	0	10	0	10	0	1190	10	0	667	0
Future Volume (vph)	435	10	0	10	0	10	0	1190	10	0	667	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt					0.932			0.999				
Flt Protected	0.950				0.976							
Satd. Flow (prot)	1681	1770	0	0	1694	0	0	3536	0	0	1863	0
Flt Permitted	0.743				0.921							
Satd. Flow (perm)	1315	1770	0	0	1599	0	0	3536	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					36			2				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		143			186			536				299
Travel Time (s)		3.3			4.2			12.2				6.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	473	11	0	11	0	11	0	1293	11	0	725	0
Shared Lane Traffic (%)	0%											
Lane Group Flow (vph)	473	11	0	0	22	0	0	1304	0	0	725	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2			2		1	2	
Detector Template				Left						Left		
Leading Detector (ft)	83	83		20	83			83		20	83	
Trailing Detector (ft)	-5	-5		0	-5			-5		0	-5	
Detector 1 Position(ft)	-5	-5		0	-5			-5		0	-5	
Detector 1 Size(ft)	40	40		20	40			40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)	43	43			43			43			43	
Detector 2 Size(ft)	40	40			40			40			40	
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		

2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak PM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8			2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			10.0		10.0	10.0	
Minimum Split (s)	10.0	10.0		10.0	10.0			15.0		23.0	23.0	
Total Split (s)	25.0	25.0		25.0	25.0			35.0		35.0	35.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%			58.3%		58.3%	58.3%	
Maximum Green (s)	20.0	20.0		20.0	20.0			30.0		30.0	30.0	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	0.0			0.0			-1.0			-1.0	
Total Lost Time (s)	4.0	5.0			5.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Recall Mode	None	None		None	None			C-Min		Min	Min	
Walk Time (s)								7.0		7.0	7.0	
Flash Dont Walk (s)								11.0		11.0	11.0	
Pedestrian Calls (#/hr)								0		0	0	
Act Effct Green (s)	23.4	22.4			22.4			28.6			28.6	
Actuated g/C Ratio	0.39	0.37			0.37			0.48			0.48	
v/c Ratio	0.92	0.02			0.04			0.77			0.82	
Control Delay	47.9	13.5			4.0			20.8			22.0	
Queue Delay	0.0	0.0			0.0			0.0			0.2	
Total Delay	47.9	13.5			4.0			20.8			22.2	
LOS	D	B			A			C			C	
Approach Delay		47.1			4.0			20.8			22.2	
Approach LOS		D			A			C			C	
Queue Length 50th (ft)	172	3			0			312			198	
Queue Length 95th (ft)	#364	12			9			m325			317	
Internal Link Dist (ft)		63			106			456			219	
Turn Bay Length (ft)												
Base Capacity (vph)	512	661			619			1827			962	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			11			0			17	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.92	0.02			0.04			0.71			0.77	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 30 (50%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 26.1
 Intersection Capacity Utilization 61.6%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

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

2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak PM Hour
 12/22/2020

Queue shown is maximum after two cycles.

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

Splits and Phases: 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway



2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak PM Hour
 12/22/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	435	10	0	10	0	10	0	1190	10	0	667	0
Future Volume (veh/h)	435	10	0	10	0	10	0	1190	10	0	667	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	481	0	0	11	0	11	0	1293	11	0	725	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	0	2	2	2	2	0
Cap, veh/h	888	396	0	224	28	162	0	2305	20	0	1194	
Arrive On Green	0.23	0.00	0.00	0.21	0.00	0.21	0.00	0.64	0.62	0.00	0.64	0.00
Sat Flow, veh/h	2807	1870	0	632	134	765	0	3704	31	0	1870	0
Grp Volume(v), veh/h	481	0	0	22	0	0	0	636	668	0	725	0
Grp Sat Flow(s),veh/h/ln	1404	1870	0	1531	0	0	0	1777	1865	0	1870	0
Q Serve(g_s), s	8.8	0.0	0.0	0.0	0.0	0.0	0.0	12.1	12.1	0.0	13.7	0.0
Cycle Q Clear(g_c), s	9.4	0.0	0.0	0.6	0.0	0.0	0.0	12.1	12.1	0.0	13.7	0.0
Prop In Lane	1.00		0.00	0.50		0.50	0.00		0.02	0.00		0.00
Lane Grp Cap(c), veh/h	888	396	0	414	0	0	0	1134	1191	0	1194	
V/C Ratio(X)	0.54	0.00	0.00	0.05	0.00	0.00	0.00	0.56	0.56	0.00	0.61	
Avail Cap(c_a), veh/h	1230	623	0	596	0	0	0	1134	1191	0	1194	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.14	0.00	1.00	0.00
Uniform Delay (d), s/veh	21.4	0.0	0.0	18.9	0.0	0.0	0.0	6.1	6.1	0.0	6.4	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	0.2	0.0	0.0	0.0	3.2	3.4	0.0	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.6	0.0	0.0	18.9	0.0	0.0	0.0	6.4	6.4	0.0	7.0	0.0
LnGrp LOS	C	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		481			22			1304			725	A
Approach Delay, s/veh		21.6			18.9			6.4			7.0	
Approach LOS		C			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		42.3		17.7		42.3		17.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		30.0		20.0		30.0		20.0				
Max Q Clear Time (g_c+I1), s		14.1		11.4		15.7		2.6				
Green Ext Time (p_c), s		4.8		1.3		2.5		0.0				

Intersection Summary






















HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

2025 Build Traffic Volumes w/Corridor Improvements
10: Red Schoolhouse Rd & Ronwood Rd

Peak PM Hour
12/22/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	0	195	179	0	83	195	957	112	91	533	53
Future Volume (vph)	160	0	195	179	0	83	195	957	112	91	533	53
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		100
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850			0.984				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	1833	0	1770	1863	1583
Flt Permitted	0.673			0.420			0.325			0.055		
Satd. Flow (perm)	1254	1583	0	782	1583	0	605	1833	0	102	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		404			229			9				64
Link Speed (mph)		30			30			30				30
Link Distance (ft)		297			621			588				536
Travel Time (s)		6.8			14.1			13.4				12.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	0	212	195	0	90	212	1040	122	99	579	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	212	0	195	90	0	212	1162	0	99	579	58
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2		2	2	2
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83		83	83	83
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Size(ft)	40	40		40	40		40	40		40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	43
Detector 2 Size(ft)	40	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	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	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6

2025 Build Traffic Volumes w/Corridor Improvements
 10: Red Schoolhouse Rd & Ronwood Rd

Peak PM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	15.0		10.0	15.0	15.0
Total Split (s)	30.0	30.0		30.0	30.0		15.0	75.0		15.0	75.0	75.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%		12.5%	62.5%		12.5%	62.5%	62.5%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0	70.0		10.0	70.0	70.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	None	None		None	None		None	C-Min		None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effect Green (s)	26.0	26.0		26.0	26.0		83.4	73.6		80.6	72.2	72.2
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.70	0.61		0.67	0.60	0.60
v/c Ratio	0.64	0.32		1.15	0.17		0.41	1.03		0.54	0.52	0.06
Control Delay	55.0	1.3		159.3	0.7		8.0	59.1		36.2	14.4	3.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	2.3	0.0
Total Delay	55.0	1.3		159.3	0.7		8.0	59.1		36.2	16.7	3.2
LOS	D	A		F	A		A	E		D	B	A
Approach Delay		25.5			109.2			51.2			18.3	
Approach LOS		C			F			D			B	
Queue Length 50th (ft)	123	0		~178	0		47	~957		31	286	0
Queue Length 95th (ft)	204	0		#329	0		73	#1257		m61	463	m7
Internal Link Dist (ft)		217			541			508			456	
Turn Bay Length (ft)							100			100		100
Base Capacity (vph)	271	659		169	522		532	1127		223	1120	977
Starvation Cap Reductn	0	0		0	0		0	0		0	394	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.64	0.32		1.15	0.17		0.40	1.03		0.44	0.80	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 85 (71%), Referenced to phase 2:NBTL, Start of Yellow
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 44.9
 Intersection LOS: D
 Intersection Capacity Utilization 97.5%
 ICU Level of Service F
 Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

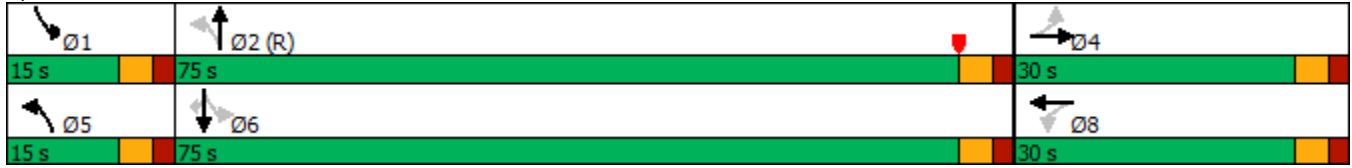
Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.






















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

Splits and Phases: 10: Red Schoolhouse Rd & Ronwood Rd



2025 Build Traffic Volumes w/Corridor Improvements
10: Red Schoolhouse Rd & Ronwood Rd

Peak PM Hour
12/22/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	0	195	179	0	83	195	957	112	91	533	53
Future Volume (veh/h)	160	0	195	179	0	83	195	957	112	91	533	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	0	212	195	0	90	212	1040	122	99	579	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	281	0	343	171	0	343	532	1043	122	149	1149	974
Arrive On Green	0.22	0.00	0.21	0.22	0.00	0.21	0.07	0.63	0.63	0.05	0.61	0.61
Sat Flow, veh/h	1307	0	1585	1170	0	1585	1781	1643	193	1781	1870	1585
Grp Volume(v), veh/h	174	0	212	195	0	90	212	0	1162	99	579	58
Grp Sat Flow(s),veh/h/ln	1307	0	1585	1170	0	1585	1781	0	1836	1781	1870	1585
Q Serve(g_s), s	15.3	0.0	14.6	11.4	0.0	5.7	5.1	0.0	75.6	2.4	20.7	1.8
Cycle Q Clear(g_c), s	21.0	0.0	14.6	26.0	0.0	5.7	5.1	0.0	75.6	2.4	20.7	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	281	0	343	171	0	343	532	0	1165	149	1149	974
V/C Ratio(X)	0.62	0.00	0.62	1.14	0.00	0.26	0.40	0.00	1.00	0.67	0.50	0.06
Avail Cap(c_a), veh/h	281	0	343	171	0	343	573	0	1165	226	1149	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.47	0.47	0.47
Uniform Delay (d), s/veh	47.8	0.0	43.0	56.3	0.0	39.5	9.2	0.0	21.8	29.9	12.9	9.3
Incr Delay (d2), s/veh	3.1	0.0	2.5	110.9	0.0	0.1	0.2	0.0	25.7	0.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	6.0	10.5	0.0	2.3	1.8	0.0	37.8	1.8	8.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	0.0	45.4	167.1	0.0	39.6	9.4	0.0	47.5	30.8	13.0	9.3
LnGrp LOS	D	A	D	F	A	D	A	A	D	C	B	A
Approach Vol, veh/h		386			285			1374			736	
Approach Delay, s/veh		47.9			126.9			41.6			15.1	
Approach LOS		D			F			D			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	80.2		30.0	12.3	77.7		30.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	70.0		25.0	10.0	70.0		25.0				
Max Q Clear Time (g_c+I1), s	4.4	77.6		23.0	7.1	22.7		28.0				
Green Ext Time (p_c), s	0.1	0.0		0.3	0.2	2.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			44.2									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

2025 Build Traffic Volumes w/Corridor Improvements
 11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	20	1244	13	16	891
Future Volume (vph)	16	20	1244	13	16	891
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.924		0.999			
Flt Protected	0.979				0.950	
Satd. Flow (prot)	1685	0	1861	0	1770	1863
Flt Permitted	0.979				0.950	
Satd. Flow (perm)	1685	0	1861	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	321		540			588
Travel Time (s)	7.3		12.3			13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	22	1352	14	17	968
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	1366	0	17	968
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	76.3%
ICU Level of Service	D
Analysis Period (min)	15

2025 Build Traffic Volumes w/Corridor Improvements
 11: Red Schoolhouse Rd & Loescher Ln

Peak PM Hour
 12/22/2020

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	20	1244	13	16	891
Future Vol, veh/h	16	20	1244	13	16	891
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	22	1352	14	17	968

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2361	1359	0	0	1366
Stage 1	1359	-	-	-	-
Stage 2	1002	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	39	182	-	-	503
Stage 1	239	-	-	-	-
Stage 2	355	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	38	182	-	-	503
Mov Cap-2 Maneuver	38	-	-	-	-
Stage 1	231	-	-	-	-
Stage 2	355	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	113.5	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	68	503
HCM Lane V/C Ratio	-	-	0.575	0.035
HCM Control Delay (s)	-	-	113.5	12.4
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	2.4	0.1

2025 Build Traffic Volumes w/Corridor Improvements
 1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	103	41	201	104	42	238
Future Volume (vph)	103	41	201	104	42	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	15	15	13	13
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.962		0.954			
Flt Protected	0.965				0.950	
Satd. Flow (prot)	1616	0	1898	0	1696	1650
Flt Permitted	0.965				0.950	
Satd. Flow (perm)	1616	0	1898	0	1696	1650
Link Speed (mph)	30		30			30
Link Distance (ft)	677		229			478
Travel Time (s)	15.4		5.2			10.9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	10%	7%	4%	7%	10%	19%
Adj. Flow (vph)	111	44	216	112	45	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	328	0	45	256
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		13			13
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.88	0.88	0.96	0.96
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.5%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes w/Corridor Improvements
 1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
 12/22/2020

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	103	41	201	104	42	238
Future Vol, veh/h	103	41	201	104	42	238
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	10	7	4	7	10	19
Mvmt Flow	111	44	216	112	45	256

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	618	272	0	0	328
Stage 1	272	-	-	-	-
Stage 2	346	-	-	-	-
Critical Hdwy	6.5	6.27	-	-	4.2
Critical Hdwy Stg 1	5.5	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-
Follow-up Hdwy	3.59	3.363	-	-	2.29
Pot Cap-1 Maneuver	440	755	-	-	1188
Stage 1	756	-	-	-	-
Stage 2	699	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	423	755	-	-	1188
Mov Cap-2 Maneuver	423	-	-	-	-
Stage 1	727	-	-	-	-
Stage 2	699	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	1.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	484	1188
HCM Lane V/C Ratio	-	-	0.32	0.038
HCM Control Delay (s)	-	-	15.9	8.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.4	0.1

2025 Build Traffic Volumes w/Corridor Improvements
2: Red Schoolhouse Rd & Summit Rd

Peak SAT Hour
12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	75	146	279	281	60
Future Volume (vph)	27	75	146	279	281	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	12	12
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	86		86			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.901				0.976	
Flt Protected	0.987		0.950			
Satd. Flow (prot)	1503	0	1689	1930	1548	0
Flt Permitted	0.987		0.393			
Satd. Flow (perm)	1503	0	699	1930	1548	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	80				17	
Link Speed (mph)	30			30	30	
Link Distance (ft)	579			595	229	
Travel Time (s)	13.2			13.5	5.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	10%	14%	5%	21%	14%
Adj. Flow (vph)	29	80	155	297	299	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	155	297	363	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	11			14	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	2		2	2	2	
Detector Template						
Leading Detector (ft)	83		83	83	83	
Trailing Detector (ft)	-5		-5	-5	-5	
Detector 1 Position(ft)	-5		-5	-5	-5	
Detector 1 Size(ft)	40		40	40	40	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	43		43	43	43	
Detector 2 Size(ft)	40		40	40	40	
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0		0.0	0.0	0.0	
Turn Type	Prot		pm+pt	NA	NA	

2025 Build Traffic Volumes w/Corridor Improvements
2: Red Schoolhouse Rd & Summit Rd

Peak SAT Hour
12/22/2020

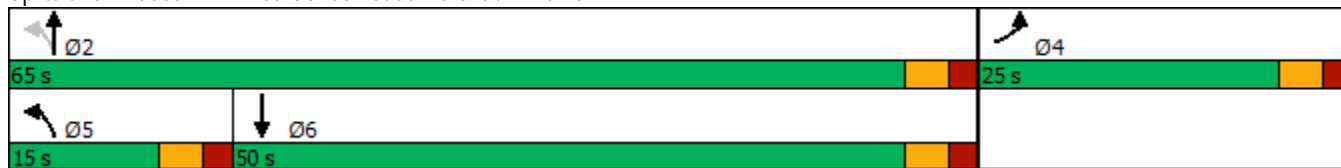


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4		5	2	6	
Permitted Phases			2			
Detector Phase	4		5	2	6	
Switch Phase						
Minimum Initial (s)	5.0		5.0	10.0	10.0	
Minimum Split (s)	10.0		10.0	15.0	15.0	
Total Split (s)	25.0		15.0	65.0	50.0	
Total Split (%)	27.8%		16.7%	72.2%	55.6%	
Maximum Green (s)	20.0		10.0	60.0	45.0	
Yellow Time (s)	3.0		3.0	3.0	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Recall Mode	None		None	Min	Min	
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effct Green (s)	6.3		29.4	30.8	20.5	
Actuated g/C Ratio	0.15		0.68	0.71	0.47	
v/c Ratio	0.38		0.23	0.22	0.49	
Control Delay	13.0		4.3	3.9	14.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	13.0		4.3	3.9	14.7	
LOS	B		A	A	B	
Approach Delay	13.0			4.0	14.7	
Approach LOS	B			A	B	
Queue Length 50th (ft)	6		11	23	71	
Queue Length 95th (ft)	45		32	58	162	
Internal Link Dist (ft)	499			515	149	
Turn Bay Length (ft)			100			
Base Capacity (vph)	768		714	1930	1458	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.14		0.22	0.15	0.25	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	43.3
Natural Cycle:	40
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	9.3
Intersection LOS:	A
Intersection Capacity Utilization:	45.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Red Schoolhouse Rd & Summit Rd



2025 Build Traffic Volumes w/Corridor Improvements
2: Red Schoolhouse Rd & Summit Rd

Peak SAT Hour
12/22/2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	75	146	279	281	60
Future Volume (veh/h)	27	75	146	279	281	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	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	1900	1900	1760	1899	1589	1589
Adj Flow Rate, veh/h	29	80	155	297	299	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	14	5	21	21
Cap, veh/h	43	118	522	1119	400	86
Arrive On Green	0.10	0.10	0.12	0.59	0.32	0.32
Sat Flow, veh/h	438	1208	1676	1899	1268	271
Grp Volume(v), veh/h	110	0	155	297	0	363
Grp Sat Flow(s),veh/h/ln	1661	0	1676	1899	0	1540
Q Serve(g_s), s	2.0	0.0	1.6	2.4	0.0	6.7
Cycle Q Clear(g_c), s	2.0	0.0	1.6	2.4	0.0	6.7
Prop In Lane	0.26	0.73	1.00			0.18
Lane Grp Cap(c), veh/h	162	0	522	1119	0	486
V/C Ratio(X)	0.68	0.00	0.30	0.27	0.00	0.75
Avail Cap(c_a), veh/h	1040	0	851	3569	0	2171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	5.9	3.2	0.0	9.8
Incr Delay (d2), s/veh	1.9	0.0	0.1	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.3	0.3	0.0	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.8	0.0	6.0	3.2	0.0	10.7
LnGrp LOS	B	A	A	A	A	B
Approach Vol, veh/h				452	363	
Approach Delay, s/veh				4.2	10.7	
Approach LOS				A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.8		8.1	8.7	15.1
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0
Max Green Setting (Gmax), s		60.0		20.0	10.0	45.0
Max Q Clear Time (g_c+I1), s		4.4		4.0	3.6	8.7
Green Ext Time (p_c), s		1.0		0.3	0.2	1.3
Intersection Summary						
HCM 6th Ctrl Delay			8.1			
HCM 6th LOS			A			
Notes						
User approved volume balancing among the lanes for turning movement.						

2025 Build Traffic Volumes w/Corridor Improvements

Peak SAT Hour

3: Red Schoolhouse Rd & Wellington Site Access/Promenade at Chestnut Ridge

12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	7	0	9	0	425	12	8	356	0
Future Volume (vph)	0	0	0	7	0	9	0	425	12	8	356	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	86			86			86			86		
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					0.925			0.996				
Flt Protected					0.978					0.950		
Satd. Flow (prot)	0	1863	1863	0	1685	0	1863	1855	0	1770	1863	0
Flt Permitted					0.978					0.950		
Satd. Flow (perm)	0	1863	1863	0	1685	0	1863	1855	0	1770	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		347			261			535			595	
Travel Time (s)		7.9			5.9			12.2			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	8	0	10	0	462	13	9	387	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	18	0	0	475	0	9	387	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			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
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 Capacity Utilization	33.1%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	0	0	7	0	9	0	425	12	8	356	0
Future Vol, veh/h	0	0	0	7	0	9	0	425	12	8	356	0
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	-	-	0	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	0	10	0	462	13	9	387	0












Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	879	880	387	874	874	469	387	0	0	475	0	0
Stage 1	405	405	-	469	469	-	-	-	-	-	-	-
Stage 2	474	475	-	405	405	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	268	286	661	270	288	594	1171	-	-	1087	-	-
Stage 1	622	598	-	575	561	-	-	-	-	-	-	-
Stage 2	571	557	-	622	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	262	284	661	268	286	594	1171	-	-	1087	-	-
Mov Cap-2 Maneuver	262	284	-	268	286	-	-	-	-	-	-	-
Stage 1	622	593	-	575	561	-	-	-	-	-	-	-
Stage 2	562	557	-	617	593	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	0		14.7		0		0.2			
HCM LOS	A		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1171	-	-	-	-	-	388	1087	-
HCM Lane V/C Ratio	-	-	-	-	-	-	0.045	0.008	-
HCM Control Delay (s)	0	-	-	0	0	14.7	8.3	-	-
HCM Lane LOS	A	-	-	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1	0	-	-

2025 Build Traffic Volumes w/Corridor Improvements
 4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
 12/22/2020

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 					
Traffic Volume (vph)	444	157	268	0	0	356
Future Volume (vph)	444	157	268	0	0	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	14	14	12	12
Storage Length (ft)	0	0		0	0	
Storage Lanes	2	1		0	0	
Taper Length (ft)	86				86	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				
Fl _t Protected	0.950					
Satd. Flow (prot)	3433	1568	1894	0	0	1638
Fl _t Permitted	0.950					
Satd. Flow (perm)	3433	1568	1894	0	0	1638
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		167				
Link Speed (mph)	30		30			30
Link Distance (ft)	418		497			535
Travel Time (s)	9.5		11.3			12.2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	3%	7%	0%	0%	16%
Adj. Flow (vph)	472	167	285	0	0	379
Shared Lane Traffic (%)						
Lane Group Flow (vph)	472	167	285	0	0	379
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		0			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	0.92	0.92	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	2	2	2			2
Detector Template						
Leading Detector (ft)	83	83	83			83
Trailing Detector (ft)	-5	-5	-5			-5
Detector 1 Position(ft)	-5	-5	-5			-5
Detector 1 Size(ft)	40	40	40			40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0			0.0
Detector 2 Position(ft)	43	43	43			43
Detector 2 Size(ft)	40	40	40			40
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			0.0
Turn Type	Prot	Perm	NA			NA

2025 Build Traffic Volumes w/Corridor Improvements
 4: Red Schoolhouse Rd & SB Exit Ramp

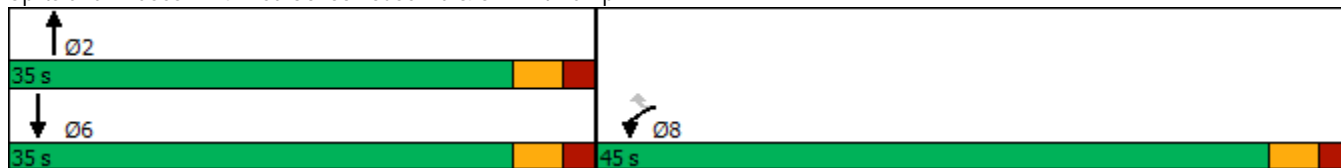
Peak SAT Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			5.0
Minimum Split (s)	23.0	23.0	23.0			23.0
Total Split (s)	45.0	45.0	35.0			35.0
Total Split (%)	56.3%	56.3%	43.8%			43.8%
Maximum Green (s)	40.0	40.0	30.0			30.0
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0			2.0
Recall Mode	None	None	Min			Min
Walk Time (s)	7.0	7.0	7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0			11.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effect Green (s)	10.8	10.8	12.3			12.3
Actuated g/C Ratio	0.32	0.32	0.37			0.37
v/c Ratio	0.43	0.27	0.41			0.63
Control Delay	10.7	3.6	10.4			14.6
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	10.7	3.6	10.4			14.6
LOS	B	A	B			B
Approach Delay	8.9		10.4			14.6
Approach LOS	A		B			B
Queue Length 50th (ft)	31	0	35			51
Queue Length 95th (ft)	74	27	92			135
Internal Link Dist (ft)	338		417			455
Turn Bay Length (ft)						
Base Capacity (vph)	3347	1533	1660			1435
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.14	0.11	0.17			0.26












Intersection Summary	
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	33.6
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	10.9
Intersection LOS:	B
Intersection Capacity Utilization:	39.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Red Schoolhouse Rd & SB Exit Ramp



2025 Build Traffic Volumes w/Corridor Improvements
4: Red Schoolhouse Rd & SB Exit Ramp

Peak SAT Hour
12/22/2020

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 					
Traffic Volume (veh/h)	444	157	268	0	0	356
Future Volume (veh/h)	444	157	268	0	0	356
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	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	1870	1856	1868	0	0	1663
Adj Flow Rate, veh/h	472	167	285	0	0	379
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	3	7	0	0	16
Cap, veh/h	1003	456	607	0	0	541
Arrive On Green	0.29	0.29	0.33	0.00	0.00	0.33
Sat Flow, veh/h	3456	1572	1868	0	0	1663
Grp Volume(v), veh/h	472	167	285	0	0	379
Grp Sat Flow(s),veh/h/ln	1728	1572	1868	0	0	1663
Q Serve(g_s), s	2.9	2.2	3.2	0.0	0.0	5.2
Cycle Q Clear(g_c), s	2.9	2.2	3.2	0.0	0.0	5.2
Prop In Lane	1.00	1.00		0.00	0.00	
Lane Grp Cap(c), veh/h	1003	456	607	0	0	541
V/C Ratio(X)	0.47	0.37	0.47	0.00	0.00	0.70
Avail Cap(c_a), veh/h	5318	2420	2156	0	0	1919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	7.6	7.3	7.0	0.0	0.0	7.7
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	0.7	0.0	0.0	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	7.5	7.2	0.0	0.0	8.3
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	639		285			379
Approach Delay, s/veh	7.7		7.2			8.3
Approach LOS	A		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		13.5				12.5
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		30.0				40.0
Max Q Clear Time (g_c+I1), s		5.2				4.9
Green Ext Time (p_c), s		0.9				2.7
Intersection Summary						
HCM 6th Ctrl Delay			7.7			
HCM 6th LOS			A			

2025 Build Traffic Volumes w/Corridor Improvements
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
 12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	54	0	268	768	33
Future Volume (vph)	0	54	0	268	768	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.994	
Flt Protected						
Satd. Flow (prot)	0	1572	0	1852	1901	0
Flt Permitted						
Satd. Flow (perm)	0	1572	0	1852	1901	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	202			351	94	
Travel Time (s)	4.6			8.0	2.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	27%	8%	0%	6%	6%	5%
Adj. Flow (vph)	0	59	0	291	835	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	59	0	291	871	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	0.96	0.96	0.92	0.92
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.4%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes w/Corridor Improvements
 5: Red Schoolhouse Rd & DeSalvo Ct

Peak SAT Hour
 12/22/2020

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	54	0	268	768	33
Future Vol, veh/h	0	54	0	268	768	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	Free
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	27	8	0	6	6	5
Mvmt Flow	0	59	0	291	835	36

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	835	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.28	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.372	-	-	-
Pot Cap-1 Maneuver	0	359	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	359	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 359	-
HCM Lane V/C Ratio	- 0.163	-
HCM Control Delay (s)	- 17	-
HCM Lane LOS	- C	-
HCM 95th %tile Q(veh)	- 0.6	-

2025 Build Traffic Volumes w/Corridor Improvements
6: Red Schoolhouse Rd & NB Entrance Ramp

Peak SAT Hour
12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑	↗		↑
Traffic Volume (vph)	0	0	266	531	0	822
Future Volume (vph)	0	0	266	531	0	822
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	13	13	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	1870	1589	0	1749
Flt Permitted						
Satd. Flow (perm)	0	0	1870	1589	0	1749
Link Speed (mph)	30		30			30
Link Distance (ft)	251		154			351
Travel Time (s)	5.7		3.5			8.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Adj. Flow (vph)	0	0	289	577	0	893
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	289	577	0	893
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.85	0.85	0.96	0.96	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.6%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes w/Corridor Improvements
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗			↕
Traffic Volume (vph)	0	25	772	48	0	822
Future Volume (vph)	0	25	772	48	0	822
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.991			
Flt Protected						
Satd. Flow (prot)	0	1611	3507	0	0	1863
Flt Permitted						
Satd. Flow (perm)	0	1611	3507	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	563		100			153
Travel Time (s)	12.8		2.3			3.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	839	52	0	893
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	891	0	0	893
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	46.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↖
Traffic Vol, veh/h	0	25	772	48	0	822
Future Vol, veh/h	0	25	772	48	0	822
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	839	52	0	893

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	420	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.93	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.319	-
Pot Cap-1 Maneuver	0	583	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	583	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 583	-
HCM Lane V/C Ratio	- 0.047	-
HCM Control Delay (s)	- 11.5	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.1	-

2025 Build Traffic Volumes w/Corridor Improvements
 8: Wilshire Dr & Summit Rd

Peak SAT Hour
 12/22/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	99	5	46	160	2	3
Future Volume (vph)	99	5	46	160	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994			0.910		
Flt Protected				0.989	0.984	
Satd. Flow (prot)	1784	0	0	1677	1475	0
Flt Permitted				0.989	0.984	
Satd. Flow (perm)	1784	0	0	1677	1475	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	248			398	442	
Travel Time (s)	5.6			9.0	10.0	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	23%	26%	8%	24%	11%
Adj. Flow (vph)	122	6	57	198	2	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	0	0	255	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	27.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	99	5	46	160	2	3
Future Vol, veh/h	99	5	46	160	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	5	23	26	8	24	11
Mvmt Flow	122	6	57	198	2	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	128	0	437
Stage 1	-	-	-	-	125
Stage 2	-	-	-	-	312
Critical Hdwy	-	-	4.36	-	6.64
Critical Hdwy Stg 1	-	-	-	-	5.64
Critical Hdwy Stg 2	-	-	-	-	5.64
Follow-up Hdwy	-	-	2.434	-	3.716
Pot Cap-1 Maneuver	-	-	1322	-	538
Stage 1	-	-	-	-	849
Stage 2	-	-	-	-	695
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1322	-	512
Mov Cap-2 Maneuver	-	-	-	-	512
Stage 1	-	-	-	-	808
Stage 2	-	-	-	-	695

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	691	-	-	1322	-
HCM Lane V/C Ratio	0.009	-	-	0.043	-
HCM Control Delay (s)	10.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak SAT Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	10	0	10	0	10	0	618	10	0	496	0
Future Volume (vph)	192	10	0	10	0	10	0	618	10	0	496	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt					0.932			0.998				
Flt Protected	0.950	0.957			0.976							
Satd. Flow (prot)	1681	1694	0	0	1694	0	0	3532	0	0	1863	0
Flt Permitted	0.743	0.731			0.842							
Satd. Flow (perm)	1315	1294	0	0	1462	0	0	3532	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			206			536			299	
Travel Time (s)		3.3			4.7			12.2			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	209	11	0	11	0	11	0	672	11	0	539	0
Shared Lane Traffic (%)	48%											
Lane Group Flow (vph)	109	111	0	0	22	0	0	683	0	0	539	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		1	2			2			2	
Detector Template				Left								
Leading Detector (ft)	83	83		20	83			83			83	
Trailing Detector (ft)	-5	-5		0	-5			-5			-5	
Detector 1 Position(ft)	-5	-5		0	-5			-5			-5	
Detector 1 Size(ft)	40	40		20	40			40			40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	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	
Detector 2 Position(ft)	43	43			43			43			43	
Detector 2 Size(ft)	40	40			40			40			40	
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA			NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8								

2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak SAT Hour
 12/22/2020

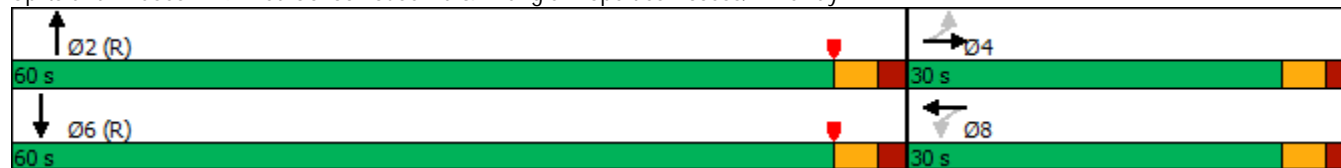


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8			2			6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			10.0			10.0	
Minimum Split (s)	23.0	23.0		10.0	10.0			23.0			23.0	
Total Split (s)	30.0	30.0		30.0	30.0			60.0			60.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%			66.7%			66.7%	
Maximum Green (s)	25.0	25.0		25.0	25.0			55.0			55.0	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Recall Mode	None	None		None	None			C-Max			C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	12.2	12.2			12.2			67.8			67.8	
Actuated g/C Ratio	0.14	0.14			0.14			0.75			0.75	
v/c Ratio	0.62	0.64			0.10			0.26			0.38	
Control Delay	50.5	52.2			12.9			5.3			5.4	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	50.5	52.2			12.9			5.3			5.4	
LOS	D	D			B			A			A	
Approach Delay		51.4			12.9			5.3			5.4	
Approach LOS		D			B			A			A	
Queue Length 50th (ft)	62	64			0			36			86	
Queue Length 95th (ft)	111	113			19			180			173	
Internal Link Dist (ft)		63			126			456			219	
Turn Bay Length (ft)												
Base Capacity (vph)	365	359			423			2663			1404	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.30	0.31			0.05			0.26			0.38	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	55 (61%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	12.3
Intersection Capacity Utilization	44.0%
Analysis Period (min)	15
Intersection LOS:	B
ICU Level of Service	A

Splits and Phases: 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway



2025 Build Traffic Volumes w/Corridor Improvements
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak SAT Hour
 12/22/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↖			↔			↕			↕	
Traffic Volume (veh/h)	192	10	0	10	0	10	0	618	10	0	496	0
Future Volume (veh/h)	192	10	0	10	0	10	0	618	10	0	496	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	217	0	0	11	0	11	0	672	11	0	539	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	0	2	2	2	0	2	2	0	2	0
Cap, veh/h	454	190	0	120	18	78	0	2817	46	0	1473	
Arrive On Green	0.10	0.00	0.00	0.10	0.00	0.10	0.00	1.00	1.00	0.00	0.79	0.00
Sat Flow, veh/h	2807	1870	0	591	180	771	0	3672	59	0	1870	0
Grp Volume(v), veh/h	217	0	0	22	0	0	0	334	349	0	539	0
Grp Sat Flow(s),veh/h/ln	1404	1870	0	1543	0	0	0	1777	1860	0	1870	0
Q Serve(g_s), s	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0
Prop In Lane	1.00		0.00	0.50		0.50	0.00		0.03	0.00		0.00
Lane Grp Cap(c), veh/h	454	190	0	217	0	0	0	1399	1464	0	1473	
V/C Ratio(X)	0.48	0.00	0.00	0.10	0.00	0.00	0.00	0.24	0.24	0.00	0.37	
Avail Cap(c_a), veh/h	949	520	0	480	0	0	0	1399	1464	0	1473	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.82	0.82	0.00	1.00	0.00
Uniform Delay (d), s/veh	39.1	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.3	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.1	0.0	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	0.0	0.0	36.9	0.0	0.0	0.0	0.3	0.3	0.0	3.6	0.0
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		217			22			683			539	A
Approach Delay, s/veh		39.4			36.9			0.3			3.6	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.9		14.1		75.9		14.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		55.0		25.0		55.0		25.0				
Max Q Clear Time (g_c+I1), s		2.0		8.5		9.7		3.1				
Green Ext Time (p_c), s		2.4		0.7		2.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

2025 Build Traffic Volumes w/Corridor Improvements
 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak SAT Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	0	171	106	0	72	228	416	98	81	363	62
Future Volume (vph)	140	0	171	106	0	72	228	416	98	81	363	62
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		100
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	86			86			86			86		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.850			0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	1770	1583	0	1770	1809	0	1770	1863	1583
Flt Permitted	0.706			0.496			0.433			0.381		
Satd. Flow (perm)	1315	1583	0	924	1583	0	807	1809	0	710	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		520			475			19				85
Link Speed (mph)		30			30			30				30
Link Distance (ft)		297			621			588				536
Travel Time (s)		6.8			14.1			13.4				12.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	152	0	186	115	0	78	248	452	107	88	395	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	152	186	0	115	78	0	248	559	0	88	395	67
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2		2	2	2
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83		83	83	83
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Size(ft)	40	40		40	40		40	40		40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	43
Detector 2 Size(ft)	40	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	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	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6

2025 Build Traffic Volumes w/Corridor Improvements
 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak SAT Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	15.0		10.0	15.0	15.0
Total Split (s)	25.0	25.0		25.0	25.0		15.0	50.0		15.0	50.0	50.0
Total Split (%)	27.8%	27.8%		27.8%	27.8%		16.7%	55.6%		16.7%	55.6%	55.6%
Maximum Green (s)	20.0	20.0		20.0	20.0		10.0	45.0		10.0	45.0	45.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							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
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effect Green (s)	15.8	15.8		15.8	15.8		62.2	54.2		56.9	49.8	49.8
Actuated g/C Ratio	0.18	0.18		0.18	0.18		0.69	0.60		0.63	0.55	0.55
v/c Ratio	0.66	0.26		0.71	0.12		0.38	0.51		0.17	0.38	0.07
Control Delay	47.3	0.9		56.9	0.4		6.9	14.2		5.6	15.7	8.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	47.3	0.9		56.9	0.4		6.9	14.2		5.6	15.7	8.0
LOS	D	A		E	A		A	B		A	B	A
Approach Delay		21.8			34.0			12.0			13.1	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	82	0		62	0		40	171		1	123	3
Queue Length 95th (ft)	132	0		111	0		88	332		59	322	39
Internal Link Dist (ft)		217			541			508			456	
Turn Bay Length (ft)							100			100		100
Base Capacity (vph)	300	763		211	728		671	1104		589	1044	925
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.51	0.24		0.55	0.11		0.37	0.51		0.15	0.38	0.07

Intersection Summary	
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	16.3
Intersection LOS:	B
Intersection Capacity Utilization:	65.5%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd



2025 Build Traffic Volumes w/Corridor Improvements
 10: Red Schoolhouse Rd & Triangle Dr/Ronwood Rd

Peak SAT Hour
 12/22/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	0	171	106	0	72	228	416	98	81	363	62
Future Volume (veh/h)	140	0	171	106	0	72	228	416	98	81	363	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	0	186	115	0	78	248	452	107	88	395	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	0	349	219	0	349	550	824	195	482	984	834
Arrive On Green	0.22	0.00	0.22	0.22	0.00	0.22	0.09	0.56	0.56	0.02	0.17	0.17
Sat Flow, veh/h	1321	0	1585	1198	0	1585	1781	1462	346	1781	1870	1585
Grp Volume(v), veh/h	152	0	186	115	0	78	248	0	559	88	395	67
Grp Sat Flow(s),veh/h/ln	1321	0	1585	1198	0	1585	1781	0	1808	1781	1870	1585
Q Serve(g_s), s	9.6	0.0	9.3	8.4	0.0	3.6	5.6	0.0	17.6	2.0	16.9	3.2
Cycle Q Clear(g_c), s	13.2	0.0	9.3	17.8	0.0	3.6	5.6	0.0	17.6	2.0	16.9	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	317	0	349	219	0	349	550	0	1020	482	984	834
V/C Ratio(X)	0.48	0.00	0.53	0.52	0.00	0.22	0.45	0.00	0.55	0.18	0.40	0.08
Avail Cap(c_a), veh/h	320	0	352	222	0	352	593	0	1020	592	984	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	34.2	0.0	31.0	38.9	0.0	28.8	9.9	0.0	12.4	10.1	24.6	18.9
Incr Delay (d2), s/veh	1.1	0.0	1.5	2.2	0.0	0.3	0.6	0.0	2.1	0.2	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	3.6	2.6	0.0	1.4	2.0	0.0	7.1	0.8	8.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	32.5	41.1	0.0	29.1	10.5	0.0	14.5	10.3	25.7	19.1
LnGrp LOS	D	A	C	D	A	C	B	A	B	B	C	B
Approach Vol, veh/h		338			193			807			550	
Approach Delay, s/veh		33.8			36.2			13.3			22.5	
Approach LOS		C			D			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	55.8		24.8	12.8	52.4		24.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	45.0		20.0	10.0	45.0		20.0				
Max Q Clear Time (g_c+I1), s	4.0	19.6		15.2	7.6	18.9		19.8				
Green Ext Time (p_c), s	0.1	3.5		0.8	0.3	2.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				22.0								
HCM 6th LOS				C								

2025 Build Traffic Volumes w/Corridor Improvements
 11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	16	726	11	14	626
Future Volume (vph)	12	16	726	11	14	626
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.923		0.998			
Flt Protected	0.979				0.950	
Satd. Flow (prot)	1683	0	1859	0	1770	1863
Flt Permitted	0.979				0.950	
Satd. Flow (perm)	1683	0	1859	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	321		540			588
Travel Time (s)	7.3		12.3			13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	17	789	12	15	680
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	0	801	0	15	680
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	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 Capacity Utilization	48.9%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes w/Corridor Improvements
 11: Red Schoolhouse Rd & Loescher Ln

Peak SAT Hour
 12/22/2020

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	12	16	726	11	14	626
Future Vol, veh/h	12	16	726	11	14	626
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	17	789	12	15	680

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1505	795	0	0	801	0
Stage 1	795	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	133	388	-	-	822	-
Stage 1	445	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	131	388	-	-	822	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	437	-	-	-	-	-
Stage 2	487	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.9	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	211	822
HCM Lane V/C Ratio	-	-	0.144	0.019
HCM Control Delay (s)	-	-	24.9	9.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1



RED SCHOOLHOUSE ROAD CORRIDOR

2025 BUILD CONDITIONS CAPACITY ANALYSIS (ALTERNATE WILLIAMS ROAD SIGNALIZATION)

**WEEKDAY AM PEAK HOUR
WEEKDAY PM PEAK HOUR
SATURDAY PEAK HOUR**

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2	Ø3	Ø5
Lane Configurations									
Traffic Volume (vph)	167	164	593	188	71	318			
Future Volume (vph)	167	164	593	188	71	318			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	12	12	15	15	13	13			
Storage Length (ft)	0	0		0	100				
Storage Lanes	1	0		0	1				
Taper Length (ft)	86				86				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Frt	0.933		0.968						
Flt Protected	0.975				0.950				
Satd. Flow (prot)	1593	0	1932	0	1696	1650			
Flt Permitted	0.975				0.107				
Satd. Flow (perm)	1593	0	1932	0	191	1650			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	44		27						
Link Speed (mph)	30		30			30			
Link Distance (ft)	677		229			478			
Travel Time (s)	15.4		5.2			10.9			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93			
Heavy Vehicles (%)	10%	7%	4%	7%	10%	19%			
Adj. Flow (vph)	180	176	638	202	76	342			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	356	0	840	0	76	342			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	12		13			13			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane									
Headway Factor	1.00	1.00	0.88	0.88	0.96	0.96			
Turning Speed (mph)	15	9		9	15				
Number of Detectors	2		2		2	2			
Detector Template									
Leading Detector (ft)	83		83		83	83			
Trailing Detector (ft)	-5		-5		-5	-5			
Detector 1 Position(ft)	-5		-5		-5	-5			
Detector 1 Size(ft)	40		40		40	40			
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	43		43		43	43			
Detector 2 Size(ft)	40		40		40	40			
Detector 2 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			
Detector 2 Channel									
Detector 2 Extend (s)	0.0		0.0		0.0	0.0			
Turn Type	Prot		NA		pm+pt	NA			

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2	Ø3	Ø5
Protected Phases	4		2 3		1	6	2	3	5
Permitted Phases					6				
Detector Phase	4		2 3		1	6			
Switch Phase									
Minimum Initial (s)	5.0				5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	10.0				10.0	15.0	15.0	10.0	10.0
Total Split (s)	25.0				12.0	40.0	43.0	20.0	15.0
Total Split (%)	25.0%				12.0%	40.0%	43%	20%	15%
Maximum Green (s)	20.0				7.0	35.0	38.0	15.0	10.0
Yellow Time (s)	3.0				3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0				2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0				0.0	0.0			
Total Lost Time (s)	5.0				5.0	5.0			
Lead/Lag	Lag				Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0				3.0	2.0	2.0	2.0	2.0
Recall Mode	None				None	Min	Min	None	None
Walk Time (s)							7.0	7.0	
Flash Dont Walk (s)							11.0	11.0	
Pedestrian Calls (#/hr)							0	0	
Act Effect Green (s)	20.1		56.3		42.6	37.2			
Actuated g/C Ratio	0.21		0.59		0.45	0.39			
v/c Ratio	0.96		0.73		0.40	0.53			
Control Delay	74.4		4.3		20.0	28.1			
Queue Delay	0.0		2.9		0.0	0.0			
Total Delay	74.4		7.2		20.0	28.1			
LOS	E		A		C	C			
Approach Delay	74.4		7.2			26.6			
Approach LOS	E		A			C			
Queue Length 50th (ft)	~206		25		24	170			
Queue Length 95th (ft)	#394		m38		49	272			
Internal Link Dist (ft)	597		149			398			
Turn Bay Length (ft)					100				
Base Capacity (vph)	369		1189		195	641			
Starvation Cap Reductn	0		237		0	0			
Spillback Cap Reductn	0		0		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.96		0.88		0.39	0.53			

Intersection Summary

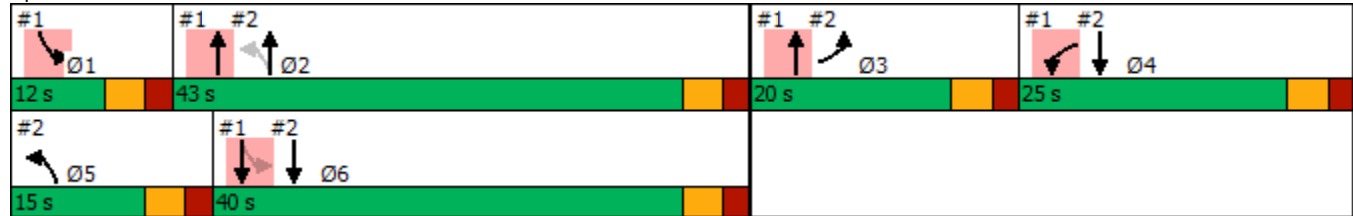
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	95.7
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.98
Intersection Signal Delay:	27.1
Intersection LOS:	C
Intersection Capacity Utilization:	78.6%
ICU Level of Service:	D
Analysis Period (min):	15

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak AM Hour
 12/22/2020

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Red Schoolhouse Rd & Williams Rd



2025 Build Traffic Volumes w/Coordinated Williams Road Signal
2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1	Ø4	Ø6
Lane Configurations									
Traffic Volume (vph)	68	140	96	713	385	97			
Future Volume (vph)	68	140	96	713	385	97			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	11	11	14	14	12	12			
Storage Length (ft)	0	0	100			0			
Storage Lanes	1	0	1			0			
Taper Length (ft)	86		86						
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Frt	0.909				0.973				
Flt Protected	0.984		0.950						
Satd. Flow (prot)	1516	0	1689	1930	1546	0			
Flt Permitted	0.984		0.329						
Satd. Flow (perm)	1516	0	585	1930	1546	0			
Right Turn on Red		Yes				Yes			
Satd. Flow (RTOR)	88				20				
Link Speed (mph)	30			30	30				
Link Distance (ft)	579			595	229				
Travel Time (s)	13.2			13.5	5.2				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94			
Heavy Vehicles (%)	5%	10%	14%	5%	21%	14%			
Adj. Flow (vph)	72	149	102	759	410	103			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	221	0	102	759	513	0			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Left	Left	Right			
Median Width(ft)	11			14	14				
Link Offset(ft)	0			0	0				
Crosswalk Width(ft)	16			16	16				
Two way Left Turn Lane									
Headway Factor	1.04	1.04	0.92	0.92	1.00	1.00			
Turning Speed (mph)	15	9	15			9			
Number of Detectors	2		2	2	2				
Detector Template									
Leading Detector (ft)	83		83	83	83				
Trailing Detector (ft)	-5		-5	-5	-5				
Detector 1 Position(ft)	-5		-5	-5	-5				
Detector 1 Size(ft)	40		40	40	40				
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0	0.0	0.0				
Detector 1 Queue (s)	0.0		0.0	0.0	0.0				
Detector 1 Delay (s)	0.0		0.0	0.0	0.0				
Detector 2 Position(ft)	43		43	43	43				
Detector 2 Size(ft)	40		40	40	40				
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel									
Detector 2 Extend (s)	0.0		0.0	0.0	0.0				
Turn Type	Prot		pm+pt	NA	NA				

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
 12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1	Ø4	Ø6
Protected Phases	3		5	2	4	6	1	4	6
Permitted Phases			2						
Detector Phase	3		5	2	4	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0	10.0			5.0	5.0	10.0
Minimum Split (s)	10.0		10.0	15.0			10.0	10.0	15.0
Total Split (s)	20.0		15.0	43.0			12.0	25.0	40.0
Total Split (%)	20.0%		15.0%	43.0%			12%	25%	40%
Maximum Green (s)	15.0		10.0	38.0			7.0	20.0	35.0
Yellow Time (s)	3.0		3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0					
Total Lost Time (s)	5.0		5.0	5.0					
Lead/Lag	Lead		Lead	Lag			Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	2.0		2.0	2.0			3.0	2.0	2.0
Recall Mode	None		None	Min			None	None	Min
Walk Time (s)	7.0			7.0					
Flash Dont Walk (s)	11.0			11.0					
Pedestrian Calls (#/hr)	0			0					
Act Effect Green (s)	13.0		44.7	38.3	58.6				
Actuated g/C Ratio	0.14		0.47	0.40	0.61				
v/c Ratio	0.79		0.28	0.98	0.54				
Control Delay	44.7		15.4	60.1	3.7				
Queue Delay	1.6		0.0	4.8	0.2				
Total Delay	46.3		15.4	64.8	3.8				
LOS	D		B	E	A				
Approach Delay	46.3			59.0	3.8				
Approach LOS	D			E	A				
Queue Length 50th (ft)	81		33	~523	28				
Queue Length 95th (ft)	#189		62	#749	m35				
Internal Link Dist (ft)	499			515	149				
Turn Bay Length (ft)			100						
Base Capacity (vph)	313		397	771	953				
Starvation Cap Reductn	0		0	0	64				
Spillback Cap Reductn	23		0	16	0				
Storage Cap Reductn	0		0	0	0				
Reduced v/c Ratio	0.76		0.26	1.01	0.58				

Intersection Summary

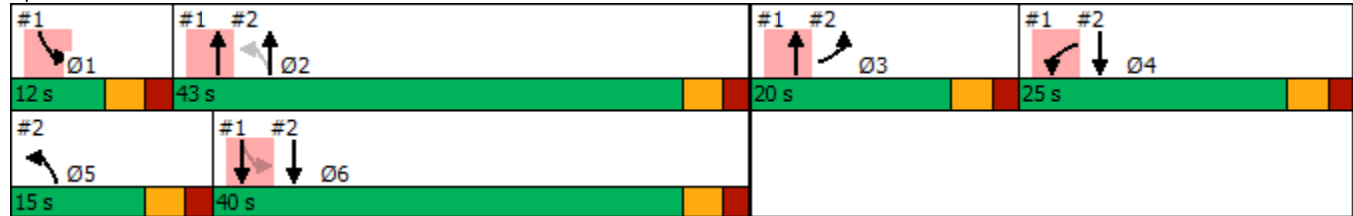
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	95.7
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.98
Intersection Signal Delay:	39.5
Intersection LOS:	D
Intersection Capacity Utilization:	58.2%
ICU Level of Service:	B
Analysis Period (min):	15

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 2: Red Schoolhouse Rd & Summit Rd

Peak AM Hour
 12/22/2020











- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Red Schoolhouse Rd & Summit Rd



2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
 12/22/2020

							Ø2	Ø3	Ø5
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations									
Traffic Volume (vph)	152	71	391	182	108	467			
Future Volume (vph)	152	71	391	182	108	467			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	12	12	15	15	13	13			
Storage Length (ft)	0	0		0	100				
Storage Lanes	1	0		0	1				
Taper Length (ft)	86				86				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Frt	0.957		0.957						
Flt Protected	0.967				0.950				
Satd. Flow (prot)	1602	0	1910	0	1760	1870			
Flt Permitted	0.967				0.188				
Satd. Flow (perm)	1602	0	1910	0	348	1870			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	21		37						
Link Speed (mph)	30		30			30			
Link Distance (ft)	677		229			478			
Travel Time (s)	15.4		5.2			10.9			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89			
Heavy Vehicles (%)	12%	5%	6%	2%	6%	5%			
Adj. Flow (vph)	171	80	439	204	121	525			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	251	0	643	0	121	525			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	12		13			13			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane									
Headway Factor	1.00	1.00	0.88	0.88	0.96	0.96			
Turning Speed (mph)	15	9		9	15				
Number of Detectors	2		2		2	2			
Detector Template									
Leading Detector (ft)	83		83		83	83			
Trailing Detector (ft)	-5		-5		-5	-5			
Detector 1 Position(ft)	-5		-5		-5	-5			
Detector 1 Size(ft)	40		40		40	40			
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	43		43		43	43			
Detector 2 Size(ft)	40		40		40	40			
Detector 2 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			
Detector 2 Channel									
Detector 2 Extend (s)	0.0		0.0		0.0	0.0			
Turn Type	Prot		NA		pm+pt	NA			

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
 12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2	Ø3	Ø5
Protected Phases	4		2 3		1	6	2	3	5
Permitted Phases					6				
Detector Phase	4		2 3		1	6			
Switch Phase									
Minimum Initial (s)	5.0				5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	10.0				10.0	15.0	15.0	10.0	10.0
Total Split (s)	25.0				15.0	40.0	40.0	20.0	15.0
Total Split (%)	25.0%				15.0%	40.0%	40%	20%	15%
Maximum Green (s)	20.0				10.0	35.0	35.0	15.0	10.0
Yellow Time (s)	3.0				3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0				2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0				0.0	0.0			
Total Lost Time (s)	5.0				5.0	5.0			
Lead/Lag	Lag				Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0
Recall Mode	None				None	Min	Min	None	None
Walk Time (s)	7.0					7.0	7.0		
Flash Dont Walk (s)	11.0					11.0	11.0		
Pedestrian Calls (#/hr)	0					0	0		
Act Effect Green (s)	18.3		50.2		40.0	31.3			
Actuated g/C Ratio	0.20		0.54		0.43	0.34			
v/c Ratio	0.75		0.61		0.43	0.83			
Control Delay	48.9		2.9		18.4	41.4			
Queue Delay	0.2		1.2		0.0	0.0			
Total Delay	49.1		4.1		18.4	41.4			
LOS	D		A		B	D			
Approach Delay	49.1		4.1			37.1			
Approach LOS	D		A			D			
Queue Length 50th (ft)	139		11		40	299			
Queue Length 95th (ft)	#247		34		71	#440			
Internal Link Dist (ft)	597		149			398			
Turn Bay Length (ft)					100				
Base Capacity (vph)	370		1089		311	722			
Starvation Cap Reductn	0		237		0	0			
Spillback Cap Reductn	5		0		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.69		0.75		0.39	0.73			

Intersection Summary

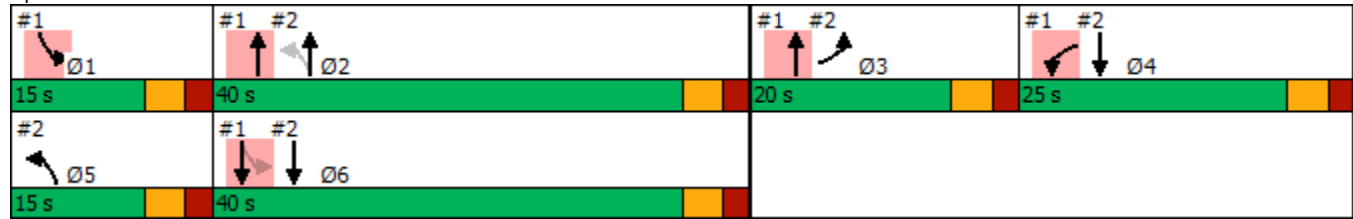
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	92.4
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	25.3
Intersection LOS:	C
Intersection Capacity Utilization:	62.9%
ICU Level of Service:	B
Analysis Period (min):	15

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak PM Hour
 12/22/2020

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Red Schoolhouse Rd & Williams Rd



2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
 12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1	Ø4	Ø6
Lane Configurations									
Traffic Volume (vph)	60	121	169	513	537	82			
Future Volume (vph)	60	121	169	513	537	82			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	11	11	14	14	12	12			
Storage Length (ft)	0	0	100			0			
Storage Lanes	1	0	1			0			
Taper Length (ft)	86		86						
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Frt	0.910				0.982				
Flt Protected	0.984		0.950						
Satd. Flow (prot)	1561	0	1851	1949	1818	0			
Flt Permitted	0.984		0.124						
Satd. Flow (perm)	1561	0	242	1949	1818	0			
Right Turn on Red		Yes				Yes			
Satd. Flow (RTOR)	86				12				
Link Speed (mph)	30			30	30				
Link Distance (ft)	579			595	229				
Travel Time (s)	13.2			13.5	5.2				
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89			
Heavy Vehicles (%)	2%	7%	4%	4%	3%	0%			
Adj. Flow (vph)	67	136	190	576	603	92			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	203	0	190	576	695	0			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Left	Left	Right			
Median Width(ft)	11			14	14				
Link Offset(ft)	0			0	0				
Crosswalk Width(ft)	16			16	16				
Two way Left Turn Lane									
Headway Factor	1.04	1.04	0.92	0.92	1.00	1.00			
Turning Speed (mph)	15	9	15			9			
Number of Detectors	2		2	2	2				
Detector Template									
Leading Detector (ft)	83		83	83	83				
Trailing Detector (ft)	-5		-5	-5	-5				
Detector 1 Position(ft)	-5		-5	-5	-5				
Detector 1 Size(ft)	40		40	40	40				
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0	0.0	0.0				
Detector 1 Queue (s)	0.0		0.0	0.0	0.0				
Detector 1 Delay (s)	0.0		0.0	0.0	0.0				
Detector 2 Position(ft)	43		43	43	43				
Detector 2 Size(ft)	40		40	40	40				
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel									
Detector 2 Extend (s)	0.0		0.0	0.0	0.0				
Turn Type	Prot		pm+pt	NA	NA				

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1	Ø4	Ø6
Protected Phases	3		5	2	4 6		1	4	6
Permitted Phases			2						
Detector Phase	3		5	2	4 6				
Switch Phase									
Minimum Initial (s)	5.0		5.0	10.0			5.0	5.0	10.0
Minimum Split (s)	10.0		10.0	15.0			10.0	10.0	15.0
Total Split (s)	20.0		15.0	40.0			15.0	25.0	40.0
Total Split (%)	20.0%		15.0%	40.0%			15%	25%	40%
Maximum Green (s)	15.0		10.0	35.0			10.0	20.0	35.0
Yellow Time (s)	3.0		3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0					
Total Lost Time (s)	5.0		5.0	5.0					
Lead/Lag	Lead		Lead	Lag			Lead	Lag	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
Recall Mode	None		None	Min			None	None	Min
Walk Time (s)				7.0				7.0	7.0
Flash Dont Walk (s)				11.0				11.0	11.0
Pedestrian Calls (#/hr)				0				0	0
Act Effct Green (s)	12.8		41.8	32.2	49.6				
Actuated g/C Ratio	0.14		0.45	0.35	0.54				
v/c Ratio	0.70		0.69	0.85	0.71				
Control Delay	36.7		31.4	41.9	5.9				
Queue Delay	0.0		0.0	0.0	0.3				
Total Delay	36.7		31.4	41.9	6.1				
LOS	D		C	D	A				
Approach Delay	36.7			39.3	6.1				
Approach LOS	D			D	A				
Queue Length 50th (ft)	70		65	331	19				
Queue Length 95th (ft)	146		#149	#511	72				
Internal Link Dist (ft)	499			515	149				
Turn Bay Length (ft)			100						
Base Capacity (vph)	330		288	756	1108				
Starvation Cap Reductn	0		0	0	78				
Spillback Cap Reductn	0		0	0	0				
Storage Cap Reductn	0		0	0	0				
Reduced v/c Ratio	0.62		0.66	0.76	0.67				

Intersection Summary

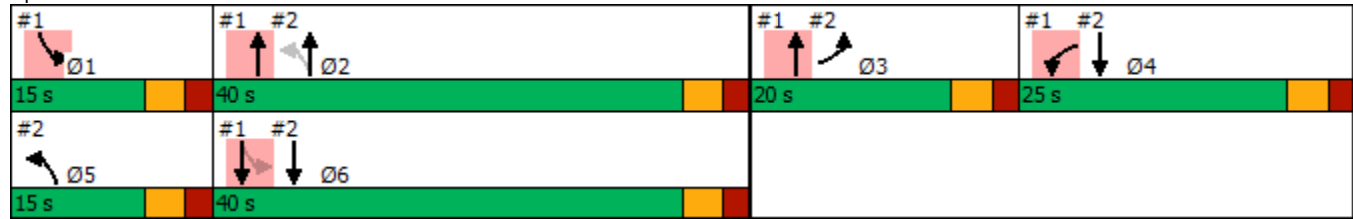
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	92.4
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.85
Intersection Signal Delay:	25.1
Intersection LOS:	C
Intersection Capacity Utilization:	65.9%
ICU Level of Service:	C
Analysis Period (min):	15

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 2: Red Schoolhouse Rd & Summit Rd

Peak PM Hour
 12/22/2020

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Red Schoolhouse Rd & Summit Rd



2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
 12/22/2020

							Ø2	Ø3	Ø5
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations									
Traffic Volume (vph)	103	41	201	104	42	238			
Future Volume (vph)	103	41	201	104	42	238			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	12	12	15	15	13	13			
Storage Length (ft)	0	0		0	100				
Storage Lanes	1	0		0	1				
Taper Length (ft)	86				86				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Frt	0.962		0.954						
Flt Protected	0.965				0.950				
Satd. Flow (prot)	1616	0	1898	0	1696	1650			
Flt Permitted	0.965				0.562				
Satd. Flow (perm)	1616	0	1898	0	1003	1650			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	17		47						
Link Speed (mph)	30		30			30			
Link Distance (ft)	677		229			478			
Travel Time (s)	15.4		5.2			10.9			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93			
Heavy Vehicles (%)	10%	7%	4%	7%	10%	19%			
Adj. Flow (vph)	111	44	216	112	45	256			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	155	0	328	0	45	256			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Right	Left	Left			
Median Width(ft)	12		13			13			
Link Offset(ft)	0		0			0			
Crosswalk Width(ft)	16		16			16			
Two way Left Turn Lane									
Headway Factor	1.00	1.00	0.88	0.88	0.96	0.96			
Turning Speed (mph)	15	9		9	15				
Number of Detectors	2		2		2	2			
Detector Template									
Leading Detector (ft)	83		83		83	83			
Trailing Detector (ft)	-5		-5		-5	-5			
Detector 1 Position(ft)	-5		-5		-5	-5			
Detector 1 Size(ft)	40		40		40	40			
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			
Detector 2 Position(ft)	43		43		43	43			
Detector 2 Size(ft)	40		40		40	40			
Detector 2 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			
Detector 2 Channel									
Detector 2 Extend (s)	0.0		0.0		0.0	0.0			
Turn Type	Prot		NA		pm+pt	NA			

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 1: Red Schoolhouse Rd & Williams Rd

Peak SAT Hour
 12/22/2020

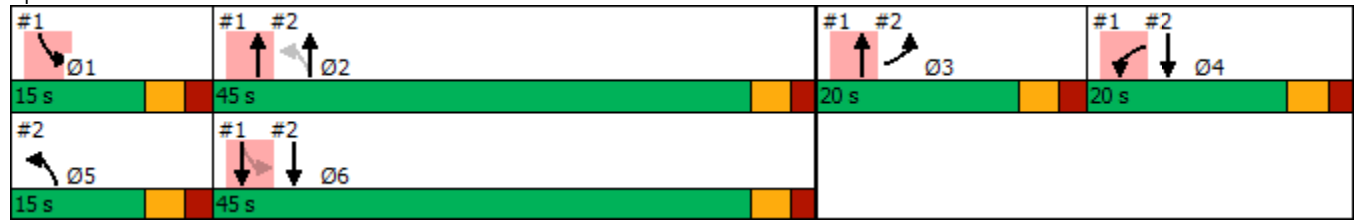


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø2	Ø3	Ø5
Protected Phases	4		2 3		1	6	2	3	5
Permitted Phases					6				
Detector Phase	4		2 3		1	6			
Switch Phase									
Minimum Initial (s)	5.0				5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	10.0				10.0	15.0	15.0	10.0	10.0
Total Split (s)	20.0				15.0	45.0	45.0	20.0	15.0
Total Split (%)	20.0%				15.0%	45.0%	45%	20%	15%
Maximum Green (s)	15.0				10.0	40.0	40.0	15.0	10.0
Yellow Time (s)	3.0				3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0				2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0				0.0	0.0			
Total Lost Time (s)	5.0				5.0	5.0			
Lead/Lag	Lag				Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				3.0	3.0	3.0	3.0	3.0
Recall Mode	None				None	Min	Min	None	None
Walk Time (s)							7.0	7.0	
Flash Dont Walk (s)							11.0	11.0	
Pedestrian Calls (#/hr)							0	0	
Act Effct Green (s)	11.6		38.2		23.8	17.0			
Actuated g/C Ratio	0.17		0.57		0.36	0.25			
v/c Ratio	0.53		0.30		0.11	0.61			
Control Delay	31.5		0.8		11.4	29.4			
Queue Delay	0.0		0.1		0.0	0.0			
Total Delay	31.5		0.8		11.4	29.4			
LOS	C		A		B	C			
Approach Delay	31.5		0.8			26.7			
Approach LOS	C		A			C			
Queue Length 50th (ft)	50		1		9	90			
Queue Length 95th (ft)	127		0		29	180			
Internal Link Dist (ft)	597		149			398			
Turn Bay Length (ft)					100				
Base Capacity (vph)	387		1310		517	1019			
Starvation Cap Reductn	0		233		0	0			
Spillback Cap Reductn	0		0		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.40		0.30		0.09	0.25			

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	66.8
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	16.8
Intersection LOS:	B
Intersection Capacity Utilization:	41.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 1: Red Schoolhouse Rd & Williams Rd



2025 Build Traffic Volumes w/Coordinated Williams Road Signal
2: Red Schoolhouse Rd & Summit Rd

Peak SAT Hour
12/22/2020



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1	Ø4	Ø6
Lane Configurations									
Traffic Volume (vph)	27	75	146	279	281	60			
Future Volume (vph)	27	75	146	279	281	60			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	11	11	14	14	12	12			
Storage Length (ft)	0	0	100			0			
Storage Lanes	1	0	1			0			
Taper Length (ft)	86		86						
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Frt	0.901				0.976				
Flt Protected	0.987		0.950						
Satd. Flow (prot)	1503	0	1689	1930	1548	0			
Flt Permitted	0.987		0.333						
Satd. Flow (perm)	1503	0	592	1930	1548	0			
Right Turn on Red		Yes				Yes			
Satd. Flow (RTOR)	80				17				
Link Speed (mph)	30			30	30				
Link Distance (ft)	579			595	229				
Travel Time (s)	13.2			13.5	5.2				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94			
Heavy Vehicles (%)	5%	10%	14%	5%	21%	14%			
Adj. Flow (vph)	29	80	155	297	299	64			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	109	0	155	297	363	0			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Left	Left	Right			
Median Width(ft)	11			14	14				
Link Offset(ft)	0			0	0				
Crosswalk Width(ft)	16			16	16				
Two way Left Turn Lane									
Headway Factor	1.04	1.04	0.92	0.92	1.00	1.00			
Turning Speed (mph)	15	9	15			9			
Number of Detectors	2		2	2	2				
Detector Template									
Leading Detector (ft)	83		83	83	83				
Trailing Detector (ft)	-5		-5	-5	-5				
Detector 1 Position(ft)	-5		-5	-5	-5				
Detector 1 Size(ft)	40		40	40	40				
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0		0.0	0.0	0.0				
Detector 1 Queue (s)	0.0		0.0	0.0	0.0				
Detector 1 Delay (s)	0.0		0.0	0.0	0.0				
Detector 2 Position(ft)	43		43	43	43				
Detector 2 Size(ft)	40		40	40	40				
Detector 2 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel									
Detector 2 Extend (s)	0.0		0.0	0.0	0.0				
Turn Type	Prot		pm+pt	NA	NA				

2025 Build Traffic Volumes w/Coordinated Williams Road Signal
 2: Red Schoolhouse Rd & Summit Rd

Peak SAT Hour
 12/22/2020

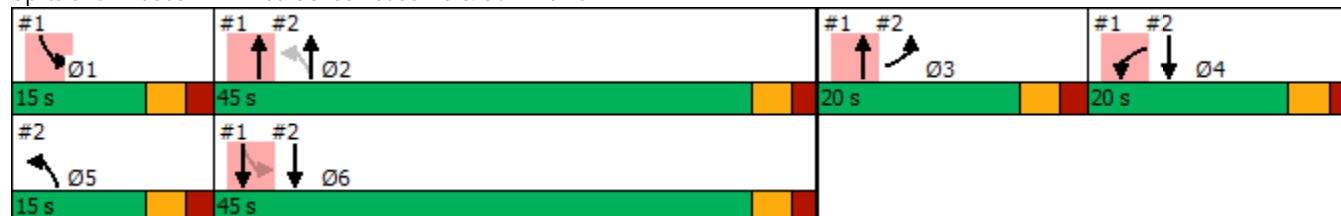


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø1	Ø4	Ø6
Protected Phases	3		5	2	4 6		1	4	6
Permitted Phases			2						
Detector Phase	3		5	2	4 6				
Switch Phase									
Minimum Initial (s)	5.0		5.0	10.0			5.0	5.0	10.0
Minimum Split (s)	10.0		10.0	15.0			10.0	10.0	15.0
Total Split (s)	20.0		15.0	45.0			15.0	20.0	45.0
Total Split (%)	20.0%		15.0%	45.0%			15%	20%	45%
Maximum Green (s)	15.0		10.0	40.0			10.0	15.0	40.0
Yellow Time (s)	3.0		3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	2.0		2.0	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	0.0		0.0	0.0					
Total Lost Time (s)	5.0		5.0	5.0					
Lead/Lag	Lead		Lead	Lag			Lead	Lag	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
Recall Mode	None		None	Min			None	None	Min
Walk Time (s)	7.0			7.0					
Flash Dont Walk (s)	11.0			11.0					
Pedestrian Calls (#/hr)	0			0					
Act Effect Green (s)	8.1		30.3	24.9	28.7				
Actuated g/C Ratio	0.12		0.45	0.37	0.43				
v/c Ratio	0.43		0.37	0.41	0.54				
Control Delay	18.1		13.6	20.5	4.6				
Queue Delay	0.0		0.0	0.0	0.0				
Total Delay	18.1		13.6	20.5	4.6				
LOS	B		B	C	A				
Approach Delay	18.1			18.1	4.6				
Approach LOS	B			B	A				
Queue Length 50th (ft)	11		33	96	2				
Queue Length 95th (ft)	59		78	194	0				
Internal Link Dist (ft)	499			515	149				
Turn Bay Length (ft)			100						
Base Capacity (vph)	409		438	1192	1148				
Starvation Cap Reductn	0		0	0	13				
Spillback Cap Reductn	0		0	0	0				
Storage Cap Reductn	0		0	0	0				
Reduced v/c Ratio	0.27		0.35	0.25	0.32				

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	66.8
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	12.8
Intersection LOS:	B
Intersection Capacity Utilization:	45.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 2: Red Schoolhouse Rd & Summit Rd





RED SCHOOLHOUSE ROAD CORRIDOR

2025 BUILD CONDITIONS CAPACITY ANALYSIS (ALTERNATE SEPHAR LANE ROUDNABOUT)

**WEEKDAY AM PEAK HOUR
WEEKDAY PM PEAK HOUR
SATURDAY PEAK HOUR**

2025 Build Traffic Volumes w/Sephar Lane Roundabout
7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	14	20	676	86	231	129	1046
Future Volume (vph)	14	20	676	86	231	129	1046
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		200		0	
Storage Lanes	1	0		1		1	
Taper Length (ft)	86					86	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt	0.920		0.983				
Flt Protected	0.980					0.950	
Satd. Flow (prot)	1679	0	3479	0	0	1770	1863
Flt Permitted	0.980					0.950	
Satd. Flow (perm)	1679	0	3479	0	0	1770	1863
Link Speed (mph)	30		30				30
Link Distance (ft)	563		327				308
Travel Time (s)	12.8		7.4				7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	22	735	93	251	140	1137
Shared Lane Traffic (%)							
Lane Group Flow (vph)	37	0	828	0	0	391	1137
Enter Blocked Intersection	No	No	No	No	No	No	Yes
Lane Alignment	Left	Right	Left	R NA	Left	Left	R NA
Median Width(ft)	12		12				12
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Sign Control	Yield		Yield				Yield

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	65.1%
ICU Level of Service	C
Analysis Period (min)	15

2025 Build Traffic Volumes w/Sephar Lane Roundabout
 7: Red Schoolhouse Rd & Sephar Ln

Peak AM Hour
 12/22/2020

Intersection					
Intersection Delay, s/veh	12.5				
Intersection LOS	B				
Approach	WB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	37	828		1528	
Demand Flow Rate, veh/h	37	845		1559	
Vehicles Circulating, veh/h	1006	399		15	
Vehicles Exiting, veh/h	238	1175		1028	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	6.7	8.8		14.6	
Approach LOS	A	A		B	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	L	TR
Assumed Moves	LR	LT	TR	L	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.256	0.744
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	37	397	448	399	1160
Cap Entry Lane, veh/h	604	935	1012	1331	1402
Entry HV Adj Factor	1.000	0.981	0.980	0.980	0.980
Flow Entry, veh/h	37	389	439	391	1137
Cap Entry, veh/h	604	917	991	1305	1375
V/C Ratio	0.061	0.425	0.443	0.300	0.827
Control Delay, s/veh	6.7	8.9	8.7	5.4	17.7
LOS	A	A	A	A	C
95th %tile Queue, veh	0	2	2	1	11

2025 Build Traffic Volumes w/Sephar Lane Roundabout
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	78	117	1181	19	407	28	784
Future Volume (vph)	78	117	1181	19	407	28	784
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		200		0	
Storage Lanes	1	0		1		1	
Taper Length (ft)	86					86	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt	0.919		0.998				
Flt Protected	0.980					0.950	
Satd. Flow (prot)	1678	0	3532	0	0	1770	1863
Flt Permitted	0.980					0.950	
Satd. Flow (perm)	1678	0	3532	0	0	1770	1863
Link Speed (mph)	30		30				30
Link Distance (ft)	563		400				308
Travel Time (s)	12.8		9.1				7.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	127	1284	21	442	30	852
Shared Lane Traffic (%)							
Lane Group Flow (vph)	212	0	1305	0	0	472	852
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left	R NA
Median Width(ft)	12		12				12
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Sign Control	Yield		Yield				Yield

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

2025 Build Traffic Volumes w/Sephar Lane Roundabout
7: Red Schoolhouse Rd & Sephar Ln

Peak PM Hour
12/22/2020

Intersection					
Intersection Delay, s/veh	15.6				
Intersection LOS	C				
Approach	WB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	212	1305		1324	
Demand Flow Rate, veh/h	217	1331		1351	
Vehicles Circulating, veh/h	1761	482		87	
Vehicles Exiting, veh/h	52	956		1891	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	36.7	18.1		9.7	
Approach LOS	E	C		A	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	L	TR
Assumed Moves	LR	LT	TR	L	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.357	0.643
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	217	626	705	482	869
Cap Entry Lane, veh/h	318	866	943	1246	1319
Entry HV Adj Factor	0.977	0.980	0.981	0.980	0.980
Flow Entry, veh/h	212	613	692	472	852
Cap Entry, veh/h	310	849	925	1221	1293
V/C Ratio	0.683	0.723	0.748	0.387	0.659
Control Delay, s/veh	36.7	18.1	18.2	6.7	11.3
LOS	E	C	C	A	B
95th %tile Queue, veh	5	6	7	2	5

2025 Build Traffic Volumes w/Sephar Lane Roundabout
7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
12/22/2020



Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	17	25	772	19	163	29	630
Future Volume (vph)	17	25	772	19	163	29	630
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		200		0	
Storage Lanes	1	0		1		1	
Taper Length (ft)	86					86	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt	0.919		0.996				
Flt Protected	0.980					0.950	
Satd. Flow (prot)	1678	0	3525	0	0	1770	1863
Flt Permitted	0.980					0.950	
Satd. Flow (perm)	1678	0	3525	0	0	1770	1863
Link Speed (mph)	30		30				30
Link Distance (ft)	563		340				153
Travel Time (s)	12.8		7.7				3.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	27	839	21	177	32	685
Shared Lane Traffic (%)							
Lane Group Flow (vph)	45	0	860	0	0	209	685
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	R NA	Left	Left
Median Width(ft)	12		12				12
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Sign Control	Yield		Yield				Yield

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	45.9%
ICU Level of Service	A
Analysis Period (min)	15

2025 Build Traffic Volumes w/Sephar Lane Roundabout
 7: Red Schoolhouse Rd & Sephar Ln

Peak SAT Hour
 12/22/2020

Intersection					
Intersection Delay, s/veh	10.6				
Intersection LOS	B				
Approach	WB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	1	1		1	
Adj Approach Flow, veh/h	45	860		894	
Demand Flow Rate, veh/h	46	877		913	
Vehicles Circulating, veh/h	1037	214		18	
Vehicles Exiting, veh/h	54	717		1065	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	9.0	14.6		6.8	
Approach LOS	A	B		A	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	R	L	TR
Assumed Moves	LR	LT	R	L	TR
RT Channelized					
Lane Util	1.000	0.976	0.024	0.234	0.766
Follow-Up Headway, s	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	46	856	21	214	699
Cap Entry Lane, veh/h	479	1169	1169	1397	1397
Entry HV Adj Factor	0.978	0.980	1.000	0.979	0.980
Flow Entry, veh/h	45	839	21	209	685
Cap Entry, veh/h	469	1146	1169	1367	1370
V/C Ratio	0.096	0.732	0.018	0.153	0.500
Control Delay, s/veh	9.0	14.9	3.2	3.9	7.7
LOS	A	B	A	A	A
95th %tile Queue, veh	0	7	0	1	3



RED SCHOOLHOUSE ROAD CORRIDOR

2025 BUILD CONDITIONS CAPACITY ANALYSIS (ALTERNATE TRIANGLE PROPERTIES/ EQUESTRIAN ESTATES ROUDNABOUT)

**WEEKDAY AM PEAK HOUR
WEEKDAY PM PEAK HOUR
SATURDAY PEAK HOUR**

2025 Build Traffic Volumes w/Triangle Properties Roundabout
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak AM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↕			↕			↕				↕
Traffic Volume (vph)	0	10	39	10	10	10	0	755	87	360	10	962
Future Volume (vph)	0	10	39	10	10	10	0	755	87	360	10	962
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200		0	
Storage Lanes	0		0	0		0	0		1		0	
Taper Length (ft)	86			86			86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.893			0.955			0.984				0.988
Flt Protected					0.984							0.987
Satd. Flow (prot)	0	1663	0	0	1750	0	0	3483	0	0	0	3451
Flt Permitted					0.984							0.987
Satd. Flow (perm)	0	1663	0	0	1750	0	0	3483	0	0	0	3451
Link Speed (mph)		30			30			30				30
Link Distance (ft)		212			202			607				327
Travel Time (s)		4.8			4.6			13.8				7.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	11	42	11	11	11	0	821	95	391	11	1046
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	33	0	0	916	0	0	0	1569
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	Left
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Sign Control		Yield			Yield			Yield				Yield

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	82.9%
ICU Level of Service	E
Analysis Period (min)	15



Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	111
Future Volume (vph)	111
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.95
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.92
Adj. Flow (vph)	121
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Sign Control	
Intersection Summary	

2025 Build Traffic Volumes w/Triangle Properties Roundabout
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak AM Hour
 12/22/2020

Intersection						
Intersection Delay, s/veh	9.6					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	53	33	916		1569	
Demand Flow Rate, veh/h	54	33	934		1600	
Vehicles Circulating, veh/h	1488	1236	421		22	
Vehicles Exiting, veh/h	134	119	1121		1247	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	11.3	8.1	9.9		9.5	
Approach LOS	B	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	54	33	439	495	752	848
Cap Entry Lane, veh/h	401	497	916	993	1323	1394
Entry HV Adj Factor	0.977	0.993	0.980	0.980	0.981	0.981
Flow Entry, veh/h	53	33	430	485	738	832
Cap Entry, veh/h	392	493	898	973	1297	1367
V/C Ratio	0.135	0.066	0.479	0.499	0.568	0.608
Control Delay, s/veh	11.3	8.1	10.0	9.8	9.2	9.7
LOS	B	A	B	A	A	A
95th %tile Queue, veh	0	0	3	3	4	4

2025 Build Traffic Volumes w/Triangle Properties Roundabout
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak PM Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↕			↕			↕				↕
Traffic Volume (vph)	0	10	65	10	0	10	0	1190	10	435	10	745
Future Volume (vph)	0	10	65	10	0	10	0	1190	10	435	10	745
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200		0	
Storage Lanes	0		0	0		0	0		1		0	
Taper Length (ft)	86			86			86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.883			0.932			0.999				0.988
Flt Protected					0.976							0.983
Satd. Flow (prot)	0	1645	0	0	1694	0	0	3536	0	0	0	3437
Flt Permitted					0.976							0.983
Satd. Flow (perm)	0	1645	0	0	1694	0	0	3536	0	0	0	3437
Link Speed (mph)		30			30			30				30
Link Distance (ft)		179			228			536				400
Travel Time (s)		4.1			5.2			12.2				9.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	11	71	11	0	11	0	1293	11	473	11	810
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	22	0	0	1304	0	0	0	1410
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	Left
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Sign Control		Yield			Stop			Yield				Yield

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	88.0%
ICU Level of Service	E
Analysis Period (min)	15



Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	107
Future Volume (vph)	107
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.95
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.92
Adj. Flow (vph)	116
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Sign Control	
Intersection Summary	

2025 Build Traffic Volumes w/Triangle Properties Roundabout
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak PM Hour
 12/22/2020

Intersection						
Intersection Delay, s/veh	13.4					
Intersection LOS	B					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	82	22	1304		1410	
Demand Flow Rate, veh/h	83	22	1330		1437	
Vehicles Circulating, veh/h	1330	1801	504		11	
Vehicles Exiting, veh/h	118	33	909		1812	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	10.6	13.0	19.2		8.2	
Approach LOS	B	B	C		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	83	22	625	705	675	762
Cap Entry Lane, veh/h	458	307	849	925	1336	1407
Entry HV Adj Factor	0.985	1.000	0.981	0.980	0.981	0.980
Flow Entry, veh/h	82	22	613	691	662	747
Cap Entry, veh/h	452	307	833	907	1311	1379
V/C Ratio	0.181	0.072	0.736	0.762	0.505	0.542
Control Delay, s/veh	10.6	13.0	19.0	19.3	8.0	8.4
LOS	B	B	C	C	A	A
95th %tile Queue, veh	1	0	7	8	3	3

2025 Build Traffic Volumes w/Triangle Properties Roundabout
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak SAT Hour
 12/22/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↕			↕			↕↔				↕↔
Traffic Volume (vph)	0	0	57	10	0	10	0	618	10	192	10	496
Future Volume (vph)	0	0	57	10	0	10	0	618	10	192	10	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200		0	
Storage Lanes	0		0	0		0	0		1		0	
Taper Length (ft)	86			86			86				86	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.865			0.932			0.998				0.977
Flt Protected					0.976							0.988
Satd. Flow (prot)	0	1611	0	0	1694	0	0	3532	0	0	0	3416
Flt Permitted					0.976							0.988
Satd. Flow (perm)	0	1611	0	0	1694	0	0	3532	0	0	0	3416
Link Speed (mph)		30			30			30				30
Link Distance (ft)		229			151			594				340
Travel Time (s)		5.2			3.4			13.5				7.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	62	11	0	11	0	672	11	209	11	539
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	22	0	0	683	0	0	0	894
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	Left
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway 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
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Sign Control		Yield			Yield			Yield				Yield

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	58.8%
ICU Level of Service	B
Analysis Period (min)	15



Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	124
Future Volume (vph)	124
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	0.95
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.92
Adj. Flow (vph)	135
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Sign Control	
Intersection Summary	

2025 Build Traffic Volumes w/Triangle Properties Roundabout
 9: Red Schoolhouse Rd & Triangle Properties Access/Driveway

Peak SAT Hour
 12/22/2020

Intersection						
Intersection Delay, s/veh	5.9					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2	2		
Conflicting Circle Lanes	2	2	2	2		
Adj Approach Flow, veh/h	62	22	683	894		
Demand Flow Rate, veh/h	63	22	696	912		
Vehicles Circulating, veh/h	785	898	224	11		
Vehicles Exiting, veh/h	138	22	624	909		
Ped Vol Crossing Leg, #/h	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	5.9	5.8	6.2	5.7		
Approach LOS	A	A	A	A		
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	63	22	327	369	429	483
Cap Entry Lane, veh/h	729	662	1098	1174	1336	1407
Entry HV Adj Factor	0.984	1.000	0.981	0.980	0.979	0.981
Flow Entry, veh/h	62	22	321	362	420	474
Cap Entry, veh/h	717	662	1078	1151	1309	1380
V/C Ratio	0.086	0.033	0.298	0.314	0.321	0.343
Control Delay, s/veh	5.9	5.8	6.2	6.1	5.7	5.7
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	0	1	1	1	2



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX G

TRAFFIC SIGNAL WARRANT ANALYSIS

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS

(Based on National Manual of Uniform Traffic Control Devices)

INTERSECTION DATA	
MAJOR STREET: RED SCHOOLHOUSE ROAD	
MINOR STREET: SUMMIT ROAD	
LOCATION: Chestnut Ridge, NY	
DATE: 9/10/20	
VOLUME BASIS..... Existing Traffic Volumes	
CONDITION Typical Weekday	

CHARACTERISTICS	
Number Of Lanes For Moving Traffic By Approach	
Major Street (Excluding Auxiliary Lanes) =	1
Minor Street (Including Auxiliary Lanes) =	1
Speed	
85 % Speed >= 40 mph (Y or N)----->	Y
Population	
Community < 10,000 (Y or N)----->	N

TIME	VOLUMES		WARRANT 1 CONDITION A		WARRANT 1 CONDITION B		WARRANT 1 CONDITION A & B COMBINED				WARRANT MET?			
							CONDITION A		CONDITION B		1A	1B	COMBINED	
							Major Street	Minor Street	Major Street	Minor Street			1A	1B
Hour Begin	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	1A	1B	1A	1B
12:00 AM	99	9	350	105	525	53	280	84	420	42	NO	NO	NO	NO
01:00 AM	31	2	350	105	525	53	280	84	420	42	NO	NO	NO	NO
02:00 AM	9	1	350	105	525	53	280	84	420	42	NO	NO	NO	NO
03:00 AM	13	2	350	105	525	53	280	84	420	42	NO	NO	NO	NO
04:00 AM	61	4	350	105	525	53	280	84	420	42	NO	NO	NO	NO
05:00 AM	161	21	350	105	525	53	280	84	420	42	NO	NO	NO	NO
06:00 AM	474	42	350	105	525	53	280	84	420	42	NO	NO	NO	NO
07:00 AM	709	78	350	105	525	53	280	84	420	42	NO	YES	NO	YES
08:00 AM	873	138	350	105	525	53	280	84	420	42	YES	YES	YES	YES
09:00 AM	734	115	350	105	525	53	280	84	420	42	YES	YES	YES	YES
10:00 AM	550	86	350	105	525	53	280	84	420	42	NO	YES	YES	YES
11:00 AM	525	60	350	105	525	53	280	84	420	42	NO	NO	NO	YES
12:00 PM	533	58	350	105	525	53	280	84	420	42	NO	YES	NO	YES
01:00 PM	596	63	350	105	525	53	280	84	420	42	NO	YES	NO	YES
02:00 PM	695	68	350	105	525	53	280	84	420	42	NO	YES	NO	YES
03:00 PM	855	104	350	105	525	53	280	84	420	42	NO	YES	YES	YES
04:00 PM	700	83	350	105	525	53	280	84	420	42	NO	YES	NO	YES
05:00 PM	805	76	350	105	525	53	280	84	420	42	NO	YES	NO	YES
06:00 PM	629	69	350	105	525	53	280	84	420	42	NO	YES	NO	YES
07:00 PM	450	56	350	105	525	53	280	84	420	42	NO	NO	NO	YES
08:00 PM	302	38	350	105	525	53	280	84	420	42	NO	NO	NO	NO
09:00 PM	179	22	350	105	525	53	280	84	420	42	NO	NO	NO	NO
10:00 PM	147	18	350	105	525	53	280	84	420	42	NO	NO	NO	NO

TOTAL HOURS MEETING WARRANTS				2	11	4	13
TOTAL HOURS NEEDED TO SATISFY				8	8	8*	8*

MINIMUM VEHICULAR VOLUME	WARRANT 1A: NOT SATISFIED -- NO SIGNAL
INTERRUPTION OF CONTINUOUS TRAFFIC	WARRANT 1B: SATISFIED -- CRITERIA MET FOR SIGNALIZATION
COMBINED CONDITION	WARRANT 1A & 1B COMBINED: NOT SATISFIED -- NO SIGNAL
*NOTE: FOR COMBINED WARRANT BOTH CONDITIONS 1A & 1B MUST BE SATISFIED FOR 8 HOURS.	

TABLE TSW-1

SIGNAL WARRANTS ANALYSIS

(Based on National Manual of Uniform Traffic Control Devices)

INTERSECTION DATA	
MAJOR STREET: RED SCHOOLHOUSE ROAD	
MINOR STREET: SUMMIT ROAD	
LOCATION: Chestnut Ridge, NY	
DATE: 9/10/20	
VOLUME BASIS..... Existing Traffic Volumes	
CONDITION Typical Weekday	

CHARACTERISTICS	
Number Of Lanes For Moving Traffic By Approach	
Major Street (Excluding Auxiliary Lanes) =	1
Minor Street (Including Auxiliary Lanes) =	1
Speed	
85 % Speed >= 40 mph (Y or N)----->	Y
Population	
Community < 10,000 (Y or N)----->	N

TIME	VOLUMES		WARRANT 2 ¹		WARRANT 3 ¹		WARRANT MET?		
	Hour Begin	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	2	3
12:00 AM		99	9	SEE FIGURE 4C-2	SEE FIGURE 4C-4			NO	NO
01:00 AM		31	2					NO	NO
02:00 AM		9	1					NO	NO
03:00 AM		13	2					NO	NO
04:00 AM		61	4					NO	NO
05:00 AM		161	21					NO	NO
06:00 AM		474	42					NO	NO
07:00 AM		709	78					YES	NO
08:00 AM		873	138					YES	YES
09:00 AM		734	115					YES	NO
10:00 AM		550	86					NO	NO
11:00 AM		525	60					NO	NO
12:00 PM		533	58					NO	NO
01:00 PM		596	63					NO	NO
02:00 PM		695	68					NO	NO
03:00 PM		855	104					YES	NO
04:00 PM		700	83					YES	NO
05:00 PM		805	76					YES	NO
06:00 PM		629	69					NO	NO
07:00 PM		450	56					NO	NO
08:00 PM		302	38					NO	NO
09:00 PM		179	22					NO	NO
10:00 PM		147	18					NO	NO

NOTE major peds = highest volume on major street crosswalk

TOTAL HOURS MEETING WARRANTS	6	1
TOTAL HOURS NEEDED TO SATISFY	4	1

FOUR HOUR VEHICULAR VOLUME	WARRANT 2: SATISFIED -- CRITERIA MET FOR SIGNALIZATION
PEAK HOUR VOLUME	WARRANT 3: SATISFIED -- CRITERIA MET FOR SIGNALIZATION

NOTES:

1) VOLUMES FOR WARRANTS 2 AND 3 ARE COMPARED TO MUTCD FIGURE 4C-2 FOR WARRANT 2 AND FIGURE 4C-4 FOR WARRANT 3 ATTACHED.

TABLE TSW-1
FIGURE 4C-2
WARRANT 2 - FOUR HOUR VEHICULAR WARRANT (>40 MPH)
RED SCHOOLHOUSE ROAD AT SUMMIT ROAD

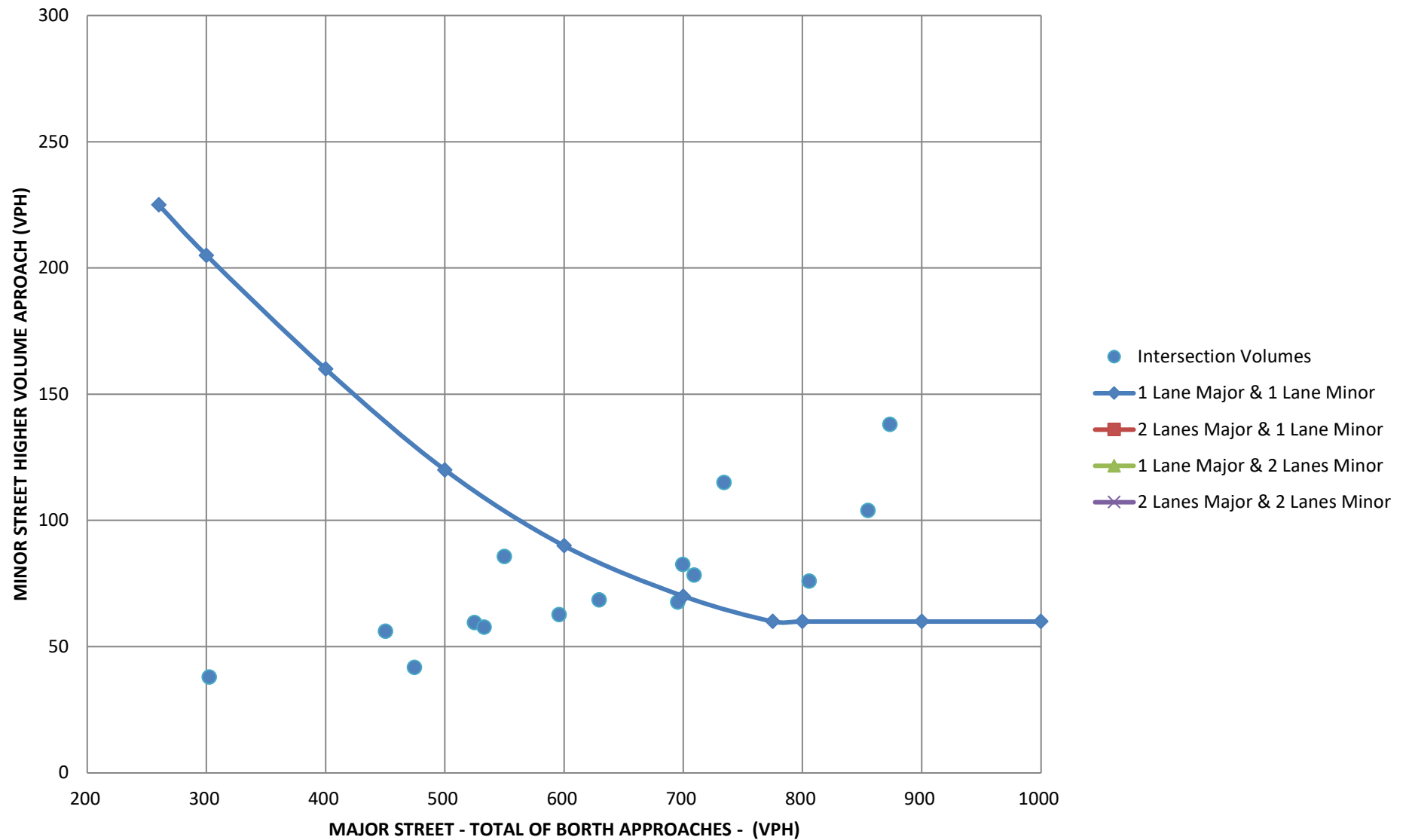


TABLE TSW-1
FIGURE 4C-4
WARRANT 3 - PEAK HOUR WARRANT (>40 MPH)
RED SCHOOLHOUSE ROAD AT SUMMIT ROAD

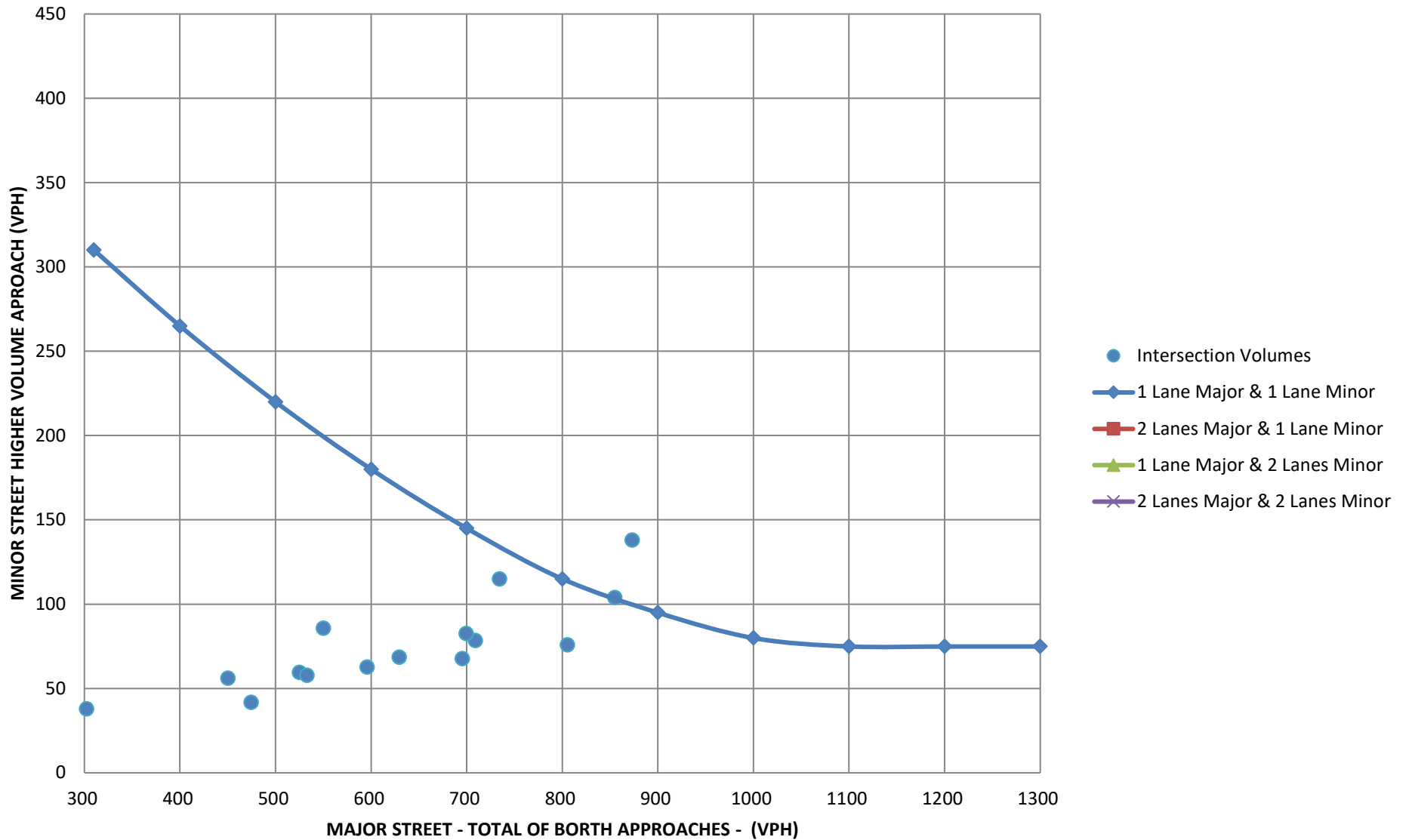


TABLE TSW-2

SIGNAL WARRANTS ANALYSIS

(Based on National Manual of Uniform Traffic Control Devices)

INTERSECTION DATA	
MAJOR STREET: RED SCHOOLHOUSE ROAD	
MINOR STREET: WILLIAMS ROAD	
LOCATION: Chestnut Ridge, NY	
DATE: 9/10/20	
VOLUME BASIS..... Existing Traffic Volumes	
CONDITION Typical Weekday	

CHARACTERISTICS	
Number Of Lanes For Moving Traffic By Approach	
Major Street (Excluding Auxiliary Lanes) =	1
Minor Street (Including Auxiliary Lanes) =	1
Speed	
85 % Speed >= 40 mph (Y or N)----->	Y
Population	
Community < 10,000 (Y or N)----->	N

TIME	VOLUMES		WARRANT 1 CONDITION A		WARRANT 1 CONDITION B		WARRANT 1 CONDITION A & B COMBINED				WARRANT MET?					
							CONDITION A		CONDITION B		1A	1B	COMBINED			
							Major Street	Minor Street	Major Street	Minor Street			1A	1B		
Hour Begin	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	1A	1B	1A	1B
12:00 AM	71	22	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
01:00 AM	32	15	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
02:00 AM	9	7	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
03:00 AM	13	7	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
04:00 AM	63	4	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
05:00 AM	164	11	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
06:00 AM	485	50	350	105	525	53	280	84	420	42	NO	NO	NO	YES		
07:00 AM	722	97	350	105	525	53	280	84	420	42	NO	YES	YES	YES		
08:00 AM	894	169	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
09:00 AM	745	180	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
10:00 AM	561	138	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
11:00 AM	534	180	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
12:00 PM	512	140	350	105	525	53	280	84	420	42	YES	NO	YES	YES		
01:00 PM	570	149	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
02:00 PM	666	141	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
03:00 PM	824	129	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
04:00 PM	672	133	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
05:00 PM	772	145	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
06:00 PM	603	122	350	105	525	53	280	84	420	42	YES	YES	YES	YES		
07:00 PM	427	82	350	105	525	53	280	84	420	42	NO	NO	NO	YES		
08:00 PM	290	58	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
09:00 PM	168	56	350	105	525	53	280	84	420	42	NO	NO	NO	NO		
10:00 PM	139	35	350	105	525	53	280	84	420	42	NO	NO	NO	NO		

TOTAL HOURS MEETING WARRANTS	11	11	12	14
TOTAL HOURS NEEDED TO SATISFY	8	8	8*	8*

MINIMUM VEHICULAR VOLUME	WARRANT 1A: SATISFIED -- CRITERIA MET FOR SIGNALIZATION
INTERRUPTION OF CONTINUOUS TRAFFIC	WARRANT 1B: SATISFIED -- CRITERIA MET FOR SIGNALIZATION
COMBINED CONDITION	WARRANT 1A & 1B COMBINED: SATISFIED -- CRITERIA MET FOR SIGNALIZATION
*NOTE: FOR COMBINED WARRANT BOTH CONDITONS 1A & 1B MUST BE SATISFIED FOR 8 HOURS.	

TABLE TSW-2

SIGNAL WARRANTS ANALYSIS

(Based on National Manual of Uniform Traffic Control Devices)

INTERSECTION DATA	
MAJOR STREET: RED SCHOOLHOUSE ROAD	
MINOR STREET: WILLIAMS ROAD	
LOCATION: Chestnut Ridge, NY	
DATE: 9/10/20	
VOLUME BASIS..... Existing Traffic Volumes	
CONDITION Typical Weekday	

CHARACTERISTICS	
Number Of Lanes For Moving Traffic By Approach	
Major Street (Excluding Auxiliary Lanes) =	1
Minor Street (Including Auxiliary Lanes) =	1
Speed	
85 % Speed >= 40 mph (Y or N)----->	Y
Population	
Community < 10,000 (Y or N)----->	N

TIME	VOLUMES		WARRANT 2 ¹		WARRANT 3 ¹		WARRANT MET?		
	Hour Begin	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	2	3
12:00 AM		71	22	SEE FIGURE 4C-2	SEE FIGURE 4C-4			NO	NO
01:00 AM		32	15					NO	NO
02:00 AM		9	7					NO	NO
03:00 AM		13	7					NO	NO
04:00 AM		63	4					NO	NO
05:00 AM		164	11					NO	NO
06:00 AM		485	50					NO	NO
07:00 AM		722	97					YES	NO
08:00 AM		894	169					YES	YES
09:00 AM		745	180					YES	YES
10:00 AM		561	138					YES	NO
11:00 AM		534	180					YES	NO
12:00 PM		512	140					YES	NO
01:00 PM		570	149					YES	NO
02:00 PM		666	141					YES	NO
03:00 PM		824	129					YES	YES
04:00 PM		672	133					YES	NO
05:00 PM		772	145					YES	YES
06:00 PM		603	122					YES	NO
07:00 PM		427	82					NO	NO
08:00 PM		290	58			NO	NO		
09:00 PM		168	56			NO	NO		
10:00 PM		139	35			NO	NO		

NOTE major peds = highest volume on major street crosswalk

TOTAL HOURS MEETING WARRANTS	12	4
TOTAL HOURS NEEDED TO SATISFY	4	1

FOUR HOUR VEHICULAR VOLUME	WARRANT 2: SATISFIED -- CRITERIA MET FOR SIGNALIZATION
PEAK HOUR VOLUME	WARRANT 3: SATISFIED -- CRITERIA MET FOR SIGNALIZATION

NOTES:

1) VOLUMES FOR WARRANTS 2 AND 3 ARE COMPARED TO MUTCD FIGURE 4C-2 FOR WARRANT 2 AND FIGURE 4C-4 FOR WARRANT 3 ATTACHED.

TABLE TSW-2
FIGURE 4C-2
WARRANT 2 - FOUR HOUR VEHICULAR WARRANT (>40 MPH)
RED SCHOOLHOUSE ROAD AT WILLIAMS ROAD

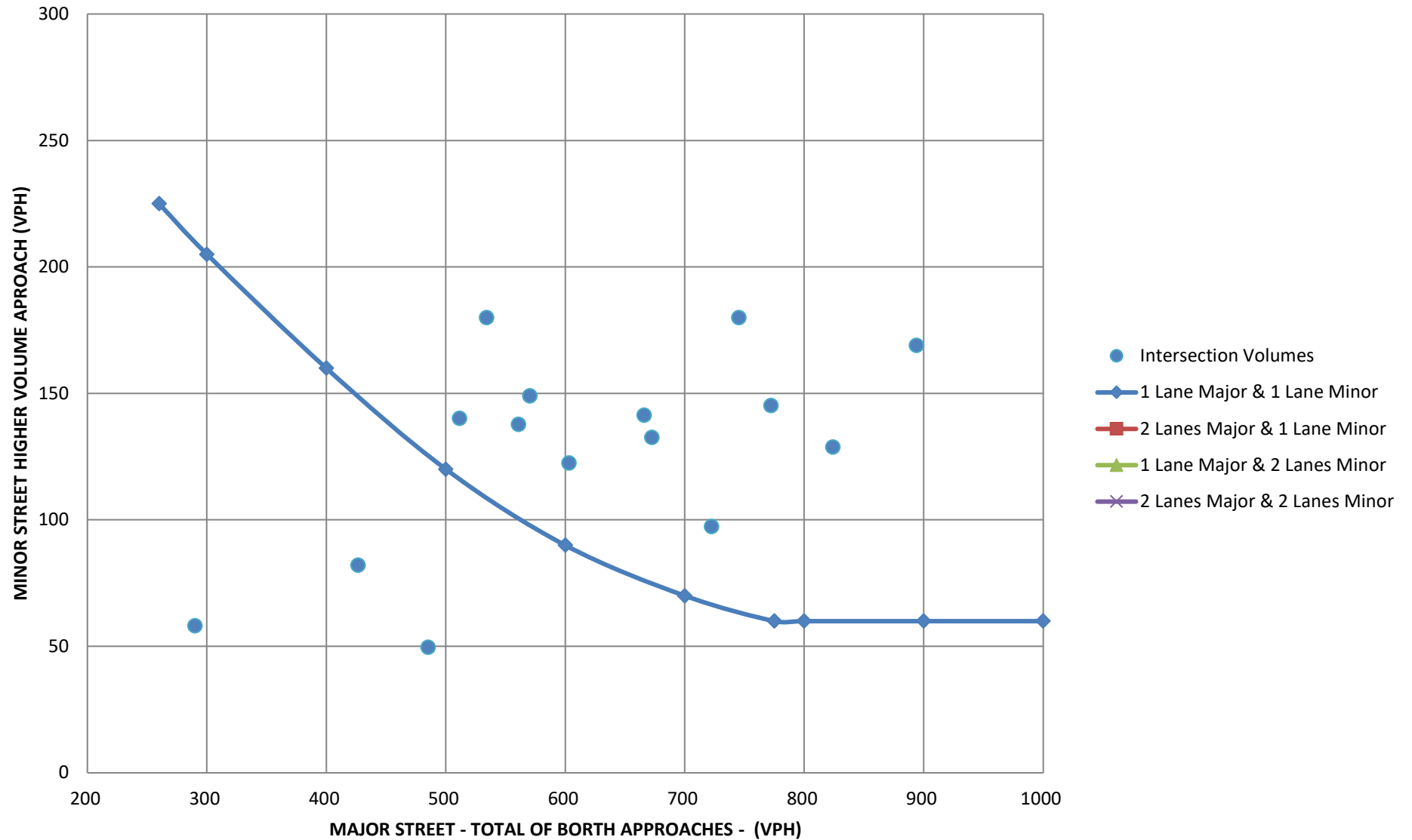
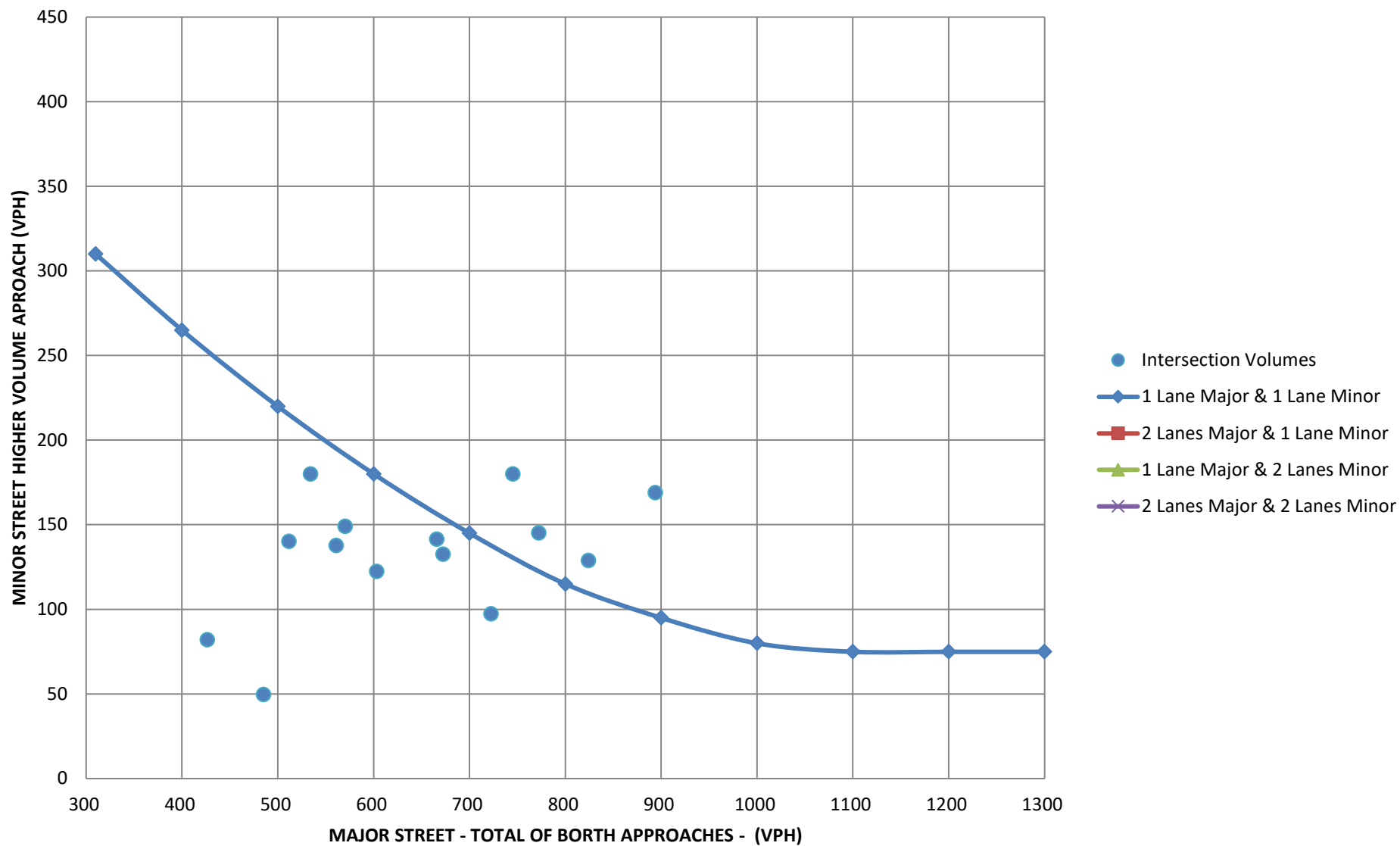


TABLE TSW-2
FIGURE 4C-4
WARRANT 3 - PEAK HOUR WARRANT (>40 MPH)
RED SCHOOLHOUSE ROAD AT WILLIAMS ROAD





RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX H

ACCIDENT DATA

Accident Location Information System(ALIS)

Date:
7/22/2020
10:32:27 AM

Accident Verbal Description

17319_VDR

Date in this report covers the period 1/1/2016-7/21/2020

Complete Accident data from NYSDMV is only available thru 8/31/2019 12:00:00 AM

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH DE SALVO CT
1/5/2016 Tue 17:10 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2016-36038552
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 4
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 68 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 58 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :4 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 21 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, FOLLOWING TOO CLOSELY

Veh :3 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 54 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
224 Meters South of Sephar Ln
4/1/2016 Fri 09:40 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2016-36163235
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NO PASSING ZONE
Manner of Collision: REAR END Weather: CLOUDY
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 22 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 2 Driver's Age: 31 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH SEPHAR LN

4/12/2016 Tue 17:34 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36171995**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4421 State of Registration: NY
Num of Occupants: 1 Driver's Age: 48 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 23 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: WILLIAMS RD
AT INTERSECTION WITH RED SCHOOLHOUSE RD

6/3/2016 Fri 09:09 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36239054**
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: REAR END Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 27 Sex: M Citation Issued: Y
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 28 Sex: F Citation Issued: Y
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
19 Meters South of De Salvo Ct

6/3/2016 Fri 09:20 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36239055**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3096 State of Registration: NY
Num of Occupants: 1 Driver's Age: 69 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Veh :1 BUS Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 59 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
91 Meters South of SUMMIT RD

6/27/2016 Mon 17:27 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36273093**
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 2 Driver's Age: 35 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 45 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH WILLIAMS RD

8/9/2016 Tue 17:14 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36346022**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: LEFT TURN (WITH OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3740 State of Registration: NY
Num of Occupants: 1 Driver's Age: 46 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT ENTERED, NOT ENTERED

Veh :2 CAR/VAN/PICKUP Registered Weight: 3718 State of Registration: NY
Num of Occupants: 1 Driver's Age: 69 Sex: F Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: DRIVER INATTENTION, GLARE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street:
11/6/2016 Sun 19:11 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36463439**
Accident Class: PROPERTY DAMAGE Police Agency: NYSP THRUWAY TARRYTOWN Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 3 Driver's Age: 34 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
30 Meters North of LOESCHER LN

11/11/2016 Fri 08:15 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36466647**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR

Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3266 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 37 Sex: M Citation Issued: Y
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
 Num of Occupants: 1 Driver's Age: 62 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
12/12/2016 Mon 16:19 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36518977**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3164 State of Registration: NY
 Num of Occupants: 4 Driver's Age: 42 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 2 Driver's Age: 17 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
12/14/2016 Wed 09:02 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2016-36522055**
 Accident Class: INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 2820 State of Registration: NY
 Num of Occupants: 1 Driver's Age: Sex: Citation Issued:
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: 3203 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 49 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 19 Meters South of De Salvo Ct
12/28/2016 Wed 14:22 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2016-36540258**
 Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT

Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 2 Driver's Age: 50 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: FL
 Num of Occupants: 1 Driver's Age: 48 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STARTING IN TRAFFIC
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH SUMMIT RD

1/6/2017 Fri 13:20 PM Persons Killed: 0 Persons Injured: 3 Extent of Injuries: BCC **Case: 2017-36556646**
 Accident Class: INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: RIGHT ANGLE Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 BUS Registered Weight: State of Registration: NY
 Num of Occupants: 3 Driver's Age: 72 Sex: F Citation Issued: N
 Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3049 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 84 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 67 Meters South of Sephar Ln

1/21/2017 Sat 11:22 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36573141**
 Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 3
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
 Num of Occupants: 1 Driver's Age: 29 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :3 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 52 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 40 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street:
1/18/2017 Wed 18:00 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36573411**
 Accident Class: PROPERTY DAMAGE Police Agency: NYSP THRUWAY TARRYTOWN Num of Veh: 1
 Type Of Accident: OTHER NON-COLLISION Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 28 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: PAVEMENT DEFECTIVE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH WILLIAMS RD
2/14/2017 Tue 07:48 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2017-36605847**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: RIGHT ANGLE Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4150 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 76 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2875 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 63 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: UNSAFE SPEED, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 19 Meters South of De Salvo Ct
2/17/2017 Fri 08:55 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36611462**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 3
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 34 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3660 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 40 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :3 OTHER Registered Weight: State of Registration: -3
 Num of Occupants: 0 Driver's Age: Sex: Citation Issued:
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: NOT APPLICABLE, UNKNOWN

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH SUMMIT RD

4/26/2017 Wed 00:02 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36700443**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: RIGHT ANGLE Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4292 State of Registration: NY
Num of Occupants: 1 Driver's Age: 65 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4958 State of Registration: NY
Num of Occupants: 1 Driver's Age: 26 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
18 Meters North of WILLIAMS RD

6/15/2017 Thu 15:14 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2017-36766979**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 5192 State of Registration: NY
Num of Occupants: 3 Driver's Age: 18 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4253 State of Registration: NY
Num of Occupants: 1 Driver's Age: 39 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH RAMP

7/31/2017 Mon 08:40 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36830346**
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: OVERTAKING Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 32 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 OTHER Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: Sex: U Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: UNSAFE SPEED, PASSING OR LANE USAGE IMPROPERLY

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH WILLIAMS RD

9/9/2017 Sat 08:32 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36881801**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3474 State of Registration: NY
Num of Occupants: 1 Driver's Age: 26 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3316 State of Registration: NY
Num of Occupants: 1 Driver's Age: 68 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH SUMMIT RD

9/13/2017 Wed 18:10 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36887679**
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: RIGHT ANGLE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: Sex: U Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 76 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH SEPHAR LN

10/3/2017 Tue 07:41 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36914301**
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 64 Sex: M Citation Issued: N
Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 62 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
19 Meters South of De Salvo Ct

10/24/2017 Tue 19:45 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36948516**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3962 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 67 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, PAVEMENT SLIPPERY

Veh :1 CAR/VAN/PICKUP Registered Weight: 4731 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 44 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
12 Meters North of SEPHAR LN

11/6/2017 Mon 10:32 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36966206**
 Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OTHER Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: MA
 Num of Occupants: 1 Driver's Age: 23 Sex: M Citation Issued: Y
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 66 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
100 Meters North of Ramp

11/17/2017 Fri 12:18 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2017-36987756**
 Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 1
 Type Of Accident: COLLISION WITH BUILDING/WALL Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: CURVE AND GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 56 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, OVERSIZED VEHICLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH SUMMIT RD

1/13/2018 Sat 16:51 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37085104**

Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DUSK
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3805 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 23 Sex: M Citation Issued: N
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: TRAFFIC CONTROL DEVICES DISREGARDED, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 57 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH Ramp

1/26/2018 Fri 16:40 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37109515**
 Accident Class: PROPERTY DAMAGE Police Agency: NYSP THRUWAY TARRYTOWN Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DUSK
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4627 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 67 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4803 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 47 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, BACKING UNSAFELY

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH SUMMIT RD

3/5/2018 Mon 16:02 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37172322**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 2635 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 50 Sex: F Citation Issued: N
 Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: NOT APPLICABLE, FAILURE TO YIELD RIGHT OF WAY

Veh :1 CAR/VAN/PICKUP Registered Weight: 4838 State of Registration: NY
 Num of Occupants: 3 Driver's Age: 44 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH SUMMIT RD

3/18/2018 Sun 20:40 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2018-37195569**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: RIGHT ANGLE Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4217 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 35 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4284 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 26 Sex: M Citation Issued: Y
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, UNSAFE SPEED

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH SUMMIT RD

4/2/2018 Mon 15:50 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37222176**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: RIGHT ANGLE Weather: CLEAR
 Road Surface Condition: WET Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 58 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 2804 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 23 Sex: M Citation Issued: Y
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, TURNING IMPROPER

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH Ramp

5/21/2018 Mon 12:40 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37292037**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 3 Driver's Age: 39 Sex: F Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 74 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD

5/15/2018 Tue 09:00 AM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2018-37292851**
 Accident Class: INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 3
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3375 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 45 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :3 CAR/VAN/PICKUP Registered Weight: 3757 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 35 Sex: M Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: SC
 Num of Occupants: 1 Driver's Age: 77 Sex: M Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 23 Meters North of Williams Rd

6/19/2018 Tue 16:38 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37340175**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 5500 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 19 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: DRIVER INATTENTION, FOLLOWING TOO CLOSELY

Veh :1 CAR/VAN/PICKUP Registered Weight: 3335 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 64 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 76 Meters South of SUMMIT RD

7/7/2018 Sat 07:49 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37366236**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NO PASSING ZONE
 Manner of Collision: OVERTAKING Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2445 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 47 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4768 State of Registration: NY

Num of Occupants: 1 Driver's Age: 49 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: OVERTAKING
 Apparent Factors: NOT APPLICABLE, PASSING OR LANE USAGE IMPROPERLY

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 57 Meters North of Loescher Ln

9/13/2018 Thu 07:50 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2018-37477461**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: HEAD ON Weather: CLOUDY
 Road Surface Condition: WET Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 38 Sex: F Citation Issued: Y
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FAILURE TO KEEP RIGHT, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4235 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 22 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
10/4/2018 Thu 17:15 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37513541**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 56 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2863 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 18 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: DRIVER INATTENTION, FOLLOWING TOO CLOSELY

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 100 Meters North of Ramp

10/5/2018 Fri 17:19 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37526050**
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 1
 Type Of Accident: COLLISION WITH BUILDING/WALL Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 TRUCK Registered Weight: State of Registration: IN
 Num of Occupants: 1 Driver's Age: 19 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, OVERSIZED VEHICLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
15 Meters South of WILLIAMS RD

10/31/2018 Wed 08:39 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2018-37557844**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: UNKNOWN Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2952 State of Registration: NY
Num of Occupants: 1 Driver's Age: 22 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :2 TRUCK Registered Weight: 33000 State of Registration: NY
Num of Occupants: 4 Driver's Age: 53 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH Ramp

12/7/2018 Fri 17:25 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37630705**
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 43 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 54 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH Ramp

2/16/2019 Sat 23:02 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-37748184**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 1
Type Of Accident: COLLISION WITH TREE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 51 Sex: M Citation Issued: Y
Direction of Travel: SOUTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, ALCOHOL INVOLVEMENT

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH SUMMIT RD

2/19/2019 Tue 17:45 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2019-37751554**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED

Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4465 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 30 Sex: F Citation Issued: N
 Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2502 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 35 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 19 Meters South of De Salvo Ct

6/10/2019 Mon 13:15 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2019-37924154**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: UNKNOWN Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 26 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3047 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 40 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: NOT APPLICABLE, FAILURE TO YIELD RIGHT OF WAY

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD

8/21/2019 Wed 20:10 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2019-38038604**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: RR CROSSING GATES
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: FL
 Num of Occupants: 3 Driver's Age: 49 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
 Num of Occupants: 1 Driver's Age: 63 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: 982L85011003 Street: GARDEN STATE PKWY

10/12/2019 Sat 12:31 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-38117495**
 Accident Class: PROPERTY DAMAGE Police Agency: NYSP THRUWAY TARRYTOWN Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 59 Sex: M Citation Issued: Y
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3515 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 47 Sex: F Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 226 Meters South of Sephar Ln

11/7/2019 Thu 18:05 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2019-38159913
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 1
 Type Of Accident: COLLISION WITH ANIMAL Traffic Control: NONE
 Manner of Collision: OTHER Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2697 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 29 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH DE SALVO CT

11/21/2019 Thu 17:27 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2019-38193619
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
 Manner of Collision: REAR END Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3849 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 38 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: NOT APPLICABLE, FAILURE TO YIELD RIGHT OF WAY

Veh :2 CAR/VAN/PICKUP Registered Weight: 4295 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 58 Sex: F Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
 AT INTERSECTION WITH LOESCHER LN

11/28/2019 Thu 12:50 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2019-38197089
 Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 1
 Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
 Num of Occupants: 1 Driver's Age: 51 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH Ramp

12/10/2019 Tue 16:45 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-38219128**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (WITH OTHER CAR) Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 BUS Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 45 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 79 Sex: F Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH De Salvo Ct

1/8/2020 Wed 16:11 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2020-38279779**
Accident Class: PROPERTY DAMAGE Police Agency: NYSP THRUWAY TARRYTOWN Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 22 Sex: M Citation Issued: Y
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: UNSAFE SPEED, FOLLOWING TOO CLOSELY

Veh :2 CAR/VAN/PICKUP Registered Weight: 3618 State of Registration: NY
Num of Occupants: 1 Driver's Age: 19 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
19 Meters South of De Salvo Ct

12/12/2019 Thu 18:00 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-38283289**
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3296 State of Registration: NY
Num of Occupants: 1 Driver's Age: 22 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 OTHER Registered Weight: State of Registration: -3
Num of Occupants: 0 Driver's Age: Sex: Citation Issued:
Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN

Apparent Factors: NOT APPLICABLE, PASSING OR LANE USAGE IMPROPERLY

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH WILLIAMS RD

1/22/2020 Wed 19:10 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2020-38292713
Accident Class: NON-REPORTABLE Police Agency: RAMAPO TOWN PD Num of Veh: 3
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 58 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :3 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 60 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, REACTION TO OTHER UNINVOLVED VEHICL

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: PA
Num of Occupants: 1 Driver's Age: 53 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street:
2/9/2020 Sun 14:52 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2020-38326856
Accident Class: PROPERTY DAMAGE Police Agency: RAMAPO TOWN PD Num of Veh: 1
Type Of Accident: COLLISION WITH SIGN POST Traffic Control: NONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3195 State of Registration: NY
Num of Occupants: 2 Driver's Age: 25 Sex: F Citation Issued: Y
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: UNSAFE SPEED, TURNING IMPROPER

County: Rockland Muni: Chestnut Ridge(V) Ref. Marker: Street: RED SCHOOLHOUSE RD
AT INTERSECTION WITH SUMMIT RD

2/21/2020 Fri 13:50 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C Case: 2020-38341923
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: RAMAPO TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: RIGHT ANGLE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: VA
Num of Occupants: 2 Driver's Age: 60 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, UNKNOWN

Veh :2 CAR/VAN/PICKUP Registered Weight: 3395 State of Registration: NY
Num of Occupants: 1 Driver's Age: 29 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: NOT APPLICABLE, UNKNOWN



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX I

VEHICLE TURNING TRACKS



MASER CONSULTING
 Customer Loyalty through Client Satisfaction
 www.maserconsulting.com

Office Locations:

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REV	DATE	DRAWN BY	DESCRIPTION

PRELIMINARY

PRELIMINARY CONCEPT PLAN
 FOR
 RED SCHOOLHOUSE ROAD

VILLAGE OF CHESTNUT RIDGE
 ROCKLAND COUNTY
 NEW YORK

WESTCHESTER OFFICE
 400 Columbus Avenue
 Suite 180E
 Valhalla, NY 10595
 Phone: 914.347.7500
 Fax: 914.347.7266

SCALE: AS SHOWN	DATE: 9/23/20	DRAWN BY: P.W.G.	CHECKED BY: P.J.G.
PROJECT NUMBER: 20003327A	DRAWING NAME: R-TURN-TRCK-EXST-1		

SHEET TITLE:
TURNING TRACKS (BUSES)

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



RED SCHOOLHOUSE ROAD CORRIDOR

APPENDIX J

EXISTING TRAFFIC VOLUME DATA



RED SCHOOLHOUSE ROAD CORRIDOR

TURNING MOVEMENT TRAFFIC COUNTS

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400 Columbus Avenue, Suite 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

File Name : 2-RED_SCHOOL_HOUSE_RD_AT_SUMMIT_RD-THUR_786298_10-01-2020

Site Code :

Start Date : 10/1/2020

Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

Start Time	RED SCHOOL HOUSE RD From North					From East					RED SCHOOL HOUSE RD From South					SUMMIT RD From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
06:30 AM	2	34	0	0	36	0	0	0	0	0	0	49	2	0	51	6	0	5	1	12	99
06:45 AM	6	43	0	0	49	0	0	0	0	0	0	59	4	0	63	8	0	5	0	13	125
Total	8	77	0	0	85	0	0	0	0	0	0	108	6	0	114	14	0	10	1	25	224
07:00 AM	8	30	0	0	38	0	0	0	0	0	0	50	1	0	51	16	0	7	0	23	112
07:15 AM	7	38	0	0	45	0	0	0	0	0	0	51	2	0	53	6	0	7	0	13	111
07:30 AM	10	32	0	0	42	0	0	0	0	0	0	53	2	0	55	13	0	8	1	22	119
07:45 AM	22	40	0	0	62	0	0	0	0	0	0	80	4	0	84	16	0	13	0	29	175
Total	47	140	0	0	187	0	0	0	0	0	0	234	9	0	243	51	0	35	1	87	517
08:00 AM	16	48	0	0	64	0	0	0	0	0	0	100	11	0	111	23	0	14	0	37	212
08:15 AM	17	39	0	0	56	0	0	0	0	0	0	79	16	0	95	21	0	20	0	41	192
08:30 AM	17	37	0	0	54	0	0	0	0	0	0	65	9	0	74	17	0	10	0	27	155
08:45 AM	15	47	0	0	62	0	0	0	0	0	0	83	9	0	92	21	0	15	0	36	190
Total	65	171	0	0	236	0	0	0	0	0	0	327	45	0	372	82	0	59	0	141	749
09:00 AM	12	36	0	0	48	0	0	0	0	0	0	48	5	0	53	13	0	7	0	20	121
09:15 AM	14	43	0	0	57	0	0	0	0	0	0	53	2	0	55	15	0	6	0	21	133
09:30 AM	7	30	0	0	37	0	0	0	0	0	0	55	9	0	64	21	0	16	0	37	138
09:45 AM	8	29	0	0	37	0	0	0	0	0	0	38	9	0	47	10	0	12	0	22	106
Total	41	138	0	0	179	0	0	0	0	0	0	194	25	0	219	59	0	41	0	100	498
Grand Total	161	526	0	0	687	0	0	0	0	0	0	863	85	0	948	206	0	145	2	353	1988
Apprch %	23.4	76.6	0	0		0	0	0	0	0	0	91	9	0		58.4	0	41.1	0.6		
Total %	8.1	26.5	0	0	34.6	0	0	0	0	0	0	43.4	4.3	0	47.7	10.4	0	7.3	0.1	17.8	
Lights	150	448	0	0	598	0	0	0	0	0	0	792	81	0	873	192	0	136	0	328	1799
% Lights	93.2	85.2	0	0	87	0	0	0	0	0	0	91.8	95.3	0	92.1	93.2	0	93.8	0	92.9	90.5
Buses	9	50	0	0	59	0	0	0	0	0	0	42	4	0	46	12	0	9	0	21	126
% Buses	5.6	9.5	0	0	8.6	0	0	0	0	0	0	4.9	4.7	0	4.9	5.8	0	6.2	0	5.9	6.3
Trucks	2	28	0	0	30	0	0	0	0	0	0	29	0	0	29	2	0	0	0	2	61
% Trucks	1.2	5.3	0	0	4.4	0	0	0	0	0	0	3.4	0	0	3.1	1	0	0	0	0.6	3.1
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.6	0.1

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Customer Loyalty through Client Satisfaction

File Name : 2-RED_SCHOOL_HOUSE_RD_AT_SUMMIT_RD-THUR_786298_10-01-2020

Site Code :

Start Date : 10/1/2020

Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

Start Time	RED SCHOOL HOUSE RD From North					From East					RED SCHOOL HOUSE RD From South					SUMMIT RD From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
02:30 PM	12	45	0	0	57	0	0	0	0	0	0	70	20	0	90	11	0	15	1	27	174
02:45 PM	17	53	0	0	70	0	0	0	0	0	0	63	22	0	85	13	0	13	0	26	181
Total	29	98	0	0	127	0	0	0	0	0	0	133	42	0	175	24	0	28	1	53	355
03:00 PM	20	58	0	0	78	0	0	0	0	0	0	58	16	0	74	24	0	19	0	43	195
03:15 PM	25	72	0	0	97	0	0	0	0	0	0	55	10	1	66	28	0	16	0	44	207
03:30 PM	18	90	0	0	108	0	0	0	0	0	0	42	16	0	58	19	0	11	0	30	196
03:45 PM	12	43	0	0	55	0	0	0	0	0	0	50	19	0	69	17	0	11	0	28	152
Total	75	263	0	0	338	0	0	0	0	0	0	205	61	1	267	88	0	57	0	145	750
04:00 PM	24	46	0	0	70	0	0	0	0	0	0	57	21	0	78	20	0	4	0	24	172
04:15 PM	12	39	0	0	51	0	0	0	0	0	0	51	11	0	62	11	0	15	0	26	139
04:30 PM	19	49	0	0	68	0	0	0	0	0	0	68	25	0	93	17	0	11	0	28	189
04:45 PM	19	38	0	0	57	0	0	0	0	0	0	54	16	0	70	20	0	19	0	39	166
Total	74	172	0	0	246	0	0	0	0	0	0	230	73	0	303	68	0	49	0	117	666
05:00 PM	15	73	0	0	88	0	0	0	0	0	0	65	23	0	88	15	0	12	0	27	203
05:15 PM	16	52	0	0	68	0	0	0	0	0	0	58	17	0	75	11	0	14	0	25	168
05:30 PM	21	51	0	0	72	0	0	0	0	0	0	60	28	0	88	9	0	10	0	19	179
05:45 PM	19	42	0	0	61	0	0	0	0	0	0	54	25	1	80	14	0	12	0	26	167
Total	71	218	0	0	289	0	0	0	0	0	0	237	93	1	331	49	0	48	0	97	717
06:00 PM	19	35	0	0	54	0	0	0	0	0	0	49	19	0	68	6	0	15	0	21	143
06:15 PM	16	35	0	0	51	0	0	0	0	0	0	46	20	0	66	13	0	17	0	30	147
Grand Total	284	821	0	0	1105	0	0	0	0	0	0	900	308	2	1210	248	0	214	1	463	2778
Apprch %	25.7	74.3	0	0		0	0	0	0	0	0	74.4	25.5	0.2		53.6	0	46.2	0.2		
Total %	10.2	29.6	0	0	39.8	0	0	0	0	0	0	32.4	11.1	0.1	43.6	8.9	0	7.7	0	16.7	
Lights	275	745	0	0	1020	0	0	0	0	0	0	844	300	0	1144	235	0	203	0	438	2602
% Lights	96.8	90.7	0	0	92.3	0	0	0	0	0	0	93.8	97.4	0	94.5	94.8	0	94.9	0	94.6	93.7
Buses	6	40	0	0	46	0	0	0	0	0	0	20	5	0	25	9	0	3	0	12	83
% Buses	2.1	4.9	0	0	4.2	0	0	0	0	0	0	2.2	1.6	0	2.1	3.6	0	1.4	0	2.6	3
Trucks	3	36	0	0	39	0	0	0	0	0	0	36	3	0	39	4	0	8	0	12	90
% Trucks	1.1	4.4	0	0	3.5	0	0	0	0	0	0	4	1	0	3.2	1.6	0	3.7	0	2.6	3.2
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	3
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.2	0	0	0	100	0.2	0.1

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Start Time	RED SCHOOL HOUSE RD From North					From East					RED SCHOOL HOUSE RD From South					SUMMIT RD From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 02:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:45 PM																					
02:45 PM	17	53	0	0	70	0	0	0	0	0	0	63	22	0	85	13	0	13	0	26	181
03:00 PM	20	58	0	0	78	0	0	0	0	0	0	58	16	0	74	24	0	19	0	43	195
03:15 PM	25	72	0	0	97	0	0	0	0	0	0	55	10	1	66	28	0	16	0	44	207
03:30 PM	18	90	0	0	108	0	0	0	0	0	0	42	16	0	58	19	0	11	0	30	196
Total Volume	80	273	0	0	353	0	0	0	0	0	0	218	64	1	283	84	0	59	0	143	779
% App. Total	22.7	77.3	0	0		0	0	0	0	0	0	77	22.6	0.4		58.7	0	41.3	0		
PHF	.800	.758	.000	.000	.817	.000	.000	.000	.000	.000	.000	.865	.727	.250	.832	.750	.000	.776	.000	.813	.941
Lights	76	238	0	0	314	0	0	0	0	0	0	197	62	0	259	76	0	51	0	127	700
% Lights	95.0	87.2	0	0	89.0	0	0	0	0	0	0	90.4	96.9	0	91.5	90.5	0	86.4	0	88.8	89.9
Buses	4	27	0	0	31	0	0	0	0	0	0	9	2	0	11	7	0	3	0	10	52
% Buses	5.0	9.9	0	0	8.8	0	0	0	0	0	0	4.1	3.1	0	3.9	8.3	0	5.1	0	7.0	6.7
Trucks	0	8	0	0	8	0	0	0	0	0	0	12	0	0	12	1	0	5	0	6	26
% Trucks	0	2.9	0	0	2.3	0	0	0	0	0	0	5.5	0	0	4.2	1.2	0	8.5	0	4.2	3.3
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.4	0	0	0	0	0	0.1

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Customer Loyalty through Client Satisfaction

File Name : 2-RED_SCHOOL_HOUSE_RD_AT_SUMMIT_RD-SAT_786299_10-03-2020

Site Code :

Start Date : 10/3/2020

Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

Start Time	RED SCHOOL HOUSE RD From North					From East					RED SCHOOL HOUSE RD From South					SUMMIT RD From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
10:00 AM	7	23	0	0	30	0	0	0	0	0	0	33	3	0	36	10	0	4	0	14	80
10:15 AM	4	26	0	0	30	0	0	0	0	0	0	28	6	0	34	11	0	5	0	16	80
10:30 AM	8	23	0	0	31	0	0	0	0	0	0	23	6	0	29	6	0	3	0	9	69
10:45 AM	8	23	0	0	31	0	0	0	0	0	0	25	8	0	33	10	0	5	0	15	79
Total	27	95	0	0	122	0	0	0	0	0	0	109	23	0	132	37	0	17	0	54	308
11:00 AM	11	27	0	0	38	0	0	0	0	0	0	16	9	0	25	7	0	4	0	11	74
11:15 AM	10	25	0	0	35	0	0	0	0	0	0	29	10	0	39	5	0	7	0	12	86
11:30 AM	8	25	0	0	33	0	0	0	0	0	0	26	8	0	34	5	0	9	0	14	81
11:45 AM	6	25	0	0	31	0	0	0	0	0	0	26	10	0	36	11	0	9	0	20	87
Total	35	102	0	0	137	0	0	0	0	0	0	97	37	0	134	28	0	29	0	57	328
12:00 PM	4	22	0	0	26	0	0	0	0	0	0	25	15	0	40	6	0	8	0	14	80
12:15 PM	6	37	0	0	43	0	0	0	0	0	0	40	20	0	60	10	0	7	0	17	120
12:30 PM	10	28	0	0	38	0	0	0	0	0	0	29	28	0	57	16	0	6	0	22	117
12:45 PM	8	19	0	0	27	0	0	0	0	0	0	26	29	3	58	17	0	9	0	26	111
Total	28	106	0	0	134	0	0	0	0	0	0	120	92	3	215	49	0	30	0	79	428
01:00 PM	6	26	0	0	32	0	0	0	0	0	0	32	18	0	50	9	0	3	0	12	94
01:15 PM	10	23	0	0	33	0	0	0	0	0	0	35	7	0	42	11	0	5	0	16	91
01:30 PM	7	24	0	0	31	0	0	0	0	0	0	26	10	1	37	11	0	5	0	16	84
01:45 PM	12	28	0	0	40	0	0	0	0	0	0	29	9	0	38	10	0	4	0	14	92
Total	35	101	0	0	136	0	0	0	0	0	0	122	44	1	167	41	0	17	0	58	361
Grand Total	125	404	0	0	529	0	0	0	0	0	0	448	196	4	648	155	0	93	0	248	1425
Apprch %	23.6	76.4	0	0		0	0	0	0	0	0	69.1	30.2	0.6		62.5	0	37.5	0		
Total %	8.8	28.4	0	0	37.1	0	0	0	0	0	0	31.4	13.8	0.3	45.5	10.9	0	6.5	0	17.4	
Lights	121	386	0	0	507	0	0	0	0	0	0	432	195	0	627	150	0	91	0	241	1375
% Lights	96.8	95.5	0	0	95.8	0	0	0	0	0	0	96.4	99.5	0	96.8	96.8	0	97.8	0	97.2	96.5
Buses	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
% Buses	0	1	0	0	0.8	0	0	0	0	0	0	0.9	0	0	0.6	0	0	0	0	0	0.6
Trucks	4	14	0	0	18	0	0	0	0	0	0	12	1	0	13	5	0	2	0	7	38
% Trucks	3.2	3.5	0	0	3.4	0	0	0	0	0	0	2.7	0.5	0	2	3.2	0	2.2	0	2.8	2.7
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	4
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.6	0	0	0	0	0	0.3

Maser Consulting

400 Columbus Avenue, Suite 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

File Name : 2-RED_SCHOOL_HOUSE_RD_AT_SUMMIT_RD-SAT_786299_10-03-2020

Site Code :

Start Date : 10/3/2020

Page No : 2

Start Time	RED SCHOOL HOUSE RD From North					From East					RED SCHOOL HOUSE RD From South					SUMMIT RD From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	6	37	0	0	43	0	0	0	0	0	0	40	20	0	60	10	0	7	0	17	120
12:30 PM	10	28	0	0	38	0	0	0	0	0	0	29	28	0	57	16	0	6	0	22	117
12:45 PM	8	19	0	0	27	0	0	0	0	0	0	26	29	3	58	17	0	9	0	26	111
01:00 PM	6	26	0	0	32	0	0	0	0	0	0	32	18	0	50	9	0	3	0	12	94
Total Volume	30	110	0	0	140	0	0	0	0	0	0	127	95	3	225	52	0	25	0	77	442
% App. Total	21.4	78.6	0	0		0	0	0	0	0	0	56.4	42.2	1.3		67.5	0	32.5	0		
PHF	.750	.743	.000	.000	.814	.000	.000	.000	.000	.000	.000	.794	.819	.250	.938	.765	.000	.694	.000	.740	.921
Lights	29	103	0	0	132	0	0	0	0	0	0	123	95	0	218	50	0	25	0	75	425
% Lights	96.7	93.6	0	0	94.3	0	0	0	0	0	0	96.9	100	0	96.9	96.2	0	100	0	97.4	96.2
Buses	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
% Buses	0	0.9	0	0	0.7	0	0	0	0	0	0	0.8	0	0	0.4	0	0	0	0	0	0.5
Trucks	1	6	0	0	7	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	12
% Trucks	3.3	5.5	0	0	5.0	0	0	0	0	0	0	2.4	0	0	1.3	3.8	0	0	0	2.6	2.7
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	3
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	100	1.3	0	0	0	0	0	0.7

LOCATION: SUMMIT AVENUE & WILSHIRE DRIVE PROJECT: RED SCHOOLHOUSE ROAD - TIS
 DATE OF COUNT: 09/16/20 DAY: WEDNESDAY JCE JOB #: 20003327A START TIME: 07:00 **AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
07:00 AM 07:15 AM		19	4	2	13		7		3				48	A	
07:15 AM 07:30 AM		15	1	0	18		2		2				38	A	
07:30 AM 07:45 AM		18	4	2	10		2		0				36	A	
07:45 AM 08:00 AM		28	10	2	15		5		0				60	A	182
08:00 AM 08:15 AM		46	8	8	26		13		5				106	X	240
08:15 AM 08:30 AM		35	7	1	27		8		5				83	X	285
08:30 AM 08:45 AM		27	3	8	20		6		1				65	X	314
08:45 AM 09:00 AM		30	12	2	25		11		8				88	X	342
09:00 AM 09:15 AM													0	A	236
09:15 AM 09:30 AM													0	A	153
09:30 AM 09:45 AM													0	A	88
09:45 AM 10:00 AM													0	A	0
10:00 AM 10:15 AM													0	A	0
10:15 AM 10:30 AM													0	A	0
10:30 AM 10:45 AM													0	A	0
10:45 AM 11:00 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

07:00 AM 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30 AM 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45 AM 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:00 AM 08:15 AM	0	46	8	8	26	0	13	0	5	0	0	0	106		
08:15 AM 08:30 AM	0	35	7	1	27	0	8	0	5	0	0	0	83		
08:30 AM 08:45 AM	0	27	3	8	20	0	6	0	1	0	0	0	65		
08:45 AM 09:00 AM	0	30	12	2	25	0	11	0	8	0	0	0	88		
09:00 AM 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:15 AM 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:30 AM 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:45 AM 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:00 AM 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:30 AM 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:45 AM 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
08:00 AM 09:00 AM	0	138	30	19	98	0	38	0	19	0	0	0	342	0.806604
PHF BY MOVEMENT	#DIV/0!	0.75	0.63	0.59	0.91	#DIV/0!	0.73	#DIV/0!	0.59	#DIV/0!	#DIV/0!	#DIV/0!		
PHF BY APPROACH		0.78			0.86			0.75			#DIV/0!			

0	0	0	^	6	0
12	11	10	<	5	98
<	v	>	v	4	19
0	1	^	<	^	>
138	2	>	7	8	9
30	3	v	38	0	19

LOCATION: SUMMIT AVENUE & WILSHIRE DRIVE PROJECT: RED SCHOOLHOUSE ROAD - TIS
 DATE OF COUNT: 09/30/20 DAY: WEDNESDAY JCE JOB #: 20003327A START TIME: 15:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
03:00 PM 03:15 PM		40	7	2	25		4		2				80	A	
03:15 PM 03:30 PM		40	4	4	19		0		0				67	A	
03:30 PM 03:45 PM		24	1	1	20		2		1				49	A	
03:45 PM 04:00 PM		26	2	1	31		1		2				63	A	259
04:00 PM 04:15 PM		28	5	1	36		2		0				72	A	251
04:15 PM 04:30 PM		28	2	0	22		3		1				56	A	240
04:30 PM 04:45 PM		31	5	1	35		4		2				78	X	269
04:45 PM 05:00 PM		27	4	1	29		5		2				68	X	274
05:00 PM 05:15 PM		22	2	3	26		1		4				58	X	260
05:15 PM 05:30 PM		27	4	0	57		2		1				91	X	295
05:30 PM 05:45 PM		18	4	0	31		2		0				55	A	272
05:45 PM 06:00 PM		25	1	2	33		0		1				62	A	266
06:00 PM 06:15 PM													0	A	208
06:15 PM 06:30 PM													0	A	117
06:30 PM 06:45 PM													0	A	62
06:45 PM 07:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

03:00 PM 03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:15 PM 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:30 PM 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:45 PM 04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:00 PM 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:15 PM 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:30 PM 04:45 PM	0	31	5	1	35	0	4	0	2	0	0	0	78		
04:45 PM 05:00 PM	0	27	4	1	29	0	5	0	2	0	0	0	68		
05:00 PM 05:15 PM	0	22	2	3	26	0	1	0	4	0	0	0	58		
05:15 PM 05:30 PM	0	27	4	0	57	0	2	0	1	0	0	0	91		
05:30 PM 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:45 PM 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:00 PM 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:30 PM 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		

0	0	0	^	6	0
12	11	10	<	5	147
<	v	>	v	4	5
0	1	^	<	^	>
107	2	>	7	8	9
15	3	v	12	0	9

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:30 PM 05:30 PM	0	107	15	5	147	0	12	0	9	0	0	0	295	0.81044
PHF BY MOVEMENT	#DIV/0!	0.86	0.75	0.42	0.64	#DIV/0!	0.60	#DIV/0!	0.56	#DIV/0!	#DIV/0!	#DIV/0!		
PHF BY APPROACH		0.85			0.67			0.75				#DIV/0!		

LOCATION: SUMMIT AVENUE & WILSHIRE DRIVE (BUSES) PROJECT: RED SCHOOLHOUSE ROAD - TIS
 DATE OF COUNT: 09/16/20 DAY: WEDNESDAY JCE JOB #: 20003327A START TIME: 07:00 **AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
07:00 AM 07:15 AM		0	2	1	5		1		0				9	A	
07:15 AM 07:30 AM		2	0	0	2		1		1				6	X	
07:30 AM 07:45 AM		3	0	0	1		0		0				4	X	
07:45 AM 08:00 AM		3	3	1	5		2		0				14	X	33
08:00 AM 08:15 AM		5	2	5	4		5		0				21	X	45
08:15 AM 08:30 AM		0	2	0	0		2		1				5	A	44
08:30 AM 08:45 AM		0	0	0	1		0		0				1	A	41
08:45 AM 09:00 AM		2	3	0	3		2		1				11	A	38
09:00 AM 09:15 AM													0	A	17
09:15 AM 09:30 AM													0	A	12
09:30 AM 09:45 AM													0	A	11
09:45 AM 10:00 AM													0	A	0
10:00 AM 10:15 AM													0	A	0
10:15 AM 10:30 AM													0	A	0
10:30 AM 10:45 AM													0	A	0
10:45 AM 11:00 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

07:00 AM 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM 07:30 AM	0	2	0	0	2	0	1	0	1	0	0	0	6	
07:30 AM 07:45 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	
07:45 AM 08:00 AM	0	3	3	1	5	0	2	0	0	0	0	0	14	
08:00 AM 08:15 AM	0	5	2	5	4	0	5	0	0	0	0	0	21	
08:15 AM 08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45 AM 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 AM 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
07:15 AM 08:15 AM	0	13	5	6	12	0	8	0	1	0	0	0	45	0.535714
PHF BY MOVEMENT	#DIV/0!	0.65	0.42	0.30	0.60	#DIV/0!	0.40	#DIV/0!	0.25	#DIV/0!	#DIV/0!	#DIV/0!		
PHF BY APPROACH		0.64			0.50			0.45			#DIV/0!			

0	0	0	^	6	0
12	11	10	<	5	12
<	v	>	v	4	6
0	1	^	<	^	>
13	2	>	7	8	9
5	3	v	8	0	1

LOCATION: SUMMIT AVENUE & WILSHIRE DRIVE (BUSES) PROJECT: RED SCHOOLHOUSE ROAD - TIS
 DATE OF COUNT: 09/30/20 DAY: WEDNESDAY JCE JOB #: 20003327A START TIME: 15:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
03:00 PM 03:15 PM		4	1	1	1		1		0				8	X	
03:15 PM 03:30 PM		4	0	1	3		0		0				8	X	
03:30 PM 03:45 PM		0	0	1	1		2		0				4	X	
03:45 PM 04:00 PM		0	1	0	2		0		1				4	X	24
04:00 PM 04:15 PM		2	1	0	0		2		0				5	A	21
04:15 PM 04:30 PM		1	1	0	1		0		0				3	A	16
04:30 PM 04:45 PM		1	2	0	2		1		0				6	A	18
04:45 PM 05:00 PM		5	1	0	0		1		1				8	A	22
05:00 PM 05:15 PM		3	1	0	0		0		1				5	A	22
05:15 PM 05:30 PM		1	1	0	0		1		0				3	A	22
05:30 PM 05:45 PM		0	0	0	0		0		0				0	A	16
05:45 PM 06:00 PM		0	0	0	0		0		0				0	A	8
06:00 PM 06:15 PM													0	A	3
06:15 PM 06:30 PM													0	A	0
06:30 PM 06:45 PM													0	A	0
06:45 PM 07:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

03:00 PM 03:15 PM	0	4	1	1	1	0	1	0	0	0	0	0	8		
03:15 PM 03:30 PM	0	4	0	1	3	0	0	0	0	0	0	0	8		
03:30 PM 03:45 PM	0	0	0	1	1	0	2	0	0	0	0	0	4		
03:45 PM 04:00 PM	0	0	1	0	2	0	0	0	1	0	0	0	4		
04:00 PM 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:15 PM 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:30 PM 04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:45 PM 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:00 PM 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:15 PM 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:30 PM 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:45 PM 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:00 PM 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:30 PM 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
03:00 PM 04:00 PM	0	8	2	3	7	0	3	0	1	0	0	0	24	0.75
PHF BY MOVEMENT	#DIV/0!	0.50	0.50	0.75	0.58	#DIV/0!	0.38	#DIV/0!	0.25	#DIV/0!	#DIV/0!	#DIV/0!		
PHF BY APPROACH		0.50			0.63			0.50				#DIV/0!		

0	0	0	^	6	0
12	11	10	<	5	7
<	v	>	v	4	3
0	1	^	<	^	>
8	2	>	7	8	9
2	3	v	3	0	1

LOCATION: SUMMIT AVENUE & WILSHIRE DRIVE PROJECT: RED SCHOOLHOUSE ROAD - TIS
 DATE OF COUNT: 10/03/20 DAY: SATURDAY JCE JOB #: 20003327A START TIME: 11:00 **SAT**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND				
SAT PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	
11:00 AM	11:15 AM		15	1	0	15		0		0				31	A
11:15 AM	11:30 AM		10	2	2	18		1		1				34	A
11:30 AM	11:45 AM		14	0	2	14		0		0				30	A
11:45 AM	12:00 PM		16	0	1	15		2		3				37	A 132
12:00 PM	12:15 PM		12	0	0	18		2		1				33	A 134
12:15 PM	12:30 PM		15	0	0	30		0		1				46	X 146
12:30 PM	12:45 PM		21	1	2	39		0		2				65	X 181
12:45 PM	01:00 PM		23	2	1	29		1		0				56	X 200
01:00 PM	01:15 PM		12	2	1	25		1		0				41	X 208
01:15 PM	01:30 PM		12	0	2	18		3		2				37	A 199
01:30 PM	01:45 PM		15	1	0	13		0		0				29	A 163
01:45 PM	02:00 PM		12	0	2	18		1		0				33	A 140
02:00 PM	02:15 PM													0	A 99
02:15 PM	02:30 PM													0	A 62
02:30 PM	02:45 PM													0	A 33
02:45 PM	03:00 PM													0	A 0

CALCULATED PEAK 15-MINUTE VOLUMES

11:00 AM	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	12:30 PM	0	15	0	0	30	0	0	0	1	0	0	0	46	
12:30 PM	12:45 PM	0	21	1	2	39	0	0	0	2	0	0	0	65	
12:45 PM	01:00 PM	0	23	2	1	29	0	1	0	0	0	0	0	56	
01:00 PM	01:15 PM	0	12	2	1	25	0	1	0	0	0	0	0	41	
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	

CALCULATED PEAK HOUR VOLUMES

SAT PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
12:15 PM 01:15 PM	0	71	5	4	123	0	2	0	3	0	0	0	208	0.8
PHF BY MOVEMENT	#DIV/0!	0.77	0.63	0.50	0.79	#DIV/0!	0.50	#DIV/0!	0.38	#DIV/0!	#DIV/0!	#DIV/0!		
PHF BY APPROACH		0.76			0.77			0.63			#DIV/0!			

0	0	0	^	6	0
12	11	10	<	5	123
<	v	>	v	4	4
0	1	^	<	^	>
71	2	>	7	8	9
5	3	v	2	0	3

LOCATION: DeSalvo Court & Red Schoolhouse Road PROJECT: 0
 DATE OF COUNT: 10/01/20 DAY: Thursday JCE JOB #: 20003327A START TIME: 16:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
04:00 PM 04:15 PM	3		8				5	24			115	6	161	A	
04:15 PM 04:30 PM	3		7				1	26			109	7	153	A	
04:30 PM 04:45 PM	3		6				3	23			127	9	171	A	
04:45 PM 05:00 PM	4		7				7	16			128	7	169	X	654
05:00 PM 05:15 PM	6		11				2	33			155	13	220	X	713
05:15 PM 05:30 PM	4		10				6	20			137	4	181	X	741
05:30 PM 05:45 PM	3		9				4	31			134	8	189	X	759
05:45 PM 06:00 PM	3		12				6	19			99	10	149	A	739
06:00 PM 06:15 PM													0	A	519
06:15 PM 06:30 PM													0	A	338
06:30 PM 06:45 PM													0	A	149
06:45 PM 07:00 PM													0	A	0
07:00 PM 07:15 PM													0	A	0
07:15 PM 07:30 PM													0	A	0
07:30 PM 07:45 PM													0	A	0
07:45 PM 08:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

04:00 PM 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM 04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM 05:00 PM	4	0	7	0	0	0	7	16	0	0	128	7	169		
05:00 PM 05:15 PM	6	0	11	0	0	0	2	33	0	0	155	13	220		
05:15 PM 05:30 PM	4	0	10	0	0	0	6	20	0	0	137	4	181		
05:30 PM 05:45 PM	3	0	9	0	0	0	4	31	0	0	134	8	189		
05:45 PM 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:00 PM 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:15 PM 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:30 PM 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 PM 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:00 PM 07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 PM 07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:30 PM 07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:45 PM 08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		

32	554	0	^	6	0
12	11	10	<	5	0
<	v	>	v	4	0
17	1	^	<	^	>
0	2	>	7	8	9
37	3	v	19	100	0

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:45 PM 05:45 PM	17	0	37	0	0	0	19	100	0	0	554	32	759	0.8625
PHF BY MOVEMENT	0.71	#DIV/0!	0.84	#DIV/0!	#DIV/0!	#DIV/0!	0.68	0.76	#DIV/0!	#DIV/0!	0.89	0.62		
PHF BY APPROACH	0.79		#DIV/0!			0.85		0.87						

LOCATION: DeSalvo Court & Red Schoolhouse Road PROJECT: 0
 DATE OF COUNT: 10/03/20 DAY: SATURDAY JCE JOB #: 20003327A START TIME: 11:00 **SAT**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

PM PEAK HOUR	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			total		
	1	2	3	4	5	6	7	8	9	10	11	12			
11:00 AM 11:15 AM	0		8				3	8			98	6	123	A	
11:15 AM 11:30 AM	1		8				2	12			77	0	100	A	
11:30 AM 11:45 AM	0		5				1	13			85	2	106	A	
11:45 AM 12:00 PM	0		4				2	13			98	3	120	A	449
12:00 PM 12:15 PM	2		9				1	14			116	3	145	A	471
12:15 PM 12:30 PM	1		7				3	26			135	16	188	X	559
12:30 PM 12:45 PM	1		5				4	13			126	5	154	X	607
12:45 PM 01:00 PM	0		8				7	13			122	8	158	X	645
01:00 PM 01:15 PM	1		3				3	17			118	3	145	X	645
01:15 PM 01:30 PM	2		12				4	18			103	0	139	A	596
01:30 PM 01:45 PM	0		6				2	13			120	5	146	A	588
01:45 PM 02:00 PM	2		11				4	12			95	4	128	A	558
02:00 PM 02:15 PM													0	A	413
02:15 PM 02:30 PM													0	A	274
02:30 PM 02:45 PM													0	A	128
02:45 PM 03:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

11:00 AM 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
11:15 AM 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
11:30 AM 11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0		
11:45 AM 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:00 PM 12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:15 PM 12:30 PM	1	0	7	0	0	0	3	26	0	0	135	16	188		
12:30 PM 12:45 PM	1	0	5	0	0	0	4	13	0	0	126	5	154		
12:45 PM 01:00 PM	0	0	8	0	0	0	7	13	0	0	122	8	158		
01:00 PM 01:15 PM	1	0	3	0	0	0	3	17	0	0	118	3	145		
01:15 PM 01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
01:30 PM 01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
01:45 PM 02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:00 PM 02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:15 PM 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:30 PM 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:45 PM 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		

32	501	0	^	6	0
12	11	10	<	5	0
<	v	>	v	4	0
3	1	^	<	^	>
0	2	>	7	8	9
23	3	v	17	69	0

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
12:15 PM 01:15 PM	3	0	23	0	0	0	17	69	0	0	501	32	645	0.857713
PHF BY MOVEMENT	0.75	#DIV/0!	0.72	#DIV/0!	#DIV/0!	#DIV/0!	0.61	0.66	#DIV/0!	#DIV/0!	0.93	0.50		
PHF BY APPROACH		0.81			#DIV/0!			0.74			0.88			



RED SCHOOLHOUSE ROAD CORRIDOR

AUTOMATIC TRAFFIC RECORDER COUNTS

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Customer Loyalty through Client Satisfaction

Site Code: 20003327 999

Station ID:
WILLIAMS ROAD (APPROX. 225' EAST OF RED
SCHOOLHOUSE ROAD)
Latitude: 0' 0.0000 Undefined

Start Time	31-Aug-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	*	*	*	*	11	13	9	8	23	16	14	12
01:00	*	*	*	*	*	*	*	*	10	8	7	4	18	11	12	8
02:00	*	*	*	*	*	*	*	*	6	2	5	3	5	8	5	4
03:00	*	*	*	*	*	*	*	*	4	3	0	1	1	9	2	4
04:00	*	*	*	*	*	*	*	*	0	4	3	2	3	1	2	2
05:00	*	*	*	*	*	*	*	*	7	10	2	5	1	4	3	6
06:00	*	*	*	*	*	*	*	*	24	55	17	13	13	14	18	27
07:00	*	*	*	*	*	*	*	*	81	99	26	22	25	38	44	53
08:00	*	*	*	*	*	*	*	*	111	148	39	61	60	68	70	92
09:00	*	*	*	*	*	*	*	*	140	135	51	58	83	100	91	98
10:00	*	*	*	*	*	*	*	*	107	90	67	58	69	77	81	75
11:00	*	*	*	*	*	*	*	*	105	121	77	62	105	112	96	98
12:00 PM	*	*	*	*	*	*	*	*	168	149	81	79	117	105	122	111
01:00	*	*	*	*	*	*	*	121	138	135	145	79	68	111	122	112
02:00	*	*	*	*	*	*	*	136	119	171	156	87	63	145	111	135
03:00	*	*	*	*	*	*	*	149	119	154	126	71	69	135	94	127
04:00	*	*	*	*	*	*	*	179	124	157	123	94	71	130	103	140
05:00	*	*	*	*	*	*	*	166	143	181	154	64	64	119	98	132
06:00	*	*	*	*	*	*	*	139	121	126	105	62	62	100	99	107
07:00	*	*	*	*	*	*	*	117	80	69	58	44	55	78	66	77
08:00	*	*	*	*	*	*	*	60	65	51	29	54	43	63	48	57
09:00	*	*	*	*	*	*	*	60	52	36	25	59	59	46	42	50
10:00	*	*	*	*	*	*	*	44	28	35	15	51	36	53	35	46
11:00	*	*	*	*	*	*	*	39	20	22	9	41	35	35	20	34
Lane	0	0	0	0	0	0	1210	1009	1911	1782	1090	1001	1538	1401	1577	1443
Day	0	0	0	0	0	0	2219	1009	3693	1782	2091	1001	2939	1401	3020	1443
AM Peak	-	-	-	-	-	-	-	-	09:00	08:00	11:00	11:00	11:00	11:00	11:00	09:00
Vol.	-	-	-	-	-	-	-	-	140	148	77	62	105	112	96	98
PM Peak	-	-	-	-	-	-	16:00	17:00	17:00	14:00	16:00	12:00	14:00	13:00	16:00	13:00
Vol.	-	-	-	-	-	-	179	143	181	156	94	79	145	122	140	118

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 20003327 999

Station ID:
WILLIAMS ROAD (APPROX. 225' EAST OF RED
SCHOOLHOUSE ROAD)
Latitude: 0' 0.0000 Undefined

Start Time	07-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	10	6	20	9	12	4	17	5	24	6	10	11	26	28	17	10
01:00	6	5	4	2	3	5	6	2	8	9	3	5	25	12	8	6
02:00	3	2	4	2	0	2	5	2	2	2	6	2	15	13	5	4
03:00	1	3	1	2	0	1	3	1	3	2	3	5	9	5	3	3
04:00	0	1	1	2	2	5	4	3	4	6	1	2	7	8	3	4
05:00	3	13	5	10	11	12	8	14	8	14	6	5	5	4	7	10
06:00	19	37	35	72	38	76	28	57	38	58	18	11	13	14	27	46
07:00	34	56	109	93	114	110	106	91	107	122	29	31	25	27	75	76
08:00	62	109	149	169	155	155	132	150	140	175	47	45	62	69	107	125
09:00	84	103	107	127	111	119	121	130	140	131	47	42	78	96	98	107
10:00	75	84	87	69	78	71	92	82	140	131	64	78	94	90	90	86
11:00	75	79	101	78	75	86	82	81	115	137	56	73	111	118	88	93
12:00 PM	105	97	87	68	92	104	101	104	172	133	72	68	129	135	108	101
01:00	103	104	126	108	108	98	97	121	160	146	76	71	122	109	113	108
02:00	125	95	117	118	128	123	107	132	158	128	77	77	146	103	123	111
03:00	173	109	170	119	158	126	177	132	140	132	74	80	135	90	147	113
04:00	138	105	159	103	159	94	162	127	142	128	87	52	128	115	139	103
05:00	131	100	201	124	169	127	173	151	164	133	88	75	91	96	145	115
06:00	97	100	122	122	133	125	135	103	131	101	53	52	106	99	111	100
07:00	102	74	110	80	126	106	111	81	93	76	50	49	69	75	94	77
08:00	78	63	79	61	72	69	54	71	44	61	49	42	73	77	64	63
09:00	48	40	54	47	51	46	51	51	35	28	62	55	61	50	52	45
10:00	64	35	42	31	47	19	50	31	34	13	50	37	50	36	48	29
11:00	26	22	37	20	36	22	35	28	23	20	49	30	28	25	33	24
Lane	1562	1442	1927	1636	1878	1705	1857	1750	2025	1892	1077	998	1608	1494	1705	1559
Day	3004		3563		3583		3607		3917		2075		3102		3264	
AM Peak	09:00	08:00	08:00	08:00	08:00	08:00	08:00	08:00	08:00	08:00	10:00	10:00	11:00	11:00	08:00	08:00
Vol.	84	109	149	169	155	155	132	150	140	175	64	78	111	118	107	125
PM Peak	15:00	15:00	17:00	17:00	17:00	17:00	15:00	17:00	12:00	13:00	17:00	15:00	14:00	12:00	15:00	17:00
Vol.	173	109	201	124	169	127	177	151	172	146	88	80	146	135	147	115

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 20003327 999
Station ID:
WILLIAMS ROAD (APPROX. 225' EAST OF RED
SCHOOLHOUSE ROAD)
Latitude: 0' 0.0000 Undefined

Start Time	14-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	12	11	13	3	11	6	*	*	*	*	*	*	*	*	12	7
01:00	7	2	2	6	1	3	*	*	*	*	*	*	*	*	3	4
02:00	1	0	1	2	4	1	*	*	*	*	*	*	*	*	2	1
03:00	0	3	0	2	0	2	*	*	*	*	*	*	*	*	0	2
04:00	2	2	3	5	0	2	*	*	*	*	*	*	*	*	2	3
05:00	10	18	7	19	6	17	*	*	*	*	*	*	*	*	8	18
06:00	46	72	50	77	44	79	*	*	*	*	*	*	*	*	47	76
07:00	107	116	118	124	106	124	*	*	*	*	*	*	*	*	110	121
08:00	139	151	113	153	120	163	*	*	*	*	*	*	*	*	124	156
09:00	139	130	125	148	*	*	*	*	*	*	*	*	*	*	132	139
10:00	84	86	79	94	*	*	*	*	*	*	*	*	*	*	82	90
11:00	94	82	85	76	*	*	*	*	*	*	*	*	*	*	90	79
12:00 PM	94	79	93	85	*	*	*	*	*	*	*	*	*	*	94	82
01:00	96	88	91	124	*	*	*	*	*	*	*	*	*	*	94	106
02:00	113	123	140	139	*	*	*	*	*	*	*	*	*	*	126	131
03:00	169	113	191	127	*	*	*	*	*	*	*	*	*	*	180	120
04:00	165	125	177	110	*	*	*	*	*	*	*	*	*	*	171	118
05:00	181	129	186	145	*	*	*	*	*	*	*	*	*	*	184	137
06:00	106	126	131	130	*	*	*	*	*	*	*	*	*	*	118	128
07:00	121	88	114	98	*	*	*	*	*	*	*	*	*	*	118	93
08:00	82	61	58	55	*	*	*	*	*	*	*	*	*	*	70	58
09:00	63	43	53	50	*	*	*	*	*	*	*	*	*	*	58	46
10:00	52	33	57	32	*	*	*	*	*	*	*	*	*	*	54	32
11:00	25	24	35	18	*	*	*	*	*	*	*	*	*	*	30	21
Lane Day	1908	1705	1922	1822	292	397	0	0	0	0	0	0	0	0	1909	1768
AM Peak	08:00	08:00	09:00	08:00	08:00	08:00	-	-	-	-	-	-	-	-	09:00	08:00
Vol.	139	151	125	153	120	163	-	-	-	-	-	-	-	-	132	156
PM Peak	17:00	17:00	15:00	17:00	-	-	-	-	-	-	-	-	-	-	17:00	17:00
Vol.	181	129	191	145	-	-	-	-	-	-	-	-	-	-	184	137

Comb. Total	6617	7307	4272	5826	7610	4166	6041	9961
ADT	ADT 3,325	AADT 3,325						

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 200033270333

Station ID:
SUMMIT ROAD (EAST OF TICE COURT AND
WEST OF RED SCHOOLHOUSE ROAD)
Latitude: 0' 0.0000 Undefined

Start Time	07-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	*	*	4	8	7	8	6	11	20	22	9	12
01:00	*	*	*	*	*	*	3	6	2	5	2	6	11	8	4	6
02:00	*	*	*	*	*	*	1	4	1	4	2	1	7	8	3	4
03:00	*	*	*	*	*	*	2	2	3	2	1	2	4	1	2	2
04:00	*	*	*	*	*	*	5	4	2	4	3	3	6	2	4	3
05:00	*	*	*	*	*	*	20	7	20	6	10	7	5	9	14	7
06:00	*	*	*	*	*	*	43	17	38	19	16	11	11	8	27	14
07:00	*	*	*	*	*	*	76	60	74	81	22	15	21	17	48	43
08:00	*	*	*	*	*	*	139	99	126	99	37	30	35	40	84	67
09:00	*	*	*	*	*	*	107	59	112	72	42	38	64	63	81	58
10:00	*	*	*	*	*	*	82	67	112	72	57	58	69	72	80	67
11:00	*	*	*	*	*	*	57	72	73	113	49	54	81	88	65	82
12:00 PM	*	*	*	*			62	77	77	84	131	131	70	69	86	91
01:00	*	*	*	*			83	79	69	94	120	127	64	62	80	99
02:00	*	*	*	*			64	109	99	107	144	126	65	68	90	98
03:00	*	*	*	*			136	115	115	123	126	130	49	82	76	90
04:00	*	*	*	*			95	130	105	107	107	142	53	68	65	88
05:00	*	*	*	*			98	161	85	144	95	139	54	87	57	81
06:00	*	*	*	*			86	116	80	121	72	81	32	49	60	87
07:00	*	*	*	*			74	103	63	66	45	73	48	73	37	59
08:00	*	*	*	*			59	64	33	53	21	46	23	45	37	52
09:00	*	*	*	*			28	43	26	50	26	43	36	52	23	43
10:00	*	*	*	*			28	28	17	23	16	32	30	33	27	24
11:00	*	*	*	*			20	22	10	27	13	28	21	27	10	24
Lane	0	0	0	0	833	1047	1318	1404	1486	1583	792	951	988	1176	1166	1305
Day	0		0		1880		2722		3069		1743		2164		2471	
AM Peak	-	-	-	-	-	-	08:00	08:00	08:00	11:00	10:00	10:00	11:00	11:00	08:00	11:00
Vol.	-	-	-	-	-	-	139	99	126	113	57	58	81	88	84	82
PM Peak	-	-	-	-	15:00	17:00	15:00	17:00	14:00	16:00	12:00	17:00	12:00	13:00	15:00	17:00
Vol.	-	-	-	-	136	161	115	144	144	142	70	87	92	99	100	122

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 200033270333

Station ID:
SUMMIT ROAD (EAST OF TICE COURT AND
WEST OF RED SCHOOLHOUSE ROAD)
Latitude: 0' 0.0000 Undefined

Start Time	14-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	4	11	12	5	0	7	*	*	*	*	*	*	*	*	5	8
01:00	2	5	5	4	3	7	*	*	*	*	*	*	*	*	3	5
02:00	2	1	1	2	2	2	*	*	*	*	*	*	*	*	2	2
03:00	1	0	1	1	3	2	*	*	*	*	*	*	*	*	2	1
04:00	3	2	4	3	6	4	*	*	*	*	*	*	*	*	4	3
05:00	21	8	15	8	18	7	*	*	*	*	*	*	*	*	18	8
06:00	46	21	51	25	60	24	*	*	*	*	*	*	*	*	52	23
07:00	81	64	91	61	85	59	*	*	*	*	*	*	*	*	86	61
08:00	135	113	140	95	142	117	*	*	*	*	*	*	*	*	139	108
09:00	133	84	115	91	*	*	*	*	*	*	*	*	*	*	124	88
10:00	69	69	75	68	*	*	*	*	*	*	*	*	*	*	72	68
11:00	74	62	77	81	*	*	*	*	*	*	*	*	*	*	76	72
12:00 PM	68	74	81	92	*	*	*	*	*	*	*	*	*	*	74	83
01:00	76	77	73	101	*	*	*	*	*	*	*	*	*	*	74	89
02:00	102	115	90	117	*	*	*	*	*	*	*	*	*	*	96	116
03:00	149	129	141	138	*	*	*	*	*	*	*	*	*	*	145	134
04:00	113	141	109	114	*	*	*	*	*	*	*	*	*	*	111	128
05:00	92	154	100	165	*	*	*	*	*	*	*	*	*	*	96	160
06:00	78	129	81	133	*	*	*	*	*	*	*	*	*	*	80	131
07:00	62	80	63	89	*	*	*	*	*	*	*	*	*	*	62	84
08:00	46	51	45	56	*	*	*	*	*	*	*	*	*	*	46	54
09:00	34	39	25	43	*	*	*	*	*	*	*	*	*	*	30	41
10:00	23	32	25	30	*	*	*	*	*	*	*	*	*	*	24	31
11:00	12	27	12	22	*	*	*	*	*	*	*	*	*	*	12	24
Lane Day	1426	1488	1432	1544	319	229	0	0	0	0	0	0	0	0	1433	1522
AM Peak	08:00	08:00	08:00	08:00	08:00	08:00	-	-	-	-	-	-	-	-	08:00	08:00
Vol.	135	113	140	95	142	117	-	-	-	-	-	-	-	-	139	108
PM Peak	15:00	17:00	15:00	17:00	-	-	-	-	-	-	-	-	-	-	15:00	17:00
Vol.	149	154	141	165	-	-	-	-	-	-	-	-	-	-	145	160

Comb. Total	2914	2976	2428	2722	3069	1743	2164	5426
ADT	ADT 2,852	AADT 2,852						

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Customer Loyalty through Client Satisfaction

Site Code: 20003327 1010

Station ID:

RED SCHOOLHOUSE ROAD (NORTH OF PROMENADE
SENIOR HOUSING & SOUTH OF WESCOM)

Latitude: 0' 0.0000 Undefined

Start Time	31-Aug-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average		
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	
12:00 AM	*	*	*	*	*	*	*	*	21	14	27	13	30	12	26	13	
01:00	*	*	*	*	*	*	*	*	6	10	17	8	24	15	16	11	
02:00	*	*	*	*	*	*	*	*	10	2	9	4	4	9	8	5	
03:00	*	*	*	*	*	*	*	*	7	3	2	3	5	2	5	3	
04:00	*	*	*	*	*	*	*	*	13	15	8	7	5	9	9	10	
05:00	*	*	*	*	*	*	*	*	53	44	22	15	6	15	27	25	
06:00	*	*	*	*	*	*	*	*	134	103	48	55	33	39	72	66	
07:00	*	*	*	*	*	*	*	*	187	175	64	77	45	52	99	101	
08:00	*	*	*	*	*	*	*	*	282	185	96	108	77	81	152	125	
09:00	*	*	*	*	*	*	*	*	218	204	118	129	111	126	149	153	
10:00	*	*	*	*	*	*	*	*	193	183	126	142	117	100	145	142	
11:00	*	*	*	*	*	*	*	*	202	198	201	126	141	147	181	157	
12:00 PM	*	*	*	*	*	*	*	202	205	264	216	205	156	148	124	205	175
01:00	*	*	*	*	*	*	*	217	192	300	212	162	156	191	131	218	173
02:00	*	*	*	*	*	*	*	282	208	309	253	157	122	180	164	232	187
03:00	*	*	*	*	*	*	*	251	263	248	265	162	131	216	130	219	197
04:00	*	*	*	*	*	*	*	255	256	266	215	170	104	160	116	213	173
05:00	*	*	*	*	*	*	*	287	268	255	216	158	135	165	123	216	186
06:00	*	*	*	*	*	*	*	234	200	192	166	130	96	179	123	184	146
07:00	*	*	*	*	*	*	*	191	115	155	109	103	67	171	77	155	92
08:00	*	*	*	*	*	*	*	94	71	98	71	115	62	105	60	103	66
09:00	*	*	*	*	*	*	*	76	49	57	49	67	69	85	54	71	55
10:00	*	*	*	*	*	*	*	59	40	67	42	68	62	72	55	66	50
11:00	*	*	*	*	*	*	*	50	56	38	56	55	41	58	26	50	45
Lane	0	0	0	0	0	0	2198	1923	3575	3006	2290	1888	2328	1790	2821	2356	
Day	0	0	0	0	0	4121	6581	4178	4118	5177							
AM Peak	-	-	-	-	-	-	-	-	08:00	09:00	11:00	10:00	11:00	11:00	11:00	11:00	
Vol.	-	-	-	-	-	-	-	-	282	204	201	142	141	147	181	157	
PM Peak	-	-	-	-	-	-	17:00	17:00	14:00	15:00	12:00	12:00	15:00	14:00	14:00	15:00	
Vol.	-	-	-	-	-	-	287	268	309	265	205	156	216	164	232	197	

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 20003327 1010

Station ID:
RED SCHOOLHOUSE ROAD (NORTH OF PROMENADE
SENIOR HOUSING & SOUTH OF WESCOM)

Latitude: 0' 0.0000 Undefined

Start Time	07-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	23	16	29	7	19	16	18	21	25	18	17	19	33	29	23	18
01:00	8	7	11	7	8	9	10	15	16	11	11	3	15	10	11	9
02:00	8	4	3	2	8	7	6	2	3	5	6	5	14	9	7	5
03:00	3	3	4	4	6	3	9	4	11	7	3	5	6	8	6	5
04:00	4	9	22	13	18	14	28	13	20	15	29	10	26	7	21	12
05:00	14	18	50	47	59	47	58	48	55	48	41	26	26	13	43	35
06:00	33	39	160	118	155	129	152	106	147	122	57	54	21	42	104	87
07:00	57	76	228	194	240	222	264	198	280	191	76	99	44	44	170	146
08:00	94	104	299	210	367	204	345	221	315	227	93	99	78	72	227	162
09:00	90	125	224	220	252	215	234	209	222	205	124	128	102	97	178	171
10:00	112	121	179	147	252	215	167	146	180	178	137	141	117	131	163	154
11:00	131	111	166	148	174	166	196	156	236	200	139	129	155	125	171	148
12:00 PM	162	123	200	170	192	177	198	161	273	238	160	150	183	185	195	172
01:00	185	125	230	185	204	192	192	193	287	245	163	149	191	155	207	178
02:00	176	156	267	217	284	181	294	237	342	237	158	150	188	153	244	190
03:00	215	113	308	283	267	304	303	293	292	320	173	124	173	116	247	222
04:00	180	104	259	226	292	265	263	283	264	252	176	108	178	138	230	197
05:00	159	106	306	254	324	310	286	273	244	224	185	133	161	114	238	202
06:00	146	130	241	197	255	221	235	197	212	145	126	107	157	102	196	157
07:00	145	87	191	126	228	132	164	146	182	111	142	89	126	78	168	110
08:00	129	80	114	96	116	88	107	59	102	100	77	52	93	58	105	76
09:00	72	55	81	46	65	67	93	81	64	52	82	67	82	51	77	60
10:00	71	38	64	40	68	43	62	44	65	37	62	68	52	45	63	45
11:00	43	22	33	53	45	46	40	54	50	51	63	26	38	23	45	39
Lane	2260	1772	3669	3010	3898	3273	3724	3160	3887	3239	2300	1941	2259	1805	3139	2600
Day	4032		6679		7171		6884		7126		4241		4064		5739	
AM Peak	11:00	09:00	08:00	09:00	08:00	07:00	08:00	08:00	08:00	08:00	11:00	10:00	11:00	10:00	08:00	09:00
Vol.	131	125	299	220	367	222	345	221	315	227	139	141	155	131	227	171
PM Peak	15:00	14:00	15:00	15:00	17:00	17:00	15:00	15:00	14:00	15:00	17:00	12:00	13:00	12:00	15:00	15:00
Vol.	215	156	308	283	324	310	303	293	342	320	185	150	191	185	247	222

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 20003327 1010

Station ID:
RED SCHOOLHOUSE ROAD (NORTH OF PROMENADE
SENIOR HOUSING & SOUTH OF WESCOM)
Latitude: 0' 0.0000 Undefined

Start Time	14-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	22	12	12	18	23	11	*	*	*	*	*	*	*	*	19	14
01:00	14	4	7	3	10	8	*	*	*	*	*	*	*	*	10	5
02:00	4	5	2	4	4	10	*	*	*	*	*	*	*	*	3	6
03:00	5	5	2	9	8	7	*	*	*	*	*	*	*	*	5	7
04:00	15	10	34	12	29	12	*	*	*	*	*	*	*	*	26	11
05:00	60	56	57	49	59	64	*	*	*	*	*	*	*	*	59	56
06:00	190	136	187	145	192	165	*	*	*	*	*	*	*	*	190	149
07:00	248	198	273	217	283	230	*	*	*	*	*	*	*	*	268	215
08:00	362	237	333	258	348	262	*	*	*	*	*	*	*	*	348	252
09:00	264	226	266	239	*	*	*	*	*	*	*	*	*	*	265	232
10:00	176	145	147	159	*	*	*	*	*	*	*	*	*	*	162	152
11:00	169	153	203	170	*	*	*	*	*	*	*	*	*	*	186	162
12:00 PM	190	154	205	178	*	*	*	*	*	*	*	*	*	*	198	166
01:00	206	202	234	182	*	*	*	*	*	*	*	*	*	*	220	192
02:00	286	227	303	230	*	*	*	*	*	*	*	*	*	*	294	228
03:00	286	348	303	344	*	*	*	*	*	*	*	*	*	*	294	346
04:00	290	283	304	244	*	*	*	*	*	*	*	*	*	*	297	264
05:00	302	279	318	300	*	*	*	*	*	*	*	*	*	*	310	290
06:00	231	177	235	182	*	*	*	*	*	*	*	*	*	*	233	180
07:00	158	112	169	131	*	*	*	*	*	*	*	*	*	*	164	122
08:00	88	68	107	89	*	*	*	*	*	*	*	*	*	*	98	78
09:00	77	51	74	51	*	*	*	*	*	*	*	*	*	*	76	51
10:00	71	43	62	51	*	*	*	*	*	*	*	*	*	*	66	47
11:00	39	45	41	41	*	*	*	*	*	*	*	*	*	*	40	43
Lane Day	3753	3176	3878	3306	956	769	0	0	0	0	0	0	0	0	3831	3268
AM Peak	08:00	08:00	08:00	08:00	08:00	08:00	-	-	-	-	-	-	-	-	08:00	08:00
Vol.	362	237	333	258	348	262	-	-	-	-	-	-	-	-	348	252
PM Peak	17:00	15:00	17:00	15:00	-	-	-	-	-	-	-	-	-	-	17:00	15:00
Vol.	302	348	318	344	-	-	-	-	-	-	-	-	-	-	310	346

Comb. Total	10961	13863	8896	11005	13707	8419	8182	18015
ADT	ADT 5,575	AADT 5,575						

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Customer Loyalty through Client Satisfaction

Site Code: 20003327 888

Station ID:

RED SCHOOLHOUSE ROAD (NORTH OF CHESTNUT
RIDGE SCHOOL BUSES & SOUTH OF SEPHAR LN)

Latitude: 0' 0.0000 Undefined

Start Time	31-Aug-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average		
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	
12:00 AM	*	*	*	*	*	*	*	*	23	26	27	36	28	40	26	34	
01:00	*	*	*	*	*	*	*	*	7	11	14	12	16	24	12	16	
02:00	*	*	*	*	*	*	*	*	6	5	9	3	3	11	6	6	
03:00	*	*	*	*	*	*	*	*	7	3	12	6	8	0	9	3	
04:00	*	*	*	*	*	*	*	*	12	16	14	12	4	9	10	12	
05:00	*	*	*	*	*	*	*	*	56	46	35	22	4	16	32	28	
06:00	*	*	*	*	*	*	*	*	142	154	68	53	39	30	83	79	
07:00	*	*	*	*	*	*	*	*	198	296	112	111	79	59	130	155	
08:00	*	*	*	*	*	*	*	*	280	314	177	154	144	116	200	195	
09:00	*	*	*	*	*	*	*	*	286	283	262	173	186	123	245	193	
10:00	*	*	*	*	*	*	*	*	293	252	286	206	255	159	278	206	
11:00	*	*	*	*	*	*	*	254	228	326	287	385	274	295	245	315	258
12:00 PM	*	*	*	*	*	*	*	265	306	355	305	375	269	291	251	322	283
01:00	*	*	*	*	*	*	*	321	292	424	289	343	268	282	257	342	276
02:00	*	*	*	*	*	*	*	382	298	451	326	307	271	295	277	359	293
03:00	*	*	*	*	*	*	*	391	329	467	340	304	272	257	284	355	306
04:00	*	*	*	*	*	*	*	410	329	440	317	303	272	202	271	339	297
05:00	*	*	*	*	*	*	*	429	309	373	309	238	282	176	296	304	299
06:00	*	*	*	*	*	*	*	314	265	352	282	200	240	169	215	259	250
07:00	*	*	*	*	*	*	*	260	201	275	222	204	206	193	181	233	202
08:00	*	*	*	*	*	*	*	109	125	171	178	134	149	135	144	137	149
09:00	*	*	*	*	*	*	*	97	83	114	101	109	125	77	106	99	104
10:00	*	*	*	*	*	*	*	51	58	87	90	76	103	62	89	69	85
11:00	*	*	*	*	*	*	*	36	38	56	64	68	70	48	51	52	56
Lane	0	0	0	0	0	0	3319	2861	5201	4516	4062	3589	3248	3254	4216	3785	
Day	0	0	0	0	0	6180	9717	7651	6502	8001							
AM Peak	-	-	-	-	-	-	11:00	11:00	11:00	08:00	11:00	11:00	11:00	11:00	11:00	11:00	
Vol.	-	-	-	-	-	-	254	228	326	314	385	274	295	245	315	258	
PM Peak	-	-	-	-	-	-	17:00	15:00	15:00	15:00	12:00	17:00	14:00	17:00	14:00	15:00	
Vol.	-	-	-	-	-	-	429	329	467	340	375	282	295	296	359	306	

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 20003327 888

Station ID:
RED SCHOOLHOUSE ROAD (NORTH OF CHESTNUT
RIDGE SCHOOL BUSES & SOUTH OF SEPHAR LN)
Latitude: 0' 0.0000 Undefined

Start Time	07-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	30	25	14	19	18	19	16	27	18	20	21	32	28	31	21	25
01:00	17	15	8	10	8	11	7	9	9	10	10	11	17	12	11	11
02:00	4	6	4	4	4	9	7	5	5	6	5	8	10	8	6	7
03:00	4	6	3	5	10	3	7	6	9	8	9	6	5	7	7	6
04:00	8	7	15	18	18	12	19	20	20	20	28	10	16	5	18	13
05:00	11	22	57	64	57	71	54	54	55	47	42	24	20	11	42	42
06:00	42	38	167	179	164	176	155	167	156	171	70	56	52	41	115	118
07:00	74	68	250	407	279	430	273	419	278	402	109	117	73	60	191	272
08:00	121	80	299	416	350	444	315	400	289	399	176	188	157	120	244	292
09:00	138	132	231	335	298	278	241	318	272	293	239	215	180	129	228	243
10:00	194	180	253	234	298	278	207	209	264	272	287	260	270	183	253	231
11:00	247	211	261	246	248	302	231	287	317	317	342	291	326	256	282	273
12:00 PM	234	245	314	300	320	259	319	283	360	287	391	321	276	338	316	290
01:00	224	291	287	280	289	271	268	267	349	317	355	343	279	284	293	293
02:00	218	293	336	326	355	296	325	275	416	328	301	338	292	302	320	308
03:00	222	263	399	365	391	357	389	345	419	381	352	282	232	318	343	330
04:00	185	264	396	332	455	366	391	361	439	320	282	307	220	326	338	325
05:00	165	224	479	379	508	372	424	346	399	355	262	301	195	307	347	326
06:00	155	212	317	276	339	280	310	259	342	282	224	259	172	227	266	256
07:00	157	188	246	202	230	197	199	181	246	235	183	183	203	175	209	194
08:00	101	154	134	147	155	134	161	100	155	172	157	164	110	123	139	142
09:00	82	90	74	76	86	69	84	97	124	92	99	127	67	72	88	89
10:00	63	64	58	67	63	61	57	44	75	85	99	113	44	45	66	68
11:00	29	37	34	50	41	41	22	33	72	53	63	52	26	27	41	42
Lane	2725	3115	4636	4737	4984	4736	4481	4512	5088	4872	4106	4008	3270	3407	4184	4196
Day	5840		9373		9720		8993		9960		8114		6677		8380	
AM Peak	11:00	11:00	08:00	08:00	08:00	08:00	08:00	07:00	11:00	07:00	11:00	11:00	11:00	11:00	11:00	08:00
Vol.	247	211	299	416	350	444	315	419	317	402	342	291	326	256	282	292
PM Peak	12:00	14:00	17:00	17:00	17:00	17:00	17:00	16:00	16:00	15:00	12:00	13:00	14:00	12:00	17:00	15:00
Vol.	234	293	479	379	508	372	424	361	439	381	391	343	292	338	347	330

Maser Consulting

400 Columbus Avenue, Ste 180 E
Valhalla, NY 10595

Customer Loyalty through Client Satisfaction

Project: RED SCHOOLHOUSE ROAD - TRAFFIC STUDY
Location: CHESTNUT RIDGE, NY
MC Job No. 20003327A

Site Code: 20003327 888

Station ID:
RED SCHOOLHOUSE ROAD (NORTH OF CHESTNUT
RIDGE SCHOOL BUSES & SOUTH OF SEPHAR LN)
Latitude: 0' 0.0000 Undefined

Start Time	14-Sep-20		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	16	19	10	18	14	17	*	*	*	*	*	*	*	*	13	18
01:00	6	5	6	8	8	10	*	*	*	*	*	*	*	*	7	8
02:00	4	5	6	4	4	8	*	*	*	*	*	*	*	*	5	6
03:00	4	10	7	10	7	4	*	*	*	*	*	*	*	*	6	8
04:00	17	18	23	19	27	21	*	*	*	*	*	*	*	*	22	19
05:00	59	73	53	61	53	67	*	*	*	*	*	*	*	*	55	67
06:00	173	208	187	203	173	223	*	*	*	*	*	*	*	*	178	211
07:00	292	421	305	445	309	439	*	*	*	*	*	*	*	*	302	435
08:00	294	434	309	471	303	415	*	*	*	*	*	*	*	*	302	440
09:00	296	286	260	326	*	*	*	*	*	*	*	*	*	*	278	306
10:00	221	216	219	246	*	*	*	*	*	*	*	*	*	*	220	231
11:00	247	235	283	239	*	*	*	*	*	*	*	*	*	*	265	237
12:00 PM	273	252	276	276	*	*	*	*	*	*	*	*	*	*	274	264
01:00	309	289	291	256	*	*	*	*	*	*	*	*	*	*	300	272
02:00	363	301	361	316	*	*	*	*	*	*	*	*	*	*	362	308
03:00	378	398	401	423	*	*	*	*	*	*	*	*	*	*	390	410
04:00	446	343	466	302	*	*	*	*	*	*	*	*	*	*	456	322
05:00	493	335	521	396	*	*	*	*	*	*	*	*	*	*	507	366
06:00	315	255	305	273	*	*	*	*	*	*	*	*	*	*	310	264
07:00	184	171	226	200	*	*	*	*	*	*	*	*	*	*	205	186
08:00	89	113	134	128	*	*	*	*	*	*	*	*	*	*	112	120
09:00	80	66	75	67	*	*	*	*	*	*	*	*	*	*	78	66
10:00	42	44	57	53	*	*	*	*	*	*	*	*	*	*	50	48
11:00	30	38	43	36	*	*	*	*	*	*	*	*	*	*	36	37
Lane Day	4631	4535	4824	4776	898	1204	0	0	0	0	0	0	0	0	4733	4649
AM Peak	09:00	08:00	08:00	08:00	07:00	07:00	-	-	-	-	-	-	-	-	07:00	08:00
Vol.	296	434	309	471	309	439	-	-	-	-	-	-	-	-	302	440
PM Peak	17:00	15:00	17:00	15:00	-	-	-	-	-	-	-	-	-	-	17:00	15:00
Vol.	493	398	521	423	-	-	-	-	-	-	-	-	-	-	507	410

Comb. Total	15006	18973	11822	15173	19677	15765	13179	25763
ADT	ADT 8,206	AADT 8,206						