APPENDIX C

TRAFFIC IMPACT STUDY

N&P, LLP

July 2017

TRAFFIC STUDY

221 East Main Street

Town of Riverhead
New York

December 2016
Revised June 2017

N & P JOB NO. 16068

NELSON & POPE
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PURPOSE OF REPORT

Nelson & Pope conducted a Traffic Impact Study in 2016 to investigate the potential traffic impacts associated with the proposed construction of 116 apartment units, 1,508 SF of retail space and two restaurants containing a total of 535 seats on the southwest corner of East Main Street and McDermott Avenue in the Town of Riverhead, New York. This study is a revision to the 2016 Traffic Study to incorporate comments from the Town of Riverhead Planning department SEQRA Staff Report dated April 17, 2017. The site is located in the DC-1 district associated with downtown Main Street, Riverhead. Access to the site will be provided via McDermott Avenue.

The revised report summarizes the results of a detailed investigation of the traffic impacts of the proposed project by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network. Figures 1 and 2 show the study area map and site location map respectively.

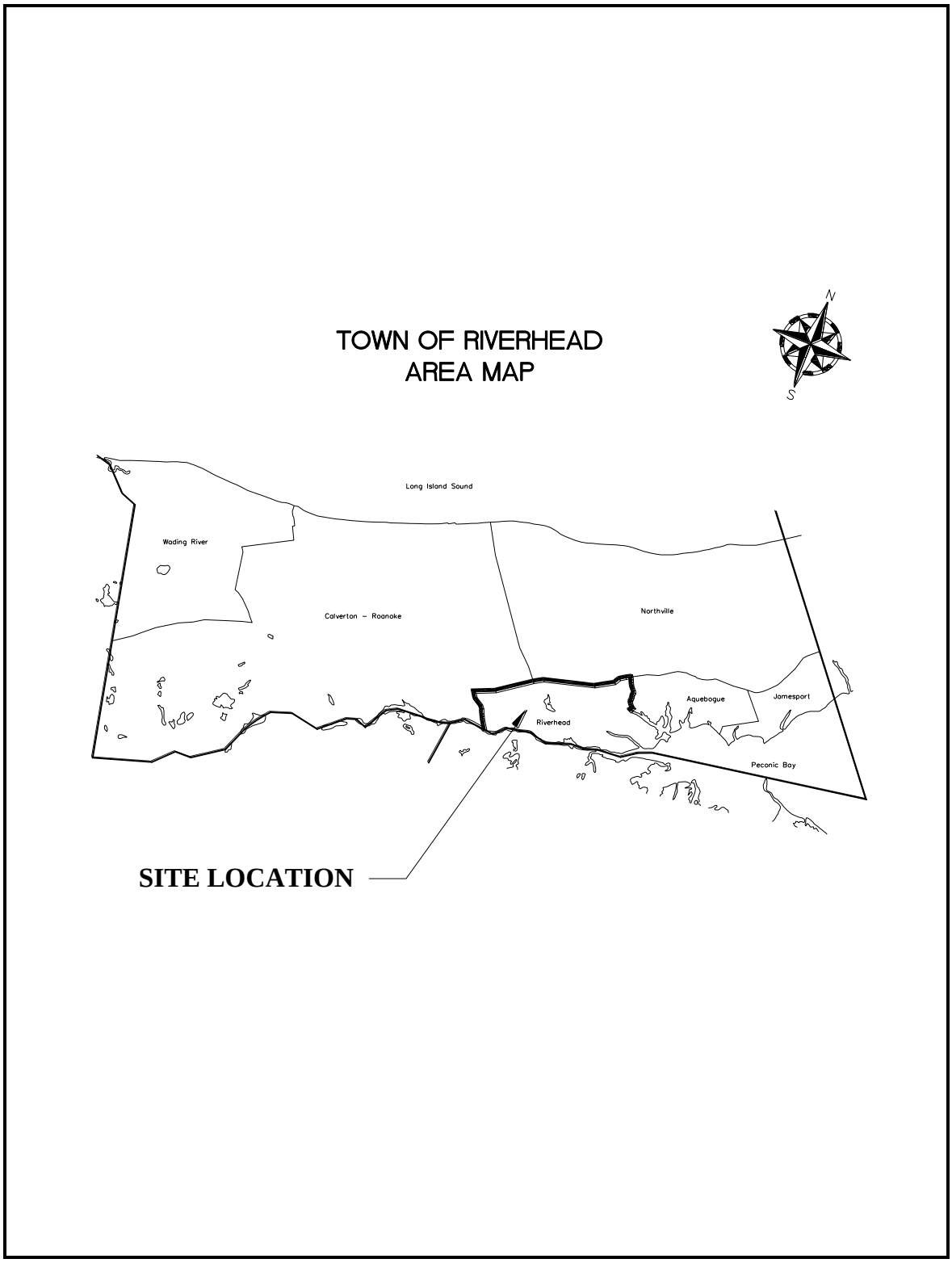
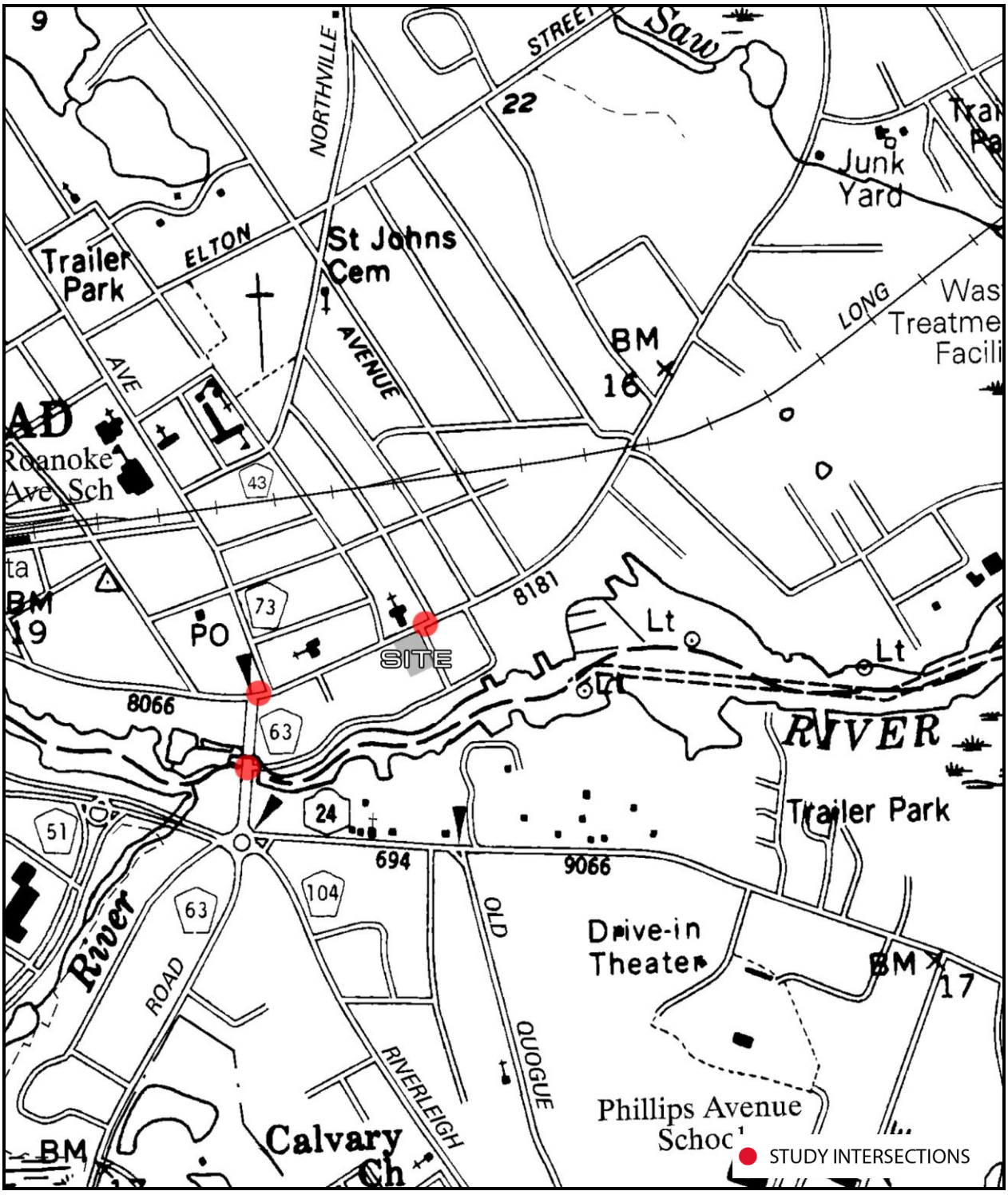


Figure 1: Area Map



SOURCE: USGS RIVERHEAD 1991

Figure 2: Location Map

STUDY METHODOLOGY

The study assesses the traffic and parking impacts associated with the proposed project and identifies mitigation measures if necessary. In executing the scope of work, the following steps were undertaken:

1. A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing and pavement markings.

2. In 2016 the Town of Riverhead Planning Department requested that any traffic data collection for the project should take into account events in the Town. In consultation with the Town, turning movement counts were conducted at the intersections of East Main Street at Peconic Avenue, East Main Street and Roanoke Avenue and East Main Street at McDermott Avenue/Maple Avenue during the weekday AM (7-9AM), PM (4-6PM) and Saturday midday (10AM-2PM) peak periods on the following days:

    - Wednesday May 31th, 2016 from 7-9AM and 4-6PM to cover a typical weekday
    - Saturday August 20th, 2016 from 10 AM -2PM to cover the Polish Town Fair event (Special events in Riverhead).
    - Saturday August 27th, 2016 from 10AM -2PM to cover a typical Summer Saturday.

- In order to respond to the Town of Riverhead Planning Department's comment on the 2016 Traffic Study regarding weekday turning movement counts collected when schools were not in session, additional turning movement counts have been collected at the intersections listed above on Wednesday May 31, 2017 during the weekday AM (7-9AM) and PM (4-6PM) peak hours.
- The turning movement counts collected in 2017 during the weekday and the 2016 Saturday data were tabulated and utilized to revise the 2016 Traffic Study to account for weekday traffic impacts when schools are in session.
- An annual growth factor, obtained from the LITP 2000 study, was applied to the existing volumes to estimate the increase in background traffic that would occur in 2019 Build Year (Ambient Traffic Volumes).

- The Town of Riverhead Planning Department was contacted to obtain information on other planned developments that may impact traffic flow in the study area.
- Traffic volumes from the other planned projects in the study area were added to the Ambient Traffic Volumes to generate the 2019 No Build Volumes.
- Estimates of traffic that would be generated by the proposed project were prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Ninth Edition*. The site-generated traffic volumes were assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by Nelson & Pope.
- The 2019 Build Condition volumes for the proposed development were developed by adding the site generated traffic volumes to the 2019 No Build Condition volumes.
- Capacity analyses were performed at the study intersections identified above for the Existing Condition, No Build Condition and Build Condition for weekday AM, PM and Saturday midday peak hours.
- The results of the analyses for the 2019 No Build Condition and 2019 Build Condition were compared to identify any significant traffic impact associated with the proposed project.

EXISTING CONDITION

Land Use

The site is located on the southwest corner of East Main Street and McDermott Avenue, Town of Riverhead, Suffolk County, New York. The site is located in the DC-1 district associated with downtown Main Street.

Roadway Conditions

Main Street **(NYS 25)** is an east/west NYSDOT roadway within the study area and runs through the downtown area of the Town of Riverhead. Within the Study area, Main Street provides one lane per travel direction. The posted speed limit on Main Street is 30 MPH within the Riverhead downtown area. Sidewalks equipped with planters and decorative street lighting are provided on both sides of Main Street in the Downtown area. Pedestrian crossings are painted across Main Street and supplemented with pedestrian crossing signs. Midblock crossings are located in front of the Suffolk Theater south of East Avenue and in front of Town Hall north of Howell Avenue.

Table 1 summarizes the lane configurations and traffic controls at the study intersections.

Table 1: Intersection Geometry

Intersection	Approach	Lane Designation*	Traffic Control
West Main Street at Peconic Avenue	EB	T-R	Traffic Signal
	WB	L-T	
	NB	L-R	
West Main Street at Roanoke Avenue	EB	L-T	Traffic Signal
	WB	L-TR	
	SB	R	
East Main Street at McDermott Avenue/Maple Avenue	EB	LTR	Traffic Signal
	WB	LTR	
	NB	LTR	
	SB	LTR	
Peconic Avenue at Parking Lot Access	WB	LR	Stop Control WB
	NB	TR	
	SB	L-T	

** L = Left turn lane; T = through lane; R = Right turn lane*

Traffic Volume Data

Turning movement counts were collected at the study intersections on Friday, August 19, 2016 during the weekday AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak period and on Saturday, August 20st and 27th, 2016 during the Saturday midday peak period (10:00 AM – 2:00 PM). Additional weekday counts were conducted on Wednesday May 31th 2017 during the weekday AM (7-9AM) and PM(4-6PM) peak hours. The Saturday data collected on August 20th, during the Polish Town Fair was slightly higher than the data collect on Saturday August 27th. The weekday counts collected on Wednesday May 31st 2017 is higher than the counts conducted on Friday, August 19, 2016. To perform a conservative analysis, the data collected on May 31st and August 20th was utilized for the weekday and weekend traffic analyses respectively.

Seasonal adjustment factors of 1.072 and 1.210 were obtained from the 2016 NYSDOT Traffic Data Report for the weekday and weekend counts respectively during the months of May and August. These seasonal adjustment factors were developed from NYSDOT continuous data collected for a three-year period. Applying the weekday and weekend normalization factors will decrease the existing traffic volumes; therefore, the weekday and weekend counts were not normalized in order to perform a more conservative analysis. The existing peak hour volumes are shown on Figures 3, 4 and 5 and detailed data are contained in Appendix A.

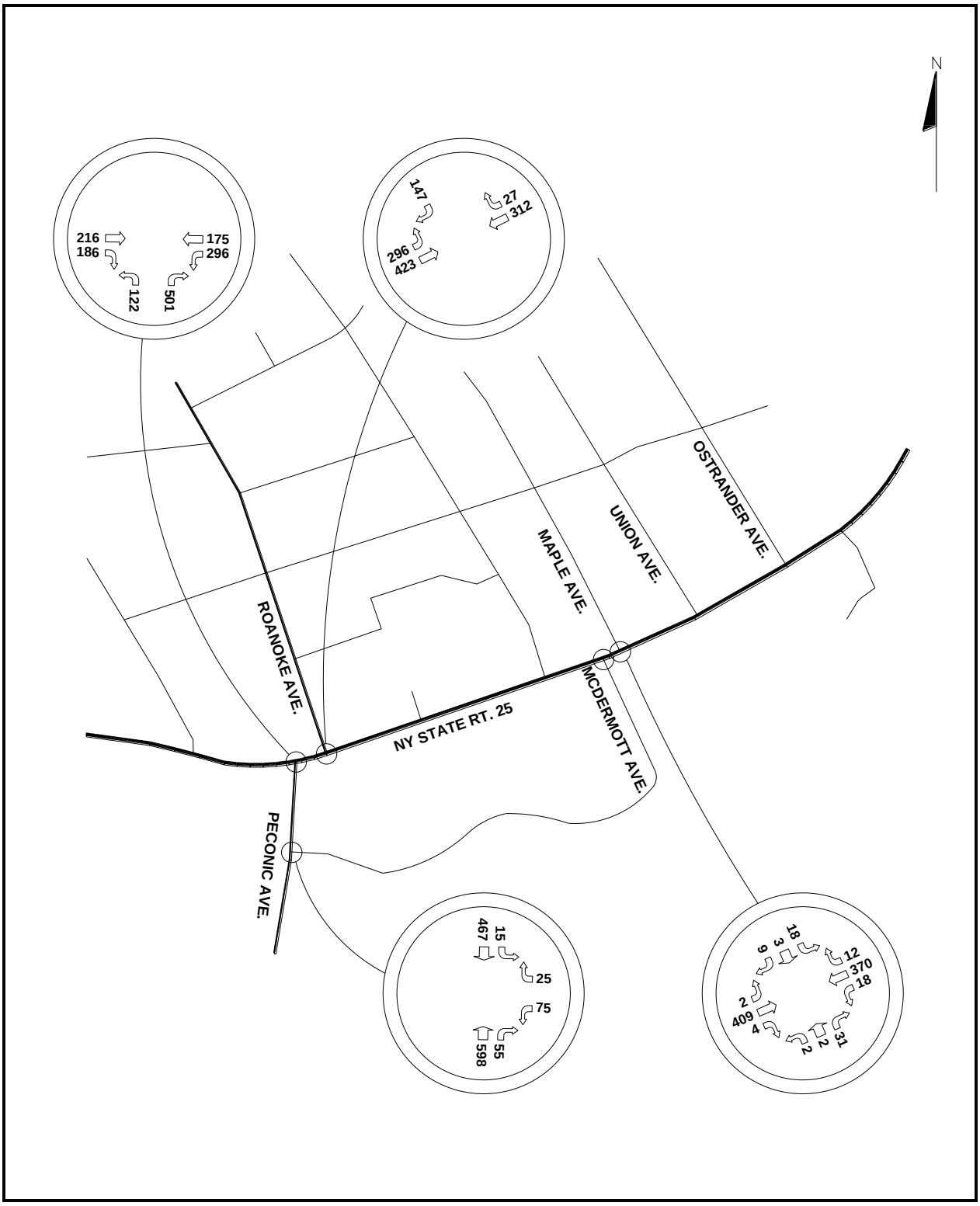


Figure 3: 2016 Existing AM Traffic Volumes

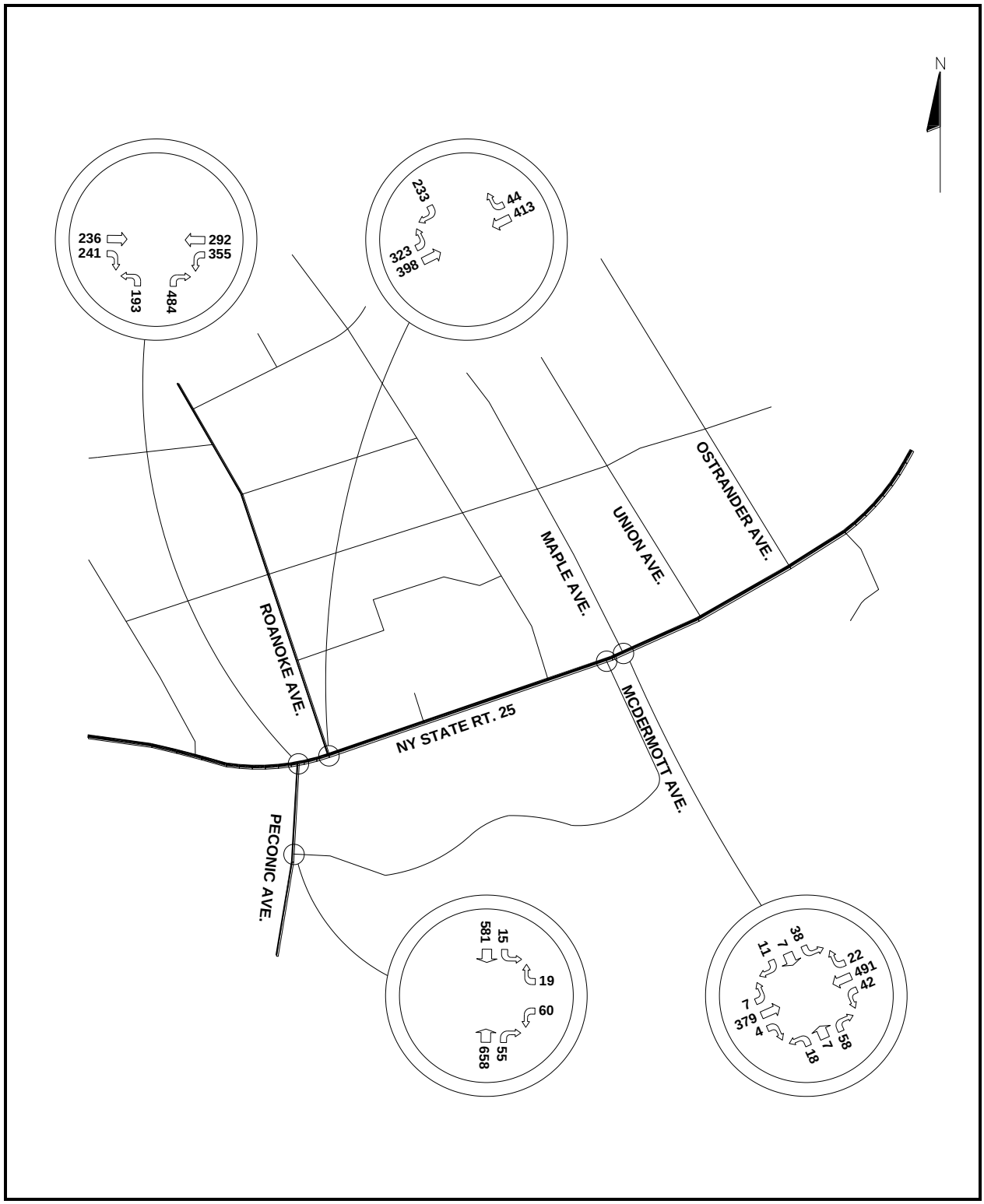


Figure 4: 2016 Existing PM Traffic Volumes

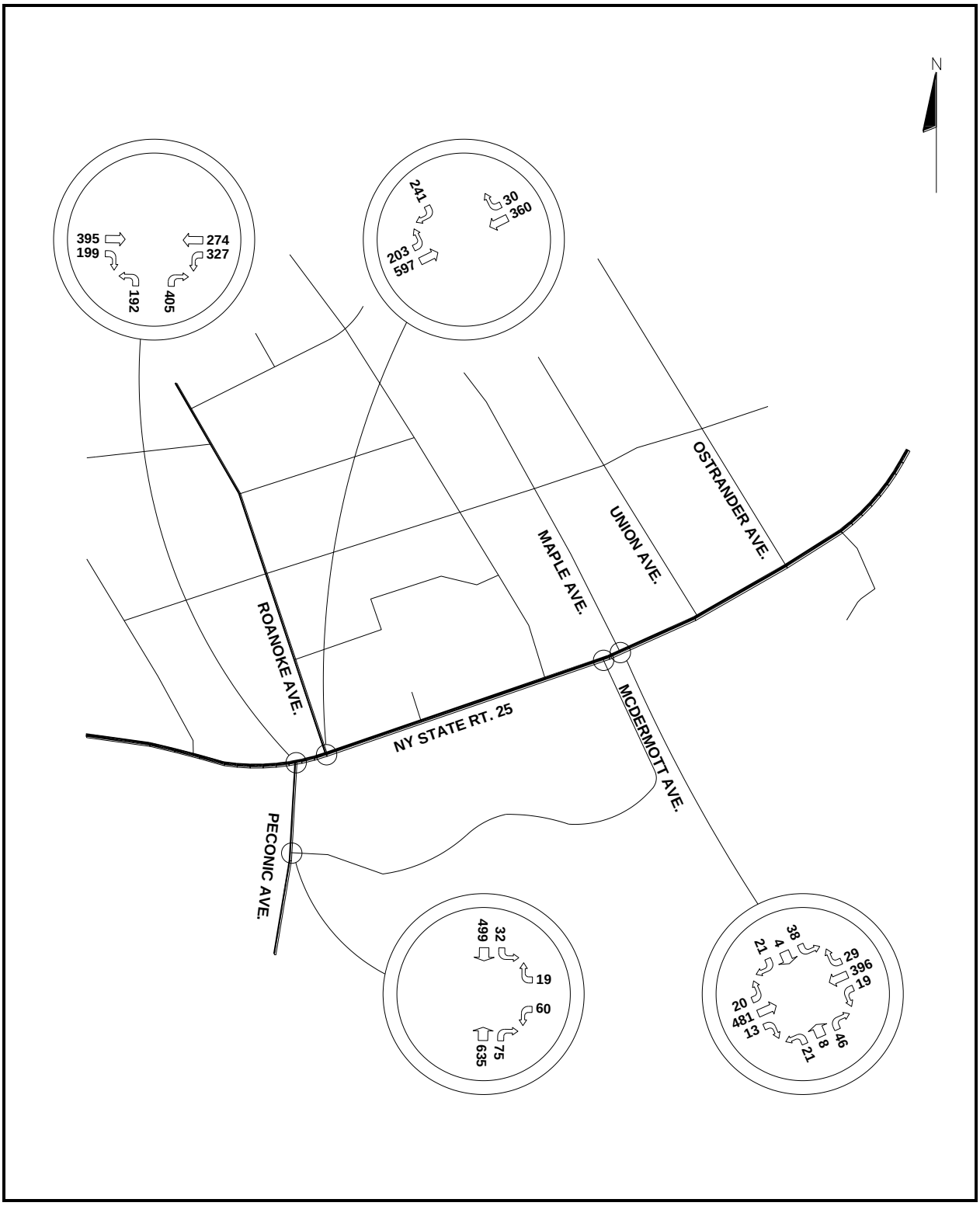


Figure 5: 2016 Existing SAT Traffic Volumes

LEVEL OF SERVICE DESCRIPTION

While traffic volumes provide an important measure of activity on the adjacent roadway network, evaluating how well that network accommodates those volumes is also important. Therefore, a comparison of peak hour traffic volumes with available roadway capacity is prepared. Capacity, by definition, represents the maximum number of vehicles that can be accommodated given the constraints of roadway geometry, traffic characteristics and controls. Intersections primarily control capacity in roadway networks, since conflicts exist at these points between through, crossing and turning traffic. Because of these conflicts, congestion is most likely to occur at intersections. Therefore, intersections are studied most often when determining the quality of traffic flow.

In order to identify the operational characteristics of the study intersections, LOS and capacity analyses and arterial network analyses for the study intersections were performed using *SYNCHRO Version 9* Software. *SYNCHRO*, in conjunction with *SimTraffic*, is a software package that allows for an interactive analysis of a single intersection or a network of intersections and can also be used for modeling and optimizing traffic signal timings. The *SimTraffic* component provides simulations of operations with animation features. *SYNCHRO* implements the Intersection Capacity Utilization (ICU) 2003 method for determining intersection capacity. This method compares the current volume to the intersections ultimate capacity. *SYNCHRO* also implements the methods of the 2010 Highway Capacity Manual (HCM) for urban streets, signalized intersections, and unsignalized intersections for determining intersection capacity analyses. The *HCM* contains procedures and methodologies for estimating capacity and determining LOS for many transportation facilities and modes including signalized and unsignalized intersections.

An intersection's LOS (LOS) describes its quality of traffic flow. It ranges in grade from LOS "A" (relatively congestion-free) to LOS "F" (very congested). The LOS definition, as well as the threshold values for each level, varies according to whether the intersection is controlled by a signal or a stop sign. A brief description is given here and a more detailed definition is found in Appendix D.

The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity for each approach represents the maximum rate of flow (for the subject approach) which may pass through the intersection under prevailing traffic, roadway and signal conditions. The LOS of a signalized intersection is evaluated on the basis of average control-delay measured in seconds per vehicle (sec/veh). The control-delay is calculated using an equation that combines the stopped-delay with the vehicle acceleration/deceleration delay that is caused by the signalized intersection. At the signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal "green time", turning percentages, truck volumes, etc. However, delay cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the LOS "F" range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle length; a particular traffic movement experience a long red time; or progressive movements for a particular lane is poor.

The flow at a two-way stop-controlled (TWSC) intersection is gauged in terms of LOS and capacity. The capacity of a stop-controlled leg is based on the distribution of gaps in the major street traffic, driver judgment in selecting a gap, and the follow-up time required by each driver in a queue. The LOS for a TWSC intersection is determined by the control-delay, and is defined for each movement rather than for the overall intersection. As with signalized intersections, HCS quantifies only the average control-delay, which is a function of the approach and the degree of saturation for any particular minor movement.

EXISTING CONDITION

The peak hour traffic volumes depicted in Figures 3 were used to determine the existing capacity and LOS of the study intersections. Table 2 contains the LOS summary for the Existing Condition calculated through the Synchro software described previously. The detailed analysis worksheets are in Appendix E.

Table 2: Existing Condition LOS Summary – Signalized

			AM Peak		PM Peak		Saturday Peak	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street at	EB	T	44.7	D	46.1	D	70.1	E
Peconic Avenue		R	24.0	C	22.4	C	21.2	C
	WB	L	7.8	A	11.2	B	19.1	B
		T	2.6	A	3.0	A	2.7	A
	NB	L	95.2	F	87.7	F	94.9	F
		R	34.6	C	29.3	C	27.7	C
Intersection			31.2	C	28.2	C	37.7	D
East/West Main Street at	EB	L	22.3	C	27.7	C	37.5	D
Roanoke Avenue		T	3.5	A	2.8	A	2.7	A
	WB	TR	41.2	D	44.0	D	40.4	D
	SB	R	37.7	D	44.6	D	46.5	D
Intersection			22.8	C	29.0	C	25.4	C
East/West Main Street at	EB	LTR	2.8	A	3.4	A	3.9	A
Maple/McDermott Avenue	WB	LTR	2.8	A	4.6	A	3.8	A
	NB	LTR	17.1	B	19.7	B	22.0	C
	SB	LTR	31.5	C	38.9	D	33.8	C
Intersection			4.6	A	7.5	A	7.2	A

Table 3: Existing Condition LOS Summary – Unsignalized

			AM Peak		PM Peak		Saturday Peak	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	15.8	C	17.0	C	16.6	C
Parking Lot Access		R	13.5	B	14.2	B	14.0	B
	SB	LT	9.1	A	9.4	A	9.5	A

Main Street at Peconic Avenue/Roanoke Avenue

The intersections of West Main Street at Peconic Avenue and East Main Street at Roanoke Avenue are approximately 55 feet apart as measured between stop lines. The distance between the two intersections provides one westbound through lane, one westbound left turn lane and a 22-foot wide eastbound lane that currently operates as a separate eastbound left turn lane and an eastbound through lane. These two left turn lanes provide storage for two cars each. These two intersections are controlled by two traffic signals operating under the same controller.

Under the Existing Condition, the eastbound West Main Street through movement at Peconic Avenue operate at LOS D, D and E during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operate at LOS F during the weekday AM, PM and Saturday midday peak hours. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and D during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours.

East Main Street at McDermott Avenue/Maple Avenue

The northbound McDermott Avenue leg and southbound Maple Avenue leg at this intersection are slightly offset from each other (approximately 20 feet) with each approach providing one lane for all traffic movements. The intersection is controlled by a two-phase traffic signal.

Under the Existing Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM, PM and Saturday midday peak hours.

Peconic Avenue at Parking Lot Access

The parking lot access intersects Peconic Avenue to form the Stop Controlled leg of a T-intersection. Peconic Avenue provides one lane per travel direction with a two-way left turn lane. The westbound parking lot access provides one left turn lane and one right turn lane.

Under the Existing Condition, the southbound Peconic Avenue approach operates at LOS A. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM, PM and Saturday midday peak hours.

NO BUILD CONDITION

The No Build Condition represents traffic conditions expected at the study intersections in the future year 2019 without the construction of the proposed project. The No Build Condition traffic volumes are estimated based on two factors as follows:

- Increases in traffic due to general population growth and developments outside of the immediate project area. This traffic increase is referred to as ambient growth.
- Other planned projects located near the project site that may affect traffic levels and patterns at the study intersections in this report.

Traffic Growth

A 1.9% annual growth factor was obtained from the New York State Department of Transportation (NYSDOT) Long Island Transportation Plan 2000 Study (LITP2000) for the Town of Riverhead. The existing traffic volumes were increased by 1.9% growth per year to project volumes to the year 2019 (2019 Base Volumes).

Other Planned Projects

"Other Planned Projects" is a term that refers to developments located near the project site that are currently under construction or in the planning stages. Traffic generated by these projects may significantly influence the operations of the study intersections and would not be represented in the field data collected. The Town of Riverhead was contacted to obtain information on any planned projects in the area. The following projects were provided to us by the Town of Riverhead for consideration:

Pending Approval:

- **Riverhead Plaza**- SCTM No. 0600-104-2-19, the removal of approximately 71,343 sq. ft. of existing building and the construction of two pad site restaurants and a movie theater at an existing shopping center on Old Country Rd. between Ostrander Ave. and Oliver St. Approximately 59,240 sq. ft. of building area will be added, including a 50,340 sq. ft., 1,246 seat movie theater with 10 auditoriums and a snack bar, a 6,300 sq. ft., 250 seat restaurant, and a 2,600 sq. ft., 125 seat restaurant with drive-through. A portion of the existing building with part of the former Wal-Mart store and two other businesses will be demolished to make way for the movie theater. The two proposed restaurants will be

located in the parking area at the front of the site to the west of the main entrance from Old Country Rd.

- **428 East Main Street,** 20-unit hotel and a 201-seat restaurant to be located on the northwest corner of East Main Street and Ostrander Avenue.
- **203-2013 East Main Street,** 170 apartment units and 3800 SF commercial space.
- **Suffolk County Historical Society**, SCTM No. 0600-128-3-46, construction of an approximately 725 sq. ft. addition for handicapped accessibility.
- **J. Petrocelli Development Associates**, SCTM No. 0600-129-5-3.3, construction of a 30-stall parking lot.
- **Viva L' Arte,** SCTM No. 0600-128-6-58.1, construction of a two-story art gallery building on East Main St. with office mezzanine and apartment mezzanine (1,779 sq. ft. first floor and 1,805 sq. ft. second floor and 428 sq. ft. for each mezzanine for a total of 4,440 sq. ft.).
- **Farm Country Kitchen**, SCTM Nos. 0600-124-04-32 & 33 and 0600-124-03-26, for conversion of an existing take-out food service on West Main St. to a 69-seat restaurant and the construction of an off-site parking lot on Raynor Ave. with 27 stalls.
- **Thea Cohen Residences**, SCTM No. 0600-127-7-24.1, the conversion of a storage building into a single-family residence on a property with two existing residences.
- **Emanon Center,** SCTM No. 0600-124-04-9 & 10, demolition of existing structures and construction of one building 3,240 sq. ft. for a convenience store and a two-story building with 1,950 sq. ft. of office and 2,497.5 sq. ft. of retail.
- **Development in Southampton**: Development in Southampton in the Riverside Area (please contact the Town of Southampton)-Large scale redevelopment is planned.

Recently approved:

- **715-725 Roanoke Ave**., SCTM No. 0600-126-02-8, an additional medical office building in addition to two existing medical buildings. The building will be two-stories of 2,475 sq. ft. each with an unfinished basement.
- **Peconic Crossing-** SCTM No. 600-128-3-68.2, to demolish an existing building (Long Island Science Center) and construct a new five-story residential building with 45 residential apartment units, 34-parking stalls, and an art gallery/studio.

- **206 Raynor Ave**., SCTM#0600-124-02-9, preliminary approval to construct a commercial building with a footprint of 1,056 sq. ft. and a lower level of 629 sq. ft. (Three use scenarios approved-either all industrial/manufacturing, first floor office and lower level storage, or all warehouse/storage use.)
- **Fedun Warehouse,** SCTM#0600-128-1-13.1, a 5000 SF warehouse at 427 Lincoln St., Riverhead.

It has been our experience that the annual growth factors typically exceed the actual increase in the ambient growth volumes. Therefore, from the review of the planned projects, it is our professional opinion that traffic from these other planned projects should already be accounted for in the 1.9% annual growth factor (5.7% over a 3-year period) applied to the existing traffic volumes. The Riverhead Plaza project is far from the proposed project and due to its size, it could be completed way after the construction of the proposed project and hence should not be included as a planned project. The same applies to the Southampton Riverside project, which has a build year of 2025. However, to perform a more conservative analysis, traffic from the other planned projects except for the Riverhead Plaza and the Southampton Riverside projects was estimated from the Institute of Transportation Engineers Trip Generation Manual and added to the 2019 Base Volumes to develop the 2019 No Build Volumes. The trip generation for the other planned developments is contained in Appendix B of the report. The No Build condition volumes for the weekday AM, weekday PM and Saturday midday peak hours are illustrated in Figures 6, 7 and 8.

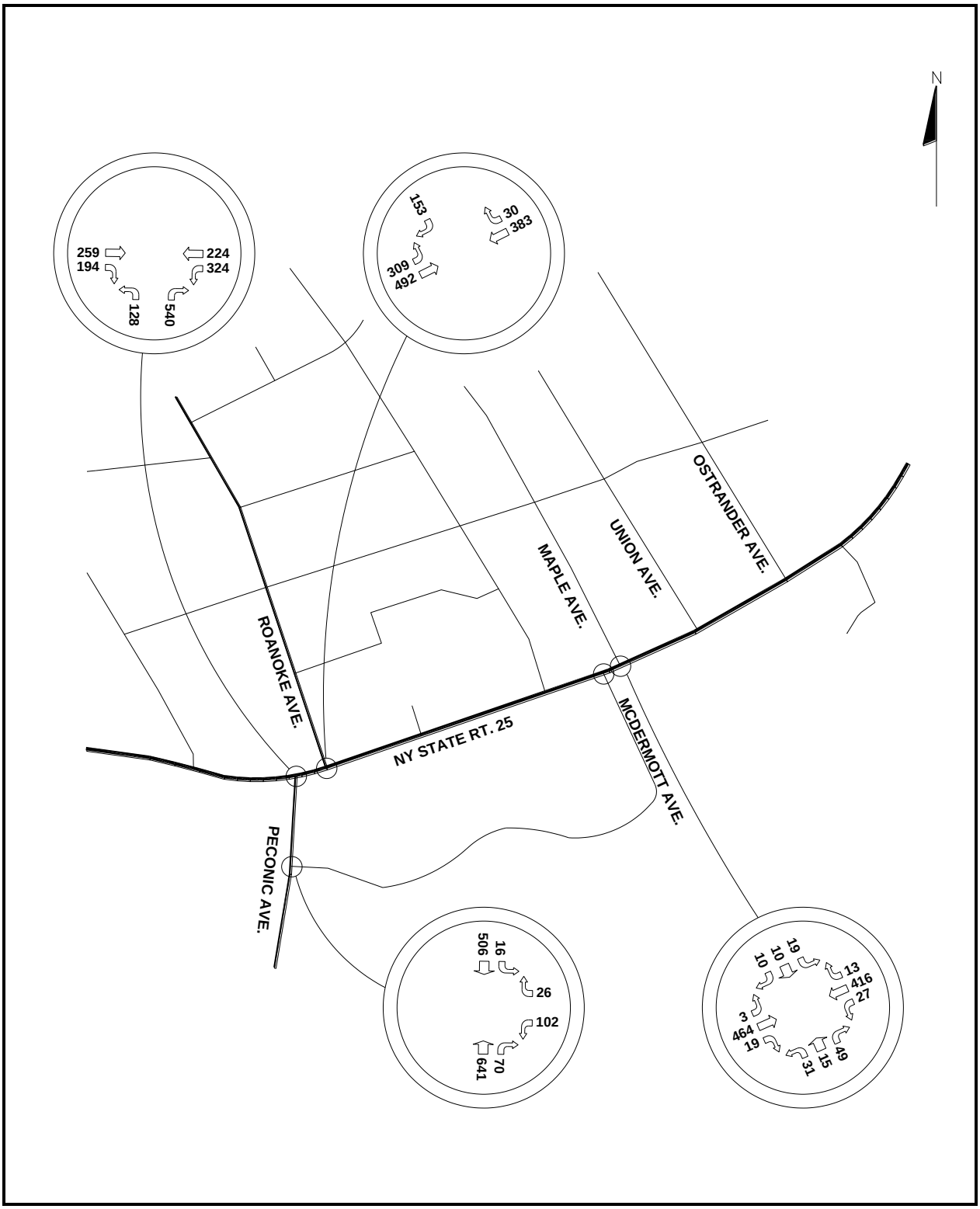


Figure 6: 2019 No Build AM Traffic Volumes

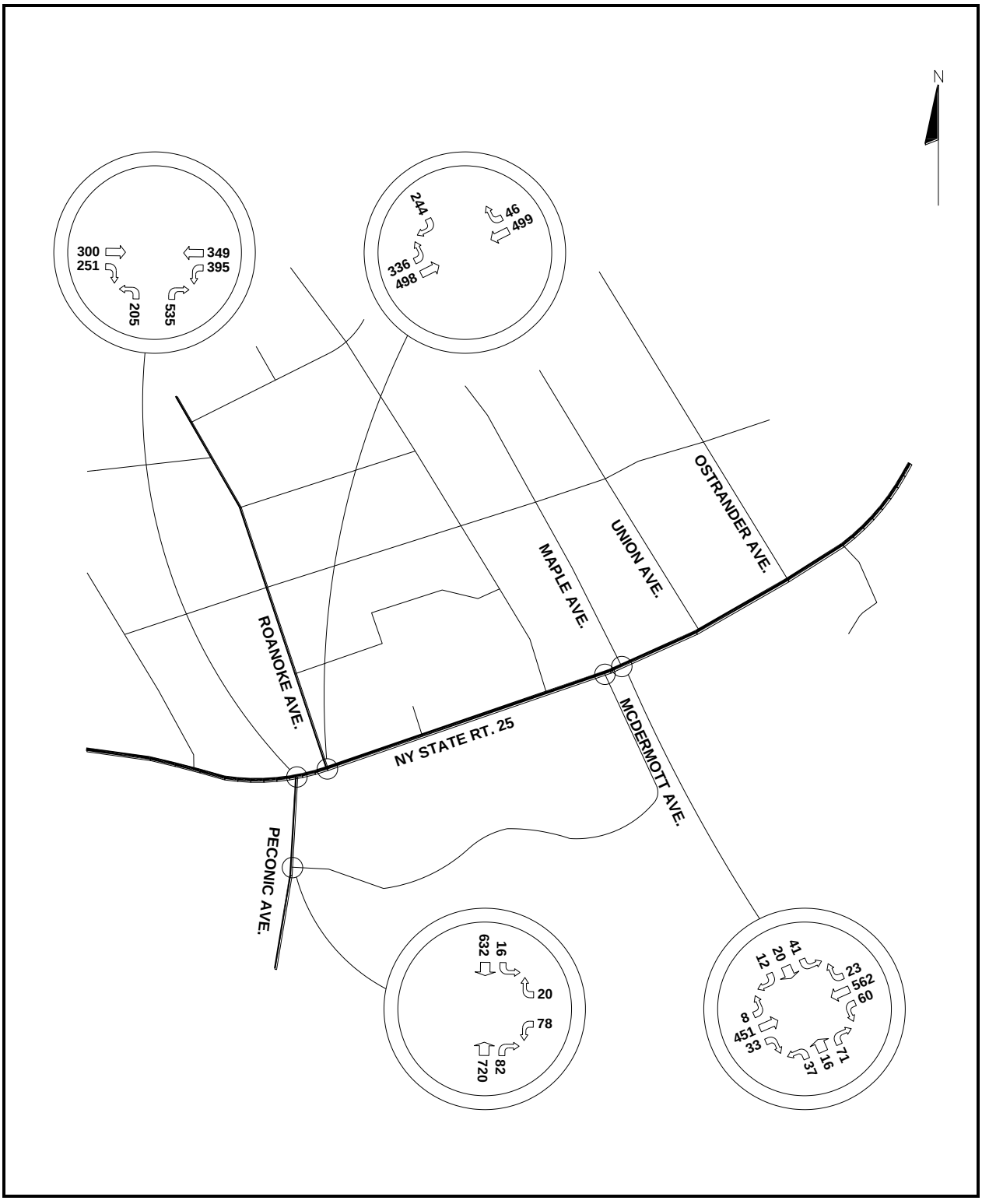


Figure 7: 2019 No Build PM Traffic Volumes

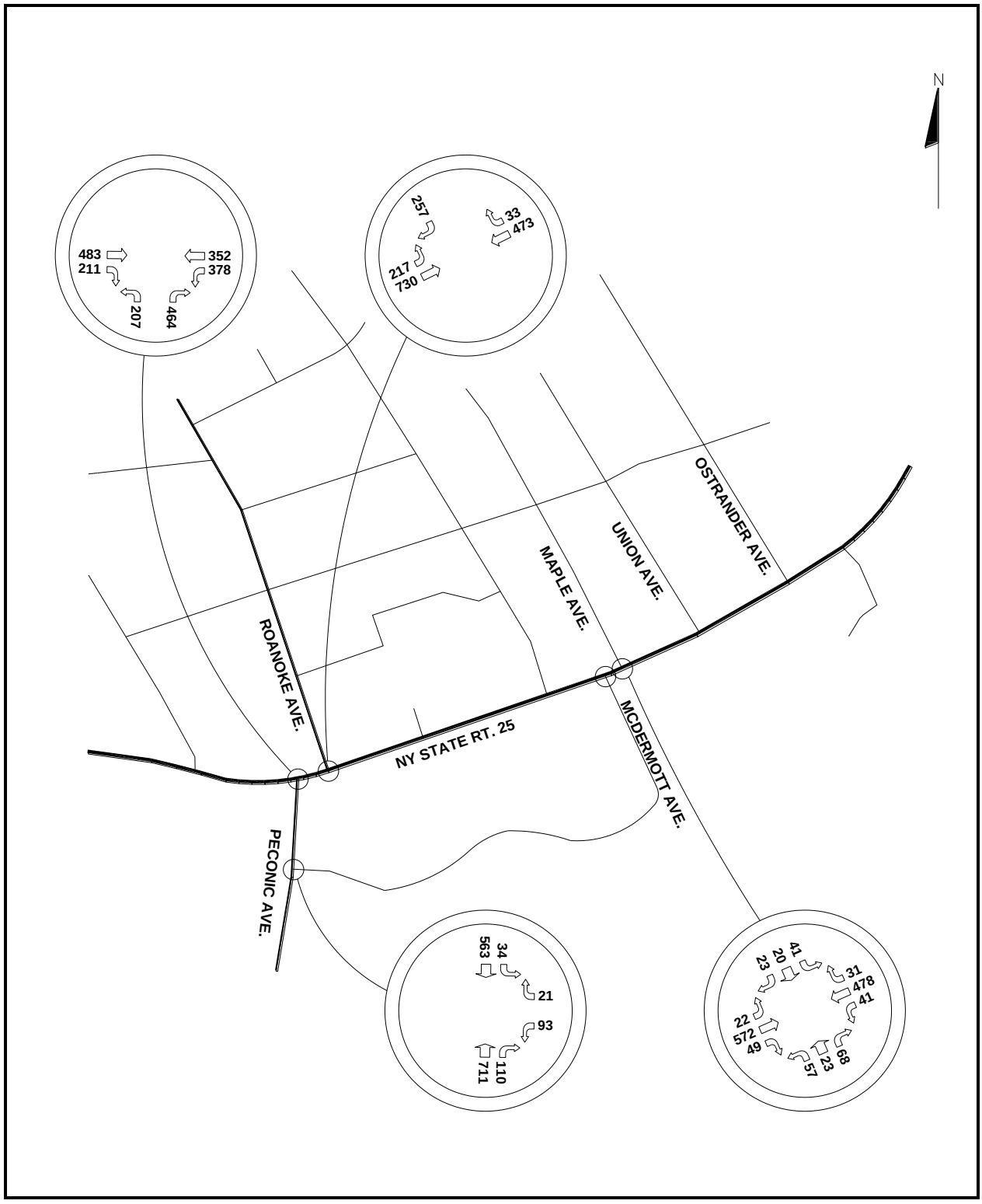


Figure 8: 2019 No Build SAT Traffic Volumes

PROPOSED DEVELOPMENT

Site Access

As depicted on the site plan, access to the site will be provided via McDemott Avenue.

Trip Generation

In order to identify the impacts, the proposed project will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. The trip generation estimates for the proposed project were prepared utilizing data found under Land Use Code 220 – Apartments, Land Use Code 820-Shopping Center and Land Use Code 931 –Quality Restaurant within the Institute of Transportation Engineers' publication, *Trip Generation, Ninth Edition*. This publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country.

We also prepared a trip generation comparison for the project which consisted of performing estimates for 2 scenarios. Scenario 1: 116 apartment units, 1,508 SF of retail and 535 seats of quality restaurant. Scenario 2: 116 apartment units and 12,623 SF of retail. The comparison revealed that Scenario 1 is anticipated to have higher trip generation and therefore is the scenario for which the analysis was prepared, a worst-case scenario. The trip generation sheets are located in the Appendix.

It should also be noted that, according to studies conducted by the Institute of Transportation Engineers (ITE), traffic associated with a retail and restaurant developments is not 100% newly generated, a significant portion of these trips will be "pass-by" traffic. It is expected that at least 40% of the peak hour trips generated by the retail and restaurant development on the site would originate from traffic already using the roadway traveling to or from another destination. No pass-by credit was applied to the retail portion of the project since it is only a small portion of the project. Pass-by credits were applied for the restaurant component of the proposed project in accordance with ITE guidelines.

The following table summarizes the trip generation estimates for the proposed project. Appendix C contains the trip generation worksheets.

Table 4: Trip Generation (Proposed Project)

Time Period	Distribution	Apartment 116 Units ITE LUC 220	Retail 1,508 SF ITE LUC 820	Restaurant 535 Seats ITE LUC 931	Total
Weekday AM Peak Hour	Enter	12	1	8	21
	Exit	50	0	8	58
	Total	**62**	**1**	**16**	**79**
Weekday PM Peak Hour	Enter	54	3	52	109
	Exit	29	3	26	58
	Total	**83**	**6**	**78**	**167**
Saturday Midday Peak Hour	Enter	34	4	104	142
	Exit	34	3	73	110
	Total	**68**	**7**	**177**	**252**

Source: Trip Generation,9th Edition, published by ITE

As can be seen from Table 4 above, the proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersection during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well. Figure 9 presents the trip distribution for site-generated traffic and Figures 10, 11 and 12 depict the site generated volumes for the weekday AM, weekday PM and Saturday midday peak hours. The site generated volumes were then added to the corresponding No Build Condition volumes resulting in the Build Condition volumes shown in Figure 13, 14 and 15.

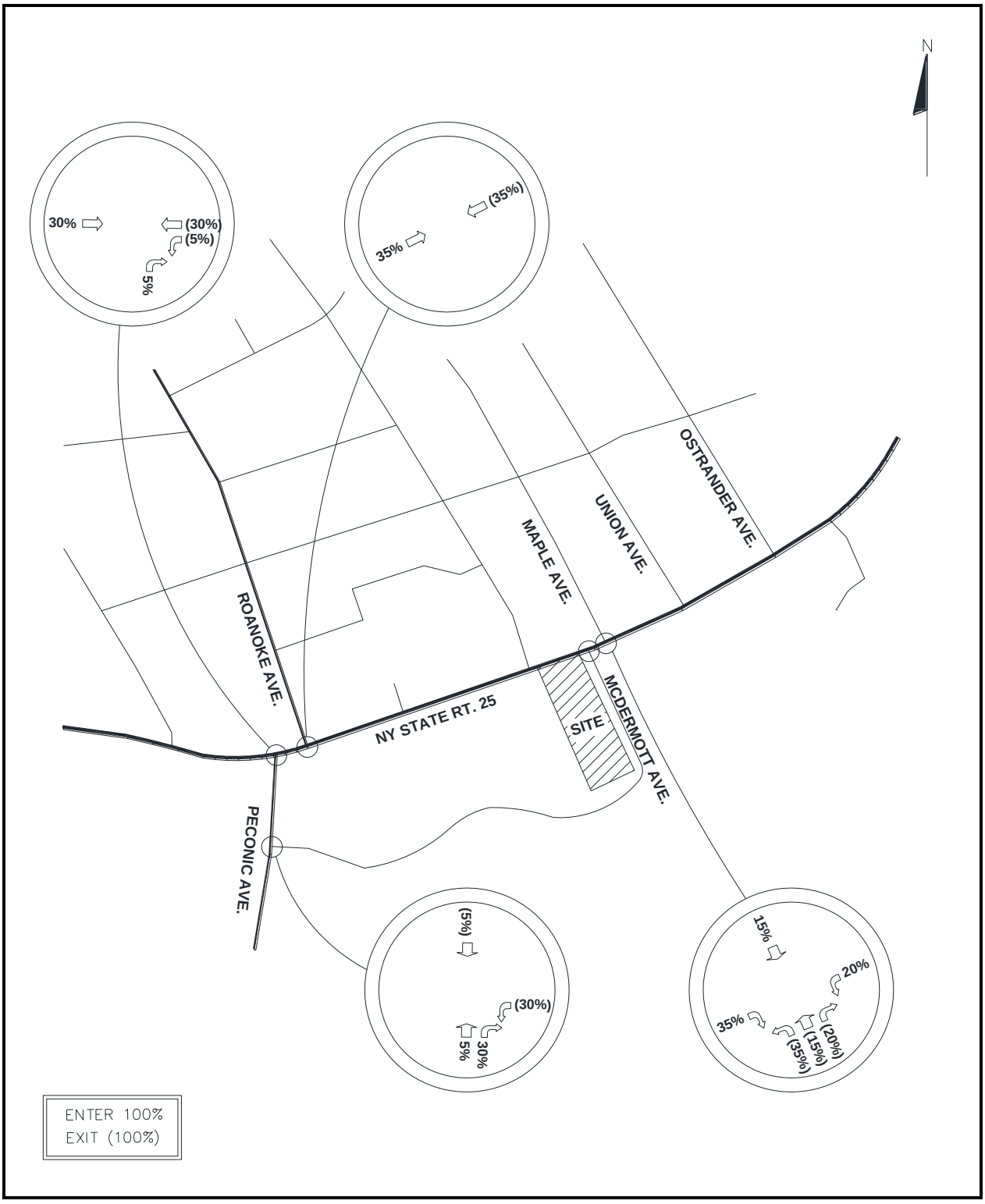


Figure 9: Site Generated Trip Distribution

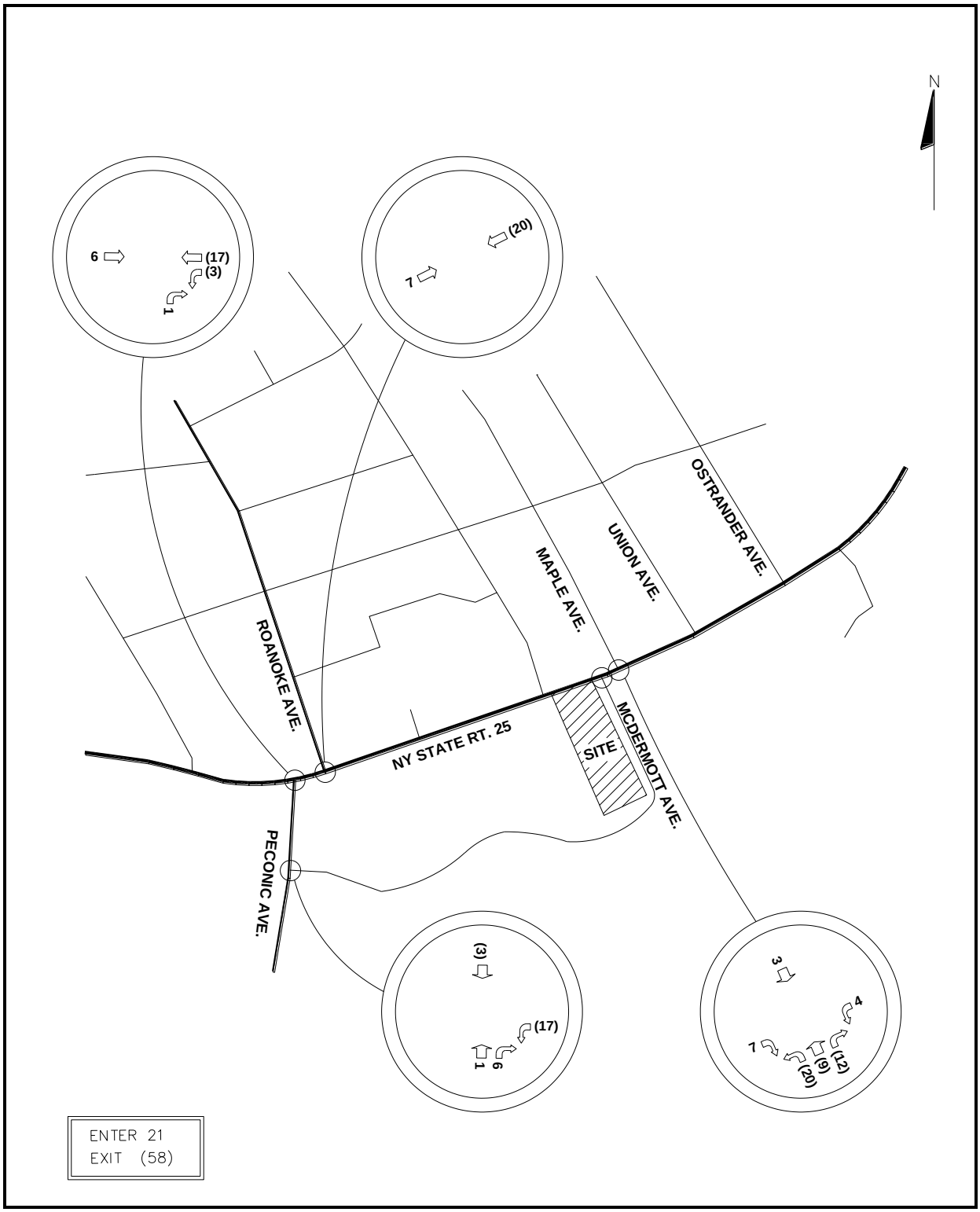


Figure 10: Site Generated AM Traffic Volumes

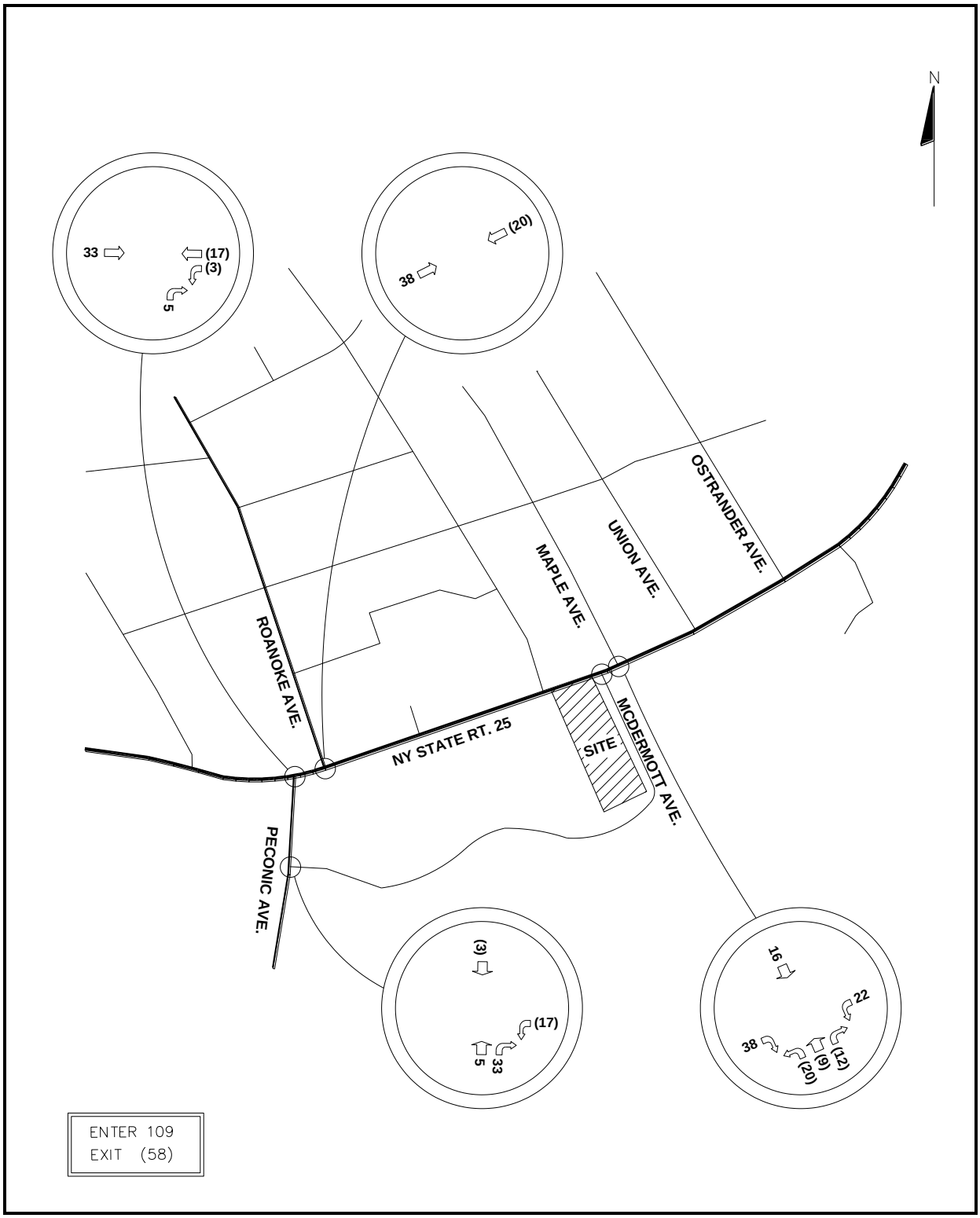


Figure 11: Site Generated PM Traffic Volumes

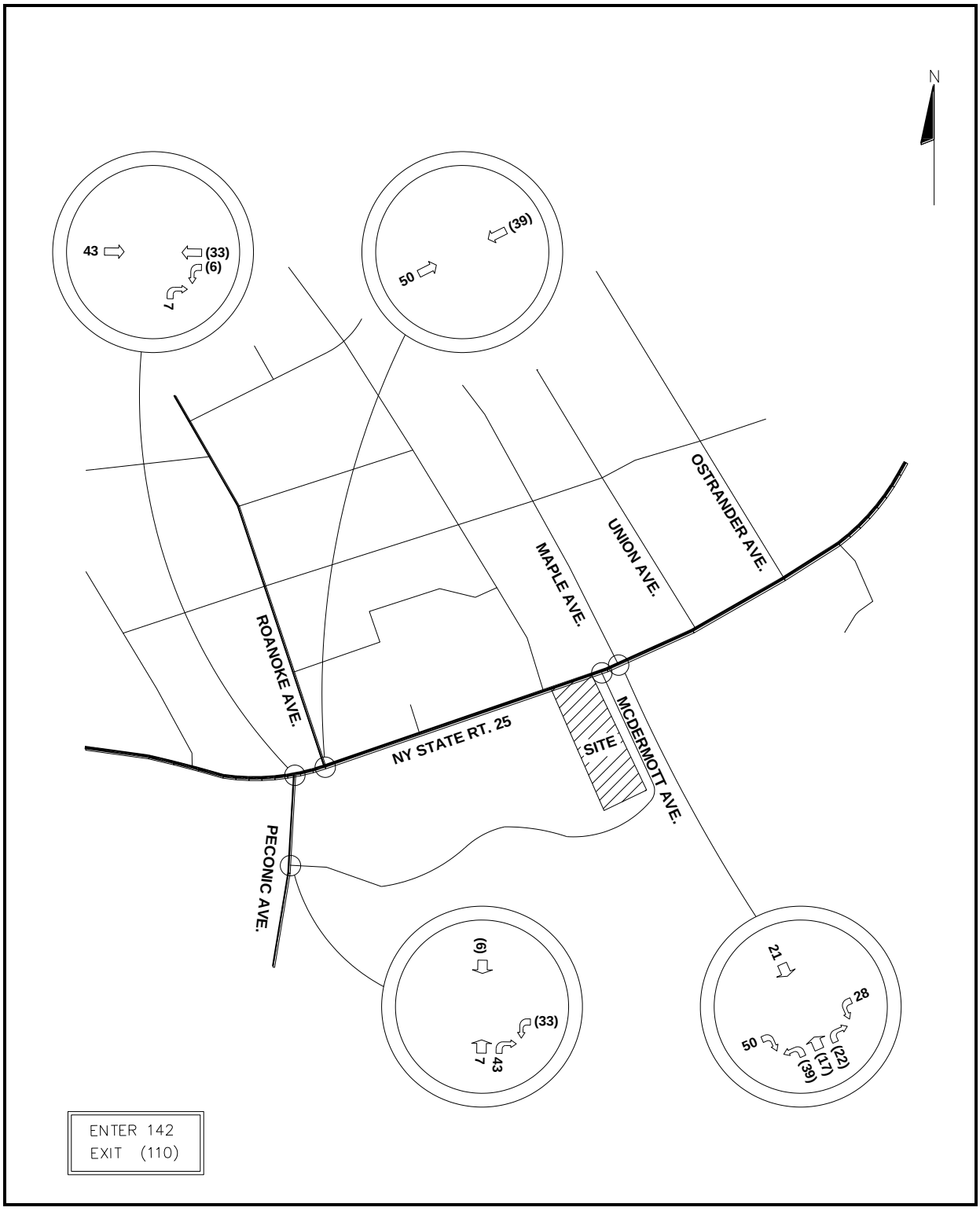


Figure 12: Site Generated SAT Traffic Volumes

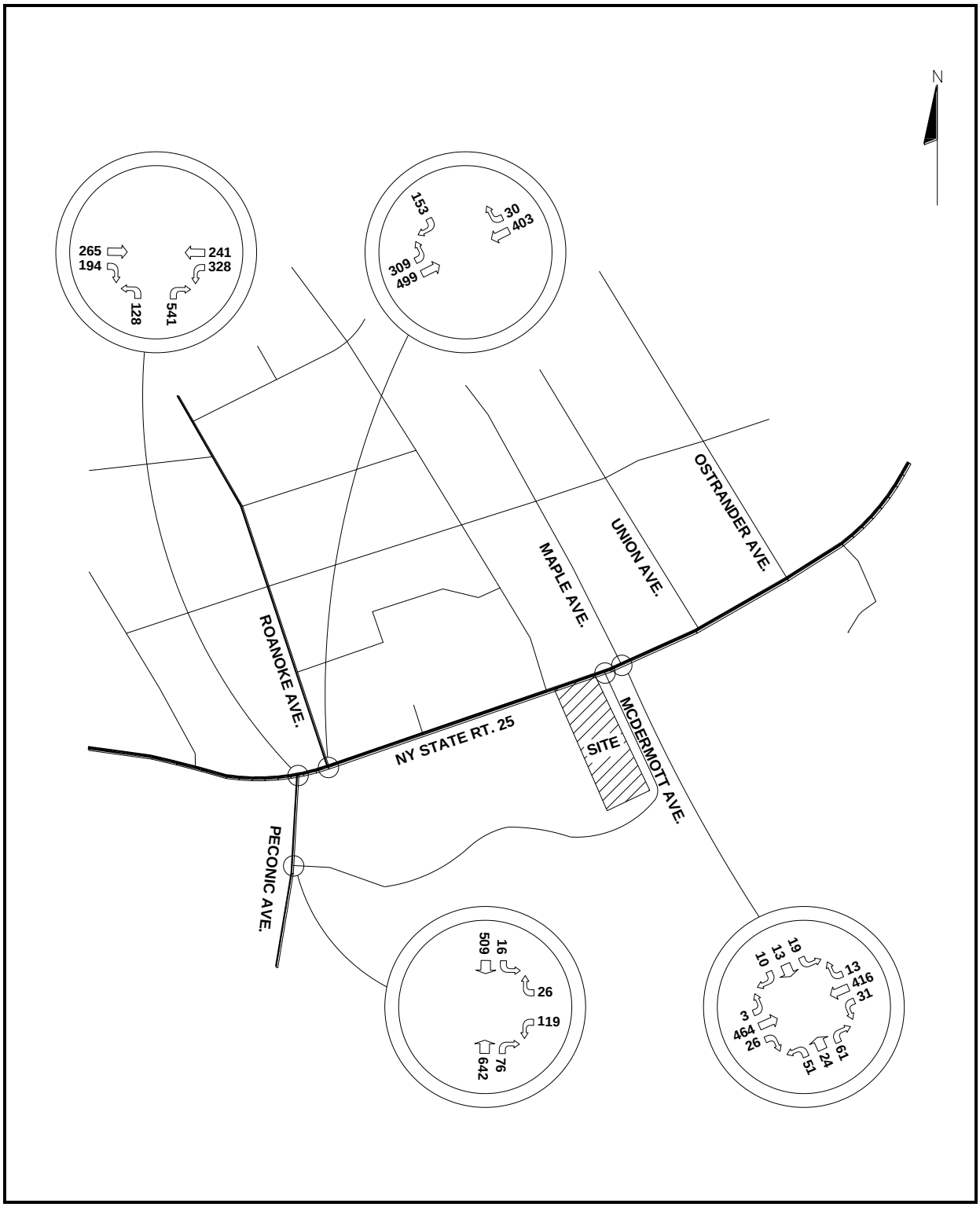


Figure 13: 2019 Build AM Traffic Volumes

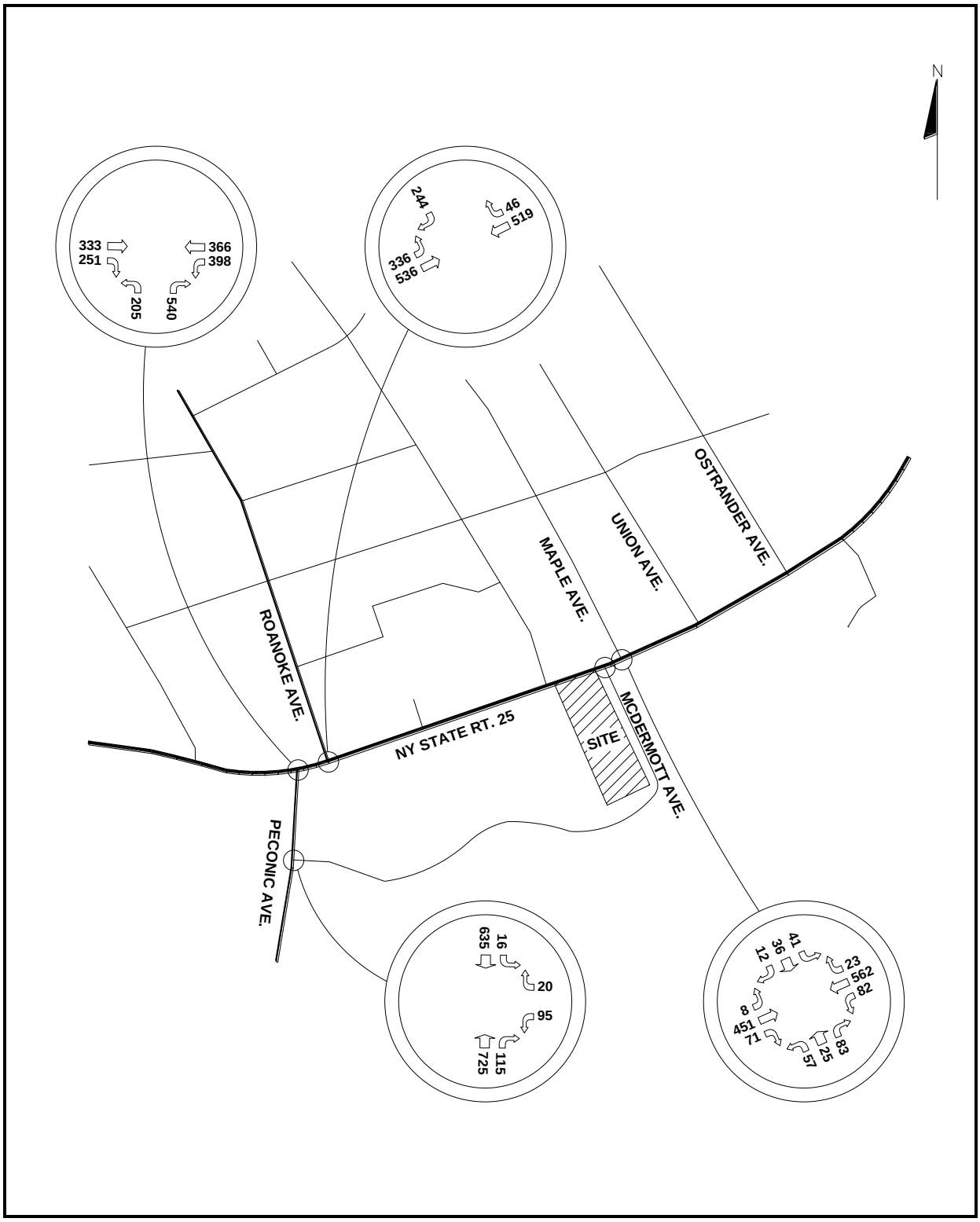


Figure 14: 2019 Build PM Traffic Volumes

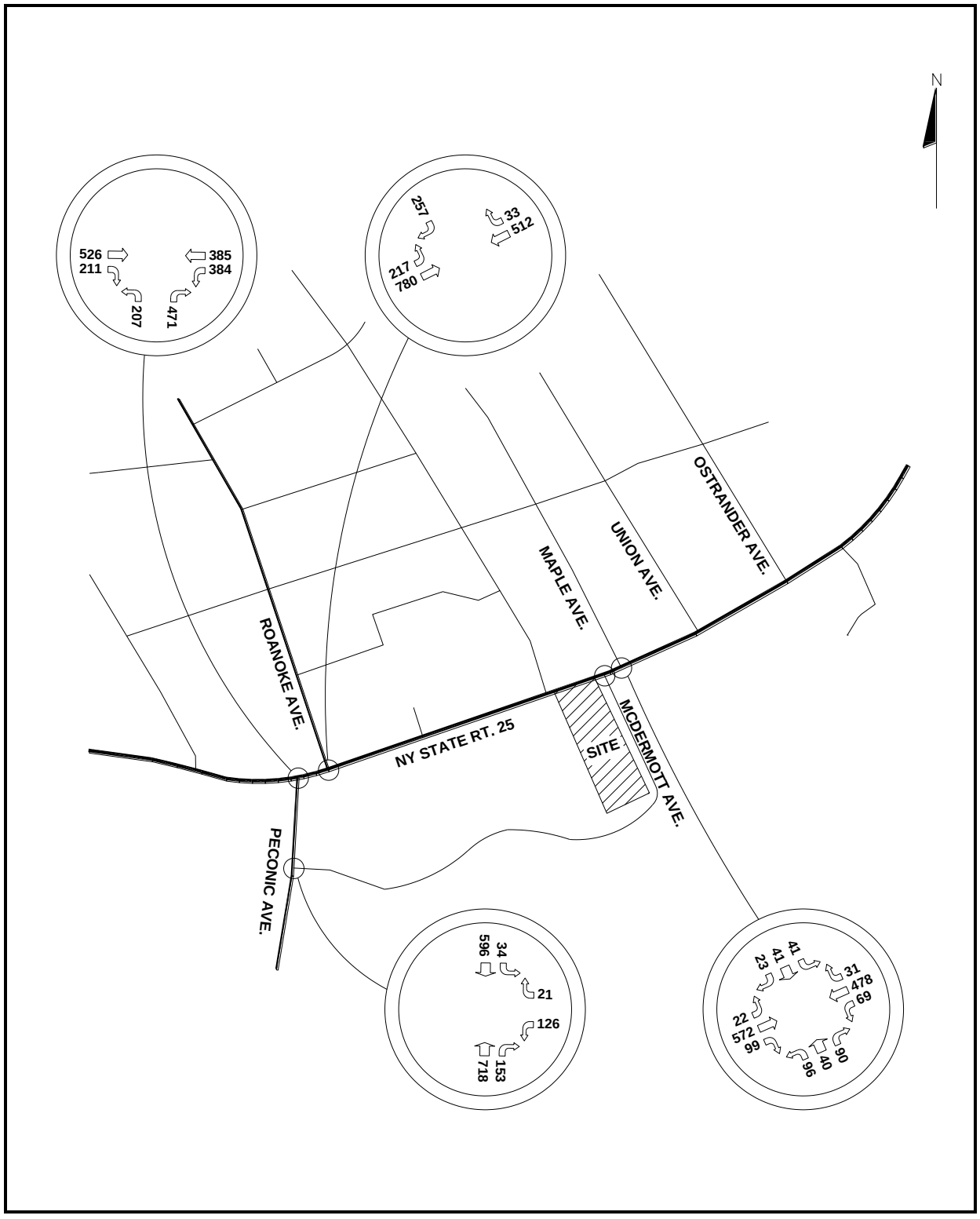


Figure 15: 2019 Build SAT Traffic Volumes

TRAFFIC IMPACT ANALYSIS

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *Highway Capacity Manual (2010)*, published by the *Transportation Research Board*. The Synchro Version 9 software was used to analyze the study intersections and provide a LOS measurement of the intersection operations. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix D.

The following tables illustrate the LOS summaries for the study intersections.

Table 5: Level of Summary – AM Signalized

			No Build		Build	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street at	EB	T	49.3	D	54.6	D
Peconic Avenue		R	27.3	C	27.3	C
	WB	L	16.7	B	18.7	B
		T	2.7	A	2.7	A
	NB	L	96.8	F	94.5	F
		R	32.2	C	31.9	C
Intersection			32.6	C	33.2	C
East/West Main Street at	EB	L	22.9	C	23.0	C
Roanoke Avenue		T	3.7	A	3.8	A
	WB	TR	47.5	D	48.4	D
	SB	R	34.5	C	34.3	C
Intersection			24.7	C	25.2	C
East/West Main Street at	EB	LTR	5.1	A	6.6	A
Maple/McDermott Avenue	WB	LTR	5.1	A	6.6	A
	NB	LTR	31.2	C	40.4	D
	SB	LTR	30.6	C	28.0	C
Intersection			8.7	A	12.0	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 6: Level of Summary – AM Unsignalized

			No Build		Build	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	18.2	C	19.1	C
Parking Lot Access		R	14.2	B	14.3	B
	SB	LT	9.4	A	9.4	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 7: Level of Summary – PM Signalized

			No Build		Build		Build Mod.	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street @	EB	T	55.9	E	66.7	E		
Peconic Avenue		R	24.3	C	24.9	C		
	WB	L	25.6	C	34.6	C		
		T	3.3	A	3.2	A		
	NB	L	89.8	F	89.5	F		
		R	28.1	C	27.5	C		
		Intersection	32.6	C	36.1	C		
East/West Main Street @	EB	L	29.1	C	30.2	C		
Roanoke Avenue		T	3.0	A	3.2	A		
	WB	TR	50.6	D	51.3	D		
	SB	R	41.4	D	41.4	D		
		Intersection	30.6	C	30.7	C		
East/West Main Street @	EB	LTR	4.8	A	6.1	A	6.6	A
Maple/McDermott Avenue	WB	LTR	7.2	A	9.9	A	10.7	B
	NB	LTR	29.5	C	41.0	D	34.6	C
	SB	LTR	44.9	D	42.6	D	37.1	D
		Intersection	11.0	B	14.7	B	14.1	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 8: Level of Summary – PM Unsignalized

			No Build		Build	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	19.6	C	21.1	C
Parking Lot Access		R	15.3	C	15.6	C
	SB	LT	9.8	A	9.9	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 9: Level of Summary – Saturday Signalized

			No Build		Build		Build Mod.	
Signalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
East/West Main Street at	EB	T	117.4	F	122.4	F		
Peconic Avenue		R	24.8	C	25.2	C		
	WB	L	101.9	F	114.7	F		
		T	2.9	A	3.1	A		
	NB	L	94.9	F	94.9	F		
		R	24.2	C	24.0	C		
Intersection			63.5	E	67.2	E		
East/West Main Street at	EB	L	35.8	D	37.3	D		
Roanoke Avenue		T	3.6	A	4.3	A		
	WB	TR	49.3	D	52.1	D		
	SB	R	42.0	D	41.4	D		
Intersection			27.2	C	28.2	C		
East/West Main Street at	EB	LTR	7.0	A	10.8	B	12.4	B
Maple/McDermott Avenue	WB	LTR	7.2	A	10.2	B	11.6	B
	NB	LTR	40.2	D	67.9	E	52.8	D
	SB	LTR	36.8	D	37.3	D	33.0	C
Intersection			12.9	B	21.2	C	19.8	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 10: Level of Summary – Saturday Unsignalized

			No Build		Build	
Unsignalized Intersections	**Approach**	**Movt.**	**Delay**	**LOS**	**Delay**	**LOS**
Peconic Avenue at	WB	L	20.5	C	25.0	C
Parking Lot Access		R	15.4	B	15.9	B
	SB	LT	10.0	B	10.3	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Main Street at Peconic Avenue/Roanoke Avenue

In the No Build Condition, the eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

East Main Street at McDermott Avenue/Maple Avenue

Under the No Build Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

Peconic Avenue at Parking Lot Access

Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The

westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.

PARKING ANALYSES

A parking assessment was conducted for the proposed project to determine if there is adequate parking near the study area to support the proposed project. As part of the Transit Oriented Development (TOD) Growth Plan in the Riverhead BOA project, Nelson & Pope conducted a detailed Parking and Public Transportation Study of Downtown Riverhead. The Downtown Riverhead parking study inventoried the parking supply and parking restrictions in the study area. It also identified the peak parking periods and associated peak occupancy by location, calculated the average parking duration and turnover by location.

The Parking Study conducted for the BOA project determined that under current conditions, only a few parking areas are highly utilized during weekdays, mostly lots used by the Suffolk County Courts, Riverhead Town Hall and the Police Department. The majority of parking areas are highly underutilized on Saturdays. From the review of the parking data, it appears that Downtown Riverhead has adequate parking to support existing conditions. The following table summarizes the overall peak utilization in Downtown Riverhead.

Table 11: Overall Parking Utilization

Lots	Available Spaces	Weekday Peak Occupancy	Weekend Peak Occupancy
Public/ Institutional	2121 Spaces	1059 Spaces (50%)	398 Spaces (22%)
Private	353 Spaces	109 Spaces (50%)	74 Spaces (24%)
On-Street	236 Spaces	122 Spaces (52%)	44 Spaces (29%)
Total	**2710 Spaces**	**1290 Spaces (48%)**	**516 Spaces (19%)**

For the purpose of the proposed project, additional parking counts were conducted in the parking areas closer the proposed project to identify current parking utilization.

The following table summarizes the existing parking capacities of the parking areas where the parking counts were conducted. Figure 16 shows the parking areas studied.

Table 12: Existing Parking Supply

Parking Area	Total Number of Spaces
Lot L	287
Lot M	59
Lot N	57
Lot Q	52
Lot R	27
Lot T	33
Lot U	84
Lot V	167
West/East Main St between Griffing Ave and Union Ave	68
Maple Ave between E 2nd Street and East Main St	19
Total spaces	853

PUBLIC/INSTITUTIONAL PARKING LOTS	
PARKING AREA	TOTAL NUMBER OF SPACES
LOT L	287
LOT M	59
LOT N	57
LOT Q	52
LOT R	27
LOT T	33
LOT U	84
LOT V	167
	150
	130
TOTAL PUBLIC/INSTITUTIONAL LOT SPACES	766
ON-STREET PARKING	
MAPLE AVENUE	19
EAST MAIN STREET	68
TOTAL ON-STREET PARKING	87
TOTAL AVAILABLE PARKING	853

LEGEND:

NO PARKING ON STREET

PARKING PERMITTED ON STREET

PARKING LOT

N&P
NELSON & POPE
ENGINEERS · SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
(631) 427-5665 FAX (631) 427-5620
WWW.NELSONPOPE.COM

FIGURE 16: PARKING STUDY AREA MAP

Parking Accumulation Data

Parking accumulation survey was conducted at the parking areas between the hours of 10:00 AM and 8:00 PM on a half-hourly basis on the following dates:

- Friday August 19th, 2016 to cover a typical summer weekday
- Saturday August 27th, 2016 to cover a typical Summer Saturday.

The parking counts were tabulated to identify the parking utilization by time-of-day and by location. The peak parking occupancy was identified for each parking facility and analyzed. The following table summarizes the peak parking demand in the study area. The detailed parking data is contained in Appendix F of the report.

Table 13: Peak Parking Demand

Parking Area	Total Number of Spaces	Weekday Peak Parking Demand	Saturday Peak Parking Demand
Lot L	287	121	111
Lot M	59	26	46
Lot N	57	10	40
Lot Q	52	50	51
Lot R	27	12	13
Lot T	33	14	30
Lot U	84	25	31
Lot V	167	88	146
West/East Main St between Griffing Ave and Union Ave	68	50	49
Ostrander Ave between E 2nd Street and East Main St	19	6	3
Total spaces	853	402	520
Parking Utilization		47.1%	61%

From the review of Table 9 above, it can be seen that the peak parking utilization in the study area is 47.1% (451 parking spaces available) during a typical weekday and 61% (333 parking spaces available) during a typical Saturday.

Peak parking demand of proposed uses

The peak parking demand of the proposed uses was estimated using parking data contained with the Institute of Transportation Engineers Parking Generation Manual 4th Edition, data within the files of Nelson & Pope and Town parking requirements for developments outside the Downtown Parking District. The following is a summary of the peak park parking demand.

Apartments: The Town Code requires 1.5 parking spaces per dwelling unit for developments outside the parking district. Given that the proposed residential units associated with the project are within the Downtown Parking District and located in close proximity to public transportation and have shared parking opportunity due to mix use or commuter parking nearby, parking demand was evaluated based on existing field surveys of parking utilization at similar apartment complexes located in Farmingdale, Babylon and Patchogue within the files of Nelson & Pope. Additionally, rates contained in other industry standard resources like The Institute of Transportation Engineers' (ITE) Parking Generation 4th Editions, and Urban Land Institute's Shared Parking Manual, 2nd Edition were utilized. The average peak parking demand obtained was 1 space per dwelling unit. Therefore, 1 space per residential dwelling unit was utilized for the parking demand calculations.

Restaurant: The Town Code requires one space per 3 seats. Downtown Riverhead is a mixed-use downtown environment providing a range of commercial establishments. Given the mixed-use nature of the restaurant locations, and proximity to the LIRR, there are opportunities for shared customer parking and hence a reduced parking rate. However, to perform a conservative parking analysis, a rate of 1 space per 3 seats was utilized for the restaurant parking calculations.

Retail: The Town Code requires one space per 250 SF of GFA for retail uses outside the Downtown Parking District. The proposed retail uses are within the Downtown Parking District and are expected to mainly be supported by the commercial and residential uses proposed as part of the project and existing in the immediate area. Therefore, a reduction in the parking requirement is warranted. According to the ITE Parking Generation, 4th Edition, an average of 2.87 spaces per 1,000 square feet for "Shopping Center" is recommended. To be conservative, a ratio of 3.0 spaces per 1,000 square feet is recommended and utilized in the parking calculations.

The following table is a summary of the peak parking demand of the proposed project (221 East Main Street – Riverview Loft) and the adjacent project at 203-213 East Main Street.

Table 14: Peak Parking Demand Estimates

Project	Use	Parking Ratio	Parking demand
221 East Main Street	116 apartments units	1 parking space per unit	116 spaces
	Restaurant (535 seats)	1 parking space per 3 seats	179 spaces
	Retail (1,508 SF)	3 parking spaces per 1000 SF	5 spaces
203-213 East Main Street	170 apartments units	1 parking space per unit	170 spaces
	Retail (3,750 SF)	3 parking spaces per 1000 SF	11 spaces
	Total parking required	**481**	
	Total parking available	**504***	

*- Total parking available is equal to available parking within the Downtown Parking District plus parking provided within the project site.

From the review of the table above, it can be seen that the peak parking demand for the proposed project (221 East Main Street) will be 300 parking spaces and the parking demand for the project adjacent to 221 East main Street (203-213 East Main Street) will be 181 parking space. The overall parking demand for the two projects will be 481 parking spaces. From the review of the parking data, a minimum of 331 parking spaces could be available in the study area during a typical weekday or weekend. A total of 171 parking spaces will be provided on site to support the two projects resulting in a total of 504 available parking spaces to support the two projects. The 505 parking spaces exceeds the peak parking demand of 481 parking spaces. It is therefore the professional opinion of Nelson & Pope that there will be more than adequate parking in the study area to meet the peak parking demand for the proposed project.

CONCLUSION

Nelson & Pope has investigated the potential traffic and parking impacts associated with the proposed development to be located at the southwest corner of East Main Street and McDermott Avenue in Riverhead, New York. The following is a summary of this investigation and the findings thereof:

1. At the request of the Town of Riverhead Planning Department, turning movement counts were conducted at the intersections of East Main Street at Peconic Avenue, East Main Street and Roanoke Avenue and East Main Street at McDermott Avenue/Maple Avenue during the weekday AM (7-9AM), PM (4-6PM) and Saturday midday (10AM-2PM) peak periods on the following days:

    - Friday August 19th from 7-9AM and 4-6PM to cover a typical summer weekday
    - Saturday August 20th from 10 AM -2PM to cover the Polish Town Fair event (Special events in Riverhead).
    - Saturday August 27th from 10AM -2PM to cover a typical Summer Saturday.

2. In order to respond to the Town of Riverhead Planning Department's comment on the 2016 Traffic Study regarding weekday turning movement counts collected when schools were not in session, additional turning movement counts have been collected at the intersections listed above on Wednesday May 31, 2017 during the weekday AM (7-9AM) and PM (4-6PM) peak hours.

3. Future 2019 No Build traffic volumes were determined by applying a 1.9% annual growth factor to the existing traffic volumes and then adding the traffic generated by the other planned developments in the vicinity of the site.

4. The trip generation for the proposed project was prepared utilizing trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Ninth Edition*.

5. The proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

6. The site-generated traffic was distributed to the study intersections and incorporated into the Future Build Condition.

7. In the No Build Condition, at the intersections Main Street and Peconic Avenue/Roanoke Avenue, eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

8. Under the No Build Condition, all the approach movements at the intersection of East Main Street and McDermott Avenue/Maple Avenue operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak

hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

9. Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.
10. A parking assessment was conducted for the proposed project and an adjacent planned project (203-213 East Main Street) to determine if there is adequate parking near the study area to support the proposed project. As part of the Transit Oriented Development (TOD) Growth Plan in the Riverhead BOA project, Nelson & Pope conducted a detailed Parking and Public Transportation Study of Downtown Riverhead. The Downtown Riverhead parking study inventoried the parking supply and parking restrictions in the study area. It also identified the peak parking periods and associated peak occupancy by location, calculated the average parking duration and turnover by location. For the purpose of the proposed project, additional parking counts were conducted in the parking areas closer the proposed project to identify current parking utilization.
11. Parking accumulation survey was conducted at the parking areas between the hours of 10:00 AM and 8:00 PM on a half-hourly basis on the following dates:
    - Friday August 19th, 2016 to cover a typical summer weekday
    - Saturday August 27th, 2016 to cover a typical Summer Saturday.
12. The parking data was summarized to identify the peak parking demand in the vicinity of the proposed project.
13. Peak parking demand of the proposed uses was estimated using parking data contained with the Institute of Transportation Engineers Parking Generation Manual 4th Edition, data

within the files of Nelson & Pope and Town parking requirements for developments outside the Downtown Parking District.

14. Based on the peak parking demand, the proposed project and adjacent planned project will require a total of 481 parking spaces. With the peak parking utilization within the study area, there will be at least 504 parking spaces available during the weekday and weekend peak periods. The available parking exceeds the peak parking demand.

Based on the results of the traffic study and parking analysis as detailed in the body of this report, it is the professional opinion of Nelson & Pope that, the proposed project will not result in significant traffic impacts in the study area.

TRAFFIC STUDY

221 East Main Street

TOWN OF RIVERHEAD

APPENDIX

December 2016
Revised June 2017

N & P JOB NO. 16068

Appendix A: Existing Traffic Volume

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 3-MAIN_ST_AT_ROANOKE_AV_417697_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

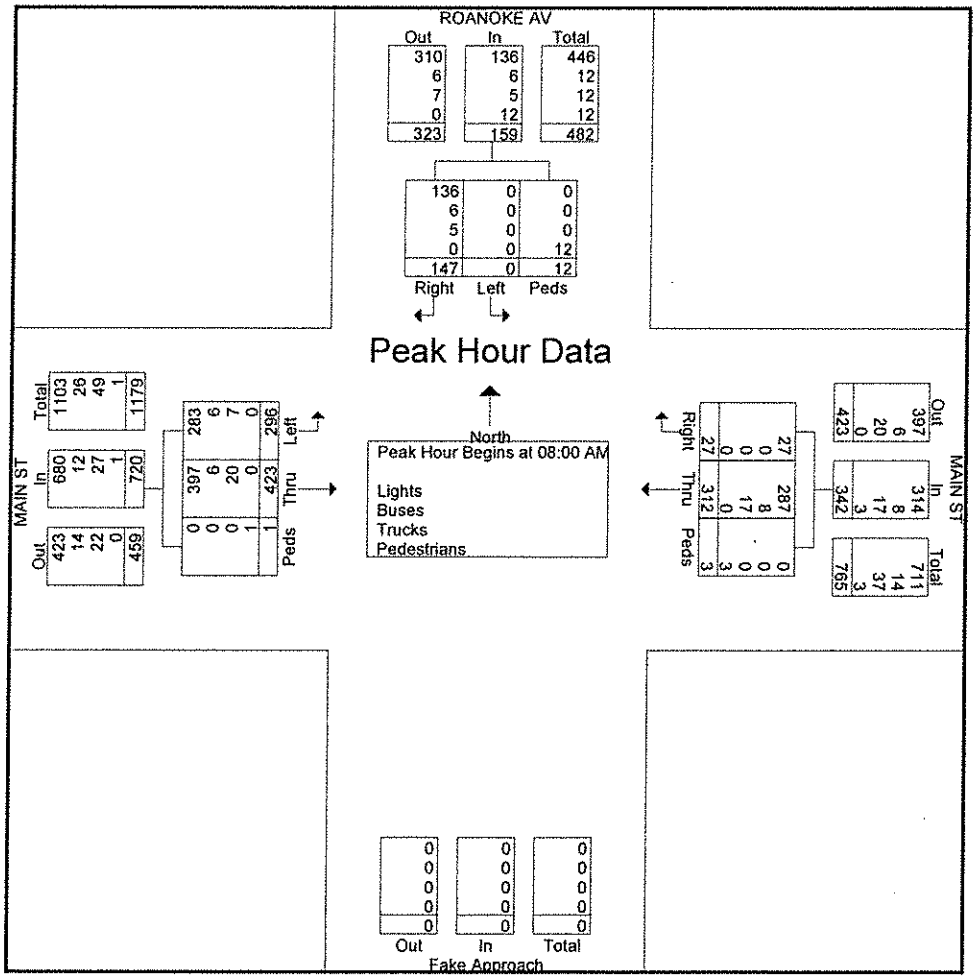
	ROANOKE AV Southbound				MAIN ST Westbound				MAIN ST Eastbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
07:00 AM	0	32	2	34	77	7	0	84	35	67	0	102	220
07:15 AM	0	29	0	29	61	3	1	65	48	75	0	123	217
07:30 AM	0	36	0	36	86	3	0	89	71	78	0	149	274
07:45 AM	0	32	1	33	97	5	0	102	68	116	0	184	319
Total	0	129	3	132	321	18	1	340	222	336	0	558	1030
08:00 AM	0	39	3	42	72	7	1	80	70	95	0	165	287
08:15 AM	0	35	4	39	70	6	1	77	68	104	0	172	288
08:30 AM	0	41	3	44	81	7	0	88	70	109	0	179	311
08:45 AM	0	32	2	34	89	7	1	97	88	115	1	204	335
Total	0	147	12	159	312	27	3	342	296	423	1	720	1221
04:00 PM	0	61	6	67	119	8	4	131	61	106	0	167	365
04:15 PM	0	59	14	73	101	6	1	108	50	103	1	154	335
04:30 PM	0	64	7	71	123	10	3	136	85	109	0	194	401
04:45 PM	0	62	7	69	99	7	11	117	75	99	0	174	360
Total	0	246	34	280	442	31	19	492	271	417	1	689	1461
05:00 PM	0	53	4	57	102	14	1	117	84	101	0	185	359
05:15 PM	0	54	12	66	89	13	6	108	79	89	0	168	342
05:30 PM	0	66	6	72	97	5	4	106	51	116	0	167	345
05:45 PM	0	61	12	73	87	6	3	96	59	83	1	143	312
Total	0	234	34	268	375	38	14	427	273	389	1	663	1358
Grand Total	0	756	83	839	1450	114	37	1601	1062	1565	3	2630	5070
Apprch %	0	90.1	9.9		90.6	7.1	2.3		40.4	59.5	0.1		
Total %	0	14.9	1.6	16.5	28.6	2.2	0.7	31.6	20.9	30.9	0.1	51.9	
Lights	0	722	0	722	1387	111	0	1498	1019	1488	0	2507	4727
% Lights	0	95.5	0	86.1	95.7	97.4	0	93.6	96	95.1	0	95.3	93.2
Buses	0	15	0	15	15	0	0	15	20	17	0	37	67
% Buses	0	2	0	1.8	1	0	0	0.9	1.9	1.1	0	1.4	1.3
Trucks	0	19	0	19	48	3	0	51	23	60	0	83	153
% Trucks	0	2.5	0	2.3	3.3	2.6	0	3.2	2.2	3.8	0	3.2	3
Pedestrians	0	0	83	83	0	0	37	37	0	0	3	3	123
% Pedestrians	0	0	100	9.9	0	0	100	2.3	0	0	100	0.1	2.4

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 3-MAIN_ST_AT_ROANOKE_AV_417697_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 2

	ROANOKE AV Southbound				MAIN ST Westbound				MAIN ST Eastbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	39	3	42	72	7	1	80	70	95	0	165	287
08:15 AM	0	35	4	39	70	6	1	77	68	104	0	172	288
08:30 AM	0	41	3	44	81	7	0	88	70	109	0	179	311
08:45 AM	0	32	2	34	89	7	1	97	88	115	1	204	335
Total Volume	0	147	12	159	312	27	3	342	296	423	1	720	1221
% App. Total	0	92.5	7.5		91.2	7.9	0.9		41.1	58.8	0.1		
PHF	.000	.896	.750	.903	.876	.964	.750	.881	.841	.920	.250	.882	.911
Lights	0	136	0	136	287	27	0	314	283	397	0	680	1130
% Lights	0	92.5	0	85.5	92.0	100	0	91.8	95.6	93.9	0	94.4	92.5
Buses	0	6	0	6	8	0	0	8	6	6	0	12	26
% Buses	0	4.1	0	3.8	2.6	0	0	2.3	2.0	1.4	0	1.7	2.1
Trucks	0	5	0	5	17	0	0	17	7	20	0	27	49
% Trucks	0	3.4	0	3.1	5.4	0	0	5.0	2.4	4.7	0	3.8	4.0
Pedestrians	0	0	12	12	0	0	3	3	0	0	1	1	16
% Pedestrians	0	0	100	7.5	0	0	100	0.9	0	0	100	0.1	1.3

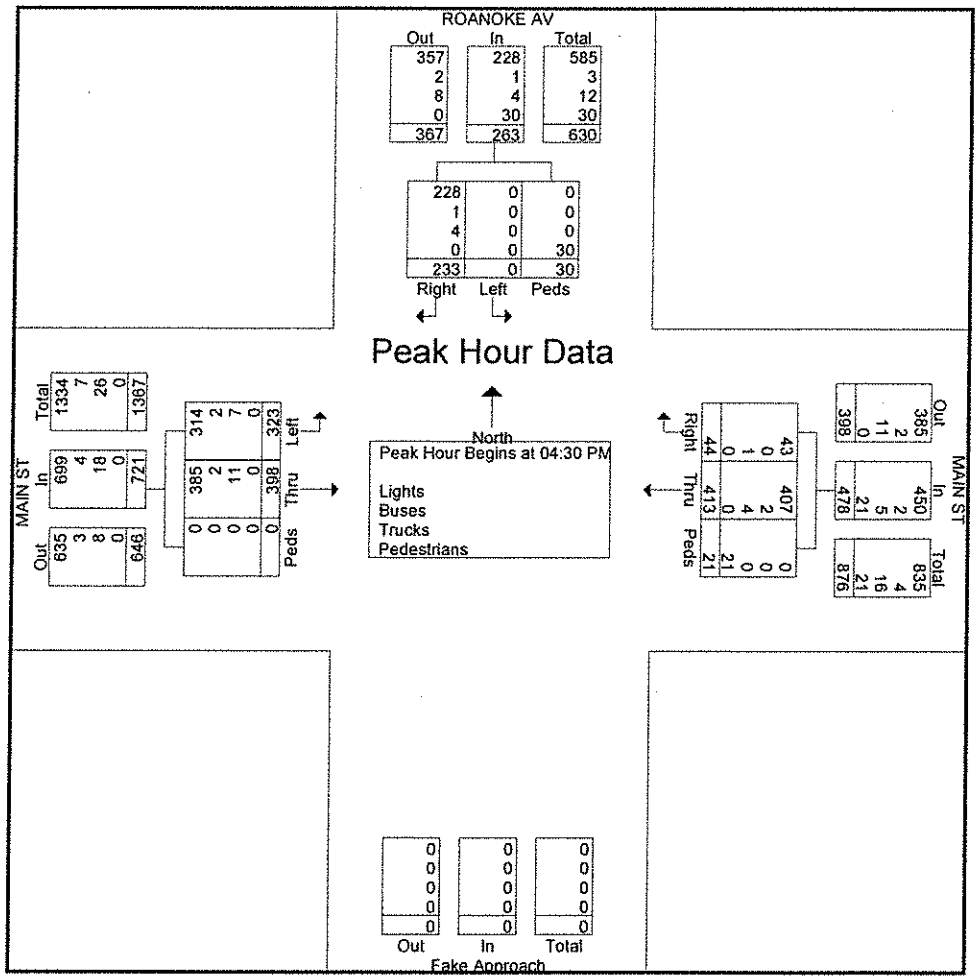


NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 3-MAIN_ST_AT_ROANOKE_AV_417697_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 3

	ROANOKE AV Southbound				MAIN ST Westbound				MAIN ST Eastbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	**64**	7	**71**	**123**	10	3	**136**	**85**	**109**	0	**194**	**401**
04:45 PM	0	62	7	69	99	7	**11**	117	75	99	0	174	360
05:00 PM	0	53	4	57	102	**14**	1	117	84	101	0	185	359
05:15 PM	0	54	**12**	66	89	13	6	108	79	89	0	168	342
Total Volume	0	233	30	263	413	44	21	478	323	398	0	721	1462
% App. Total	0	88.6	11.4		86.4	9.2	4.4		44.8	55.2	0		
PHF	.000	.910	.625	.926	.839	.786	.477	.879	.950	.913	.000	.929	.911
Lights	0	228	0	228	407	43	0	450	314	385	0	699	1377
% Lights	0	97.9	0	86.7	98.5	97.7	0	94.1	97.2	96.7	0	96.9	94.2
Buses	0	1	0	1	2	0	0	2	2	2	0	4	7
% Buses	0	0.4	0	0.4	0.5	0	0	0.4	0.6	0.5	0	0.6	0.5
Trucks	0	4	0	4	4	1	0	5	7	11	0	18	27
% Trucks	0	1.7	0	1.5	1.0	2.3	0	1.0	2.2	2.8	0	2.5	1.8
Pedestrians	0	0	30	30	0	0	21	21	0	0	0	0	51
% Pedestrians	0	0	100	11.4	0	0	100	4.4	0	0	0	0	3.5



NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 2-MAIN_ST_AT_MAPLE_AV-MCDERMOTT_AV_417699_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 1

Groups Printed- Lights - Buses - Trucks

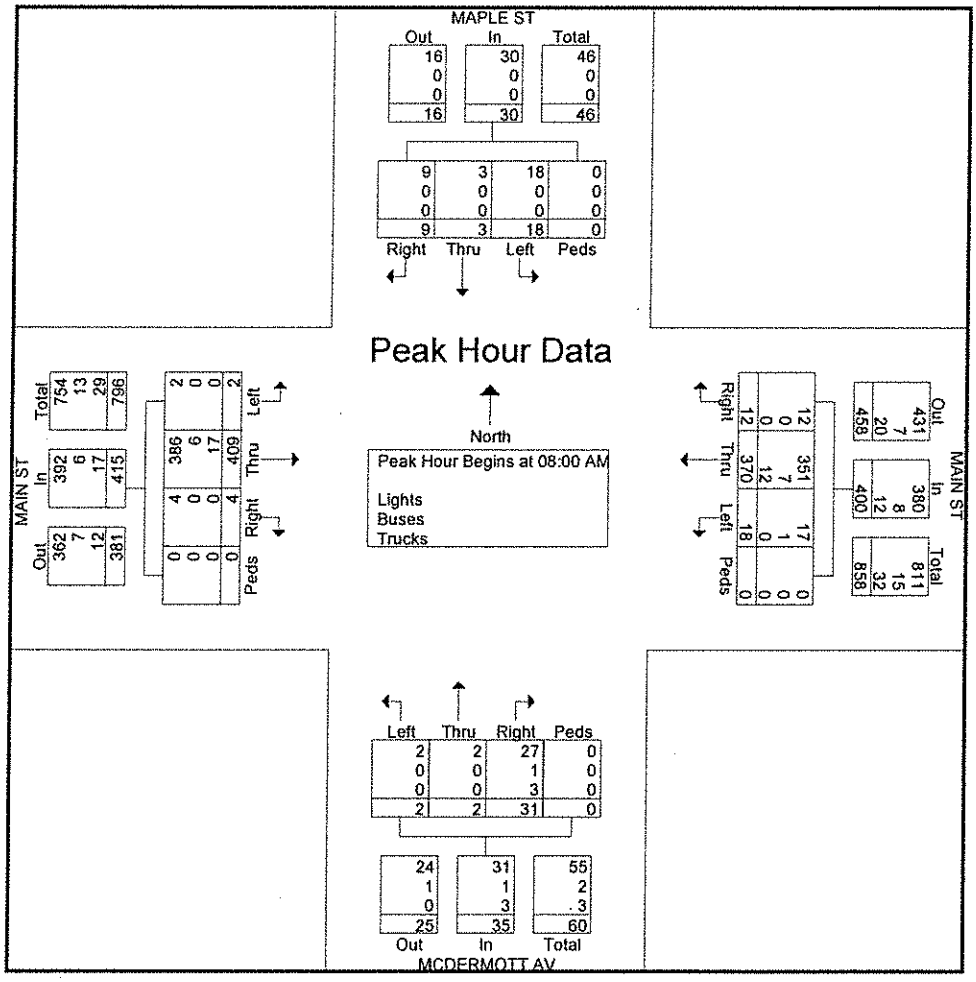
	MAPLE ST Southbound					MAIN ST Westbound					MCDERMOTT AV Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	0	8	0	11	3	76	0	0	79	1	0	4	0	5	2	66	4	0	72	167
07:15 AM	2	0	2	0	4	1	71	0	0	72	0	0	1	0	1	1	67	1	0	69	146
07:30 AM	3	0	5	0	8	1	88	2	0	91	1	0	2	0	3	4	87	1	0	92	194
07:45 AM	4	0	2	0	6	3	100	3	0	106	1	1	7	0	9	0	114	2	0	116	237
Total	12	0	17	0	29	8	335	5	0	348	3	1	14	0	18	7	334	8	0	349	744
08:00 AM	4	1	0	0	5	6	93	2	0	101	0	0	7	0	7	0	99	0	0	99	212
08:15 AM	4	0	2	0	6	4	81	2	0	87	1	0	5	0	6	1	98	3	0	102	201
08:30 AM	5	2	6	0	13	2	91	5	0	98	1	2	9	0	12	0	99	0	0	99	222
08:45 AM	5	0	1	0	6	6	105	3	0	114	0	0	10	0	10	1	113	1	0	115	245
Total	18	3	9	0	30	18	370	12	0	400	2	2	31	0	35	2	409	4	0	415	880
04:00 PM	11	0	4	0	15	12	138	7	0	157	6	3	16	0	25	4	86	2	0	92	289
04:15 PM	11	3	4	0	18	6	112	6	0	124	4	0	14	0	18	1	100	2	0	103	263
04:30 PM	7	1	0	0	8	10	123	4	0	137	8	0	15	0	23	1	95	0	0	96	264
04:45 PM	9	3	3	0	15	14	118	5	0	137	0	4	13	0	17	1	98	0	0	99	268
Total	38	7	11	0	56	42	491	22	0	555	18	7	58	0	83	7	379	4	0	390	1084
05:00 PM	12	1	3	0	16	13	128	4	0	145	9	1	20	0	30	1	91	3	0	95	286
05:15 PM	15	0	2	0	17	9	91	4	0	104	7	2	14	0	23	1	86	0	0	87	231
05:30 PM	12	5	4	0	21	2	95	0	0	97	5	3	16	0	24	3	94	3	0	100	242
05:45 PM	12	1	1	0	14	5	86	2	0	93	3	2	17	0	22	2	86	3	0	91	220
Total	51	7	10	0	68	29	400	10	0	439	24	8	67	0	99	7	357	9	0	373	979
Grand Total	119	17	47	0	183	97	1596	49	0	1742	47	18	170	0	235	23	1479	25	0	1527	3687
Apprch %	65	9.3	25.7	0		5.6	91.6	2.8	0		20	7.7	72.3	0		1.5	96.9	1.6	0		
Total %	3.2	0.5	1.3	0	5	2.6	43.3	1.3	0	47.2	1.3	0.5	4.6	0	6.4	0.6	40.1	0.7	0	41.4	
Lights	116	16	45	0	177	93	1541	49	0	1683	45	18	162	0	225	22	1415	25	0	1462	3547
% Lights	97.5	94.1	95.7	0	96.7	95.9	96.6	100	0	96.6	95.7	100	95.3	0	95.7	95.7	95.7	100	0	95.7	96.2
Buses	3	0	2	0	5	1	16	0	0	17	1	0	1	0	2	1	17	0	0	18	42
% Buses	2.5	0	4.3	0	2.7	1	1	0	0	1	2.1	0	0.6	0	0.9	4.3	1.1	0	0	1.2	1.1
Trucks	0	1	0	0	1	3	39	0	0	42	1	0	7	0	8	0	47	0	0	47	98
% Trucks	0	5.9	0	0	0.5	3.1	2.4	0	0	2.4	2.1	0	4.1	0	3.4	0	3.2	0	0	3.1	2.7

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 2-MAIN_ST_AT_MAPLE_AV-MCDERMOTT_AV_417699_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 2

	MAPLE ST Southbound					MAIN ST Westbound					MCDERMOTT AV Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	4	1	0	0	5	6	93	2	0	101	0	0	7	0	7	0	99	0	0	99	212
08:15 AM	4	0	2	0	6	4	81	2	0	87	1	0	5	0	6	1	98	3	0	102	201
08:30 AM	5	2	6	0	13	2	91	5	0	98	1	2	9	0	12	0	99	0	0	99	222
08:45 AM	5	0	1	0	6	6	105	3	0	114	0	0	10	0	10	1	113	1	0	115	245
Total Volume	18	3	9	0	30	18	370	12	0	400	2	2	31	0	35	2	409	4	0	415	880
% App. Total	60	10	30	0		4.5	92.5	3	0		5.7	5.7	88.6	0		0.5	98.6	1	0		
PHF	.900	.375	.375	.000	.577	.750	.881	.600	.000	.877	.500	.250	.775	.000	.729	.500	.905	.333	.000	.902	.898
Lights	18	3	9	0	30	17	351	12	0	380	2	2	27	0	31	2	386	4	0	392	833
% Lights	100	100	100	0	100	94.4	94.9	100	0	95.0	100	100	87.1	0	88.6	100	94.4	100	0	94.5	94.7
Buses	0	0	0	0	0	1	7	0	0	8	0	0	1	0	1	0	6	0	0	6	15
% Buses	0	0	0	0	0	5.6	1.9	0	0	2.0	0	0	3.2	0	2.9	0	1.5	0	0	1.4	1.7
Trucks	0	0	0	0	0	0	12	0	0	12	0	0	3	0	3	0	17	0	0	17	32
% Trucks	0	0	0	0	0	0	3.2	0	0	3.0	0	0	9.7	0	8.6	0	4.2	0	0	4.1	3.6

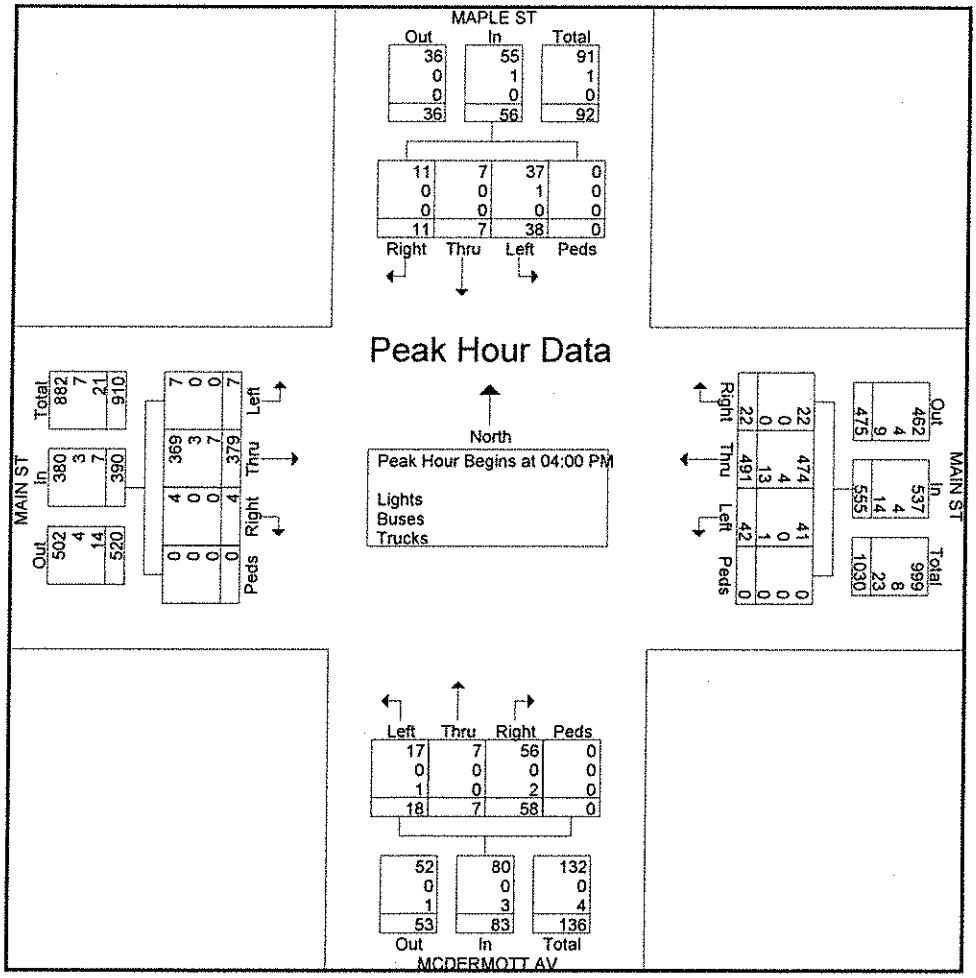


NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 2-MAIN_ST_AT_MAPLE_AV-MCDERMOTT_AV_417699_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 3

	MAPLE ST Southbound					MAIN ST Westbound					MCDERMOTT AV Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	11	0	4	0	15	12	138	7	0	157	6	3	16	0	25	4	86	2	0	92	289
04:15 PM	11	3	4	0	18	6	112	6	0	124	4	0	14	0	18	1	100	2	0	103	263
04:30 PM	7	1	0	0	8	10	123	4	0	137	8	0	15	0	23	1	95	0	0	96	264
04:45 PM	9	3	3	0	15	14	118	5	0	137	0	4	13	0	17	1	98	0	0	99	268
Total Volume	38	7	11	0	56	42	491	22	0	555	18	7	58	0	83	7	379	4	0	390	1084
% App. Total	67.9	12.5	19.6	0		7.6	88.5	4	0		21.7	8.4	69.9	0		1.8	97.2	1	0		
PHF	.864	.583	.688	.000	.778	.750	.889	.786	.000	.884	.563	.438	.906	.000	.830	.438	.948	.500	.000	.947	.938
Lights	37	7	11	0	55	41	474	22	0	537	17	7	56	0	80	7	369	4	0	380	1052
% Lights	97.4	100	100	0	98.2	97.6	96.5	100	0	96.8	94.4	100	96.6	0	96.4	100	97.4	100	0	97.4	97.0
Buses	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	8
% Buses	2.6	0	0	0	1.8	0	0.8	0	0	0.7	0	0	0	0	0	0	0.8	0	0	0.8	0.7
Trucks	0	0	0	0	0	1	13	0	0	14	1	0	2	0	3	0	7	0	0	7	24
% Trucks	0	0	0	0	0	2.4	2.6	0	0	2.5	5.6	0	3.4	0	3.6	0	1.8	0	0	1.8	2.2



NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 4-MAIN_ST_AT_PECONIC_AV_417700_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

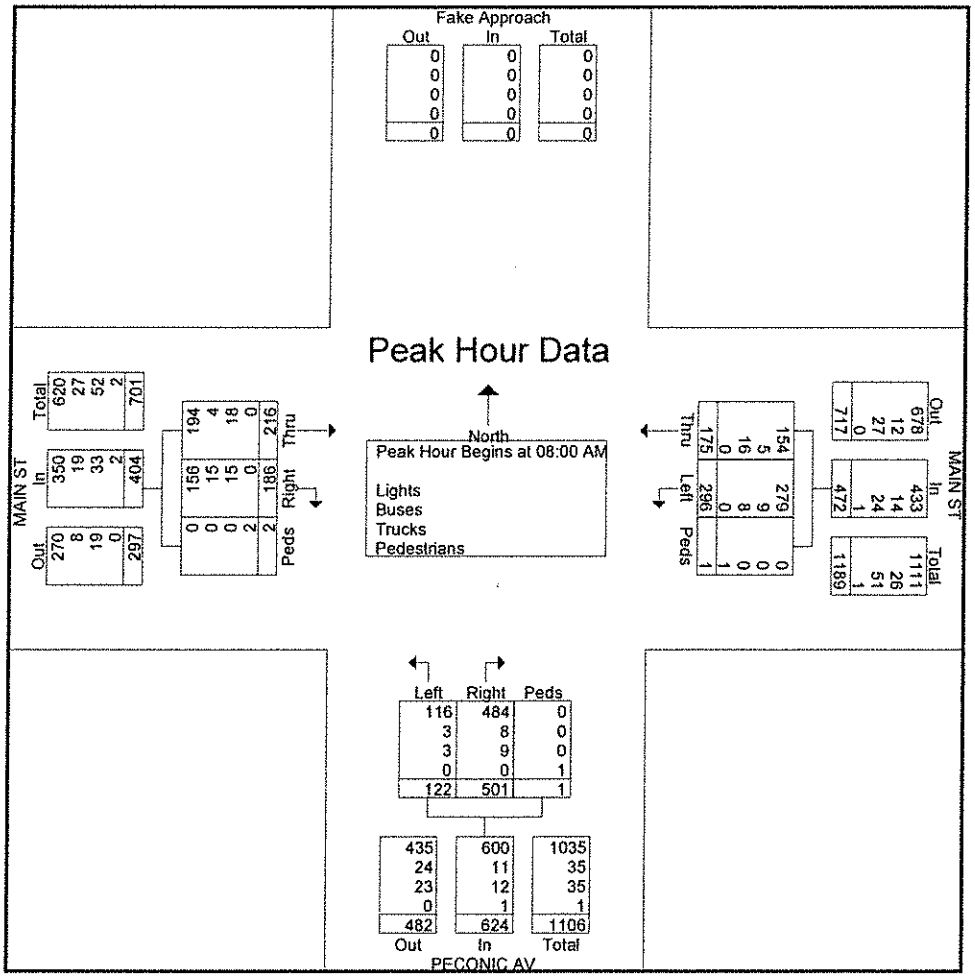
	MAIN ST Westbound				PECONIC AV Northbound				MAIN ST Eastbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	84	29	0	113	33	80	1	114	23	51	0	74	301
07:15 AM	63	28	1	92	21	91	1	113	32	45	0	77	282
07:30 AM	80	43	0	123	41	113	0	154	36	41	0	77	354
07:45 AM	81	48	0	129	50	120	1	171	65	42	0	107	407
Total	308	148	1	457	145	404	3	552	156	179	0	335	1344
08:00 AM	66	45	1	112	28	113	0	141	50	49	0	99	352
08:15 AM	65	41	0	106	22	124	1	147	48	48	1	97	350
08:30 AM	79	45	0	124	32	117	0	149	62	43	0	105	378
08:45 AM	86	44	0	130	40	147	0	187	56	46	1	103	420
Total	296	175	1	472	122	501	1	624	216	186	2	404	1500
04:00 PM	95	84	2	181	49	108	0	157	56	59	5	120	458
04:15 PM	94	67	1	162	44	97	0	141	58	59	1	118	421
04:30 PM	112	77	2	191	47	126	0	173	67	44	3	114	478
04:45 PM	83	75	2	160	41	113	2	156	62	72	2	136	452
Total	384	303	7	694	181	444	2	627	243	234	11	488	1809
05:00 PM	83	72	1	156	48	123	1	172	62	63	2	127	455
05:15 PM	77	68	1	146	57	122	1	180	45	62	0	107	433
05:30 PM	97	66	1	164	59	105	1	165	60	44	2	106	435
05:45 PM	105	42	0	147	48	104	1	153	39	53	3	95	395
Total	362	248	3	613	212	454	4	670	206	222	7	435	1718
Grand Total	1350	874	12	2236	660	1803	10	2473	821	821	20	1662	6371
Apprch %	60.4	39.1	0.5		26.7	72.9	0.4		49.4	49.4	1.2		
Total %	21.2	13.7	0.2	35.1	10.4	28.3	0.2	38.8	12.9	12.9	0.3	26.1	
Lights	1298	828	0	2126	619	1743	0	2362	762	755	0	1517	6005
% Lights	96.1	94.7	0	95.1	93.8	96.7	0	95.5	92.8	92	0	91.3	94.3
Buses	19	10	0	29	26	23	0	49	13	33	0	46	124
% Buses	1.4	1.1	0	1.3	3.9	1.3	0	2	1.6	4	0	2.8	1.9
Trucks	33	36	0	69	15	37	0	52	46	33	0	79	200
% Trucks	2.4	4.1	0	3.1	2.3	2.1	0	2.1	5.6	4	0	4.8	3.1
Pedestrians	0	0	12	12	0	0	10	10	0	0	20	20	42
% Pedestrians	0	0	100	0.5	0	0	100	0.4	0	0	100	1.2	0.7

NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 4-MAIN_ST_AT_PECONIC_AV_417700_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 2

	MAIN ST Westbound				PECONIC AV Northbound				MAIN ST Eastbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	66	**45**	**1**	112	28	113	0	141	50	**49**	0	99	352
08:15 AM	65	41	0	106	22	124	**1**	147	48	48	**1**	97	350
08:30 AM	79	45	0	124	32	117	0	149	**62**	43	0	**105**	378
08:45 AM	**86**	44	0	**130**	**40**	**147**	0	**187**	56	46	1	103	**420**
Total Volume	296	175	1	472	122	501	1	624	216	186	2	404	1500
% App. Total	62.7	37.1	0.2		19.6	80.3	0.2		53.5	46	0.5		
PHF	.860	.972	.250	.908	.763	.852	.250	.834	.871	.949	.500	.962	.893
Lights	279	154	0	433	116	484	0	600	194	156	0	350	1383
% Lights	94.3	88.0	0	91.7	95.1	96.6	0	96.2	89.8	83.9	0	86.6	92.2
Buses	9	5	0	14	3	8	0	11	4	15	0	19	44
% Buses	3.0	2.9	0	3.0	2.5	1.6	0	1.8	1.9	8.1	0	4.7	2.9
Trucks	8	16	0	24	3	9	0	12	18	15	0	33	69
% Trucks	2.7	9.1	0	5.1	2.5	1.8	0	1.9	8.3	8.1	0	8.2	4.6
Pedestrians	0	0	1	1	0	0	1	1	0	0	2	2	4
% Pedestrians	0	0	100	0.2	0	0	100	0.2	0	0	100	0.5	0.3

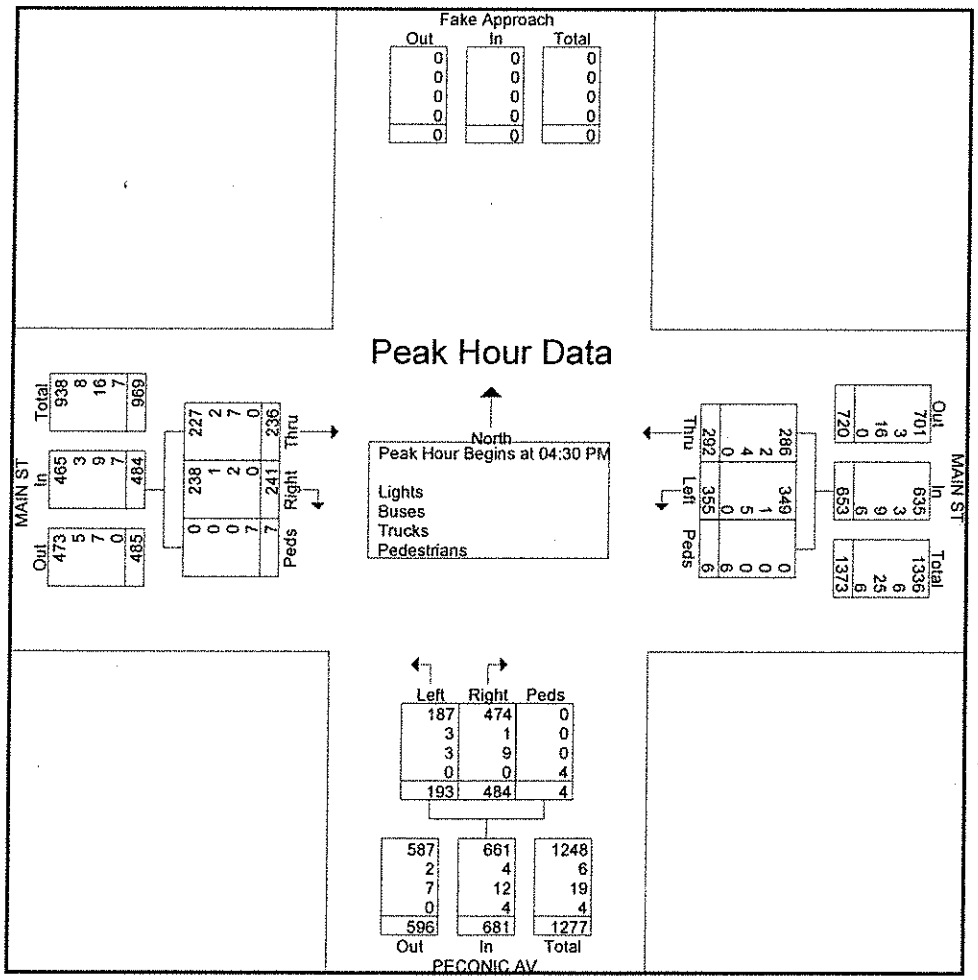


NELSON AND POPE

572 Walt Whitman Rd
Melville, NY 11747

File Name : 4-MAIN_ST_AT_PECONIC_AV_417700_05-31-2017
Site Code :
Start Date : 5/31/2017
Page No : 3

	MAIN ST Westbound				PECONIC AV Northbound				MAIN ST Eastbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	**112**	**77**	**2**	**191**	47	**126**	0	173	**67**	44	**3**	114	**478**
04:45 PM	83	75	2	160	41	113	**2**	156	62	**72**	2	**136**	452
05:00 PM	83	72	1	156	48	123	1	172	62	63	2	127	455
05:15 PM	77	68	1	146	**57**	122	1	**180**	45	62	0	107	433
Total Volume	355	292	6	653	193	484	4	681	236	241	7	484	1818
% App. Total	54.4	44.7	0.9		28.3	71.1	0.6		48.8	49.8	1.4		
PHF	.792	.948	.750	.855	.846	.960	.500	.946	.881	.837	.583	.890	.951
Lights	349	286	0	635	187	474	0	661	227	238	0	465	1761
% Lights	98.3	97.9	0	97.2	96.9	97.9	0	97.1	96.2	98.8	0	96.1	96.9
Buses	1	2	0	3	3	1	0	4	2	1	0	3	10
% Buses	0.3	0.7	0	0.5	1.6	0.2	0	0.6	0.8	0.4	0	0.6	0.6
Trucks	5	4	0	9	3	9	0	12	7	2	0	9	30
% Trucks	1.4	1.4	0	1.4	1.6	1.9	0	1.8	3.0	0.8	0	1.9	1.7
Pedestrians	0	0	6	6	0	0	4	4	0	0	7	7	17
% Pedestrians	0	0	100	0.9	0	0	100	0.6	0	0	100	1.4	0.9



NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_19_2016_337875_08-19-2016
Site Code :
Start Date : 8/19/2016
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

	RONAKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	14	2	4	20	31	26	3	0	60	24	35	36	0	95	0	21	43	0	64	239
07:15 AM	0	22	0	1	23	39	30	1	0	70	21	30	41	0	92	0	33	28	0	61	246
07:30 AM	0	22	0	1	23	59	48	6	0	113	21	37	52	2	112	1	23	21	0	45	293
07:45 AM	0	26	0	0	26	53	52	3	2	110	30	49	67	1	147	0	47	30	0	77	360
Total	0	84	2	6	92	182	156	13	2	353	96	151	196	3	446	1	124	122	0	247	1138
08:00 AM	0	17	1	1	19	31	40	9	0	80	30	52	46	1	129	0	42	33	0	75	303
08:15 AM	0	17	2	6	25	33	28	3	0	64	28	42	48	1	119	3	39	22	1	65	273
08:30 AM	0	31	1	3	35	57	49	3	0	109	26	46	74	0	146	1	33	21	0	55	345
08:45 AM	0	29	4	4	37	51	47	5	0	103	43	58	69	3	173	2	53	20	0	75	388
Total	0	94	8	14	116	172	164	20	0	356	127	198	237	5	567	6	167	96	1	270	1309
04:00 PM	0	31	5	4	40	31	70	4	6	111	47	63	46	1	157	0	64	39	3	106	414
04:15 PM	0	41	4	7	52	26	77	2	0	105	48	58	36	2	144	0	61	32	5	98	399
04:30 PM	0	37	3	8	48	17	65	7	2	91	44	54	44	1	143	0	73	44	0	117	399
04:45 PM	0	44	4	1	49	45	61	5	3	114	54	35	56	4	149	0	54	47	3	104	416
Total	0	153	16	20	189	119	273	18	11	421	193	210	182	8	593	0	252	162	11	425	1628
05:00 PM	0	56	2	4	62	37	77	2	3	119	41	62	47	0	150	4	57	55	2	118	449
05:15 PM	0	50	5	11	66	33	72	5	13	123	39	61	49	0	149	2	77	60	0	139	477
05:30 PM	0	42	4	5	51	33	56	7	8	104	46	67	42	3	158	0	65	46	2	113	426
05:45 PM	0	43	7	10	60	34	57	10	2	103	39	48	50	0	137	0	58	66	1	125	425
Total	0	191	18	30	239	137	262	24	26	449	165	238	188	3	594	6	257	227	5	495	1777
Grand Total	0	522	44	70	636	610	855	75	39	1579	581	797	803	19	2200	13	800	607	17	1437	5852
Apprch %	0	82.1	6.9	11		38.6	54.1	4.7	2.5		26.4	36.2	36.5	0.9		0.9	55.7	42.2	1.2		
Total %	0	8.9	0.8	1.2	10.9	10.4	14.6	1.3	0.7	27	9.9	13.6	13.7	0.3	37.6	0.2	13.7	10.4	0.3	24.6	
Lights	0	500	43	0	543	577	800	75	0	1452	566	790	781	0	2137	13	768	592	0	1373	5505
% Lights	0	95.8	97.7	0	85.4	94.6	93.6	100	0	92	97.4	99.1	97.3	0	97.1	100	96	97.5	0	95.5	94.1
Buses	0	2	0	0	2	2	12	0	0	14	0	5	4	0	9	0	7	7	0	14	39
% Buses	0	0.4	0	0	0.3	0.3	1.4	0	0	0.9	0	0.6	0.5	0	0.4	0	0.9	1.2	0	1	0.7
Trucks	0	20	1	0	21	31	43	0	0	74	15	2	18	0	35	0	25	8	0	33	163
% Trucks	0	3.8	2.3	0	3.3	5.1	5	0	0	4.7	2.6	0.3	2.2	0	1.6	0	3.1	1.3	0	2.3	2.8
Pedestrians	0	0	0	70	70	0	0	0	39	39	0	0	0	19	19	0	0	0	17	17	145
% Pedestrians	0	0	0	100	11	0	0	0	100	2.5	0	0	0	100	0.9	0	0	0	100	1.2	2.5

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_19_2016_337875_08-19-2016
Site Code :
Start Date : 8/19/2016
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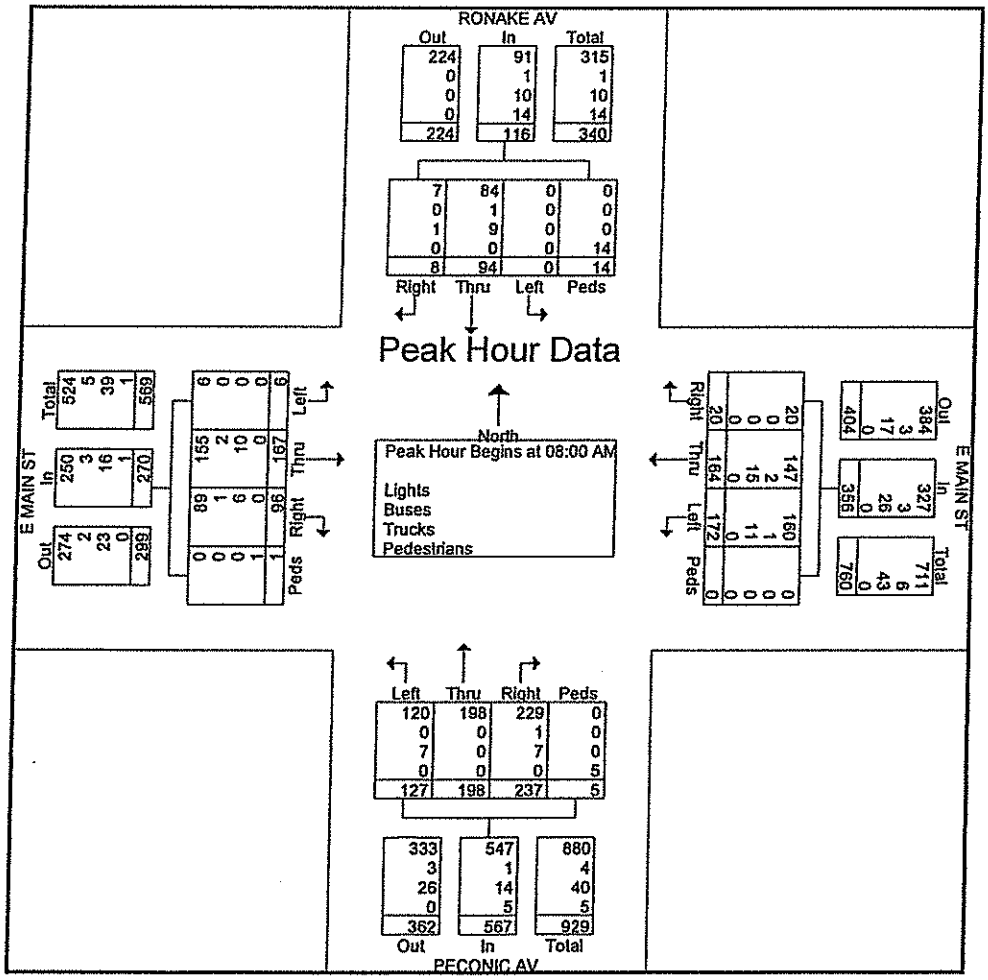
	RONAKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	17	1	1	19	31	40	9	0	80	30	52	46	1	129	0	42	33	0	75	303
08:15 AM	0	17	2	6	25	33	28	3	0	64	28	42	48	1	119	3	39	22	1	65	273
08:30 AM	0	31	1	3	35	57	49	3	0	109	26	46	74	0	146	1	33	21	0	55	345
08:45 AM	0	29	4	4	37	51	47	5	0	103	43	58	69	3	173	2	53	20	0	75	388
Total Volume	0	94	8	14	116	172	164	20	0	356	127	198	237	5	567	6	167	96	1	270	1309
% App. Total	0	81	6.9	12.1		48.3	46.1	5.6	0		22.4	34.9	41.8	0.9		2.2	61.9	35.6	0.4		
PHF	.000	.758	.500	.583	.784	.754	.837	.556	.000	.817	.738	.853	.801	.417	.819	.500	.788	.727	.250	.900	.843
Lights	0	84	7	0	91	160	147	20	0	327	120	198	229	0	547	6	155	89	0	250	1215
% Lights	0	89.4	87.5	0	78.4	93.0	89.6	100	0	91.9	94.5	100	96.6	0	96.5	100	92.8	92.7	0	92.6	92.8
Buses	0	1	0	0	1	1	2	0	0	3	0	0	1	0	1	0	2	1	0	3	8
% Buses	0	1.1	0	0	0.9	0.6	1.2	0	0	0.8	0	0	0.4	0	0.2	0	1.2	1.0	0	1.1	0.6
Trucks	0	9	1	0	10	11	15	0	0	26	7	0	7	0	14	0	10	6	0	16	66
% Trucks	0	9.6	12.5	0	8.6	6.4	9.1	0	0	7.3	5.5	0	3.0	0	2.5	0	6.0	6.3	0	5.9	5.0
Pedestrians																					
% Pedestrians	0	0	0	100	12.1	0	0	0	0	0	0	0	0	100	0.9	0	0	0	100	0.4	1.5



NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_19_2016_337875_08-19-2016
Site Code :
Start Date : 8/19/2016
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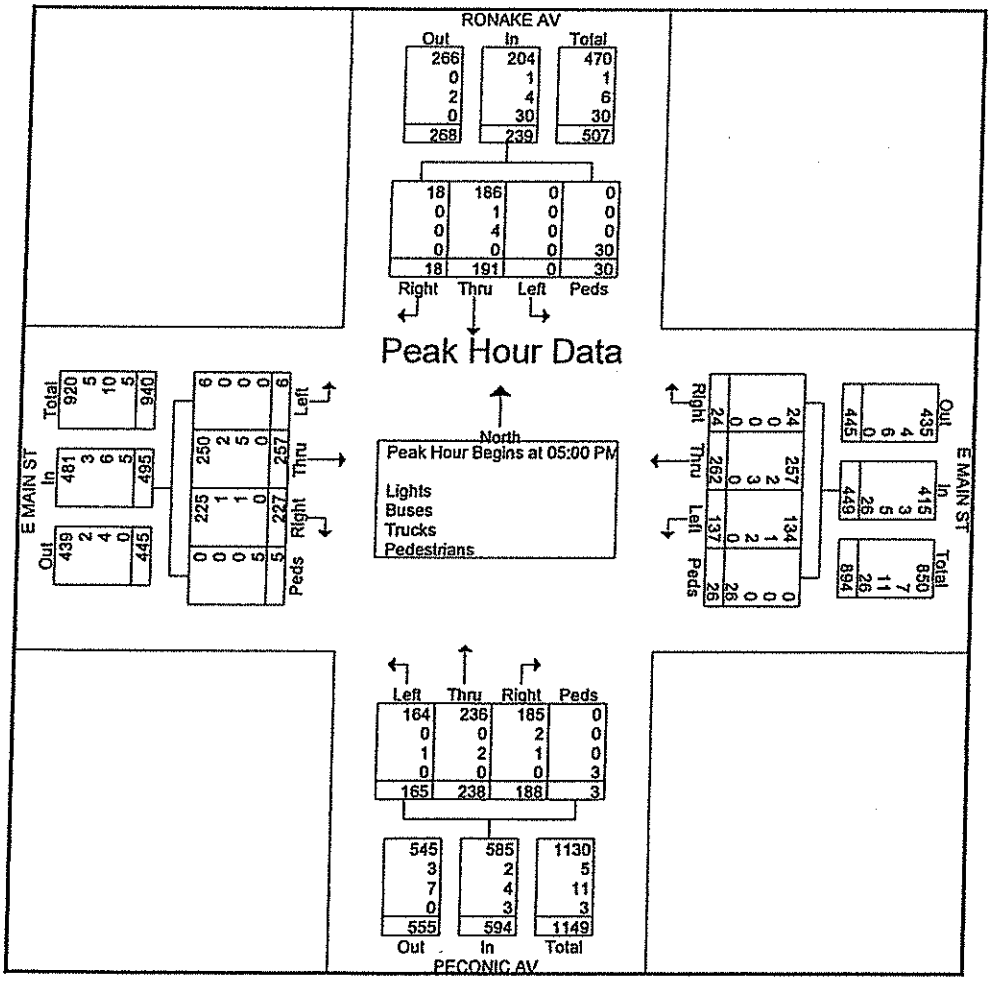
	RONAKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	56	2	4	62	37	77	2	3	119	41	62	47	0	150	4	57	55	2	118	449
05:15 PM	0	50	5	11	66	33	72	5	13	123	39	61	49	0	149	2	77	60	0	139	477
05:30 PM	0	42	4	5	51	33	56	7	8	104	46	67	42	3	158	0	65	46	2	113	426
05:45 PM	0	43	7	10	60	34	57	10	2	103	39	48	50	0	137	0	58	66	1	125	425
Total Volume	0	191	18	30	239	137	262	24	26	449	165	238	188	3	594	6	257	227	5	495	1777
% App. Total	0	79.9	7.5	12.6		30.5	58.4	5.3	5.8		27.8	40.1	31.6	0.5		1.2	51.9	45.9	1		
PHF	.000	.853	.643	.682	.905	.926	.851	.600	.500	.913	.897	.888	.940	.250	.940	.375	.834	.860	.625	.890	.931
Lights	0	186	18	0	204	134	257	24	0	415	164	236	185	0	585	6	250	225	0	481	1685
% Lights	0	97.4	100	0	85.4	97.8	98.1	100	0	92.4	99.4	99.2	98.4	0	98.5	100	97.3	99.1	0	97.2	94.8
Buses	0	1	0	0	1	1	2	0	0	3	0	0	2	0	2	0	2	1	0	3	9
% Buses	0	0.5	0	0	0.4	0.7	0.8	0	0	0.7	0	0	1.1	0	0.3	0	0.8	0.4	0	0.6	0.5
Trucks	0	4	0	0	4	2	3	0	0	5	1	2	1	0	4	0	5	1	0	6	19
% Trucks	0	2.1	0	0	1.7	1.5	1.1	0	0	1.1	0.6	0.8	0.5	0	0.7	0	1.9	0.4	0	1.2	1.1
Pedestrians																					
% Pedestrians	0	0	0	100	12.6	0	0	0	100	5.8	0	0	0	100	0.5	0	0	0	100	1.0	3.6



NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_27_2016_339052_08-27-2016
Site Code :
Start Date : 8/27/2016
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Groups Printed- Lights - Buses - Trucks - Pedestrians

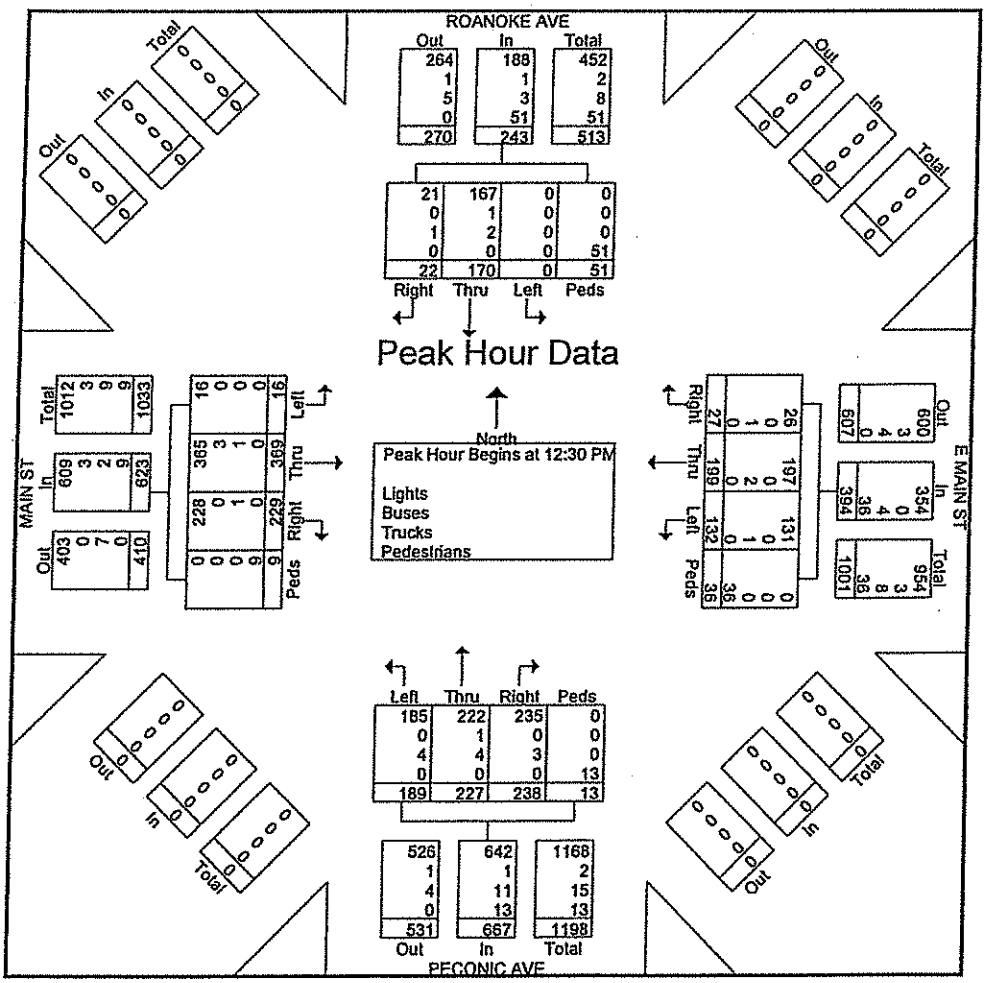
	ROANOKE AVE Southbound					E MAIN ST Westbound					PECONIC AVE Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	48	0	3	51	38	44	8	3	93	45	34	80	3	162	1	63	51	2	117	423
11:15 AM	1	33	4	17	55	39	53	8	6	106	48	61	62	0	171	3	87	45	5	140	472
11:30 AM	0	43	4	9	56	30	59	11	1	101	45	60	65	2	172	5	73	44	0	122	451
11:45 AM	0	34	6	14	54	39	38	4	9	90	48	54	73	1	176	7	89	55	0	151	471
Total	1	158	14	43	216	146	194	31	19	390	186	209	280	6	681	16	312	195	7	530	1817
12:00 PM	0	40	7	4	51	25	40	5	7	77	48	56	51	0	155	5	91	62	1	159	442
12:15 PM	0	38	5	7	50	29	38	3	6	76	53	71	50	0	174	4	86	63	4	157	457
12:30 PM	0	39	4	13	56	28	51	9	7	95	45	66	46	0	157	7	99	68	2	176	484
12:45 PM	0	48	9	24	81	36	55	5	15	111	55	59	69	0	183	1	86	50	4	141	516
Total	0	165	25	48	238	118	184	22	35	359	201	252	216	0	669	17	362	243	11	633	1899
01:00 PM	0	37	5	1	43	32	49	5	9	95	35	58	61	3	157	5	111	55	2	173	468
01:15 PM	0	46	4	13	63	36	44	8	5	93	54	44	62	10	170	3	73	56	1	133	459
01:30 PM	0	38	5	0	43	26	45	12	0	83	52	41	52	5	150	2	101	57	0	160	436
01:45 PM	0	52	2	5	59	28	62	3	1	94	56	44	50	1	151	3	93	54	0	150	454
Total	0	173	16	19	208	122	200	28	15	365	197	187	225	19	628	13	378	222	3	616	1817
Grand Total	1	496	55	110	662	386	578	81	69	1114	584	648	721	25	1978	46	1052	660	21	1779	5533
Apprch %	0.2	74.9	8.3	16.6		34.6	51.9	7.3	6.2		29.5	32.8	36.5	1.3		2.6	59.1	37.1	1.2		
Total %	0	9	1	2	12	7	10.4	1.5	1.2	20.1	10.6	11.7	13	0.5	35.7	0.8	19	11.9	0.4	32.2	
Lights	1	491	54	0	546	382	565	79	0	1026	575	640	712	0	1927	46	1036	656	0	1738	5237
% Lights	100	99	98.2	0	82.5	99	97.8	97.5	0	92.1	98.5	98.8	98.8	0	97.4	100	98.5	99.4	0	97.7	94.7
Buses	0	1	0	0	1	0	5	0	0	5	0	2	0	0	2	0	6	0	0	6	14
% Buses	0	0.2	0	0	0.2	0	0.9	0	0	0.4	0	0.3	0	0	0.1	0	0.6	0	0	0.3	0.3
Trucks	0	4	1	0	5	4	8	2	0	14	9	6	9	0	24	0	10	4	0	14	57
% Trucks	0	0.8	1.8	0	0.8	1	1.4	2.5	0	1.3	1.5	0.9	1.2	0	1.2	0	1	0.6	0	0.8	1
Pedestrians	0	0	0	110	110	0	0	0	69	69	0	0	0	25	25	0	0	0	21	21	225
% Pedestrians	0	0	0	100	16.6	0	0	0	100	6.2	0	0	0	100	1.3	0	0	0	100	1.2	4.1

NELSON AND POPE

572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_27_2016_339052_08-27-2016
Site Code :
Start Date : 8/27/2016
Page No : 2

	ROANOKE AVE Southbound					E MAIN ST Westbound					PECONIC AVE Northbound					MAIN ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	39	4	13	56	28	51	9	7	95	45	66	46	0	157	7	99	68	2	176	484
12:45 PM	0	48	9	24	81	36	55	5	15	111	55	59	69	0	183	1	86	50	4	141	516
01:00 PM	0	37	5	1	43	32	49	5	9	95	35	58	61	3	157	5	111	55	2	173	468
01:15 PM	0	46	4	13	63	36	44	8	5	93	54	44	62	10	170	3	73	56	1	133	459
Total Volume	0	170	22	51	243	132	199	27	36	394	189	227	238	13	667	16	369	229	9	623	1927
% App. Total	0	70	9.1	21		33.5	50.5	6.9	9.1		28.3	34	35.7	1.9		2.6	59.2	36.8	1.4		
PHF	.000	.885	.611	.531	.750	.917	.905	.750	.600	.887	.859	.860	.862	.325	.911	.571	.831	.842	.563	.885	.934
Lights	0	167	21	0	188	131	197	26	0	354	185	222	235	0	642	16	365	228	0	609	1793
% Lights	0	98.2	95.5	0	77.4	99.2	99.0	96.3	0	89.8	97.9	97.8	98.7	0	96.3	100	98.9	99.6	0	97.8	93.0
Buses	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	5
% Buses	0	0.6	0	0	0.4	0	0	0	0	0	0	0.4	0	0	0.1	0	0.8	0	0	0.5	0.3
Trucks	0	2	1	0	3	1	2	1	0	4	4	4	3	0	11	0	1	1	0	2	20
% Trucks	0	1.2	4.5	0	1.2	0.8	1.0	3.7	0	1.0	2.1	1.8	1.3	0	1.6	0	0.3	0.4	0	0.3	1.0
Pedestrians																					
% Pedestrians	0	0	0	100	21.0	0	0	0	100	9.1	0	0	0	100	1.9	0	0	0	100	1.4	5.7



572 Walt Whitman Road
Melville, NY 11747

File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_19_2016_337876_08-19-20
Site Code :
Start Date : 8/19/2016
Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
7:00 AM	6	1	6	3	16	2	56	1	0	59	0	0	1	1	2	1	58	0	0	59	13
7:15 AM	3	0	5	0	8	2	61	0	0	63	1	0	3	3	7	3	67	0	0	70	14
7:30 AM	1	0	6	2	9	1	102	0	0	103	3	0	6	5	14	3	64	1	0	68	19
7:45 AM	3	0	5	0	8	3	108	1	3	115	2	0	8	2	12	1	104	2	0	107	24
Total	13	1	22	5	41	8	327	2	3	340	6	0	18	11	35	8	293	3	0	304	72
8:00 AM	3	0	2	1	6	5	92	0	0	97	1	4	5	2	12	1	85	1	0	87	20
8:15 AM	3	0	0	2	5	3	71	1	0	75	0	0	7	5	12	0	76	0	0	76	16
8:30 AM	4	0	2	4	10	1	104	2	0	107	2	0	9	2	13	0	102	0	0	102	23
8:45 AM	5	0	0	3	8	3	106	5	0	114	5	0	10	4	19	3	109	2	1	115	25
Total	15	0	4	10	29	12	373	8	0	393	8	4	31	13	56	4	372	3	1	380	85
4:00 PM	10	0	2	5	17	16	119	3	4	142	5	2	12	14	33	1	108	1	3	113	30
4:15 PM	12	1	3	6	22	10	115	12	11	148	6	3	13	11	33	2	95	2	1	100	30
4:30 PM	8	3	3	10	24	14	115	3	6	138	4	3	15	4	26	5	106	0	6	117	30
4:45 PM	12	1	3	16	32	14	105	11	4	134	2	1	14	13	30	1	106	4	1	112	30
Total	42	5	11	37	95	54	454	29	25	562	17	9	54	42	122	9	415	7	11	442	1221
5:00 PM	15	2	4	3	24	10	107	4	3	124	5	3	17	6	31	3	99	1	1	104	28
5:15 PM	13	1	4	7	25	16	110	6	6	138	9	2	17	20	48	3	109	2	1	115	32
5:30 PM	9	1	1	4	15	6	104	6	2	118	9	4	20	5	38	5	98	5	1	109	28
5:45 PM	9	0	7	9	25	7	99	11	6	123	5	2	13	8	28	2	104	1	1	108	28
Total	46	4	16	23	89	39	420	27	17	503	28	11	67	39	145	13	410	9	4	436	117
Total	116	10	53	75	254	113	1574	66	45	1798	59	24	170	105	358	34	1490	22	16	1562	397
arch %	45.7	3.9	20.9	29.5		6.3	87.5	3.7	2.5		16.5	6.7	47.5	29.3		2.2	95.4	1.4	1		
otal %	2.9	0.3	1.3	1.9	6.4	2.8	39.6	1.7	1.1	45.3	1.5	0.6	4.3	2.6	9	0.9	37.5	0.6	0.4	39.3	
Lights	114	10	51	0	175	112	1494	65	0	1671	55	24	165	0	244	32	1443	21	0	1496	358
Lights	98.3	100	96.2	0	68.9	99.1	94.9	98.5	0	92.9	93.2	100	97.1	0	68.2	94.1	96.8	95.5	0	95.8	90.3
Buses	0	0	0	0	0	0	14	1	0	15	0	0	0	0	0	0	12	0	0	12	27
Buses	0	0	0	0	0	0	0.9	1.5	0	0.8	0	0	0	0	0	0	0.8	0	0	0.8	0.7
Trucks	2	0	2	0	4	1	66	0	0	67	4	0	5	0	9	2	35	1	0	38	11
Trucks	1.7	0	3.8	0	1.6	0.9	4.2	0	0	3.7	6.8	0	2.9	0	2.5	5.9	2.3	4.5	0	2.4	3
strians	0	0	0	75	75	0	0	0	45	45	0	0	0	105	105	0	0	0	16	16	241
strians	0	0	0	100	29.5	0	0	0	100	2.5	0	0	0	100	29.3	0	0	0	100	1	6.1

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Site Code :
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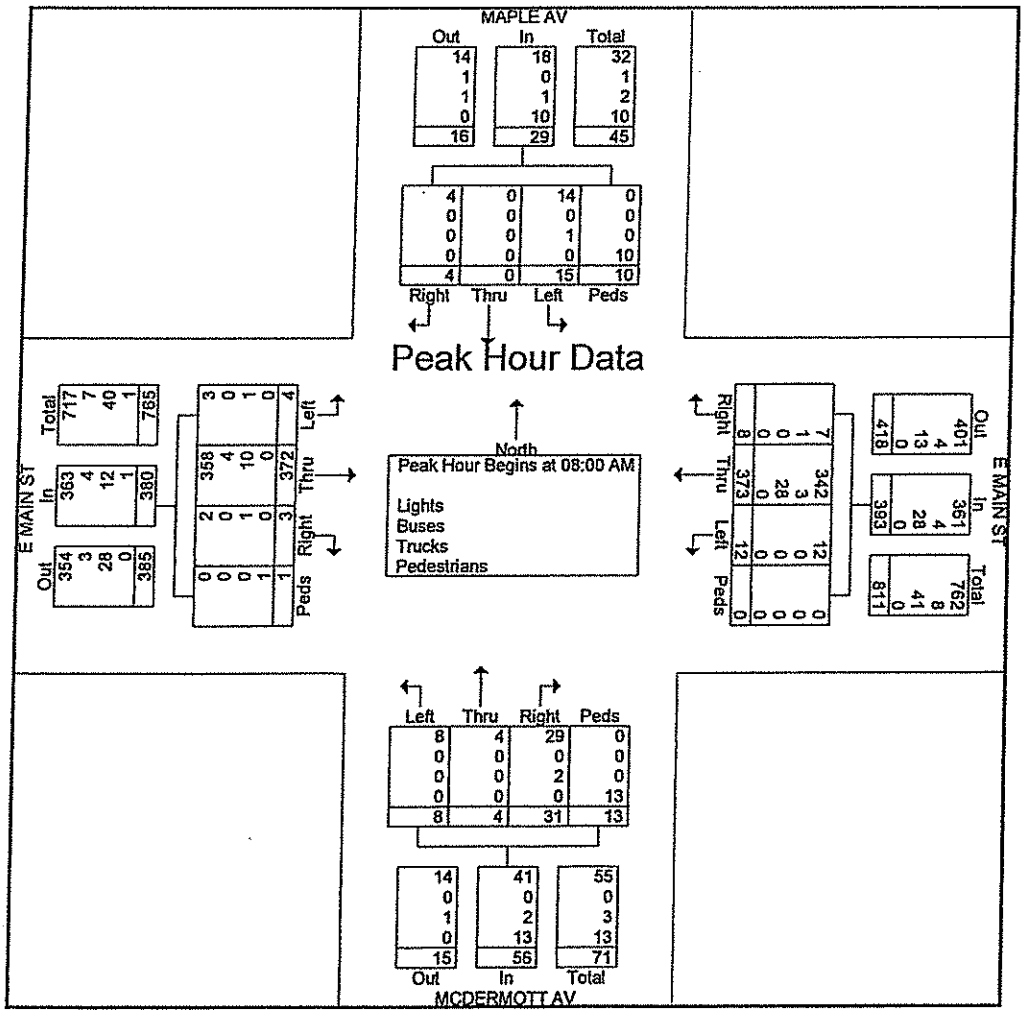
	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Hour for Entire Intersection Begins at 08:00 AM																					
:00 AM	3	0	2	1	6	5	92	0	0	97	1	4	5	2	12	1	85	1	0	87	202
:15 AM	3	0	0	2	5	3	71	1	0	75	0	0	7	5	12	0	76	0	0	76	168
:30 AM	4	0	2	4	10	1	104	2	0	107	2	0	9	2	13	0	102	0	0	102	232
:45 AM	5	0	0	3	8	3	106	5	0	114	5	0	10	4	19	3	109	2	1	115	256
Volume	15	0	4	10	29	12	373	8	0	393	8	4	31	13	56	4	372	3	1	380	858
p. Total	51.7	0	13.8	34.5		3.1	94.9	2	0		14.3	7.1	55.4	23.2		1.1	97.9	0.8	0.3		
PHF	.750	.000	.500	.625	.725	.600	.880	.400	.000	.862	.400	.250	.775	.650	.737	.333	.853	.375	.250	.826	.836
Lights	14	0	4	0	18	12	342	7	0	361	8	4	29	0	41	3	358	2	0	363	783
Lights	93.3	0	100	0	62.1	100	91.7	87.5	0	91.9	100	100	93.5	0	73.2	75.0	96.2	66.7	0	95.5	91.3
Buses	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	4	0	0	4	8
Buses	0	0	0	0	0	0	0.8	12.5	0	1.0	0	0	0	0	0	0	1.1	0	0	1.1	0.9
Trucks	1	0	0	0	1	0	28	0	0	28	0	0	2	0	2	1	10	1	0	12	43
Trucks	6.7	0	0	0	3.4	0	7.5	0	0	7.1	0	0	6.5	0	3.6	25.0	2.7	33.3	0	3.2	5.0
strians	0	0	0	10	10	0	0	0	0	0	0	0	0	13	13	0	0	0	1	1	24
estrians	0	0	0	100	34.5	0	0	0	0	0	0	0	0	100	23.2	0	0	0	100	0.3	2.8



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File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_19_2016_337876_08-19-20
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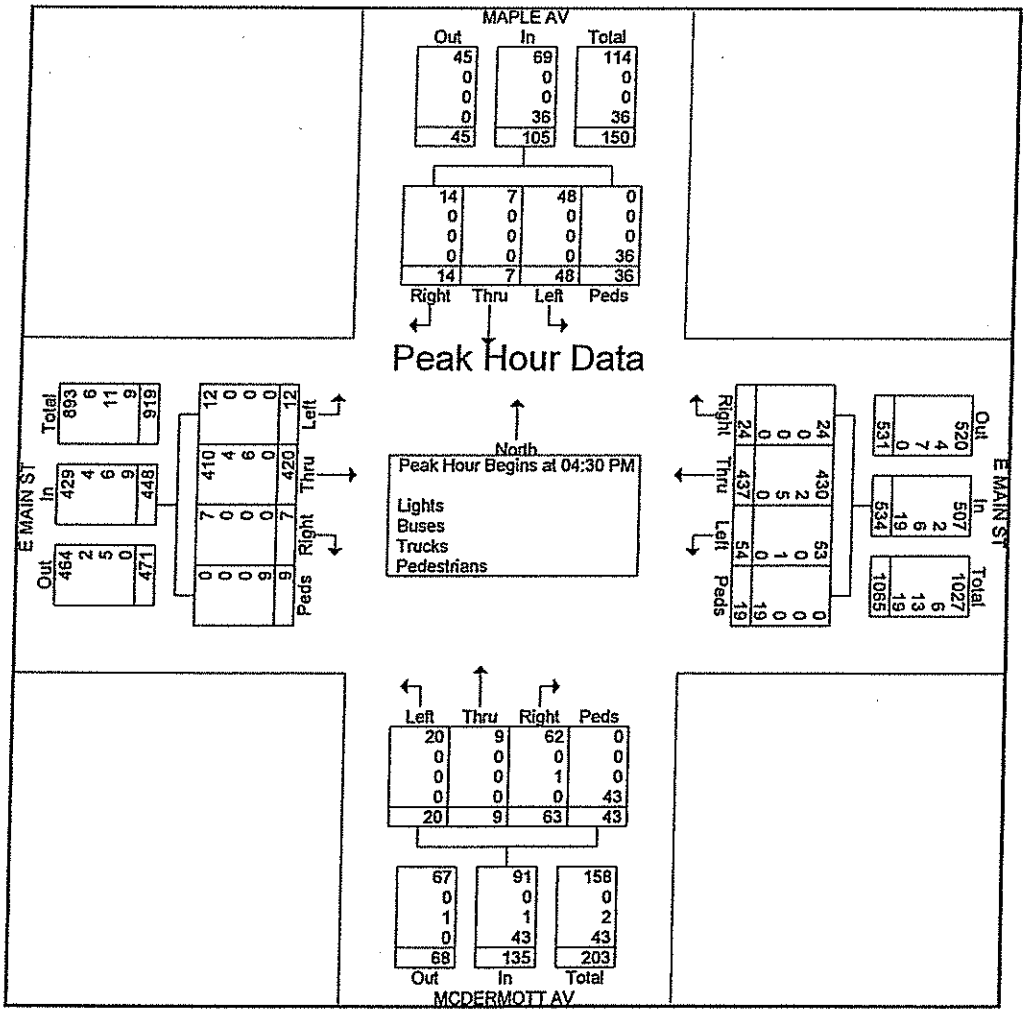
	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
k Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
k Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	8	3	3	10	24	14	115	3	6	138	4	3	15	4	26	5	106	0	6	117	305
4:45 PM	12	1	3	16	32	14	105	11	4	134	2	1	14	13	30	1	106	4	1	112	308
5:00 PM	15	2	4	3	24	10	107	4	3	124	5	3	17	6	31	3	99	1	1	104	283
5:15 PM	13	1	4	7	25	16	110	6	6	138	9	2	17	20	48	3	109	2	1	115	326
al Volume	48	7	14	36	105	54	437	24	19	534	20	9	63	43	135	12	420	7	9	448	1222
App. Total	45.7	6.7	13.3	34.3		10.1	81.8	4.5	3.6		14.8	6.7	46.7	31.9		2.7	93.8	1.6	2		
PHF	.800	.583	.875	.563	.820	.844	.950	.545	.792	.967	.556	.750	.926	.538	.703	.600	.963	.438	.375	.957	.937
Lights	48	7	14	0	69	53	430	24	0	507	20	9	62	0	91	12	410	7	0	429	1096
% Lights	100	100	100	0	65.7	98.1	98.4	100	0	94.9	100	100	98.4	0	67.4	100	97.6	100	0	95.8	89.7
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
% Buses	0	0	0	0	0	0	0.5	0	0	0.4	0	0	0	0	0	0	1.0	0	0	0.9	0.5
Trucks	0	0	0	0	0	1	5	0	0	6	0	0	1	0	1	0	6	0	0	6	13
% Trucks	0	0	0	0	0	1.9	1.1	0	0	1.1	0	0	1.6	0	0.7	0	1.4	0	0	1.3	1.1
estrians	0	0	0	36	36	0	0	0	19	19	0	0	0	43	43	0	0	0	9	9	107
destrians	0	0	0	100	34.3	0	0	0	100	3.6	0	0	0	100	31.9	0	0	0	100	2.0	8.8



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Melville, NY 11747

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Groups Printed- Lights - Buses - Trucks - Pedestrians

	MAPLE AV Southbound					E MAIN ST Westbound					MCDEMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
:00 AM	12	0	4	11	27	4	85	3	2	94	3	2	14	9	28	4	132	2	1	139	28E
:15 AM	7	0	4	1	12	6	86	2	1	95	3	1	12	15	31	8	118	1	0	127	26E
:30 AM	5	1	0	9	15	1	101	2	6	110	4	3	9	11	27	5	117	1	1	124	27E
:45 AM	12	3	3	12	30	2	81	1	2	86	3	1	14	27	45	3	137	5	1	146	307
Total	36	4	11	33	84	13	353	8	11	385	13	7	49	62	131	20	504	9	3	536	113E
:00 PM	5	2	2	10	19	3	70	2	3	78	1	3	21	9	34	4	130	2	0	136	267
:15 PM	6	1	4	12	23	3	91	4	0	98	5	0	15	24	44	1	124	4	4	133	29E
:30 PM	5	0	3	3	11	5	82	4	5	96	4	0	13	28	45	4	136	3	0	143	29E
:45 PM	8	1	6	22	37	5	84	4	7	100	7	3	11	17	38	7	116	2	8	133	30E
Total	24	4	15	47	90	16	327	14	15	372	17	6	60	78	161	16	506	11	12	545	116E
:00 PM	10	0	6	11	27	1	76	5	6	88	5	5	10	10	30	3	148	5	0	156	301
:15 PM	10	1	6	21	38	4	84	1	14	103	9	2	10	19	40	5	132	4	0	141	322
30 PM	4	3	12	10	29	4	55	2	8	69	4	0	8	19	31	8	126	2	3	139	26E
45 PM	12	2	7	4	25	4	82	5	14	105	4	4	19	15	42	4	123	5	4	136	30E
Total	36	6	31	46	119	13	297	13	42	365	22	11	47	63	143	20	529	16	7	572	119E
d Total	96	14	57	126	293	42	977	35	68	1122	52	24	156	203	435	56	1539	36	22	1653	3503
ɔrch %	32.8	4.8	19.5	43		3.7	87.1	3.1	6.1		12	5.5	35.9	46.7		3.4	93.1	2.2	1.3		
otal %	2.7	0.4	1.6	3.6	8.4	1.2	27.9	1	1.9	32	1.5	0.7	4.5	5.8	12.4	1.6	43.9	1	0.6	47.2	
Lights	95	14	56	0	165	41	959	35	0	1035	52	24	154	0	230	56	1517	36	0	1609	303E
Lights	99	100	98.2	0	56.3	97.6	98.2	100	0	92.2	100	100	98.7	0	52.9	100	98.6	100	0	97.3	86.E
Buses	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7
Buses	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0	0.2	0	0	0.2	0.2
Trucks	1	0	1	0	2	1	14	0	0	15	0	0	2	0	2	0	19	0	0	19	3E
Trucks	1	0	1.8	0	0.7	2.4	1.4	0	0	1.3	0	0	1.3	0	0.5	0	1.2	0	0	1.1	1.1
trians	0	0	0	126	126	0	0	0	68	68	0	0	0	203	203	0	0	0	22	22	419
strians	0	0	0	100	43	0	0	0	100	6.1	0	0	0	100	46.7	0	0	0	100	1.3	12

File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_27_2016_339053_08-27-20
Site Code :
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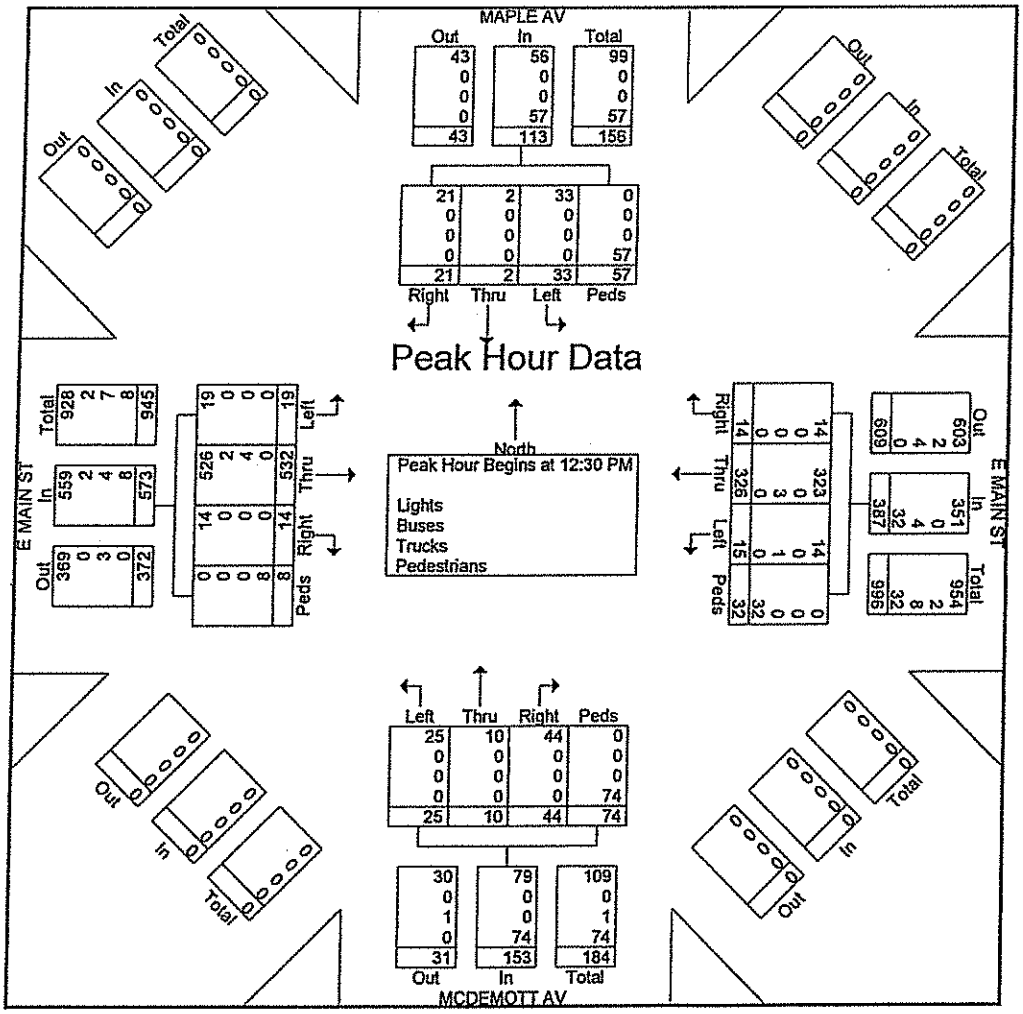
	MAPLE AV Southbound					E MAIN ST Westbound					MCDEMOTT AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
: Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
: Hour for Entire Intersection Begins at 12:30 PM																					
2:30 PM	5	0	3	3	11	5	82	4	5	96	4	0	13	28	45	4	136	3	0	143	295
2:45 PM	8	1	6	22	37	5	84	4	7	100	7	3	11	17	38	7	116	2	8	133	308
1:00 PM	10	0	6	11	27	1	76	5	6	88	5	5	10	10	30	3	148	5	0	156	301
1:15 PM	10	1	6	21	38	4	84	1	14	103	9	2	10	19	40	5	132	4	0	141	322
l Volume	33	2	21	57	113	15	326	14	32	387	25	10	44	74	153	19	532	14	8	573	1226
pp. Total	29.2	1.8	18.6	50.4		3.9	84.2	3.6	8.3		16.3	6.5	28.8	48.4		3.3	92.8	2.4	1.4		
PHF	.825	.500	.875	.648	.743	.750	.970	.700	.571	.939	.694	.500	.846	.661	.850	.679	.899	.700	.250	.918	.952
Lights	33	2	21	0	56	14	323	14	0	351	25	10	44	0	79	19	526	14	0	559	1045
% Lights	100	100	100	0	49.6	93.3	99.1	100	0	90.7	100	100	100	0	51.6	100	98.9	100	0	97.6	85.2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.3	0.2
Trucks	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	4	0	0	4	8
% Trucks	0	0	0	0	0	6.7	0.9	0	0	1.0	0	0	0	0	0	0	0.8	0	0	0.7	0.7
estrians	0	0	0	57	57	0	0	0	32	32	0	0	0	74	74	0	0	0	8	8	171
edestrians	0	0	0	100	50.4	0	0	0	100	8.3	0	0	0	100	48.4	0	0	0	100	1.4	13.9



572 Walt Whitman Road
Melville, NY 11747

File Name : 1-PECONIC_AV-ROANOKE_AV_AT_E_MAIN_ST_8_20_16_341000_08-20-20
Site Code :
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Page No : 1

Groups Printed- Lights - Buses - Trucks - Pedestrians

	ROANKOE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
:00 AM	1	51	5	0	57	43	50	14	1	108	58	40	72	0	170	2	82	51	0	135	47(
:15 AM	0	48	2	3	53	23	51	14	2	90	52	65	55	0	172	6	78	36	0	120	43
:30 AM	0	40	7	0	47	38	42	10	0	90	35	62	33	0	130	4	77	40	0	121	38
:45 AM	0	40	5	1	46	31	48	12	0	91	38	54	45	0	137	3	103	43	0	149	42
Total	1	179	19	4	203	135	191	50	3	379	183	221	205	0	609	15	340	170	0	525	171
:00 PM	0	53	8	0	61	36	58	5	2	101	46	49	54	0	149	1	79	48	0	128	43
:15 PM	0	52	10	1	63	32	45	9	0	86	47	57	65	0	169	5	94	57	0	156	47
:30 PM	1	50	9	1	61	32	66	7	0	105	54	45	51	0	150	5	92	44	3	144	46
:45 PM	0	49	10	0	59	31	45	6	4	86	48	54	52	0	154	3	96	38	1	138	43
Total	1	204	37	2	244	131	214	27	6	378	195	205	222	0	622	14	361	187	4	566	181
:00 PM	0	52	8	3	63	29	57	8	2	96	48	42	53	0	143	0	97	52	0	149	45
:15 PM	1	53	10	8	72	31	69	9	5	114	42	51	57	0	150	3	99	65	0	167	50
:30 PM	0	44	6	5	55	40	56	10	4	110	52	49	42	0	143	4	84	43	0	131	43
:45 PM	0	50	6	5	61	34	67	7	0	108	37	51	60	0	148	8	77	16	0	101	41
Total	1	199	30	21	251	134	249	34	11	428	179	193	212	0	584	15	357	176	0	548	181
d Total	3	582	86	27	698	400	654	111	20	1185	557	619	639	0	1815	44	1058	533	4	1639	533
prch %	0.4	83.4	12.3	3.9		33.8	55.2	9.4	1.7		30.7	34.1	35.2	0		2.7	64.6	32.5	0.2		
otal %	0.1	10.9	1.6	0.5	13.1	7.5	12.3	2.1	0.4	22.2	10.4	11.6	12	0	34	0.8	19.8	10	0.1	30.7	
Lights	3	577	84	0	664	395	643	110	0	1148	551	614	633	0	1798	44	1043	528	0	1615	522
Lights	100	99.1	97.7	0	95.1	98.8	98.3	99.1	0	96.9	98.9	99.2	99.1	0	99.1	100	98.6	99.1	0	98.5	97.9
Buses	0	1	0	0	1	0	6	0	0	6	4	0	0	0	4	0	4	1	0	5	16
Buses	0	0.2	0	0	0.1	0	0.9	0	0	0.5	0.7	0	0	0	0.2	0	0.4	0.2	0	0.3	0.3
Trucks	0	4	2	0	6	5	5	1	0	11	2	5	6	0	13	0	11	4	0	15	45
Trucks	0	0.7	2.3	0	0.9	1.2	0.8	0.9	0	0.9	0.4	0.8	0.9	0	0.7	0	1	0.8	0	0.9	0.8
strians	0	0	0	27	27	0	0	0	20	20	0	0	0	0	0	0	0	0	4	4	51
estrians	0	0	0	100	3.9	0	0	0	100	1.7	0	0	0	0	0	0	0	0	100	0.2	1

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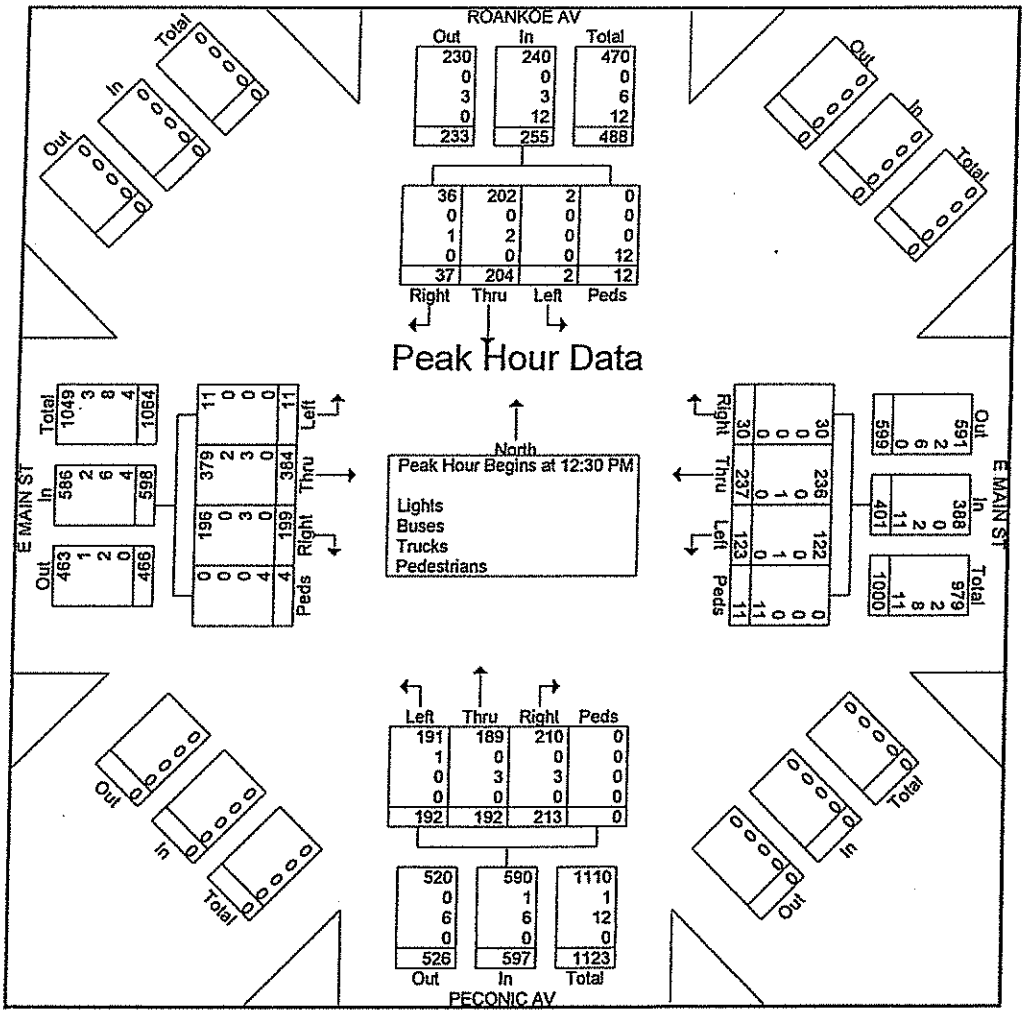
	ROANOKE AV Southbound					E MAIN ST Westbound					PECONIC AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
k Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
k Hour for Entire Intersection Begins at 12:30 PM																					
2:30 PM	1	50	9	1	61	32	66	7	0	105	54	45	51	0	150	5	92	44	3	144	460
2:45 PM	0	49	10	0	59	31	45	6	4	86	48	54	52	0	154	3	96	38	1	138	437
1:00 PM	0	52	8	3	63	29	57	8	2	96	48	42	53	0	143	0	97	52	0	149	451
1:15 PM	1	53	10	8	72	31	69	9	5	114	42	51	57	0	150	3	99	65	0	167	503
al Volume	2	204	37	12	255	123	237	30	11	401	192	192	213	0	597	11	384	199	4	598	1851
App. Total	0.8	80	14.5	4.7		30.7	59.1	7.5	2.7		32.2	32.2	35.7	0		1.8	64.2	33.3	0.7		
PHF	.500	.962	.925	.375	.885	.961	.859	.833	.550	.879	.889	.889	.934	.000	.969	.550	.970	.765	.333	.895	.920
Lights	2	202	36	0	240	122	236	30	0	388	191	189	210	0	590	11	379	196	0	586	1804
% Lights	100	99.0	97.3	0	94.1	99.2	99.6	100	0	96.8	99.5	98.4	98.6	0	98.8	100	98.7	98.5	0	98.0	97.8
Buses	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	3
% Buses	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.2	0	0.5	0	0	0.3	0.2
Trucks	0	2	1	0	3	1	1	0	0	2	0	3	3	0	6	0	3	3	0	6	17
% Trucks	0	1.0	2.7	0	1.2	0.8	0.4	0	0	0.5	0	1.6	1.4	0	1.0	0	0.8	1.5	0	1.0	0.9
estrians	0	0	0	12	12	0	0	0	11	11	0	0	0	0	0	0	0	0	4	4	27
destrians	0	0	0	100	4.7	0	0	0	100	2.7	0	0	0	0	0	0	0	0	100	0.7	1.5



572 Walt Whitman Road
Melville, NY 11747

File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_20_16_341001_08-20-20
Site Code :
Start Date : 8/20/2016
Page No : 1

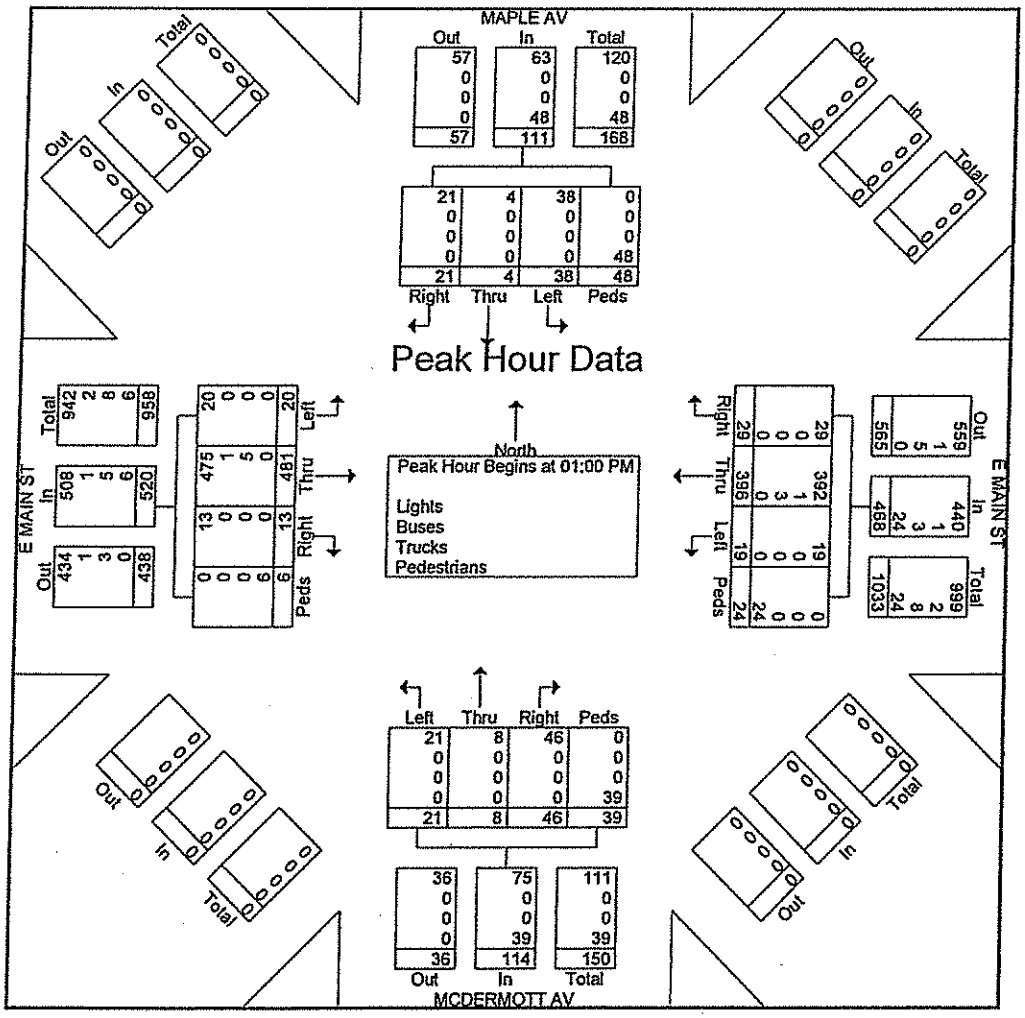
Groups Printed- Lights - Buses - Trucks - Pedestrians

	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
rt Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
:00 AM	5	1	2	6	14	2	104	8	1	115	2	2	11	2	17	5	130	5	0	140	286
:15 AM	4	1	0	6	11	4	90	3	3	100	3	0	14	9	26	9	119	4	0	132	269
:30 AM	5	0	2	0	7	1	90	8	2	101	3	1	9	2	15	2	106	2	0	110	233
:45 AM	7	0	2	0	9	2	84	7	0	93	5	1	7	4	17	6	123	7	2	138	257
Total	21	2	6	12	41	9	368	26	6	409	13	4	41	17	75	22	478	18	2	520	1045
:00 PM	5	0	2	2	9	2	89	6	2	99	11	4	14	3	32	5	124	3	0	132	272
:15 PM	11	0	4	3	18	2	69	6	3	80	3	1	3	6	13	10	134	2	0	146	257
:30 PM	10	1	5	2	18	3	104	9	4	120	1	0	6	3	10	4	117	1	0	122	270
:45 PM	6	0	5	1	12	6	76	6	3	91	9	0	12	1	22	4	126	4	0	134	259
Total	32	1	16	8	57	13	338	27	12	390	24	5	35	13	77	23	501	10	0	534	1058
:00 PM	8	1	7	10	26	6	84	10	6	106	6	0	16	13	35	2	121	2	0	125	292
:15 PM	10	1	5	20	36	4	116	8	10	138	1	2	9	8	20	9	118	4	0	131	325
:30 PM	11	0	4	16	31	4	99	7	2	112	5	2	10	13	30	4	122	4	6	136	309
:45 PM	9	2	5	2	18	5	97	4	6	112	9	4	11	5	29	5	120	3	0	128	287
Total	38	4	21	48	111	19	396	29	24	468	21	8	46	39	114	20	481	13	6	520	1213
d Total	91	7	43	68	209	41	1102	82	42	1267	58	17	122	69	266	65	1460	41	8	1574	3316
orch %	43.5	3.3	20.6	32.5		3.2	87	6.5	3.3		21.8	6.4	45.9	25.9		4.1	92.8	2.6	0.5		
otal %	2.7	0.2	1.3	2.1	6.3	1.2	33.2	2.5	1.3	38.2	1.7	0.5	3.7	2.1	8	2	44	1.2	0.2	47.5	
Lights	88	7	42	0	137	41	1088	80	0	1209	57	16	121	0	194	65	1438	41	0	1544	3084
Lights	96.7	100	97.7	0	65.6	100	98.7	97.6	0	95.4	98.3	94.1	99.2	0	72.9	100	98.5	100	0	98.1	93
Buses	2	0	0	0	2	0	6	2	0	8	1	1	1	0	3	0	8	0	0	8	21
Buses	2.2	0	0	0	1	0	0.5	2.4	0	0.6	1.7	5.9	0.8	0	1.1	0	0.5	0	0	0.5	0.6
Trucks	1	0	1	0	2	0	8	0	0	8	0	0	0	0	0	0	14	0	0	14	24
Trucks	1.1	0	2.3	0	1	0	0.7	0	0	0.6	0	0	0	0	0	0	1	0	0	0.9	0.7
strians	0	0	0	68	68	0	0	0	42	42	0	0	0	69	69	0	0	0	8	8	187
estrians	0	0	0	100	32.5	0	0	0	100	3.3	0	0	0	100	25.9	0	0	0	100	0.5	5.6

572 Walt Whitman Road
Melville, NY 11747

File Name : 2-MAPLE_AV-MCDERMOTT_AV_AT_E_MAIN_ST_8_20_16_341001_08-20-20
Site Code :
Start Date : 8/20/2016
Page No : 2

	MAPLE AV Southbound					E MAIN ST Westbound					MCDERMOTT AV Northbound					E MAIN ST Eastbound					
art Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Tota
: Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
: Hour for Entire Intersection Begins at 01:00 PM																					
1:00 PM	8	1	7	10	26	6	84	10	6	106	6	0	16	13	35	2	121	2	0	125	292
1:15 PM	10	1	5	20	36	4	116	8	10	138	1	2	9	8	20	9	118	4	0	131	325
1:30 PM	11	0	4	16	31	4	99	7	2	112	5	2	10	13	30	4	122	4	6	136	309
1:45 PM	9	2	5	2	18	5	97	4	6	112	9	4	11	5	29	5	120	3	0	128	287
l Volume	38	4	21	48	111	19	396	29	24	468	21	8	46	39	114	20	481	13	6	520	1213
pp. Total	34.2	3.6	18.9	43.2		4.1	84.6	6.2	5.1		18.4	7	40.4	34.2		3.8	92.5	2.5	1.2		
PHF	.864	.500	.750	.600	.771	.792	.853	.725	.600	.848	.583	.500	.719	.750	.814	.556	.986	.813	.250	.956	.933
Lights	38	4	21	0	63	19	392	29	0	440	21	8	46	0	75	20	475	13	0	508	1086
% Lights	100	100	100	0	56.8	100	99.0	100	0	94.0	100	100	100	0	65.8	100	98.8	100	0	97.7	89.5
Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% Buses	0	0	0	0	0	0	0.3	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.2	0.2
Trucks	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8
% Trucks	0	0	0	0	0	0	0.8	0	0	0.6	0	0	0	0	0	0	1.0	0	0	1.0	0.7
estrians	0	0	0	48	48	0	0	0	24	24	0	0	0	39	39	0	0	0	6	6	117
destrians	0	0	0	100	43.2	0	0	0	100	5.1	0	0	0	100	34.2	0	0	0	100	1.2	9.6



NELSON & POPE

AM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

GROWTH FACTOR: 1.90%
NO. OF YEARS: 2
GROWTH RATE: 1.040

LOCATION	DIR	MVMT	EXISTING VOLUME	SEASONAL ADJUSTMENT VOLUMES	AMBIENT NO BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	122	122	127
		THROUGH	0	0	0
		RIGHT	501	501	522
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	216	216	225
		RIGHT	186	186	194
	WB	LEFT	296	296	308
		THROUGH	175	175	182
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	147	147	153
9	EB	LEFT	296	296	308
		THROUGH	423	423	440
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	312	312	325
		RIGHT	27	27	29
NYS RT 25 AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	2	2	3
		THROUGH	2	2	3
		RIGHT	31	31	33
	SB	LEFT	18	18	19
		THROUGH	3	3	4
		RIGHT	9	9	10
11	EB	LEFT	2	2	3
		THROUGH	409	409	426
		RIGHT	4	4	5
	WB	LEFT	18	18	19
		THROUGH	370	370	385
		RIGHT	12	12	13
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	598	598	622
		RIGHT	55	55	58
	SB	LEFT	15	15	16
		THROUGH	467	467	486
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	75	75	78
		THROUGH	0	0	0
		RIGHT	25	25	26

NELSON & POPE

AM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

OTHER
PLANNED
PROJECTS

LOCATION	DIR	MVMT	%EN	%EX
				Site
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT		
		THROUGH		
		RIGHT	5%	
	SB	LEFT		
		THROUGH		
		RIGHT		
8	EB	LEFT		
		THROUGH	30%	
		RIGHT		
	WB	LEFT		5%
		THROUGH		30%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT		
		THROUGH		
		RIGHT		
	SB	LEFT		
		THROUGH		
		RIGHT		
9	EB	LEFT		
		THROUGH	35%	
		RIGHT		
	WB	LEFT		
		THROUGH		35%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT		35%
		THROUGH		15%
		RIGHT		20%
	SB	LEFT		
		THROUGH	15%	
		RIGHT		
11	EB	LEFT		
		THROUGH		
		RIGHT	35%	
	WB	LEFT	20%	
		THROUGH		
		RIGHT		
Peconic Ave at Parking Lot Access	NB	LEFT		
		THROUGH	5%	
		RIGHT	30%	
	SB	LEFT		
		THROUGH		5%
		RIGHT		
24	EB	LEFT		
		THROUGH		
		RIGHT		
	WB	LEFT		30%
		THROUGH		
		RIGHT		

NELSON & POPE

AM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

LOCATION	DIR	MVMT	TOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	128	0	128
		THROUGH	0	0	0
		RIGHT	540	1	541
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	259	6	265
		RIGHT	194	0	194
	WB	LEFT	325	3	328
		THROUGH	224	17	241
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	153	0	153
9	EB	LEFT	309	0	309
		THROUGH	492	7	499
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	383	20	403
		RIGHT	30	0	30
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	31	20	51
		THROUGH	15	9	24
		RIGHT	49	12	61
	SB	LEFT	19	0	19
		THROUGH	10	3	13
		RIGHT	10	0	10
11	EB	LEFT	3	0	3
		THROUGH	464	0	464
		RIGHT	19	7	26
	WB	LEFT	27	4	31
		THROUGH	416	0	416
		RIGHT	13	0	13
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	641	1	642
		RIGHT	70	6	76
	SB	LEFT	16	0	16
		THROUGH	506	3	509
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	102	17	119
		THROUGH	0	0	0
		RIGHT	26	0	26

NELSON & POPE

PM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

GROWTH FACTOR: 1.90%
NO. OF YEARS: 2
GROWTH RATE: 1.040

LOCATION	DIR	MVMT	EXISTING VOLUME	SEASONAL ADJUSTMENT VOLUMES	AMBIENT NO BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	193	193	201
		THROUGH	0	0	0
		RIGHT	484	484	504
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	236	236	246
		RIGHT	241	241	251
	WB	LEFT	355	355	370
		THROUGH	292	292	304
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	233	233	243
9	EB	LEFT	323	323	336
		THROUGH	398	398	414
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	413	413	430
		RIGHT	44	44	46
NYS RT 25 AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	18	18	19
		THROUGH	7	7	8
		RIGHT	58	58	61
	SB	LEFT	38	38	40
		THROUGH	7	7	8
		RIGHT	11	11	12
11	EB	LEFT	7	7	8
		THROUGH	379	379	395
		RIGHT	4	4	5
	WB	LEFT	42	42	44
		THROUGH	491	491	511
		RIGHT	22	22	23
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	658	658	685
		RIGHT	55	55	58
	SB	LEFT	15	15	16
		THROUGH	581	581	605
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	60	60	63
		THROUGH	0	0	0
		RIGHT	19	19	20

NELSON & POPE

PM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 15068

OTHER
PLANNED
PROJECTS

Site

LOCATION	DIR	MVMT	%EN	%EX
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT		
		THROUGH		
		RIGHT	5%	
	SB	LEFT		
		THROUGH		
		RIGHT		
8	EB	LEFT		
		THROUGH	30%	
		RIGHT		
	WB	LEFT		5%
		THROUGH		30%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT		
		THROUGH		
		RIGHT		
	SB	LEFT		
		THROUGH		
		RIGHT		
9	EB	LEFT		
		THROUGH	35%	
		RIGHT		
	WB	LEFT		
		THROUGH		35%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT		35%
		THROUGH		15%
		RIGHT		20%
	SB	LEFT		
		THROUGH	15%	
		RIGHT		
11	EB	LEFT		
		THROUGH		
		RIGHT	35%	
	WB	LEFT	20%	
		THROUGH		
		RIGHT		
Peconic Ave at Parking Lot Access	NB	LEFT		
		THROUGH	5%	
		RIGHT	30%	
	SB	LEFT		
		THROUGH		5%
		RIGHT		
24	EB	LEFT		
		THROUGH		
		RIGHT		
	WB	LEFT		30%
		THROUGH		
		RIGHT		

NELSON & POPE

PM PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

LOCATION	DIR	MVMT	TOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	205	0	205
		THROUGH	0	0	0
		RIGHT	535	5	540
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	300	33	333
		RIGHT	251	0	251
	WB	LEFT	395	3	398
		THROUGH	349	17	366
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	244	0	244
9	EB	LEFT	336	0	336
		THROUGH	498	38	536
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	499	20	519
		RIGHT	46	0	46
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	37	20	57
		THROUGH	16	9	25
		RIGHT	71	12	83
	SB	LEFT	41	0	41
		THROUGH	20	16	36
		RIGHT	12	0	12
11	EB	LEFT	8	0	8
		THROUGH	451	0	451
		RIGHT	33	38	71
	WB	LEFT	60	22	82
		THROUGH	562	0	562
		RIGHT	23	0	23
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	720	5	725
		RIGHT	82	33	115
	SB	LEFT	16	0	16
		THROUGH	632	3	635
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	78	17	95
		THROUGH	0	0	0
		RIGHT	20	0	20

NELSON & POPE

SAT PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

GROWTH FACTOR: 1.90%
NO. OF YEARS: 3
GROWTH RATE: 1.060

LOCATION	DIR	MVMT	EXISTING VOLUME	SEASONAL ADJUSTMENT VOLUMES	AMBIENT NO BUILD VOLUME
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT	192	192	204
		THROUGH	0	0	0
		RIGHT	405	405	430
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	395	395	419
		RIGHT	199	199	211
	WB	LEFT	327	327	347
		THROUGH	274	274	291
		RIGHT	0	0	0
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	241	241	256
9	EB	LEFT	203	203	216
		THROUGH	597	597	633
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	360	360	382
		RIGHT	30	30	32
NYS RT 25 AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT	21	21	23
		THROUGH	8	8	9
		RIGHT	46	46	49
	SB	LEFT	38	38	41
		THROUGH	4	4	5
		RIGHT	21	21	23
11	EB	LEFT	20	20	22
		THROUGH	481	481	510
		RIGHT	13	13	14
	WB	LEFT	19	19	21
		THROUGH	396	396	420
		RIGHT	29	29	31
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	635	635	674
		RIGHT	75	75	80
	SB	LEFT	32	32	34
		THROUGH	499	499	529
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	60	60	64
		THROUGH	0	0	0
		RIGHT	19	19	21

NELSON & POPE

SAT PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

OTHER
PLANNED
PROJECTS

Site

LOCATION	DIR	MVMT	%EN	%EX
NYS RT 25 (W. MAIN ST/E. MAIN ST) AT PECONIC AVENUE	NB	LEFT		
		THROUGH		
		RIGHT	5%	
	SB	LEFT		
		THROUGH		
		RIGHT		
8	EB	LEFT		
		THROUGH	30%	
		RIGHT		
	WB	LEFT		5%
		THROUGH		30%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT ROANOKE AVENUE	NB	LEFT		
		THROUGH		
		RIGHT		
	SB	LEFT		
		THROUGH		
		RIGHT		
9	EB	LEFT		
		THROUGH	35%	
		RIGHT		
	WB	LEFT		
		THROUGH		35%
		RIGHT		
NYS RT 25 (E. MAIN ST) AT MAPLE AVENUE/ McDERMOTT AVENUE	NB	LEFT		35%
		THROUGH		15%
		RIGHT		20%
	SB	LEFT		
		THROUGH	15%	
		RIGHT		
11	EB	LEFT		
		THROUGH		
		RIGHT	35%	
	WB	LEFT	20%	
		THROUGH		
		RIGHT		
Peconic Ave at Parking Lot Access	NB	LEFT		
		THROUGH	5%	
		RIGHT	30%	
	SB	LEFT		
		THROUGH		5%
		RIGHT		
24	EB	LEFT		
		THROUGH		
		RIGHT		
	WB	LEFT		30%
		THROUGH		
		RIGHT		

NELSON & POPE

SAT PEAK HOUR
Project Name: 2021 E. Main Street
Project No.: 16068

LOCATION	DIR	MVMT	TOTAL NO BUILD VOLUME	TRAFFIC GENERATED BY PROPOSED PROJECT	TOTAL BUILD VOLUME
NYS RT 25	NB	LEFT	207	0	207
(W. MAIN ST/E. MAIN ST)		THROUGH	0	0	0
AT		RIGHT	464	7	471
PECONIC AVENUE	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
8	EB	LEFT	0	0	0
		THROUGH	483	43	526
		RIGHT	211	0	211
	WB	LEFT	378	6	384
		THROUGH	352	33	385
		RIGHT	0	0	0
NYS RT 25	NB	LEFT	0	0	0
(E. MAIN ST)		THROUGH	0	0	0
AT		RIGHT	0	0	0
ROANOKE AVENUE	SB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	257	0	257
9	EB	LEFT	217	0	217
		THROUGH	730	50	780
		RIGHT	0	0	0
	WB	LEFT	0	0	0
		THROUGH	473	39	512
		RIGHT	33	0	33
NYS RT 25	NB	LEFT	57	39	96
(E. MAIN ST)		THROUGH	23	17	40
AT		RIGHT	68	22	90
MAPLE AVENUE/	SB	LEFT	41	0	41
McDERMOTT AVENUE		THROUGH	20	21	41
		RIGHT	23	0	23
11	EB	LEFT	22	0	22
		THROUGH	572	0	572
		RIGHT	49	50	99
	WB	LEFT	41	28	69
		THROUGH	478	0	478
		RIGHT	31	0	31
Peconic Ave at Parking Lot Access	NB	LEFT	0	0	0
		THROUGH	711	7	718
		RIGHT	110	43	153
	SB	LEFT	34	0	34
		THROUGH	563	6	569
		RIGHT	0	0	0
24	EB	LEFT	0	0	0
		THROUGH	0	0	0
		RIGHT	0	0	0
	WB	LEFT	93	33	126
		THROUGH	0	0	0
		RIGHT	21	0	21

Appendix B: Other Planned Developments

Pending Approval:

- **Riverhead Plaza**- SCTM No. 0600-104-2-19, the removal of approximately 71,343 sq. ft. of existing building and the construction of two pad site restaurants and a movie theater at an existing shopping center on Old Country Rd. between Ostrander Ave. and Oliver St. Approximately 59,240 sq. ft. of building area will be added, including a 50,340 sq. ft., 1,246 seat movie theater with 10 auditoriums and a snack bar, a 6,300 sq. ft., 250 seat restaurant, and a 2,600 sq. ft., 125 seat restaurant with drive-through. A portion of the existing building with part of the former Wal-Mart store and two other businesses will be demolished to make way for the movie theater. The two proposed restaurants will be located in the parking area at the front of the site to the west of the main entrance from Old Country Rd.
- **428 East Main Street,** 20-unit hotel and a 201-seat restaurant to be located on the northwest corner of East Main Street and Ostrander Avenue.
- **203-2013 East Main Street,** 170 apartment units and 3800 SF commercial space.
- **Suffolk County Historical Society**, SCTM No. 0600-128-3-46, construction of an approximately 725 sq. ft. addition for handicapped accessibility.
- **J. Petrocelli Development Associates**, SCTM No. 0600-129-5-3.3, construction of a 30-stall parking lot.
- **Viva L' Arte,** SCTM No. 0600-128-6-58.1, construction of a two-story art gallery building on East Main St. with office mezzanine and apartment mezzanine (1,779 sq. ft. first floor and 1,805 sq. ft. second floor and 428 sq. ft. for each mezzanine for a total of 4,440 sq. ft.).
- **Farm Country Kitchen**, SCTM Nos. 0600-124-04-32 & 33 and 0600-124-03-26, for conversion of an existing take-out food service on West Main St. to a 69-seat restaurant and the construction of an off-site parking lot on Raynor Ave. with 27 stalls.
- **Thea Cohen Residences**, SCTM No. 0600-127-7-24.1, the conversion of a storage building into a single-family residence on a property with two existing residences.
- **Emanon Center,** SCTM No. 0600-124-04-9 & 10, demolition of existing structures and construction of one building 3,240 sq. ft. for a convenience store and a two-story building with 1,950 sq. ft. of office and 2,497.5 sq. ft. of retail.
- **Development in Southampton**: Development in Southampton in the Riverside Area (please contact the Town of Southampton)-Large scale redevelopment is planned.

Recently approved:

- **715-725 Roanoke Ave.**, SCTM No. 0600-126-02-8, an additional medical office building in addition to two existing medical buildings. The building will be two-stories of 2,475 sq. ft. each with an unfinished basement.
- **Peconic Crossing**- SCTM No. 600-128-3-68.2, to demolish an existing building (Long Island Science Center) and construct a new five-story residential building with 45 residential apartment units, 34-parking stalls, and an art gallery/studio.
- **206 Raynor Ave.**, SCTM#0600-124-02-9, preliminary approval to construct a commercial building with a footprint of 1,056 sq. ft. and a lower level of 629 sq. ft. (Three use scenarios approved-either all industrial/manufacturing, first floor office and lower level storage, or all warehouse/storage use.)
- **Fedun Warehouse,** SCTM#0600-128-1-13.1, a 5000 SF warehouse at 427 Lincoln St., Riverhead.

Detailed Average Rate Trip Calculations
For 3.24 Th.Sq.Ft. GFA of Convenience Market (Open 15-16 Hours)(852) - [R]

Project:
Phase:

Open Date:
Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	0.00	0.00	1.00	0
7-9 AM Peak Hour Enter	15.51	0.00	1.00	50
7-9 AM Peak Hour Exit	15.51	0.00	1.00	51
7-9 AM Peak Hour Total	31.02	24.36	1.00	101
4-6 PM Peak Hour Enter	16.94	0.00	1.00	55
4-6 PM Peak Hour Exit	17.63	0.00	1.00	57
4-6 PM Peak Hour Total	34.57	17.61	1.00	112
AM Pk Hr, Generator, Enter	16.63	0.00	1.00	54
AM Pk Hr, Generator, Exit	15.97	0.00	1.00	52
AM Pk Hr, Generator, Total	32.60	23.64	1.00	106
PM Pk Hr, Generator, Enter	17.75	0.00	1.00	58
PM Pk Hr, Generator, Exit	18.47	0.00	1.00	59
PM Pk Hr, Generator, Total	36.22	16.69	1.00	117
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 2.475 Th.Sq.Ft. GFA of Medical-Dental Office Building(720) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	36.13	10.18	1.00	89
7-9 AM Peak Hour Enter	1.89	0.00	1.00	5
7-9 AM Peak Hour Exit	0.50	0.00	1.00	1
7-9 AM Peak Hour Total	2.39	1.89	1.00	6
4-6 PM Peak Hour Enter	1.00	0.00	1.00	2
4-6 PM Peak Hour Exit	2.57	0.00	1.00	7
4-6 PM Peak Hour Total	3.57	2.47	1.00	9
AM Pk Hr, Generator, Enter	2.35	0.00	1.00	6
AM Pk Hr, Generator, Exit	1.15	0.00	1.00	3
AM Pk Hr, Generator, Total	3.50	2.35	1.00	9
PM Pk Hr, Generator, Enter	1.67	0.00	1.00	4
PM Pk Hr, Generator, Exit	2.60	0.00	1.00	7
PM Pk Hr, Generator, Total	4.27	2.50	1.00	11
Saturday 2-Way Volume	8.96	9.17	1.00	22
Saturday Peak Hour Enter	2.07	0.00	1.00	5
Saturday Peak Hour Exit	1.56	0.00	1.00	4
Saturday Peak Hour Total	3.63	1.93	1.00	9
Sunday 2-Way Volume	1.55	1.80	1.00	4
Sunday Peak Hour Enter	0.21	0.00	1.00	1
Sunday Peak Hour Exit	0.19	0.00	1.00	0
Sunday Peak Hour Total	0.40	0.00	1.00	1

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 1.95 Th.Sq.Ft. GFA of General Office Building(710) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	11.03	6.15	1.00	22
7-9 AM Peak Hour Enter	1.37	0.00	1.00	3
7-9 AM Peak Hour Exit	0.19	0.00	1.00	0
7-9 AM Peak Hour Total	1.56	1.40	1.00	3
4-6 PM Peak Hour Enter	0.25	0.00	1.00	0
4-6 PM Peak Hour Exit	1.24	0.00	1.00	3
4-6 PM Peak Hour Total	1.49	1.37	1.00	3
AM Pk Hr, Generator, Enter	1.37	0.00	1.00	3
AM Pk Hr, Generator, Exit	0.19	0.00	1.00	0
AM Pk Hr, Generator, Total	1.56	1.40	1.00	3
PM Pk Hr, Generator, Enter	0.25	0.00	1.00	0
PM Pk Hr, Generator, Exit	1.24	0.00	1.00	3
PM Pk Hr, Generator, Total	1.49	1.37	1.00	3
Saturday 2-Way Volume	2.46	2.21	1.00	5
Saturday Peak Hour Enter	0.23	0.00	1.00	0
Saturday Peak Hour Exit	0.20	0.00	1.00	0
Saturday Peak Hour Total	0.43	0.72	1.00	1
Sunday 2-Way Volume	1.05	1.43	1.00	2
Sunday Peak Hour Enter	0.09	0.00	1.00	0
Sunday Peak Hour Exit	0.07	0.00	1.00	0
Sunday Peak Hour Total	0.16	0.44	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 2.497 Th.Sq.Ft. GLA of Shopping Center(820) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	42.70	21.25	1.00	107
7-9 AM Peak Hour Enter	0.60	0.00	1.00	1
7-9 AM Peak Hour Exit	0.36	0.00	1.00	1
7-9 AM Peak Hour Total	0.96	1.31	1.00	2
4-6 PM Peak Hour Enter	1.78	0.00	1.00	4
4-6 PM Peak Hour Exit	1.93	0.00	1.00	5
4-6 PM Peak Hour Total	3.71	2.74	1.00	9
AM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
AM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
AM Pk Hr, Generator, Total	0.00	0.00	1.00	0
PM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
PM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
PM Pk Hr, Generator, Total	0.00	0.00	1.00	0
Saturday 2-Way Volume	49.97	22.62	1.00	125
Saturday Peak Hour Enter	2.51	0.00	1.00	6
Saturday Peak Hour Exit	2.31	0.00	1.00	6
Saturday Peak Hour Total	4.82	3.10	1.00	12
Sunday 2-Way Volume	25.24	17.23	1.00	63
Sunday Peak Hour Enter	1.53	0.00	1.00	4
Sunday Peak Hour Exit	1.59	0.00	1.00	4
Sunday Peak Hour Total	3.12	2.78	1.00	8

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 69 Seats of High Turnover (Sit-Down) Restaurant(932) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	4.83	0.00	1.00	333
7-9 AM Peak Hour Enter	0.24	0.00	1.00	17
7-9 AM Peak Hour Exit	0.23	0.00	1.00	15
7-9 AM Peak Hour Total	0.47	0.70	1.00	32
4-6 PM Peak Hour Enter	0.23	0.00	1.00	16
4-6 PM Peak Hour Exit	0.18	0.00	1.00	12
4-6 PM Peak Hour Total	0.41	0.73	1.00	28
AM Pk Hr, Generator, Enter	0.35	0.00	1.00	24
AM Pk Hr, Generator, Exit	0.25	0.00	1.00	17
AM Pk Hr, Generator, Total	0.60	0.86	1.00	41
PM Pk Hr, Generator, Enter	0.37	0.00	1.00	26
PM Pk Hr, Generator, Exit	0.35	0.00	1.00	24
PM Pk Hr, Generator, Total	0.72	0.96	1.00	50
Saturday 2-Way Volume	6.21	0.00	1.00	428
Saturday Peak Hour Enter	0.28	0.00	1.00	19
Saturday Peak Hour Exit	0.25	0.00	1.00	18
Saturday Peak Hour Total	0.53	0.86	1.00	37
Sunday 2-Way Volume	5.17	0.00	1.00	357
Sunday Peak Hour Enter	0.36	0.00	1.00	25
Sunday Peak Hour Exit	0.29	0.00	1.00	20
Sunday Peak Hour Total	0.65	0.86	1.00	45

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 1.685 Th.Sq.Ft. GFA of Warehousing(150) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	8.73	0.00	1.00	15
7-9 AM Peak Hour Enter	4.09	0.00	1.00	7
7-9 AM Peak Hour Exit	1.09	0.00	1.00	2
7-9 AM Peak Hour Total	5.18	0.00	1.00	9
4-6 PM Peak Hour Enter	0.65	0.00	1.00	1
4-6 PM Peak Hour Exit	1.94	0.00	1.00	3
4-6 PM Peak Hour Total	2.59	0.00	1.00	4
AM Pk Hr, Generator, Enter	1.69	0.00	1.00	3
AM Pk Hr, Generator, Exit	0.91	0.00	1.00	1
AM Pk Hr, Generator, Total	2.59	0.00	1.00	4
PM Pk Hr, Generator, Enter	0.35	0.00	1.00	1
PM Pk Hr, Generator, Exit	1.48	0.00	1.00	2
PM Pk Hr, Generator, Total	1.83	0.00	1.00	3
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .86LN(X) + 2.24, R^2 = 0.77
7-9 AM Peak Hr. Total:	LN(T) = .55LN(X) + 1.88
	R^2 = 0.67 , 0.79 Enter, 0.21 Exit
4-6 PM Peak Hr. Total:	LN(T) = .64LN(X) + 1.14
	R^2 = 0.64 , 0.25 Enter, 0.75 Exit
AM Gen Pk Hr. Total:	LN(T) = .7LN(X) + 1.11
	R^2 = 0.75 , 0.65 Enter, 0.35 Exit
PM Gen Pk Hr. Total:	LN(T) = .78LN(X) + .72
	R^2 = 0.8 , 0.19 Enter, 0.81 Exit
Sat. 2-Way Volume:	0, R^2 = 0
Sat. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	0, R^2 = 0
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
ource: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 45 Dwelling Units of Apartments(220) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	8.81	0.00	1.00	396
7-9 AM Peak Hour Enter	0.11	0.00	1.00	5
7-9 AM Peak Hour Exit	0.46	0.00	1.00	21
7-9 AM Peak Hour Total	0.57	0.00	1.00	26
4-6 PM Peak Hour Enter	0.61	0.00	1.00	28
4-6 PM Peak Hour Exit	0.33	0.00	1.00	14
4-6 PM Peak Hour Total	0.94	0.00	1.00	42
AM Pk Hr, Generator, Enter	0.17	0.00	1.00	8
AM Pk Hr, Generator, Exit	0.42	0.00	1.00	19
AM Pk Hr, Generator, Total	0.59	0.00	1.00	27
PM Pk Hr, Generator, Enter	0.57	0.00	1.00	26
PM Pk Hr, Generator, Exit	0.36	0.00	1.00	16
PM Pk Hr, Generator, Total	0.93	0.00	1.00	42
Saturday 2-Way Volume	2.16	0.00	1.00	97
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.84	0.00	1.00	38
Sunday 2-Way Volume	4.17	0.00	1.00	188
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	T = 6.06(X) + 123.56, R^2 = 0.87
7-9 AM Peak Hr. Total:	T = .49(X) + 3.73
	R^2 = 0.83 , 0.2 Enter, 0.8 Exit
4-6 PM Peak Hr. Total:	T = .55(X) + 17.65
	R^2 = 0.77 , 0.65 Enter, 0.35 Exit
AM Gen Pk Hr. Total:	T = .54(X) + 2.45
	R^2 = 0.82 , 0.29 Enter, 0.71 Exit
PM Gen Pk Hr. Total:	T = .6(X) + 14.91
	R^2 = 0.8 , 0.61 Enter, 0.39 Exit
Sat. 2-Way Volume:	T = 7.85(X) + -256.19, R^2 = 0.85
Sat. Pk Hr. Total:	T = .41(X) + 19.23
	R^2 = 0.56 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	T = 6.42(X) + -101.12, R^2 = 0.82
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 96 Dwelling Units of Apartments(220) - [E]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	7.35	0.00	1.00	705
7-9 AM Peak Hour Enter	0.11	0.00	1.00	10
7-9 AM Peak Hour Exit	0.42	0.00	1.00	41
7-9 AM Peak Hour Total	0.53	0.00	1.00	51
4-6 PM Peak Hour Enter	0.48	0.00	1.00	46
4-6 PM Peak Hour Exit	0.26	0.00	1.00	24
4-6 PM Peak Hour Total	0.73	0.00	1.00	70
AM Pk Hr, Generator, Enter	0.16	0.00	1.00	16
AM Pk Hr, Generator, Exit	0.40	0.00	1.00	38
AM Pk Hr, Generator, Total	0.57	0.00	1.00	54
PM Pk Hr, Generator, Enter	0.46	0.00	1.00	44
PM Pk Hr, Generator, Exit	0.29	0.00	1.00	29
PM Pk Hr, Generator, Total	0.76	0.00	1.00	73
Saturday 2-Way Volume	5.18	0.00	1.00	497
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.61	0.00	1.00	59
Sunday 2-Way Volume	5.37	0.00	1.00	515
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	T = 6.06(X) + 123.56, R^2 = 0.87
7-9 AM Peak Hr. Total:	T = .49(X) + 3.73
	R^2 = 0.83 , 0.2 Enter, 0.8 Exit
4-6 PM Peak Hr. Total:	T = .55(X) + 17.65
	R^2 = 0.77 , 0.65 Enter, 0.35 Exit
AM Gen Pk Hr. Total:	T = .54(X) + 2.45
	R^2 = 0.82 , 0.29 Enter, 0.71 Exit
PM Gen Pk Hr. Total:	T = .6(X) + 14.91
	R^2 = 0.8 , 0.61 Enter, 0.39 Exit
Sat. 2-Way Volume:	T = 7.85(X) + -256.19, R^2 = 0.85
Sat. Pk Hr. Total:	T = .41(X) + 19.23
	R^2 = 0.56 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	T = 6.42(X) + -101.12, R^2 = 0.82
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 1 Dwelling Units of Apartments(220) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	6.65	3.07	1.00	7
7-9 AM Peak Hour Enter	0.10	0.00	1.00	0
7-9 AM Peak Hour Exit	0.41	0.00	1.00	0
7-9 AM Peak Hour Total	0.51	0.73	1.00	1
4-6 PM Peak Hour Enter	0.40	0.00	1.00	0
4-6 PM Peak Hour Exit	0.22	0.00	1.00	0
4-6 PM Peak Hour Total	0.62	0.82	1.00	1
AM Pk Hr, Generator, Enter	0.16	0.00	1.00	0
AM Pk Hr, Generator, Exit	0.39	0.00	1.00	0
AM Pk Hr, Generator, Total	0.55	0.76	1.00	1
PM Pk Hr, Generator, Enter	0.41	0.00	1.00	0
PM Pk Hr, Generator, Exit	0.26	0.00	1.00	0
PM Pk Hr, Generator, Total	0.67	0.85	1.00	1
Saturday 2-Way Volume	6.39	2.99	1.00	6
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.52	0.74	1.00	1
Sunday 2-Way Volume	5.86	2.73	1.00	6
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.51	0.75	1.00	1

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Average Rate Trip Calculations
For 0.428 Th.Sq.Ft. GFA of General Office Building(710) - [R]

Project: Open Date:
Phase: Analysis Date:

Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	11.03	6.15	1.00	5
7-9 AM Peak Hour Enter	1.37	0.00	1.00	1
7-9 AM Peak Hour Exit	0.19	0.00	1.00	0
7-9 AM Peak Hour Total	1.56	1.40	1.00	1
4-6 PM Peak Hour Enter	0.25	0.00	1.00	0
4-6 PM Peak Hour Exit	1.24	0.00	1.00	1
4-6 PM Peak Hour Total	1.49	1.37	1.00	1
AM Pk Hr, Generator, Enter	1.37	0.00	1.00	1
AM Pk Hr, Generator, Exit	0.19	0.00	1.00	0
AM Pk Hr, Generator, Total	1.56	1.40	1.00	1
PM Pk Hr, Generator, Enter	0.25	0.00	1.00	0
PM Pk Hr, Generator, Exit	1.24	0.00	1.00	1
PM Pk Hr, Generator, Total	1.49	1.37	1.00	1
Saturday 2-Way Volume	2.46	2.21	1.00	1
Saturday Peak Hour Enter	0.23	0.00	1.00	0
Saturday Peak Hour Exit	0.20	0.00	1.00	0
Saturday Peak Hour Total	0.43	0.72	1.00	0
Sunday 2-Way Volume	1.05	1.43	1.00	0
Sunday Peak Hour Enter	0.09	0.00	1.00	0
Sunday Peak Hour Exit	0.07	0.00	1.00	0
Sunday Peak Hour Total	0.16	0.44	1.00	0

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

Detailed Land Use Data
For 5 Gross Floor Area 1000 SF of MWAREHOUSE 1
(151) Mini-Warehouse

Project: 221 E Main

Open Date: 6/5/2017
Analysis Date: 6/5/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	1 (EN / EX)	0	0.14	0.04	0.27	0.38	66	55	45	False		
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	1 (EN / EX)	0	0.26	0.07	0.64	0.52	57	50	50	False		
Saturday Peak Hour of Generator Source : Trip Generation Manual 9th Edition	2 (EN / EX)	0	0.4	0.24	0.6	0.64	62	50	50	False		

Detailed Average Rate Trip Calculations
For 160 Dwelling Units of Apartments(220) - [E]

Project: Open Date:
Phase: Analysis Date:

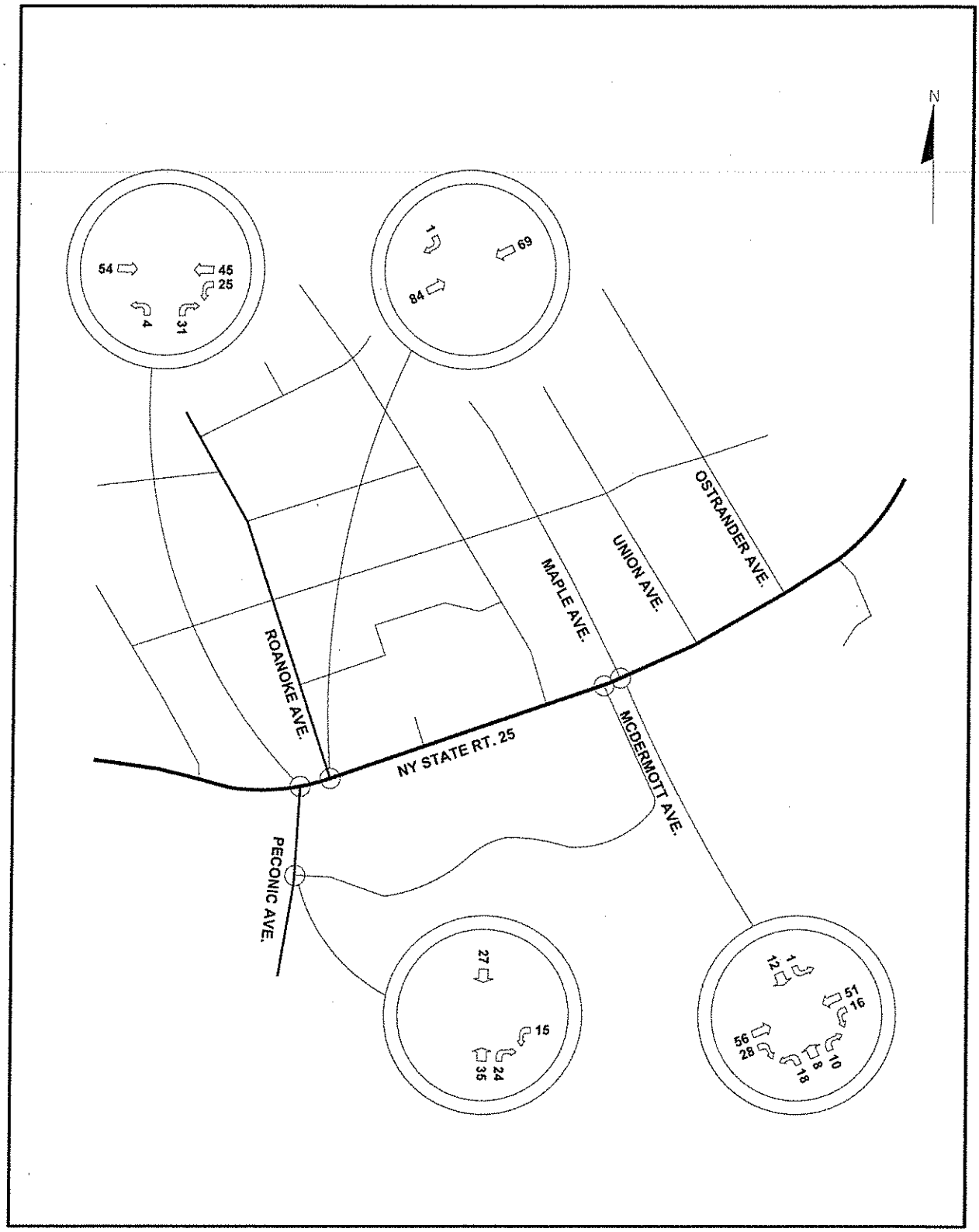
Description:

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	6.83	0.00	1.00	1093
7-9 AM Peak Hour Enter	0.10	0.00	1.00	16
7-9 AM Peak Hour Exit	0.41	0.00	1.00	66
7-9 AM Peak Hour Total	0.51	0.00	1.00	82
4-6 PM Peak Hour Enter	0.43	0.00	1.00	69
4-6 PM Peak Hour Exit	0.23	0.00	1.00	37
4-6 PM Peak Hour Total	0.66	0.00	1.00	106
AM Pk Hr, Generator, Enter	0.16	0.00	1.00	26
AM Pk Hr, Generator, Exit	0.39	0.00	1.00	63
AM Pk Hr, Generator, Total	0.56	0.00	1.00	89
PM Pk Hr, Generator, Enter	0.42	0.00	1.00	68
PM Pk Hr, Generator, Exit	0.27	0.00	1.00	43
PM Pk Hr, Generator, Total	0.69	0.00	1.00	111
Saturday 2-Way Volume	6.25	0.00	1.00	1000
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.53	0.00	1.00	85
Sunday 2-Way Volume	5.79	0.00	1.00	926
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

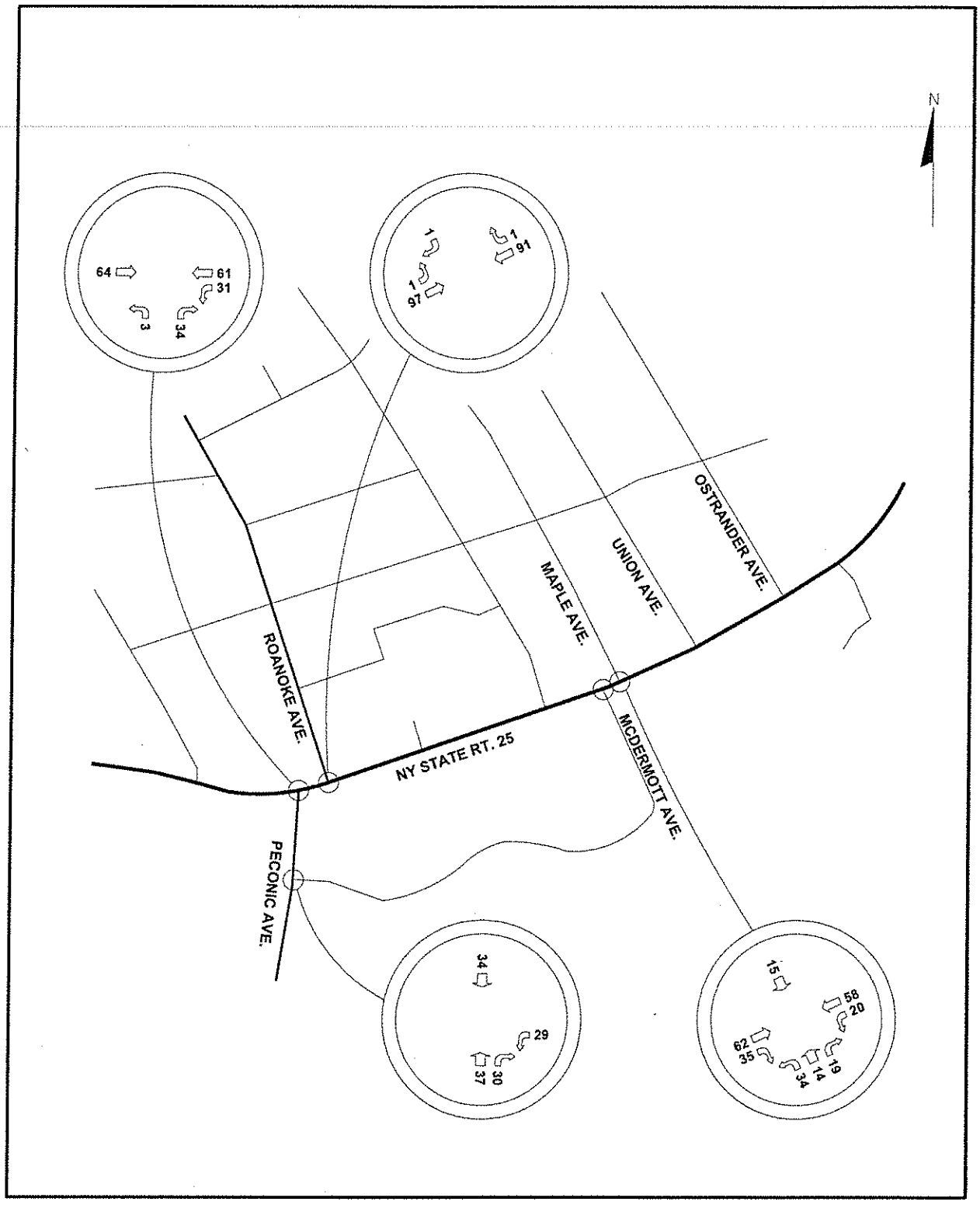
The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	T = 6.06(X) + 123.56, R^2 = 0.87
7-9 AM Peak Hr. Total:	T = .49(X) + 3.73
	R^2 = 0.83 , 0.2 Enter, 0.8 Exit
4-6 PM Peak Hr. Total:	T = .55(X) + 17.65
	R^2 = 0.77 , 0.65 Enter, 0.35 Exit
AM Gen Pk Hr. Total:	T = .54(X) + 2.45
	R^2 = 0.82 , 0.29 Enter, 0.71 Exit
PM Gen Pk Hr. Total:	T = .6(X) + 14.91
	R^2 = 0.8 , 0.61 Enter, 0.39 Exit
Sat. 2-Way Volume:	T = 7.85(X) + -256.19, R^2 = 0.85
Sat. Pk Hr. Total:	T = .41(X) + 19.23
	R^2 = 0.56 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	T = 6.42(X) + -101.12, R^2 = 0.82
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012



Other Planed Project PM Peak Hour Traffic Volumes



Other Planed Project Saturday Peak Hour Traffic Volumes

Appendix C: Trip Generation

Detailed Land Use Data
For 118 Dwelling Units of APT 1
(220) Apartment

Project: 221 E Main St

Open Date: 6/7/2017
Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	60	0	0.51	0.1	1.02	0.73	235	20	80	False	T = 0.49(X) + 3.73	0.83
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	73	0	0.62	0.1	1.64	0.82	233	65	35	False	T = 0.55(X) + 17.65	0.77
Saturday Peak Hour of Generator Source : Trip Generation Manual 9th Edition	61	0	0.52	0.26	1.05	0.74	178	50	50	False	T = 0.41(X) + 19.23	0.56

Detailed Land Use Data

For 1.5 Gross Leasable Area 1000 SF of CENTERSHOPPING 2

(820) Shopping Center

Project: 221 E Main St

Open Date: 6/7/2017

Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic	1	0	0.96	0.1	9.05	1.31	310	62	38	False	Ln(T) = 0.61 Ln(X) + 2.24	0.56
Source : Trip Generation Manual 9th Edition												
Weekday PM Peak Hour of Adjacent Street Traffic	6	2	3.71	0.68	29.27	2.74	376	48	52	False	Ln(T) = 0.67 Ln(X) + 3.31	0.81
Source : Trip Generation Manual 9th Edition												
Saturday Peak Hour of Generator	7	0	4.82	1.46	18.32	3.1	458	52	48	False	Ln(T) = 0.65 Ln(X) + 3.78	0.83
Source : Trip Generation Manual 9th Edition												

Detailed Land Use Data
For 535 Seats of RESTAURANTQ 1
(931) Quality Restaurant

Project: 221 E Main St

Open Date: 6/7/2017
Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic	16	0	0.03	0.01	0.04	0.16	321	50	50	False		
Source : Trip Generation Manual 9th Edition												
Weekday PM Peak Hour of Adjacent Street Traffic	139	61	0.26	0.07	0.5	0.52	326	67	33	False		
Source : Trip Generation Manual 9th Edition												
Saturday Peak Hour of Generator	177	0	0.33	0.16	0.5	0.58	308	59	41	False	T = 0.38(X) - 16.72	0.64
Source : Trip Generation Manual 9th Edition												

Detailed Land Use Data

For 12.62 Gross Leasable Area 1000 SF of CENTERSHOPPING 1

(820) Shopping Center

Project: 221 E Main St

Open Date: 6/7/2017

Analysis Date: 6/7/2017

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	12	0	0.96	0.1	9.05	1.31	310	62	38	False	Ln(T) = 0.61 Ln(X) + 2.24	0.56
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 9th Edition	47	16	3.71	0.68	29.27	2.74	376	48	52	False	Ln(T) = 0.67 Ln(X) + 3.31	0.81
Saturday Peak Hour of Generator Source : Trip Generation Manual 9th Edition	61	0	4.82	1.46	18.32	3.1	458	52	48	False	Ln(T) = 0.65 Ln(X) + 3.78	0.83

Appendix D: Level of Service Definitions

LEVEL OF SERVICE: SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents at an intersection. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. The portion of the total delay attributed to the control facility is called the control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay may also be referred to as signal delay for signalized intersections.

Level of service criteria for signalized intersections is determined in terms of the average control delay per vehicle. The following average control delays are used to determine approach levels of service:

Level of Service A	$\leq$ 10.0 seconds per vehicle
Level of Service B	> 10.0 and $\leq$ 20.0 seconds per vehicle
Level of Service C	> 20.0 and $\leq$ 35.0 seconds per vehicle
Level of Service D	> 35.0 and $\leq$ 55.0 seconds per vehicle
Level of Service E	> 55.0 and $\leq$ 80.0 seconds per vehicle
Level of Service F	> 80.0 seconds per vehicle

Level of Service A describes operations with very low control delay. This occurs when progression is extremely favorable; most vehicles arrive during the green phase and do not stop at all. Short traffic signal cycles may contribute to low delay.

Level of Service B generally occurs with good progression and/or short traffic signal cycle lengths. More vehicles stop than for level of service A, causing higher average delays.

Level of Service C has higher delays than level of service B. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures, where motorists are required to wait through an entire signal cycle, may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.

Level of Service D At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high volume-to-capacity ratios. The proportion of stopping vehicles increases. Individual cycle failures are noticeable.

Level of Service E is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures occur frequently.

Level of Service F is considered unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may occur at volume to capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

LEVEL OF SERVICE: TWO WAY STOP CONTROLLED INTERSECTIONS

The quality of traffic service at a two-way stop controlled, or "TWSC," intersection is measured according to the level of service and capacity of individual legs. The level of service ranges from LOS A to LOS F, just as with signalized intersections.

The right of way at the TWSC intersection is controlled by stop signs on two opposing legs of an intersection (on one leg of a "T"-type intersection). The capacity of a controlled leg is based on the distribution of gaps in the major street traffic flow, driver judgment in selecting a gap through which to execute the desired maneuver and the follow up time required by each driver in a queue.

The level of service for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometry and in the absence of incidents, control, and traffic. This program only quantifies that portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. This delay is called control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Average control delay for any particular minor movement is a function of the approach and the degree of saturation.

The expectation is that TWSC intersections are designed to carry smaller traffic volumes than signalized intersections. Therefore, the delay threshold times are lower for the same LOS grades. The following average control delays are used to determine approach levels of service:

Level of Service A	$\leq$ 10 seconds per vehicle
Level of Service B	> 10 and $\leq$ 15 seconds per vehicle
Level of Service C	> 15 and $\leq$ 25 seconds per vehicle
Level of Service D	> 25 and $\leq$ 35 seconds per vehicle
Level of Service E	> 35 and $\leq$ 50 seconds per vehicle
Level of Service F	> 50 seconds per vehicle

Appendix E: Capacity Analysis/Level of Service Worksheets & Summary Tables

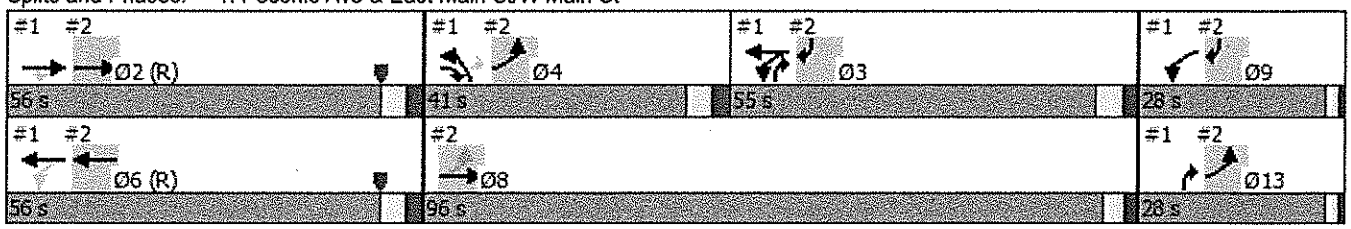
Existing Capacity Analyses

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	216	186	296	175	122	501					
Future Volume (vph)	216	186	296	175	122	501					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	68.9	96.5	140.7	115.7	21.6	99.3					
Actuated g/C Ratio	0.38	0.54	0.78	0.64	0.12	0.55					
v/c Ratio	0.33	0.25	0.33	0.19	0.72	0.70					
Control Delay	42.9	24.0	6.8	1.7	95.2	33.7					
Queue Delay	1.8	0.0	1.0	1.0	0.0	0.8					
Total Delay	44.7	24.0	7.8	2.6	95.2	34.6					
LOS	D	C	A	A	F	C					
Approach Delay	35.1			5.9	46.4						
Approach LOS	D			A	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 31.2 Intersection LOS: C
Intersection Capacity Utilization 52.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

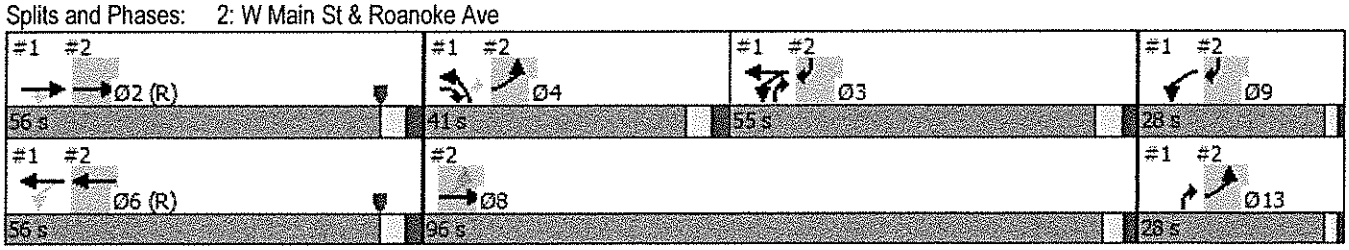


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	296	423	312	147						
Future Volume (vph)	296	423	312	147						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	93.4	150.0	68.9	71.7						
Actuated g/C Ratio	0.52	0.83	0.38	0.40						
v/c Ratio	0.48	0.33	0.33	0.28						
Control Delay	18.8	2.7	41.1	37.7						
Queue Delay	3.5	0.8	0.0	0.0						
Total Delay	22.3	3.5	41.2	37.7						
LOS	C	A	D	D						
Approach Delay		11.2	41.2							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 35.7% ICU Level of Service A
Analysis Period (min) 15

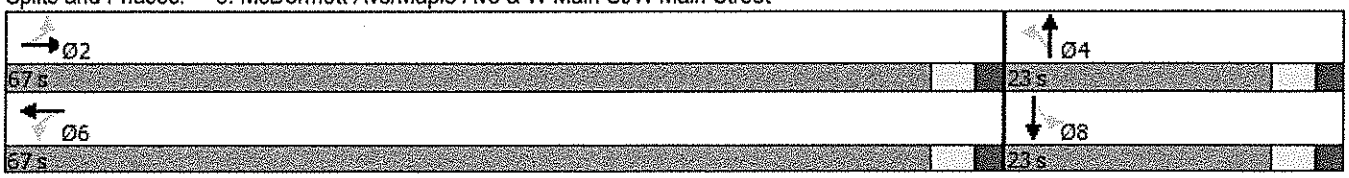
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	2	409	18	370	2	2	18	3
Future Volume (vph)	2	409	18	370	2	2	18	3
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	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
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?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		67.3		67.3		7.2		7.2
Actuated g/C Ratio		0.86		0.86		0.09		0.09
v/c Ratio		0.32		0.32		0.27		0.30
Control Delay		2.8		2.8		17.1		31.5
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		2.8		2.8		17.1		31.5
LOS		A		A		B		C
Approach Delay		2.8		2.8		17.1		31.5
Approach LOS		A		A		B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 4.6	Intersection LOS: A
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	72	25	598	55	15	467
Future Volume (Veh/h)	72	25	598	55	15	467
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	27	650	60	16	508
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1220	680			710	
vC1, stage 1 conf vol	680					
vC2, stage 2 conf vol	540					
vCu, unblocked vol	1220	680			710	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	81	94			98	
cM capacity (veh/h)	411	451			889	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	78	27	710	16	508
Volume Left	78	0	0	16	0
Volume Right	0	27	60	0	0
cSH	411	451	1700	889	1700
Volume to Capacity	0.19	0.06	0.42	0.02	0.30
Queue Length 95th (ft)	17	5	0	1	0
Control Delay (s)	15.8	13.5	0.0	9.1	0.0
Lane LOS	C	B		A	
Approach Delay (s)	15.2		0.0	0.3	
Approach LOS	C				

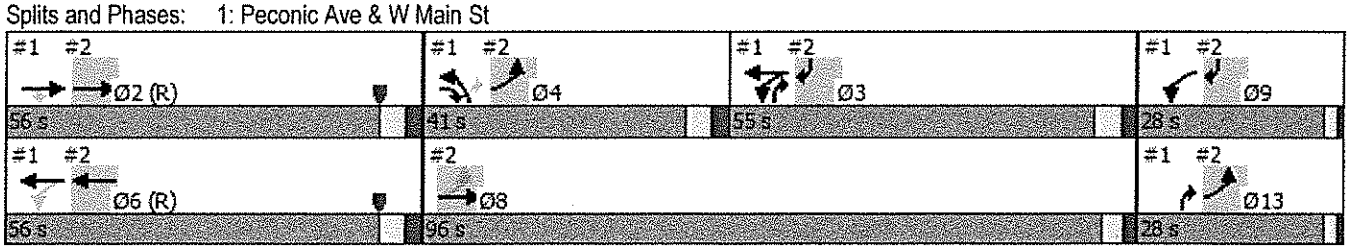
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	236	241	355	292	193	484					
Future Volume (vph)	236	241	355	292	193	484					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	69.6	103.5	134.3	109.3	28.0	98.6					
Actuated g/C Ratio	0.39	0.58	0.75	0.61	0.16	0.55					
v/c Ratio	0.35	0.29	0.43	0.32	0.73	0.59					
Control Delay	44.6	22.4	9.8	2.5	87.7	29.0					
Queue Delay	1.5	0.0	1.4	0.5	0.0	0.3					
Total Delay	46.1	22.4	11.2	3.0	87.7	29.3					
LOS	D	C	B	A	F	C					
Approach Delay	34.1			7.5	46.0						
Approach LOS	C			A	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 28.2 Intersection LOS: C
Intersection Capacity Utilization 57.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & W Main St

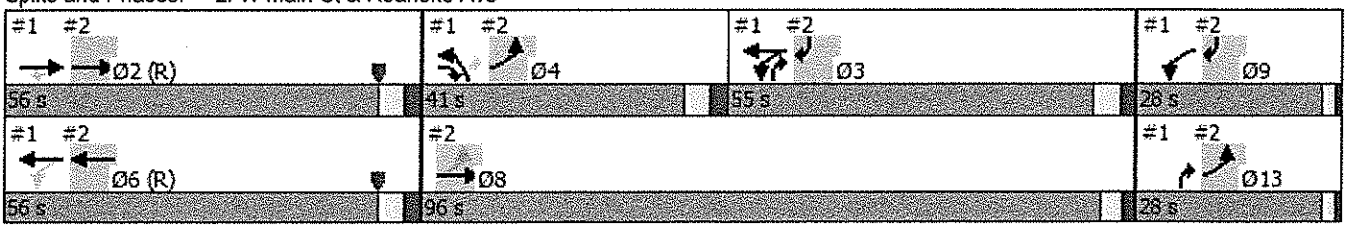


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	323	398	413	233						
Future Volume (vph)	323	398	413	233						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	92.7	150.0	69.6	64.7						
Actuated g/C Ratio	0.52	0.83	0.39	0.36						
v/c Ratio	0.51	0.28	0.41	0.43						
Control Delay	22.9	2.4	43.9	44.6						
Queue Delay	3.9	0.6	0.1	0.1						
Total Delay	26.7	2.9	44.0	44.7						
LOS	C	A	D	D						
Approach Delay		13.6	44.0							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 28.8 Intersection LOS: C
Intersection Capacity Utilization 40.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: W Main St & Roanoke Ave

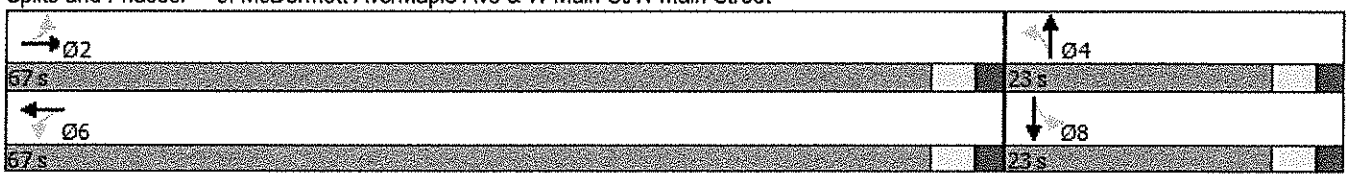


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	7	379	42	491	18	7	38	7
Future Volume (vph)	7	379	42	491	18	7	38	7
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	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
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?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		66.0		66.0		8.8		8.8
Actuated g/C Ratio		0.81		0.81		0.11		0.11
v/c Ratio		0.27		0.44		0.43		0.46
Control Delay		3.4		4.6		19.7		38.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		3.4		4.6		19.7		38.9
LOS		A		A		B		D
Approach Delay		3.4		4.6		19.7		38.9
Approach LOS		A		A		B		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 81.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 7.5 Intersection LOS: A
Intersection Capacity Utilization 66.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	60	19	658	55	15	581
Future Volume (Veh/h)	60	19	658	55	15	581
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	21	715	60	16	632
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1409	745			775	
vC1, stage 1 conf vol	745					
vC2, stage 2 conf vol	664					
vCu, unblocked vol	1409	745			775	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	82	95			98	
cM capacity (veh/h)	364	414			841	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	65	21	775	16	632
Volume Left	65	0	0	16	0
Volume Right	0	21	60	0	0
cSH	364	414	1700	841	1700
Volume to Capacity	0.18	0.05	0.46	0.02	0.37
Queue Length 95th (ft)	16	4	0	1	0
Control Delay (s)	17.0	14.2	0.0	9.4	0.0
Lane LOS	C	B		A	
Approach Delay (s)	16.3		0.0	0.2	
Approach LOS	C				

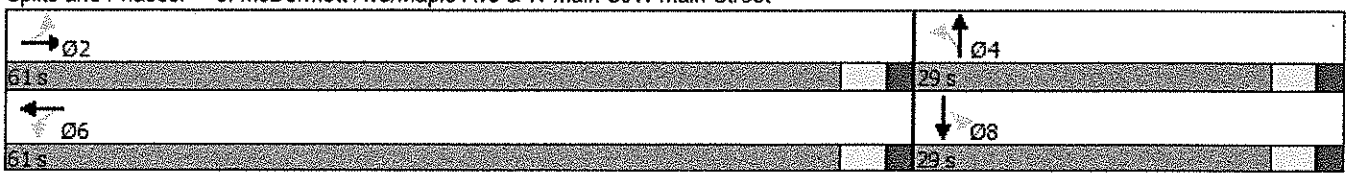
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	8	451	82	562	57	25	41	36
Future Volume (vph)	8	451	82	562	57	25	41	36
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	61.0	61.0	61.0	61.0	29.0	29.0	29.0	29.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	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
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?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		56.2		56.2		13.0		13.0
Actuated g/C Ratio		0.71		0.71		0.16		0.16
v/c Ratio		0.43		0.66		0.69		0.54
Control Delay		6.6		10.7		34.6		37.1
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		6.6		10.7		34.6		37.1
LOS		A		B		C		D
Approach Delay		6.6		10.7		34.6		37.1
Approach LOS		A		B		C		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 79.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 87.6% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street

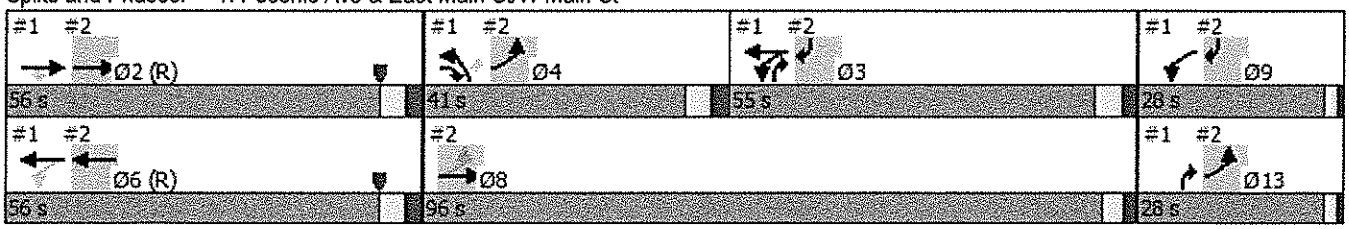


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	395	199	327	274	192	405					
Future Volume (vph)	395	199	327	274	192	405					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	72.3	103.7	136.8	111.8	25.5	95.9					
Actuated g/C Ratio	0.40	0.58	0.76	0.62	0.14	0.53					
v/c Ratio	0.58	0.25	0.44	0.29	0.78	0.49					
Control Delay	49.2	21.2	16.9	2.2	94.9	27.5					
Queue Delay	20.9	0.0	2.2	0.5	0.0	0.2					
Total Delay	70.1	21.2	19.1	2.7	94.9	27.7					
LOS	E	C	B	A	F	C					
Approach Delay	53.7			11.6	49.3						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 37.7 Intersection LOS: D
Intersection Capacity Utilization 64.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

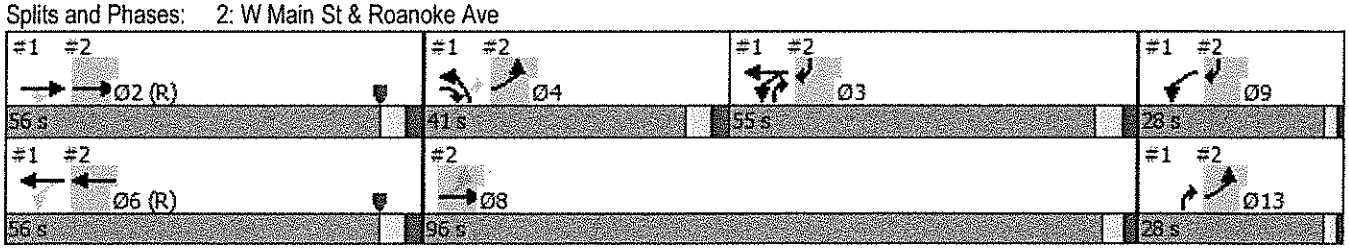


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	203	597	360	241						
Future Volume (vph)	203	597	360	241						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	90.0	150.0	72.3	64.5						
Actuated g/C Ratio	0.50	0.83	0.40	0.36						
v/c Ratio	0.33	0.43	0.33	0.47						
Control Delay	29.1	2.3	40.3	46.5						
Queue Delay	8.4	0.4	0.1	0.0						
Total Delay	37.5	2.7	40.4	46.5						
LOS	D	A	D	D						
Approach Delay		11.6	40.4							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 35.7% ICU Level of Service A
Analysis Period (min) 15

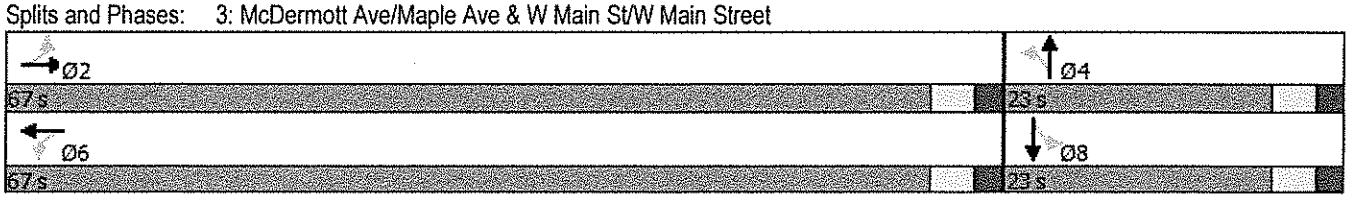
Splits and Phases: 2: W Main St & Roanoke Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Traffic Volume (vph)	20	481	19	396	21	8	38	4
Future Volume (vph)	20	481	19	396	21	8	38	4
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		2		6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	6	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	15.0	15.0	15.0	9.0	9.0	9.0	9.0
Total Split (s)	67.0	67.0	67.0	67.0	23.0	23.0	23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%	74.4%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	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
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?								
Recall Mode	Max	Max	Max	Max	None	None	None	None
Act Effct Green (s)		66.0		66.0		8.7		8.7
Actuated g/C Ratio		0.81		0.81		0.11		0.11
v/c Ratio		0.36		0.36		0.43		0.47
Control Delay		3.9		3.8		22.0		33.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		3.9		3.8		22.0		33.8
LOS		A		A		C		C
Approach Delay		3.9		3.8		22.0		33.8
Approach LOS		A		A		C		C

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 81.6			
Natural Cycle: 40			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: McDermott Ave/Maple Ave & W Main St/W Main Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	60	19	635	75	32	499
Future Volume (Veh/h)	60	19	635	75	32	499
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	21	690	82	35	542
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1343	731			772	
vC1, stage 1 conf vol	731					
vC2, stage 2 conf vol	612					
vCu, unblocked vol	1343	731			772	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	95			96	
cM capacity (veh/h)	375	422			843	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	65	21	772	35	542
Volume Left	65	0	0	35	0
Volume Right	0	21	82	0	0
cSH	375	422	1700	843	1700
Volume to Capacity	0.17	0.05	0.45	0.04	0.32
Queue Length 95th (ft)	15	4	0	3	0
Control Delay (s)	16.6	14.0	0.0	9.5	0.0
Lane LOS	C	B		A	
Approach Delay (s)	16.0		0.0	0.6	
Approach LOS	C				

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

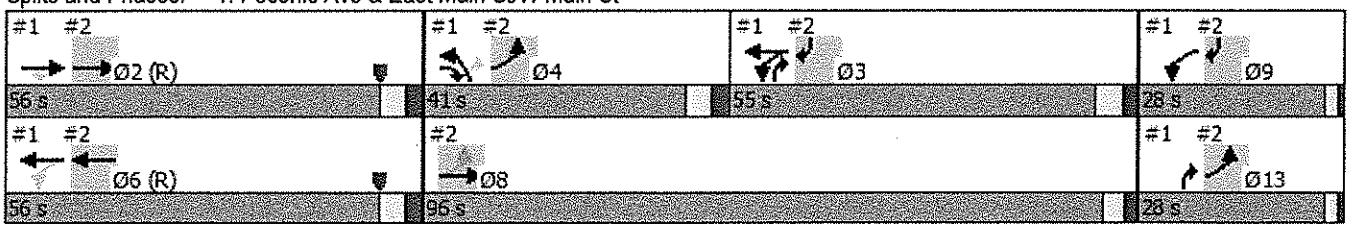
No Build Capacity Analyses

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	259	194	325	224	128	540					
Future Volume (vph)	259	194	325	224	128	540					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	63.7	91.8	140.1	115.1	22.2	104.5					
Actuated g/C Ratio	0.35	0.51	0.78	0.64	0.12	0.58					
v/c Ratio	0.43	0.27	0.37	0.24	0.74	0.72					
Control Delay	49.3	27.2	14.3	1.7	95.8	31.4					
Queue Delay	4.1	0.0	2.7	1.0	0.0	0.9					
Total Delay	53.3	27.2	17.0	2.7	95.8	32.3					
LOS	D	C	B	A	F	C					
Approach Delay	42.1			11.1	44.4						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 33.2 Intersection LOS: C
Intersection Capacity Utilization 56.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

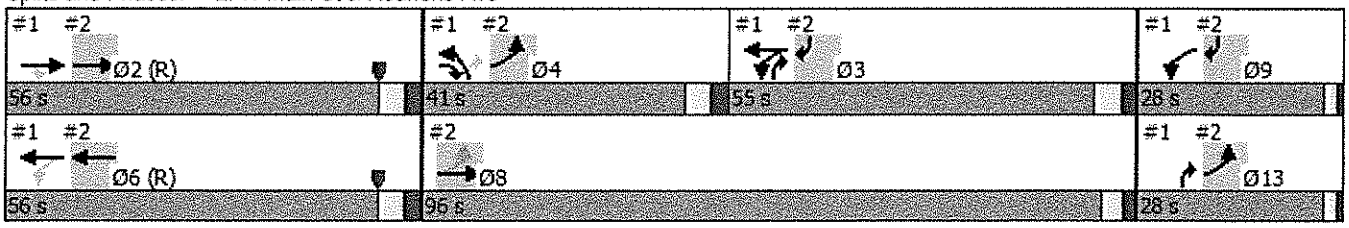


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	309	492	383	153						
Future Volume (vph)	309	492	383	153						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	98.6	150.0	63.7	76.4						
Actuated g/C Ratio	0.55	0.83	0.35	0.42						
v/c Ratio	0.50	0.38	0.43	0.28						
Control Delay	18.6	2.8	47.4	34.5						
Queue Delay	4.3	0.9	0.2	0.0						
Total Delay	22.9	3.7	47.5	34.5						
LOS	C	A	D	C						
Approach Delay		11.1	47.5							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 38.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: W Main St & Roanoke Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	104	27	641	71	16	506
Future Volume (Veh/h)	104	27	641	71	16	506
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	29	697	77	17	550
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1320	736			774	
vC1, stage 1 conf vol	736					
vC2, stage 2 conf vol	584					
vCu, unblocked vol	1320	736			774	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	71	93			98	
cM capacity (veh/h)	384	419			842	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	113	29	774	17	550
Volume Left	113	0	0	17	0
Volume Right	0	29	77	0	0
cSH	384	419	1700	842	1700
Volume to Capacity	0.29	0.07	0.46	0.02	0.32
Queue Length 95th (ft)	30	6	0	2	0
Control Delay (s)	18.2	14.2	0.0	9.4	0.0
Lane LOS	C	B		A	
Approach Delay (s)	17.4		0.0	0.3	
Approach LOS	C				

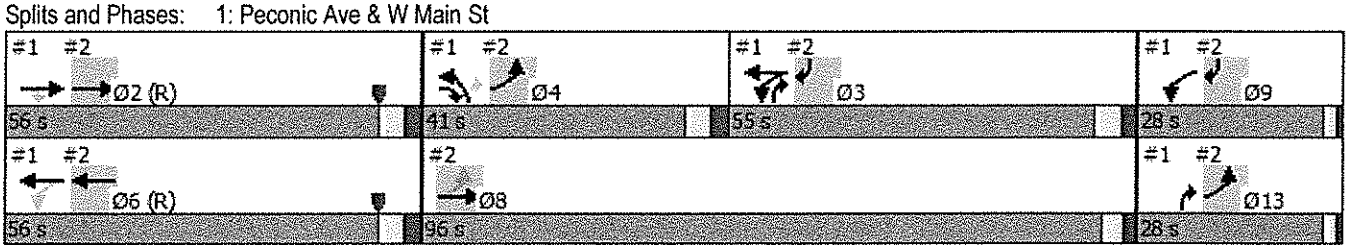
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	300	251	395	349	205	535					
Future Volume (vph)	300	251	395	349	205	535					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	64.8	99.2	133.8	108.8	28.5	103.4					
Actuated g/C Ratio	0.36	0.55	0.74	0.60	0.16	0.57					
v/c Ratio	0.48	0.31	0.50	0.39	0.77	0.62					
Control Delay	50.1	24.3	21.0	2.6	89.8	27.7					
Queue Delay	5.7	0.0	4.6	0.7	0.0	0.4					
Total Delay	55.9	24.3	25.6	3.3	89.8	28.1					
LOS	E	C	C	A	F	C					
Approach Delay	41.5			15.1	45.2						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 32.6 Intersection LOS: C
Intersection Capacity Utilization 63.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & W Main St

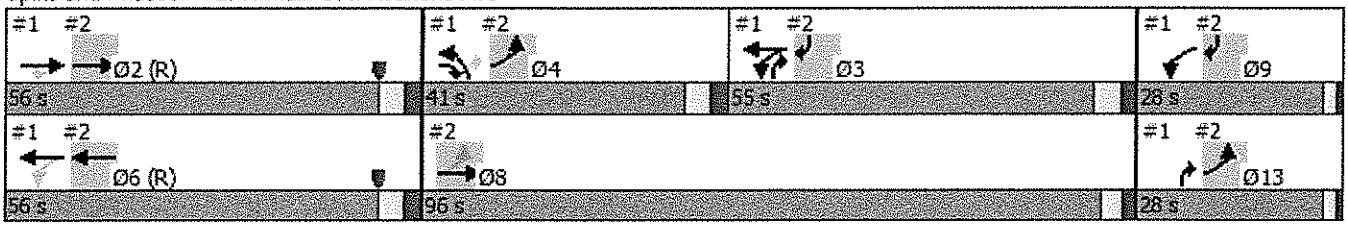


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	336	498	499	244						
Future Volume (vph)	336	498	499	244						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	97.5	150.0	64.8	69.0						
Actuated g/C Ratio	0.54	0.83	0.36	0.38						
v/c Ratio	0.53	0.35	0.53	0.42						
Control Delay	23.3	2.5	49.2	42.2						
Queue Delay	5.4	0.6	0.4	0.1						
Total Delay	28.7	3.1	49.6	42.2						
LOS	C	A	D	D						
Approach Delay		13.4	49.6							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 30.2 Intersection LOS: C
Intersection Capacity Utilization 43.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: W Main St & Roanoke Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	79	21	720	83	16	632
Future Volume (Veh/h)	79	21	720	83	16	632
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	86	23	783	90	17	687
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage veh)						2
Upstream signal (ft)						280
pX, platoon unblocked						
vC, conflicting volume	1549	828			873	
vC1, stage 1 conf vol	828					
vC2, stage 2 conf vol	721					
vCu, unblocked vol	1549	828			873	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	94			98	
cM capacity (veh/h)	332	371			773	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	86	23	873	17	687
Volume Left	86	0	0	17	0
Volume Right	0	23	90	0	0
cSH	332	371	1700	773	1700
Volume to Capacity	0.26	0.06	0.51	0.02	0.40
Queue Length 95th (ft)	25	5	0	2	0
Control Delay (s)	19.6	15.3	0.0	9.8	0.0
Lane LOS	C	C		A	
Approach Delay (s)	18.7		0.0	0.2	
Approach LOS	C				

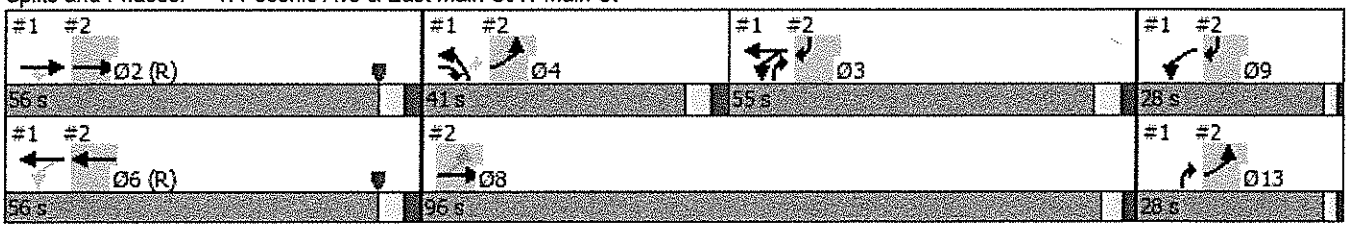
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø6	Ø8	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	265	194	328	241	128	541					
Future Volume (vph)	265	194	328	241	128	541					
Turn Type	NA	pm+ov	custom	NA	Prot	pt+ov					
Protected Phases	2	4	3 9	6 3	4	3 13	3	6	8	9	13
Permitted Phases		2	6			4 3					
Detector Phase	2	4	3 9	6 3	4	3 13					
Switch Phase											
Minimum Initial (s)	10.0	10.0			10.0		4.0	10.0	10.0	22.0	22.0
Minimum Split (s)	15.9	15.9			15.9		9.9	28.0	15.0	25.0	25.0
Total Split (s)	56.0	41.0			41.0		55.0	56.0	96.0	28.0	28.0
Total Split (%)	31.1%	22.8%			22.8%		31%	31%	53%	16%	16%
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5	3.0	2.0	2.0
All-Red Time (s)	2.4	2.4			2.4		2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0						
Total Lost Time (s)	5.9	5.9			5.9						
Lead/Lag		Lead			Lead		Lag				
Lead-Lag Optimize?											
Recall Mode	C-Min	None			None		None	C-Min	None	None	None
Act Effct Green (s)	63.2	91.6	139.8	114.8	22.5	105.0					
Actuated g/C Ratio	0.35	0.51	0.78	0.64	0.12	0.58					
v/c Ratio	0.44	0.27	0.37	0.26	0.73	0.71					
Control Delay	49.9	27.3	15.5	1.7	94.5	31.0					
Queue Delay	4.7	0.0	3.2	0.9	0.0	0.9					
Total Delay	54.6	27.3	18.7	2.7	94.5	31.9					
LOS	D	C	B	A	F	C					
Approach Delay	43.0			11.9	43.8						
Approach LOS	D			B	D						

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 33.2 Intersection LOS: C
Intersection Capacity Utilization 57.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Peconic Ave & East Main St/W Main St

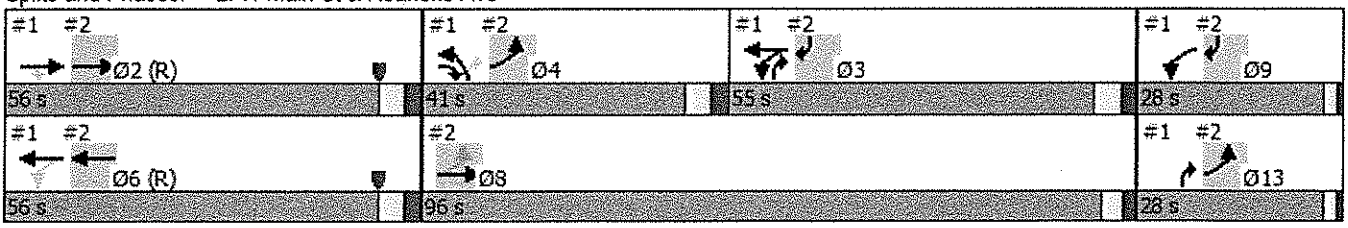


Lane Group	EBL	EBT	WBT	SBR	Ø2	Ø3	Ø4	Ø8	Ø9	Ø13
Lane Configurations										
Traffic Volume (vph)	336	536	519	244						
Future Volume (vph)	336	536	519	244						
Turn Type	custom	NA	NA	custom						
Protected Phases	4 13	8 2	6	3 9	2	3	4	8	9	13
Permitted Phases	8									
Detector Phase	4 13	8 2	6	3 9						
Switch Phase										
Minimum Initial (s)			10.0		10.0	4.0	10.0	10.0	22.0	22.0
Minimum Split (s)			28.0		15.9	9.9	15.9	15.0	25.0	25.0
Total Split (s)			56.0		56.0	55.0	41.0	96.0	28.0	28.0
Total Split (%)			31.1%		31%	31%	23%	53%	16%	16%
Yellow Time (s)			3.5		3.5	3.5	3.5	3.0	2.0	2.0
All-Red Time (s)			2.4		2.4	2.4	2.4	2.0	1.0	1.0
Lost Time Adjust (s)			0.0							
Total Lost Time (s)			5.9							
Lead/Lag						Lag	Lead			
Lead-Lag Optimize?										
Recall Mode			C-Min		C-Min	None	None	None	None	None
Act Effct Green (s)	98.7	150.0	63.6	70.1						
Actuated g/C Ratio	0.55	0.83	0.35	0.39						
v/c Ratio	0.53	0.37	0.56	0.41						
Control Delay	23.8	2.5	50.7	41.4						
Queue Delay	6.4	0.7	0.5	0.1						
Total Delay	30.2	3.2	51.3	41.4						
LOS	C	A	D	D						
Approach Delay		13.6	51.3							
Approach LOS		B	D							

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 30.7 Intersection LOS: C
Intersection Capacity Utilization 44.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: W Main St & Roanoke Ave



Appendix F: Parking Data

RIVERHEAD POLICE DEPARTMENT

210 Howell Avenue, Riverhead, New York 11901

David J. Hegermiller
Chief of Police

Tel (631) 727-4500 Ext 335
Fax (631) 727-8630

March 21, 2017

Mr. Phillip Malicki, CEP, AICP, LEED AP
Senior Environmental Planner
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747-2188

Dear Mr. Malicki:

I am in receipt of your letter with regards to the E.A.F. for the Riverview Lofts project (formerly the 221 East Main Street/31 McDermott Avenue project), located in the downtown section of the Town of Riverhead, and offer the following responses to your questions:

1. The Riverhead Police Department does not consist of various precincts. The project site is located entirely within the Department's jurisdiction.

2. Riverhead Police Headquarters is located at 210 Howell Avenue, Riverhead, New York.

3. The proposed site lies within the 601 patrol sector.

At this point in time, we should be able to assume the additional police services needed for your proposed project. Obviously, as with all development in our Township, the increase in population and vehicles will have a negative impact on our agency.

If you have any questions or if I can be of further assistance, please feel free to contact me at (631) 727-4500, ext. 335.

Yours for service,

David J. Hegermiller
Chief of Police

DJH/mk

CC: file

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Volunteer Fire Department
540 Roanoke Avenue
Riverhead, New York 11901
attn: Kevin Brooks, Chief of Department

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Chief Brooks:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

I am writing to obtain information on the facilities, services, and capabilities of the Riverhead Volunteer Fire Department that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- The location of the substation(s) which would serve the site;
- A listing of the major pieces of firefighting equipment at each facility;
- The number of firefighters assigned to each facility;
- Indicate any specialized firefighting capabilities of the District; and
- Indicate whether the firefighters are volunteers or full-time.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

ALLEN M. SMITH
Attorney and Counselor at Law

737 Roanoke Avenue
Tel: (631) 727-3947 Riverhead, New York 11901 Fax (631) 727-3950

February 21, 2017

Phil Malicki, CEP, AICP, LEED AP
Nelson, Pope and Voorhis, LLC
572 Walt Whitman Road
Melville, New York 11747

Re: Your File NVP #16068

Dear Mr. Malicki:

Please be advised that I am General Counsel to the Riverhead Fire District. Please accept this letter in response to your letter addressed to Kevin Brooks, Chief of the Department dated January 26, 2017.

The properties referenced in your letter are within the Riverhead Fire District and are protected by the Riverhead Fire Department.

This letter may not be taken to express any opinion about this/these project(s) or the Fire Department's ability to respond to emergencies now or in the future.

It is the District's position that it is incumbent on the project(s) developer(s) to design and construct this/these project(s) in full compliance with all applicable laws, codes, regulations, standards, etc..

At such time as this/these project(s) have been fully designed and engineered the District expects that the Town of Riverhead Fire Marshall shall present the same to the District and Department. The District and Department reserve their right to comment on the same at an appropriate future date.

Very truly yours,

ALLEN M. SMITH

AMS/amw

cc: Board of Fire Commissioners
cc: Chiefs of the Department

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Volunteer Ambulance Corps, Inc.
1111 Osborn Avenue
PO Box 924
Riverhead, New York 11901
attn: William Wilkinson, Chief

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Chief Wilkinson:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

I am writing to obtain information on the public ambulance service facilities and capabilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- The location of the ambulance substation(s) which would serve the site;
- The number of emergency medical technicians (EMTs) assigned to each facility;
- Indicate any specialized emergency medical capabilities; and
- Indicate whether the EMTs are volunteers or full-time.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

Riverhead
Volunteer Ambulance Corps, Inc.
P.O. Box 924
Riverhead, NY 11901
(631) 727-1686

February 14 2017

Mr. Philip Malicki
Nelson, Pope & Voorhis, LLC
572 Walt Whitman Road
Melville, NY 11747-2188

Dear Mr. Malicki,

Riverhead Volunteer Ambulance Corps can and will provide emergency medical services to your Riverview Lofts project located on East Main Street Riverhead, NY.

If you have any additional questions feel free to contact me.

Regards,

Rod Richardson
Chief
Riverhead Volunteer Ambulance

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Water District
1035 Pulaski Street
Riverhead, NY 11901
attn.: Mark Conklin, Superintendent

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use project
Supplemental EAF
NPV #16068

Dear Ms. Kennedy:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces (including two restaurants totaling 481 seats) are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

Assuming the wastewater flow design rates of the Suffolk County Department of Health Services, it is anticipated that the project will consume about 31,560 gallons of water daily.

I am writing to obtain information on water supply facilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- The locations of the wells nearest the subject site;
- The aquifer from which the above wells pump;
- The locations and sizes of the RWD distribution system pipes that may be used to supply the site;
- A copy of the district's 2015 Expanded Data Package; and
- A Letter of Water Availability for the project.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

H2M water
538 Broad Hollow Road, 4th Floor East
Melville, NY 11747
tel 631.756.8000
fax 631.694.4122

June 7, 2017

Mr. Warren Hanson
Galli Engineering, PC
35 Pinelawn Road
Suite 209-E
Melville NY 11747

Re: Riverhead Water District
221 East Main Street, Riverhead
S.C.T.M. Designation: 0600-129-01-21 & 22
Request for Water Availability

Dear Mr. Hanson:

We are the consulting engineers for the Riverhead Water District (District) and have been directed to respond to your request for water availability to service the above referenced project. The Water District map indicates that modification of the existing distribution system will be required in order to provide water service to the proposed mixed-use development. This correspondence can be considered a "letter of water availability" contingent upon acceptance of the terms outlined herein.

Water will be supplied from the District upon compliance with the following items:

1. Approval of Site Plan by Town of Riverhead
2. Extension of new water facilities as detailed in the Engineering Report entitled Lateral Water Main Extension for Riverview Lofts dated May 2017.
3. Approval of this report by the Riverhead Town Board.
4. Payment of applicable monies associated with the lateral extension of water main.
5. Payment of applicable Key Money Fees as detailed in aforementioned report.

A copy of the referenced engineering report will be provided under separate cover.

Should you have any questions or comments, please contact this office.

Very truly yours,

H2M architects + engineers

John Collins

John R. Collins, P.E.

cc: Superintendent Mark Conklin
Richard Ehlers, Esq.

\\FS1\Projects\RDWD (Riverhead Water District) - 10810\RDWD1752 - Georgica Green\correspondence\17.07.11_Galli - Water Availability.doc

RWD Riverhead Water District

1035 Pulaski Street, Riverhead, New York 11901-3043
Phone: 631.727.3205 FAX: 631.369.4608

Mark K Conklin, Superintendent
Email: conklin@townofriverheadny.gov

Thomas Kruger, Assistant Superintendent
Email: kruger@townofriverheadny.gov

December 2, 2016

Mr. Phil Malicki
Nelson & Pope
572 Walt Whitman Road
Melville NY 11747

Re: 2015 Drinking Water Quality Report & Supplemental Data

Dear Mr. Malicki:

Pursuant to your request, enclosed please find the above document. If you have any questions or if we may be of further assistance to you, please do not hesitate to contact us.

Very truly yours,

LYNN M BARAUSKAS
Account Clerk Typist

LMB
Enclosure

2015 drinking water quality report

RIVERHEAD WATER DISTRICT
PUBLIC WATER SUPPLY IDENTIFICATION NO. 5103705

ANNUAL WATER SUPPLY REPORT **MAY 2016**

Dear Water District Resident:

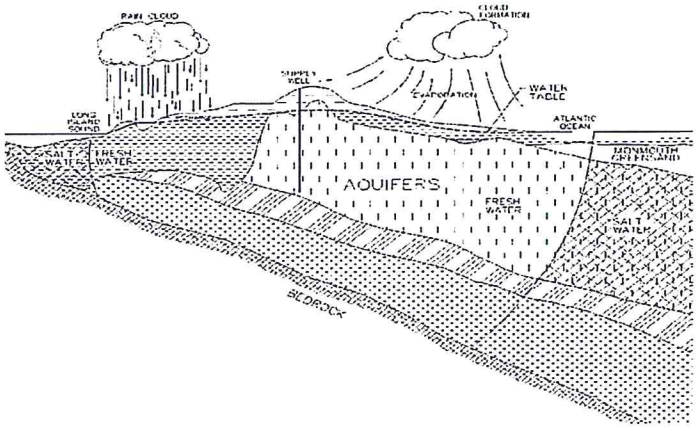
We are pleased to present to you the Riverhead Water District's 2015 Consumer Confidence Report/Annual Water Supply Statement. As shown in this report, the Riverhead Water District continues to provide the residents with a source of water for all of our domestic needs which is reliable and of high quality. Our water is continuously tested to ensure that it meets all drinking water standards. As the Town grows, so does our Water District. We have completed the construction of additional wells and pumping stations to increase our water supply capabilities. Simultaneously, we encourage all of our residents to conserve water so we can limit the expense connected with the construction of new additional facilities just to meet the water demands for the few peak days during the summer.

Our Water District staff works hard to make sure every resident has clean water every time he or she turns on the tap. Additional information about our Water District and our water supply can be found on our Town website, www.townofriverheadny.gov.

SOURCE OF OUR WATER

The source of water for the District is groundwater pumped from seventeen (17) active wells located throughout the community that are drilled into the Glacial and Magothy aquifers beneath Long Island, as shown on the adjacent figure. Generally, the water quality of the aquifer is good to excellent, although there are localized areas of contamination.

The population served by the Riverhead Water District during 2015 was approximately 33,777. The total amount of water withdrawn from the aquifer in 2015 was 3.04 billion gallons, of which approximately 89.8 percent was billed directly to the residents of the District.



THE LONG ISLAND AQUIFER SYSTEM

INFORMATION ABOUT OUR DRINKING WATER

This report is required to be delivered to all residents of our District in compliance with Federal and State regulations. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. The Riverhead Town Board and the District employees are committed to ensuring that you and your family receive the highest quality water.

COST OF WATER

During 2015, the District utilized a unit price billing schedule with the consumer being billed at a rate of $10.90 for the first 5,000 gallons per quarter plus $1.50 for each additional 1,000 gallons for the District's 3/4 inch service size. The billing rate is $19.90 per quarter for first 12,000 gallons for 1 inch meters plus $1.50 for each additional 1,000 gallons. For rates for larger water service sizes, please go to the Town's website.

CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water is safe and meets all Federal and State requirements with the exception of iron and manganese. If you have any questions about this report or concerning your water utility, please contact Water District Supt. Mark Conklin at (631) 727-3205 or the Suffolk County Department of Health Services at (631) 852-5810. Water District issues are normally discussed at Town Board meetings that are held on the first and third Tuesday of each month. Log on to the website at www.townofriverheadny.gov for times and locations or call (631-727-3205).

The Riverhead Water District monitors for different parameters and contaminants in your drinking water as required by Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. For more information on contamination and potential health risks, please contact the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants.

In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water suppliers. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants, can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by microbial pathogens are available from the Safe Drinking Water Hotline (1-800-426-4791).

The USEPA established a Lead and Copper Rule that requires all public water suppliers to sample and test for lead and copper at the tap. The first testing was required in 1992. All results were excellent indicating that the District's corrosion control treatment program was effective in preventing the leaching of lead and copper from your home's plumbing into your drinking water. The same testing was last conducted in 2013 with the same excellent results.

WATER CONSERVATION MEASURES

The underground water system of Long Island has more than enough water for present water demands. However, saving water will ensure that our future generations will always have a safe and abundant water supply.

The Riverhead Water District continues to implement a water conservation program to help reduce the peak day water use. Several years ago, there were a few days where the total water demand on the District started to exceed the pumping capacity of our system.

Most of this water use was due to lawn irrigation. While the District is proceeding with the construction of new wells to meet the increased water demand, water conservation is necessary to insure we have sufficient water supply during these peak periods for our normal needs as well as the fire fighting protection. A detailed newsletter explaining the water conservation program is attached to this water report. The Riverhead Water District requests that all residents help us conserve water.

WATER QUALITY

In accordance with State regulations, the Riverhead Water District routinely monitors your drinking water for numerous parameters. We test your drinking water for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes and synthetic organic contaminants. Over 135 separate parameters are tested in each of our wells numerous times per year. The table presented on page 3 depicts the quality of your drinking water. It should be noted that many of these parameters are naturally found in all Long Island drinking water and do not pose any adverse health effects.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. The source of the nitrates is the nitrogen in fertilizers and from on-site septic systems. If you are caring for an infant you should ask advice from your health care provider.

WATER TREATMENT

The Riverhead Water District provides treatment at all wells to improve the quality of the water pumped prior to distribution to the consumer. The pH of the pumped water is adjusted upward to reduce corrosive action between the water and water mains and in-house plumbing by the addition of lime. The water is also chlorinated with calcium hypochlorite to protect against the growth of bacteria in the distribution system. The District also adds iron sequestering agents at all wells as part of the District's overall water treatment program to supplement corrosion control and to maintain iron in the soluble state to minimize water stains on laundry and plumbing fixtures.

The District has constructed an ion exchange filtration system at Plant No. 16 for the removal of perchlorate. Perchlorate is a manmade substance most often associated with the production of fertilizers and fireworks. Research has indicated that continuous high levels of perchlorate may effect the thyroid gland. Although the USEPA has not set a drinking water standard for perchlorate, the NYS Dept. of Health has enacted an action level of 18.0 ug/l. Perchlorate is not present in the majority of the District wells, however, the District has recenlty installed treatment for perchlorate at one of their sites, Plant No. 16 on Edwards Avenue.

2015 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant
Inorganic Contaminants							
Lead	No	August/September 2013	ND - 1.3 ND[1]	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Copper	No	August/September 2013	ND - 0.49 0.30[1]	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Arsenic[2]	No	03/04/15	ND - 5.8	ug/l	n/a	MCL = 10	Naturally occuring
Barium	No	05/27/15	ND - 0.065	mg/l	2	MCL = 2.0	Naturally occurring
Magnesium	No	07/16/15	ND - 3.8	mg/l	n/a	MCL = 22	Naturally occurring
Nickel	No	06/01/15	ND - 0.9	ug/l	n/a	MCL = 100	Naturally occurring
Ammonia (As Nitrogen)	No	06/01/15	ND - 0.28	mg/l	n/a	MCL = 5.0	Runnoff from fertilizer and leaching from septic tanks and sewage
Calcium	No	07/16/15	ND - 17.0	mg/l	n/a	No MCL	Naturally occurring
Sodium	No	05/27/15	4.4 - 100.0	mg/l	n/a	No MCL[3]	Naturally occurring
Chloride	Yes	05/27/15	5.0 - 279.0	mg/l	n/a	MCL = 250	Naturally occurring
Iron	Yes[4]	09/23/15	ND - 950	ug/l	n/a	MCL = 300[4]	Naturally occurring
Manganese	No[4]	10/16/15	ND - 150	ug/l	n/a	MCL = 300	Naturally occurring
Nitrate	No	10/16/15	ND - 7.2	mgl	10	MCL = 10[6]	Runnoff from fertilizer and leaching from septic tanks and sewage
Sulfate	No	05/20/15	ND - 69.1	mg/l	n/a	MCL = 250	Naturally occurring
Unregulated Contaminants							
Perchlorate	No	03/23/15	ND - 13.5	ug/l	n/a	AL = 18[5]	Fertilizers
Synthetic Organic Contaminants Including Pesticides and Herbicides							
bis-(2-ethylhexyl)phthalate	No	06/10/15	ND - 0.9	ug/l	--	MCL = 6	Discharge from industrial facilities
Volatile Organic Contaminants							
None Detected	--	--	ND	--	--	--	--
Radionuclides							
Gross Alpha	No	02/24/12	ND - 0.652	pCi/L	n/a	MCL = 15	Naturally occurring
Radium 226 & 228	No	02/29/12	ND - 0.937	pCi/L	n/a	MCL = 5	Naturally occurring
Unregulated Contaminant Monitoring Rule[5]							
1,2,3-Trichloropropane	No	03/19/14	ND - 0.3	ug/l	n/a	MCL = 5	Industrial solvents, soil fumigant & degreasing agents
Chromium	No	03/19/14	ND - 2.6	ug/l	100	MCL = 100	Natural deposits
Molybdenum	No	03/19/14	ND - 1.2	ug/l	n/a	No MCL	Naturally occurring
Strontium	No	03/19/14	24.6 - 99.2	ug/l	n/a	No MCL	Naturally occurring
Vanadium	No	03/19/14	ND - 3.4	ug/l	n/a	No MCL	Naturally occurring
Hexavelent Chromium	No	03/19/14	ND - 2.6	ug/l	n/a	MCL = 100	Natural deposits
Chlorate	No	03/19/14	ND - 5.2	ug/l	n/a	No MCL	Naturally occurring

Definitions:

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Milligrams per liter (mg/l) - Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l) - Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Non-Detects (ND) - Laboratory analysis indicates that the constituent is not present.

pCi/L - pico Curies per Liter is a measure of radioactivity in water.

[1] - During 2013 we collected and analyzed 31 samples for lead and copper. The 90% percentile is presented as the maximum result. The Action Levels for both lead and copper were not exceeded at any site tested. Retesting is scheduled for 2016. If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Riverhead Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

[2] – NYS and EPA have promulgated a drinking water arsenic standard of 10 parts per billion. While your drinking water meets the standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effect on low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

[3] - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on high restricted sodium diets and 270 mg/l for those on moderate sodium diets.

[4] - Iron has no health effects. At 1,000 ug/L a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/L, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/L represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multi-vitamins may contain 3,000 or 4,000 micrograms of iron per capsule. The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2,000-5,000 micrograms for adults. However, many peoples diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetables or are vegetarian. The infant population is of the greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese. Excess manganese produces a brownish color in laundered good and impairs the taste of tea, coffee and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures. As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.

[5] - Perchlorate is an unregulated contaminant. However, the NYS Dept. of Health has established an action level of 18 ug/l. At Plant No. 5 on Middle Road, Well No. 5-1 is blended with Well No. 5-2 to provide a manganese level below the MCL.

[6] - Water from some of the wells within the Riverhead Water District have a slightly elevated nitrate level. This level is below the maximum contaminant level of 10.0 parts per million. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. The source of the nitrates is the nitrogen in fertilizers and from on-site septic systems. If you are caring for an infant, you should ask advice from your health care provider.

WATER SYSTEM IMPROVEMENTS

The Riverhead Water District has recently completed the construction of an ion exchange water treatment filter to remove perchlorate from the water at their Plant No. 16 site. The perchlorate level from this well or any other District well has never exceeded NYS drinking water guidelines. The District considered implementing treatment as a top priority and in the best interest of its residents. This filter is currently in service reducing perchlorate to non-detectable levels. The District is evaluating what additional improvements to the water system that will be needed in the next few years.

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2015, are available at the Riverhead Water District office located at 1035 Pulaski Street, Riverhead, New York, the Town Clerk's office and the local Public Library.

We, at the Riverhead Water District, work around the clock to provide top quality water to every tap throughout the community. We ask that all our customers help us protect our water supply, which will improve our way of life and our children's future.

The Riverhead Water District normally conducts over 1,000 water quality tests throughout the year, testing for over 130 different contaminants which have been undetected in our water supply including:

Cadmium	Aldicarb Sulfone	Carbon Tetrachloride
Mercury	Aldicarbsulfoxide	1,1-Dichloropropene
Selenium	Aldicarb	1,2-Dichloroethane
Silver	Total Aldicarbs	Trichloroethene
Color	Oxamyl	1,2-Dichloropropane
Turbidity	Methomyl	Dibromomethane
Odor	3-Hydroxycarbofuran	Trans-1,3-Dichloropropene
Total Alkalinity	Carbofuran	cis-1,3-Dichloropropene
Detergents (MBAS)	Carbaryl	1,1,2-Trichloroethane
Free Cyanide	Glyphosate	Tetrachloroethene
Fluoride	Diquat	1,3-Dichloropropane
Antimony	Endothall	Chlorobenzene
Beryllium	1,2-Dibromoethane (EDB)	1,1,1,2-Tetrachloroethane
Thallium	1,2-Dibromo-3-Chl.Propane	Bromobenzene
Lindane	Dioxin	1,1,2,2-Tetrachloroethane
Heptachlor	Chloroacetic Acid	2-Chlorotoluene
Aldrin	Bromoacetic Acid	4-Chlorotoluene
Heptachloro Epoxide	Dichloroacetic Acid	1,2-Dichlorobenzene
Dieldrin	Trichloroacetic Acid	1,3-Dichlorobenzene
Endrin	Dibromoacetic Acid	1,4-Dichlorobenzene
Methoxychlor	Total Haloacetic Acid	1,24-Trichlorobenzene
Toxaphene	Chloroform	Hexachlorobutadiene
Chlordane	Bromodichloromethane	1,2,3-Trichlorobenzene
Total PCBs	Dibromochloromethane	Benzene
Propachlor	Bromoform	Toluene
Alachlor	Total Trihalomethanes	Ethylbenzene
Simazine	Gross Beta	M.P-Xylene
Atrazine	Radium 226	O-Xylene
Metolachlor	Dichlorodifluoromethane	Styrene
Metribuzin	Chloromethane	Isopropylbenzene (Cumene)
Butachlor	Vinyl Chloride	N-Propylbenzene
2,4-D	Bromomethane	1,3,5-Trimethylbenzene
2,4,5-TP (Silvex)	Chloroethane	Tert-Butylbenzene
Dinoseb	Trichlorofluoromethane	1,2,4-Trimethylbenzene
Dalapon	Chlorodifluoromethane	Sec-Butylbenzene
Picloram	1,1-Dichloroethene	4-Isopropyltoluene (P-Cumene)
Dicamba	Methylene Chloride	N-Butylbenzene
Pentachlorophenol	Trans-1,2-Dichloroethene	Methyl Tert.Butyl Ether (MTBE)
Hexachlorocyclopentadiene	1,1-Dichloroethane	
bis(2-Ethylhexyl)adipate	cis-1,2-Dichloroethene	
Trihalomethanes (THMs)	2,2-Dichloropropane	
Hexachlorobenzene	Bromochloromethane	
Benzo(A)Pyrene	1,1,1-Trichloroethane	

SOURCE WATER ASSESSMENT

The NYSDOH has completed a source water assessment for this system, based on available information. Known and possible contamination sources to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water. It does not mean that the water delivered to consumers is, or will become, contaminated. (See section "Water Quality" for a list of contaminants that have been detected.) The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from 17 active wells. The source water assessment has rated most of the wells as having a high susceptibility to industrial solvents, pesticides and nitrates and microbial contamination. The elevated susceptibility ratings are due primarily to the various land uses and their related point sources of contamination in the assessment area. The land uses include unsewered commercial, industrial and residential, as well as agricultural land use. While the source water assessment rates our well as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting the Water District.

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (mg/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT (raw/treat)	AVG. RESULT (raw/treat)	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
INORGANIC												
ARSENIC	10.0 ug/l	3.0 ug/l	5.8[5]	5.2	4.6[5]	4.2	3.7[5]	3.6	ND	ND	2.2[5]	2.0
BARIUM	2.0 mg/l	0.2 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM	5.0 ug/l	5.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHROMIUM	0.10 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COPPER	[1.3] mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE	2.2 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LEAD	[15.0] ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MERCURY	2.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SELENIUM	10.0 mg/l	5.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SILVER	0.1 mg/l	0.01 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SODIUM	**20/270 mg/l	0.2 mg/l	4.7	4.7	4.5	4.5	4.4	4.4	5.0	5.0	5.3	5.3
SPECIFIC CONDUCTIVITY	None	None	82	82	84	84	78	78	75	75	97	97
ZINC	5.0 mg/l	0.02 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COLOR	15 Units	5 Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ODOR	3 Units	0 Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
IRON	0.3 mg/l	0.02 mg/l	0.2	0.2	***1.0[6]	***0.8	0.1	0.1	0.02	0.02	***0.7[4]	***0.6
MANGANESE	0.3 mg/l	0.01 mg/l	ND	ND	0.04	0.0	ND	ND	ND	ND	0.04	0.04
AMMONIA	None	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.3	0.3
NITRITE	1.0 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NITRATE	10.0 mg/l	0.1 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORIDE	250 mg/l	2.0 mg/l	6.1	6.1	6.2	6.2	5.7	5.7	5.9	5.9	8.1	8.1
TOTAL HARDNESS	None	1.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL ALKALINITY	None	0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
pH (BEFORE TREATMENT)	None	None	6.5	6.5	7.0	7.0	6.6	6.6	6.7	6.7	6.4	6.4
TOTAL DISSOLVED SOLIDS	None	5.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SULFATE	250 mg/l	5.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	15.4	15.4
ANTIMONY	6.0 ug/l	5.9 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BERYLLIUM	4.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CALCIUM	None	1.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAGNESIUM	None	1.0 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NICKEL	0.10 mg/l	0.04 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.001	0.001
THALLIUM	2.0 ug/l	0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYANIDE	0.2 mg/l	0.010 mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PERCHLORATE	18.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
** - 20 mg/l IS THE LIMIT FOR PEOPLE ON HIGHLY RESTRICTED SODIUM DIETS AND 270 mg/l FOR THOSE ON MODERATELY RESTRICTED SODIUM DIETS
[ ] - USEPA/NYSDH ACTION LEVEL
*** - EXCEEDS NEW YORK STATE MAXIMUM CONTAMINANT LEVEL FOR POTABLE WATER BEFORE TREATMENT.
THE STANDARD FOR IRON IS A SECONDARY STANDARD FOR AESTHETICS ONLY. IRON POSES NO HEALTH RISKS.
( ) - NUMBER OF SAMPLES COLLECTED AND TESTING DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348(1)		WELL NO. 2 S-7261(1)		WELL NO. 3A S-15117(1)		WELL NO. 4-1 S-30271(1)		WELL NO. 4-2 S-34732(1)	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC)												
LINDANE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR	0.4 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDRIN	5.0 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR EPOXIDE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIELDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHOXYCHLOR	40.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOXAPHENE	3.0 ug/l	2.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORDANE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL PCBs	0.5 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PROPACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALACHLOR	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SIMAZINE	4.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ATRAZINE	3.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METOLACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METRIBUZIN	50.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BUTACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-10834[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC) (CONT'D.)												
2,4-D	50.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TP (SILVEX)	10.0 ug/l	0.13 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DINOSEB	7.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DALAPON	200 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PICLORAM	500 ug/l	0.6 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DICAMBA	50.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	1.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	50.0 ug/l	0.64 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ETHYLHEXYL)ADIPATE	400 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ETHYLHEXYL)PHTHALATE	6.0 ug/l	3.0 ug/l	ND	ND	0.9	0.9	ND	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	1.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZO(A)PYRENE	0.2 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARB SULFONE	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARBSULFOXIDE	4.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ALDICARB	3.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL ALDICARBS	7.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OXAMYL	200 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHOMYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-HYDROXYCARBOFURAN	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBOFURAN	40.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBARYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GLYPHOSATE	700 ug/l	10.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIQUAT	20 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDOTHALL	100 ug/l	50.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMOETHANE (EDB)	0.05 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMO-3-CHL.PROPANE	0.2 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS												
DICHLORODIFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2 DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NOS. 2 & 3 ARE OUT OF SERVICE

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348(1) MAX. RESULT	WELL NO. 1A S-108348(1) AVG. RESULT	WELL NO. 2 S-7261(1) MAX. RESULT	WELL NO. 2 S-7261(1) AVG. RESULT	WELL NO. 3A S-15117(1) MAX. RESULT	WELL NO. 3A S-15117(1) AVG. RESULT	WELL NO. 4-1 S-30271(1) MAX. RESULT	WELL NO. 4-1 S-30271(1) AVG. RESULT	WELL NO. 4-2 S-34732(1) MAX. RESULT	WELL NO. 4-2 S-34732(1) AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
1,3-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M,P-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
STYRENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348[1]		WELL NO. 2 S-7261[1]		WELL NO. 3A S-15117[1]		WELL NO. 4-1 S-30271[1]		WELL NO. 4-2 S-34732[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
TERT-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-ISOPROPYLTOLUENE (P-CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL TERT.BUTYL ETHER (MTBE)	10.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-109348(1)		WELL NO. 2 S-7261(1)		WELL NO. 3A S-15117(1)		WELL NO. 4-1 S-30271(1)		WELL NO. 4-2 S-34732(1)	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
TRIHALOMETHANES AND HALOACETIC ACIDS												
CHLOROACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL HALOACETIC ACID	60 ug/l	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TRIHALOMETHANES	80 ug/l	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
RADIONUCLIDES												
GROSS ALPHA	15 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
GROSS BETA	50 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
RADIUM 226	5 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	
RADIUM 228	5 pCi/L	< 3 pCi/L	NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED		NOT TESTED	

CONT. - CONTAMINANT
ND - NOT DETECTED
pCi/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

WELL NOS. 2 & 3 ARE OUT OF SERVICE

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 1A S-108348 MAX. RESULT	WELL NO. 1A S-108348 AVG. RESULT	WELL NO. 2 S-7261 MAX. RESULT	WELL NO. 2 S-7261 AVG. RESULT	WELL NO. 3A S-15117 MAX. RESULT	WELL NO. 3A S-15117 AVG. RESULT	WELL NO. 4-1 S-30271 MAX. RESULT	WELL NO. 4-1 S-30271 AVG. RESULT	WELL NO. 4-2 S-34732 MAX. RESULT	WELL NO. 4-2 S-34732 AVG. RESULT
UCMR3												
1,4 DIOXANE	50 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOLATILES												
1,1-DICHLOROETHANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLORPROPANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-BUTADIENE	50 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	50 ug/l	0.06 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORODIFLUOROMETHANE	5.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PERFLUOROCHEMICALS												
PERFLUOROBUTANESULFONIC ACI	5.0 ug/l	0.9 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROHEPTANOIC ACID	5.0 ug/l	0.01 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROHEXANESULFONIC ACI	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUORONONANOIC ACID	5.0 ug/l	0.02 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROOCTANESULFONIC ACI	5.0 ug/l	0.04 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
PERFLUOROOCTANOIC ACID	5.0 ug/l	0.02 ug/l	ND	ND	ND	ND	NOT	TESTED	NOT	TESTED	NOT	TESTED
METALS												
CHROMIUM	100 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COBALT		1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM		1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
STRONTIUM		0.3 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VANADIUM		0.2 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEXAVELENT CHROMIUM		0.03 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORATE		20 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HORMONES												
17-ALPHA-ETHYNYLESTRADIOL	50 ug/l	0.0004 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
17-BETA-ESTRADIOL	50 ug/l	0.0009 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
4-ANDROSTENE-3,17-DIONE	50 ug/l	0.0003 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
EQUILIN	50 ug/l	0.004 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
ESTRIOL	50 ug/l	0.0008 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
ESTRONE	50 ug/l	0.002 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
TESTOSTERONE	50 ug/l	0.0001 ug/l	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT OETECTED
Pg/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA

PARAMETERS (mg/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1]		WELL NO. 5-2A S-124088[1]		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133[1]		WELL NO. 7-3 S-105439[1]	
			MAX. RESULT (raw/treat)	AVG. RESULT (raw/treat)	MAX. RESULT (raw/treat)	AVG. RESULT (raw/treat)	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
INORGANIC												
ARSENIC	10.0 ug/l	3.0 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
BARIUM	2.0 mg/l	0.2 mg/l	0.07	0.07	0.03	0.03			0.003	0.003	ND	ND
CADMIUM	5.0 ug/l	5.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHROMIUM	0.10 mg/l	0.01 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
COPPER	[1.3] mg/l	0.02 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
FLUORIDE	2.2 mg/l	0.1 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
LEAD	[15.0] ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
MERCURY	2.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
SELENIUM	10.0 mg/l	5.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
SILVER	0.1 mg/l	0.01 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
SODIUM	**20/270 mg/l	0.2 mg/l	18.0	18.0	15.0	15.0			4.4	4.4	4.9	4.9
SPECIFIC CONDUCTIVITY	None	None	227	227	197	197			58	58	82	82
ZINC	5.0 mg/l	0.02 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
COLOR	15 Units	5 Units	ND	ND	ND	ND			ND	ND	ND	ND
ODOR	3 Units	0 Units	ND	ND	ND	ND			ND	ND	ND	ND
IRON	0.3 mg/l	0.02 mg/l	0.03	0.03	0.03	0.03			ND	ND	ND	ND
MANGANESE	0.3 mg/l	0.01 mg/l	0.4[10]/0.2[3]	0.3/0.1	0.1[7]/0.2[3]	0.02/0.1			ND	ND	ND	ND
AMMONIA	None	0.1 mg/l	0.2	0.2	ND	ND			ND	ND	ND	ND
NITRITE	1.0 mg/l	0.1 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
NITRATE	10.0 mg/l	0.1 mg/l	7.2[6]	6.0	3.40	3.40			0.3	0.3	0.2	0.2
CHLORIDE	250 mg/l	2.0 mg/l	36.2	36.2	29.40	29.40			6.1	6.1	5.4	5.4
TOTAL HARDNESS	None	1.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL ALKALINITY	None	0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
pH (BEFORE TREATMENT)	None	None	6.4	6.4	6.70	6.70			6.8	6.8	6.7	6.7
TOTAL DISSOLVED SOLIDS	None	5.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
SULFATE	250 mg/l	5.0 mg/l	21.0	21.0	22.7	22.7			ND	ND	ND	ND
ANTIMONY	6.0 ug/l	5.9 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BERYLLIUM	4.0 ug/l	0.3 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CALCIUM	None	1.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
MAGNESIUM	None	1.0 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
NICKEL	0.10 mg/l	0.04 mg/l	ND	ND	ND	ND			0.001	0.001	0.0006	0.0006
THALLIUM	2.0 ug/l	0.3 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CYANIDE	0.2 mg/l	0.010 mg/l	ND	ND	ND	ND			ND	ND	ND	ND
PERCHLORATE	18.0 ug/l	1.0 ug/l	ND	ND	1.20	1.20			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
** - 20 mg/l IS THE LIMIT FOR PEOPLE ON HIGHLY RESTRICTED SODIUM DIETS AND 270 mg/l FOR THOSE ON MODERATELY RESTRICTED SODIUM DIETS
[ ] - USEPA/NYSDH ACTION LEVEL
*** - EXCEEDS NEW YORK STATE MAXIMUM CONTAMINANT LEVEL FOR POTABLE WATER BEFORE TREATMENT.
THE STANDARD FOR IRON IS A SECONDARY STANDARD FOR AESTHETICS ONLY. IRON POSES NO HEALTH RISKS.
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1]		WELL NO. 5-2A S-88466[1]		WELL NO. 7-1 S-34272[1]		WELL NO. 7-2 S-89133[1]		WELL NO. 7-3 S-105439[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC)												
LINDANE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	OUT OF SERVICE		ND	ND	ND	ND
HEPTACHLOR	0.4 ug/l	0.025 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDRIN	5.0 ug/l	0.025 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEPTACHLOR EPOXIDE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIELDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ENDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHOXYCHLOR	40.0 ug/l	0.25 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOXAPHENE	3.0 ug/l	2.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLORDANE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL PCBs	0.5 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PROPACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALACHLOR	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
SIMAZINE	4.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ATRAZINE	3.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METOLACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METRIBUZIN	50.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BUTACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1] MAX. RESULT	WELL NO. 5-1 S-66685[1] AVG. RESULT	WELL NO. 5-2A S-88466[1] MAX. RESULT	WELL NO. 5-2A S-88466[1] AVG. RESULT	WELL NO. 7-1 S-34272[1] MAX. RESULT	WELL NO. 7-1 S-34272[1] AVG. RESULT	WELL NO. 7-2 S-89133[1] MAX. RESULT	WELL NO. 7-2 S-89133[1] AVG. RESULT	WELL NO. 7-3 S-105439[1] MAX. RESULT	WELL NO. 7-3 S-105439[1] AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC) (CONT'D.)												
2,4-D	50.0 ug/l	0.25 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
2,4,5-TP (SILVEX)	10.0 ug/l	0.13 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DINOSEB	7.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DALAPON	200 ug/l	0.7 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PICLORAM	500 ug/l	0.6 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DICAMBA	50.0 ug/l	0.08 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PENTACHLOROPHENOL	1.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	50.0 ug/l	0.64 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
bis(2-ETHYLHEXYL)ADIPATE	400 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
bis(2-ETHYLHEXYL)PHTHALATE	6.0 ug/l	3.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXACHLOROBENZENE	1.0 ug/l	0.25 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BENZO(A)PYRENE	0.2 ug/l	0.1 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDICARB SULFONE	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDICARBSULFOXIDE	4.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ALDICARB	3.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL ALDICARBS	7.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
OXAMYL	200 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHOMYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
3-HYDROXYCARBOFURAN	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CARBOFURAN	40.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CARBARYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
GLYPHOSATE	700 ug/l	10.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIQUAT	20 ug/l	1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ENDOTHALL	100 ug/l	50.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DIBROMOETHANE (EDB)	0.05 ug/l	0.02 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DIBROMO-3-CHL.PROPANE	0.2 ug/l	0.02 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685[1]		WELL NO. 5-2 S-88466[1]		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133[1]		WELL NO. 7-3 S-105439[1]	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS												
DICHLORODIFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
VINYL CHLORIDE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHYLENE CHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
cis-1,2 DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
2,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOCHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CARBON TETRACHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIBROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
cis-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TETRACHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685(1) MAX. RESULT	WELL NO. 5-1 S-66685(1) AVG. RESULT	WELL NO. 5-2 S-88466(1) MAX. RESULT	WELL NO. 5-2 S-88466(1) AVG. RESULT	WELL NO. 7-1 S-34272 MAX. RESULT	WELL NO. 7-1 S-34272 AVG. RESULT	WELL NO. 7-2 S-89133(1) MAX. RESULT	WELL NO. 7-2 S-89133(1) AVG. RESULT	WELL NO. 7-3 S-105439(1) MAX. RESULT	WELL NO. 7-3 S-105439(1) AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
1,3-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
CHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,3-TRICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
2-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
4-CHLOROTOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,3-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,4-DICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXACHLOROBUTADIENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOLUENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
M,P-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
O-XYLENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
STYRENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
N-PROPYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685 (1)		WELL NO. 5-2 S-88466 (1)		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133 (1)		WELL NO. 7-3 S-105439 (1)	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
TERT-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
SEC-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
4-ISOPROPYLTOLUENE (P-CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
N-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
METHYL TERT.BUTYL ETHER (MTBE)	10.0 ug/l	0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND

ND - NOT DETECTED
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

GREENLAWN WATER DISTRICT

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685(1) MAX. RESULT	WELL NO. 5-1 S-66685(1) AVG. RESULT	WELL NO. 5-2 S-88466(1) MAX. RESULT	WELL NO. 5-2 S-88466(1) AVG. RESULT	WELL NO. 7-1 S-34272 MAX. RESULT	WELL NO. 7-1 S-34272 AVG. RESULT	WELL NO. 7-2 S-89133(1) MAX. RESULT	WELL NO. 7-2 S-89133(1) AVG. RESULT	WELL NO. 7-3 S-105439(1) MAX. RESULT	WELL NO. 7-3 S-105439(1) AVG. RESULT
TRIHALOMETHANES AND HALOACETIC ACIDS												
CHLOROACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
BROMOACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TRICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIBROMOACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL HALOACETIC ACID	60 ug/l	< 2.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLOROFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMODICHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
TOTAL TRIHALOMETHANES	80 ug/l	< 1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
RADIONUCLIDES												
GROSS ALPHA	15 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
GROSS BETA	50 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
RADIUM 226	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
RADIUM 228	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT DETECTED
pCi/L - PICOGRAMS PER LITER
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 5-1 S-66685		WELL NO. 5-2 S-88466		WELL NO. 7-1 S-34272		WELL NO. 7-2 S-89133		WELL NO. 7-3 S-105439	
			MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT	MAX. RESULT	AVG. RESULT
UCMR3												
1,4 DIOXANE	50 ug/l	0.7 ug/l	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND	ND	ND
VOLATILES												
1,1-DICHLOROETHANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,2,3-TRICHLORPROPANE	5.0 ug/l	0.03 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
1,3-BUTADIENE	50 ug/l	0.1 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOCHLOROMETHANE	50 ug/l	0.06 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
BROMOMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLORODIFLUOROMETHANE	5.0 ug/l	0.08 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLOROMETHANE	5.0 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
PERFLUOROCHEMICALS												
PERFLUOROBUTANESULFONIC ACI	5.0 ug/l	0.9 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROHEPTANOIC ACID	5.0 ug/l	0.01 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROHEXANESULFONIC ACI	5.0 ug/l	0.03 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUORONONANOIC ACID	5.0 ug/l	0.02 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROOCTANESULFONIC ACI	5.0 ug/l	0.04 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
PERFLUOROOCTANOIC ACID	5.0 ug/l	0.02 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
METALS												
CHROMIUM	100 ug/l	0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
COBALT		1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
MOLYBDENUM		1.0 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
STRONTIUM		0.3 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
VANADIUM		0.2 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HEXAVELENT CHROMIUM		0.03 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
CHLORATE		20 ug/l	ND	ND	ND	ND			ND	ND	ND	ND
HORMONES												
17-ALPHA-ETHYNYLESTRADIOL	50 ug/l	0.0004 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
17-BETA-ESTRADIOL	50 ug/l	0.0009 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
4-ANDROSTENE-3,17-DIONE	50 ug/l	0.0003 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
EQUILIN	50 ug/l	0.004 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
ESTRIOL	50 ug/l	0.0008 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
ESTRONE	50 ug/l	0.002 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED
TESTOSTERONE	50 ug/l	0.0001 ug/l	NOT	TESTED	NOT	TESTED			NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
WELL NO. 7-1 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707[1] MAX. RESULT	WELL NO. 11-1 S-17707[1] AVG. RESULT	WELL NO. 11-2 S-122918T[1] MAX. RESULT	WELL NO. 11-2 S-122918T[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110[1] MAX. RESULT	WELL NO. 12-2 S-35110[1] AVG. RESULT	WELL NO. 15-1A S-129655[1] MAX. RESULT	WELL NO. 15-1A S-129655[1] AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC)												
LINDANE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
HEPTACHLOR	0.4 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDRIN	5.0 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEPTACHLOR EPOXIDE	0.2 ug/l	0.025 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIELDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ENDRIN	2.0 ug/l	0.05 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHOXYCHLOR	40.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOXAPHENE	3.0 ug/l	2.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHLORDANE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOTAL PCBs	0.5 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
PROPACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALACHLOR	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
SIMAZINE	4.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ATRAZINE	3.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METOLACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METRIBUZIN	50.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BUTACHLOR	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX CONT LEVEL	DETECT LIMITS	WELL NO. 11-1 S-17707 (1) MAX. RESULT	WELL NO. 11-1 S-17707 (1) AVG. RESULT	WELL NO. 11-2 S-122918T (1) MAX. RESULT	WELL NO. 11-2 S-122918T (1) AVG. RESULT	WELL NO. 12-1 S-49605 (1) MAX. RESULT	WELL NO. 12-1 S-49605 (1) AVG. RESULT	WELL NO. 12-2 S-35110 (1) MAX. RESULT	WELL NO. 12-2 S-35110 (1) AVG. RESULT	WELL NO. 15-1A S-129655 (1) MAX. RESULT	WELL NO. 15-1A S-129655 (1) AVG. RESULT
SYNTHETIC ORGANICS CONTAMINANTS (SOC) (CONT'D.)												
2,4-D	50.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
2,4,5-TP (SILVEX)	10.0 ug/l	0.13 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DINOSEB	7.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DALAPON	200 ug/l	0.7 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
PICLORAM	500 ug/l	0.6 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DICAMBA	50.0 ug/l	0.08 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
PENTACHLOROPHENOL	1.0 ug/l	0.2 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEXACHLOROCYCLOPENTADIENE	50.0 ug/l	0.64 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
bis(2-ETHYLHEXYL)ADIPATE	400 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
bis(2-ETHYLHEXYL)PHTHALATE	6.0 ug/l	3.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
HEXACHLOROBENZENE	1.0 ug/l	0.25 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BENZO(A)PYRENE	0.2 ug/l	0.1 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDICARB SULFONE	2.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDICARBSULFOXIDE	4.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ALDICARB	3.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TOTAL ALDICARBS	7.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
OXAMYL	200 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHOMYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
3-HYDROXYCARBOFURAN	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CARBOFURAN	40.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CARBARYL	50.0 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
GLYPHOSATE	700 ug/l	10.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIQUAT	20 ug/l	1.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
ENDOTHALL	100 ug/l	50.0 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DIBROMOETHANE (EDB)	0.05 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DIBROMO-3-CHL.PROPANE	0.2 ug/l	0.02 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707[1] MAX. RESULT	WELL NO. 11-1 S-17707[1] AVG. RESULT	WELL NO. 11-2 S-122918[1] MAX. RESULT	WELL NO. 11-2 S-122918[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655[1] MAX. RESULT	WELL NO. 15-1A S-129655[1] AVG. RESULT
VOLATILE ORGANICS												
DICHLORODIFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	OUT OF SERVICE		ND	ND
CHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
VINYL CHLORIDE	2.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRICHLOROFLUOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHYLENE CHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRANS-1,2-DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
cis-1,2 DICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
2,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
BROMOCHLOROMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1,1-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
CARBON TETRACHLORIDE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRICHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,2-DICHLOROPROPANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
DIBROMOMETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TRANS-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
cis-1,3-DICHLOROPROPENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
1,1,2-TRICHLOROETHANE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
TETRACHLOROETHENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

CONT. - CONTAMINANT
ND - NOT DETECTED
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT. LEVEL	DETECT. LIMITS	WELL NO. 11-1 S-17707[1] MAX. RESULT	WELL NO. 11-1 S-17707[1] AVG. RESULT	WELL NO. 11-2 S-122918T[1] MAX. RESULT	WELL NO. 11-2 S-122918T[1] AVG. RESULT	WELL NO. 12-1 S-49605[1] MAX. RESULT	WELL NO. 12-1 S-49605[1] AVG. RESULT	WELL NO. 12-2 S-35110 MAX. RESULT	WELL NO. 12-2 S-35110 AVG. RESULT	WELL NO. 15-1A S-129655[1] MAX. RESULT	WELL NO. 15-1A S-129655[1] AVG. RESULT
VOLATILE ORGANICS (CONT'D.)												
TERT-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND	OUT OF	SERVICE	ND	ND
1,2,4-TRIMETHYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
SEC-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
4-ISOPROPYLTOLUENE (P-CUMENE)	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
N-BUTYLBENZENE	5.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND
METHYL TERT.BUTYL ETHER (MTBE)	10.0 ug/l	0.5 ug/l	ND	ND	ND	ND	ND	ND			ND	ND

ND - NOT DETECTED
WELL NO. 12-2 - OUT OF SERVICE
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

RIVERHEAD WATER DISTRICT
2015 WATER QUALITY DATA (continued)

PARAMETERS (ug/l)	MAX. CONT LEVEL	DETECT. LIMITS	WELL NO. 15-2 S-129656[1] MAX. RESULT	WELL NO. 15-2 S-129656[1] AVG. RESULT	WELL NO. 15-3 S-129657[1] MAX. RESULT	WELL NO. 15-3 S-129657[1] AVG. RESULT	WELL NO. 16 S-129453[4] MAX. RESULT	WELL NO. 16 S-129453[4] AVG. RESULT	WELL NO. 17-1 S-130317[1] MAX. RESULT	WELL NO. 17-1 S-130317[1] AVG. RESULT
TRIHALOMETHANES AND HALOACETIC ACIDS										
CHLOROACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROACETIC ACID	—	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOACETIC ACID	—	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL HALOACETIC ACID	60 ug/l	< 2.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	50 ug/l	< 0.5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TRIHALOMETHANES	80 ug/l	< 1.0 ug/l	ND	ND	ND	ND	ND	ND	ND	ND
RADIONUCLIDES										
GROSS ALPHA	15 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
GROSS BETA	50 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
RADIUM 226	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED
RADIUM 228	5 pCi/L	< 3 pCi/L	NOT	TESTED	NOT	TESTED	NOT	TESTED	NOT	TESTED

CONT. - CONTAMINANT
ND - NOT DETECTED
Pg/L - PICOGRAMS PER LITER
( ) - NUMBER OF SAMPLES COLLECTED AND TESTED DURING YEAR

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING
572 WALT WHITMAN ROAD, MELVILLE, NY 11747 - 2188
(631) 427-5665 FAX (631) 427-5620

November 4, 2016

Riverhead Sewer District (RSD)
2 River Avenue
Riverhead, NY 11901
attn.: Michael Reichel, Superintendent

Re: 221 East Main Street/31 McDermott Avenue
Mixed-Use Project
Supplemental EAF
NPV #16068

Dear Superintendent Reichel:

Nelson, Pope & Voorhis, LLC is preparing a Supplemental Environmental Assessment Form (EAF) for the above-referenced proposal for the 0.85-acre project site (see attached **Figure 1-8**, Existing Site and Area Conditions). The project involves demolishing the one-story vacant brick commercial structure at 221 East Main Street and the one-story occupied frame commercial and residential structure at 31 McDermott Avenue, and replacing them with a single, five-story mixed retail and residential building. A total of about 16,000 square feet of commercial spaces (including two restaurants totaling 481 seats) are proposed for the building's ground floor, with 117 apartments distributed on the building's second through fifth floors.

Assuming the wastewater flow design rates of the Suffolk County Department of Health Services, it is anticipated that the project will consume about 31,560 gallons of water daily. Thus, it is expected that this same 31,560 gpd represents the amount of sanitary wastewater to be conveyed via the Town's sewer system to the treatment facility of the Riverhead Sewer District.

I am writing to obtain information on sanitary wastewater facilities that may be pertinent to the project, to be included in the Supplemental EAF. Specifically, I am requesting the following:

- Confirmation whether the Town Sanitary Sewer System and the Town Stormwater Sewer System are or are not a single, "combined" sewer system.
- Whether a determination has been made regarding how the project will be connected to the RSD collection network. RSD has indicated that three connections are envisioned; one for each restaurant, and one for the balance of the project. Discussions between the RSD and the Applicant's engineer (Galli Engineering P.C.) indicate two options: to the north-south oriented line beneath McDermott Avenue (the option preferred by the RSD), or to the 12-inch main that crosses east-west beneath the site. The latter option would entail connection about 139 feet west of the existing manhole on McDermott Avenue, along with cutting in two new manholes for the two restaurants. Additionally, the grease traps involved would normally be exterior to the building, but the RSD would allow these to be installed in the parking area, as long as they are installed in the ground.
- The location and nature of the treatment facility at which the project's wastewater will be treated.

- The capacity of the treatment facility, and the current average daily flow to it.
- A Letter of Availability for the project.

If you have any additional information or comments which would be pertinent, please include them. Finally, if you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,
NELSON, POPE AND VOORHIS, LLC

Phil Malicki, CEP, AICP, LEED® AP
Senior Environmental Planner

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-8
EXISTING SITE AND AREA CONDITIONS

Source: NYS Orthophotos, 2013

Scale: 1 inch = 100 feet

N

221 East Main St./
31 McDermott Ave.
Riverhead

Supplemental EAF

RIVERHEAD SEWER DISTRICT
Town of Riverhead
200 Howell Avenue, Riverhead, New York 11901
(631) 727-3069 Fax (631) 369-3091

July 13, 2017

Suffolk County Dept. of Health Services
Office of Wastewater Management
360 Yaphank Avenue, Suite 2C
Yaphank, NY 11980

Re: Property Located:
221 East Main Street
Riverhead, NY 11901
S.C.T.M. No. 600-129-1-21, 22

Please be advised that the above referenced property is located within the boundaries of the Riverhead Sewer District. Connection is available to service this property based on plans with a last revision date of July 12, 2017. Should you have any questions or require any additional information, please feel free to contact me at (631) 727-3069.

Very truly yours,

Michael Reichel, Superintendent
Riverhead Sewer District

cc: Building Department
Planning Department

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE S-3
ARCHITECT'S RENDERING

Source: Architect
Not to Scale

N

Riverview Lofts
Riverhead

Voluntary DEIS

In addition, there are number of agencies contributing to the funding for the project, and include:

- New York State (NYS) Homes & Community Renewal
- NYS Housing Finance Agency
- Governor's Office of Storm Recovery
- Suffolk County Department of Economic Development and Planning (SC Affordable Housing Opportunities Program)
- Riverhead Industrial Development Agency
- NYS Empire State Development (RESTORE NY Communities Initiative Municipal Grant Program)

As noted, the project conforms to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the Town's EMSURP and the BOA, and will conform to many of the applicable Town Zoning Code bulk and setback requirements for development in the site's DC-1 zoning district. However, the project requires six (6) variances from the Town Zoning Board of Appeals (ZBA), one to exceed the maximum size of the studio units and five related to the on-site parking spaces (see **Sheet C-002.00**), as follows:

- Minimum Parking Stall Size
- Minimum Back-Up Aisle Width
- Minimum Parking Stall Size [handicapped]
- Minimum Access Aisle Width
- Minimum Width at Curb Cut

In addition, the project needs a Town Board (hereafter, *"the Board"*) special permit to exceed the maximum allowed building coverage (80% of the site allowed, 91.75% requested). **Section 2.1.2** discusses the project's conformance to the standards on which the Board will review the special permit request and determine whether those standards are met.

As noted above, the subject site is privately owned and currently has 27 parking stalls. Prior Town reports and mapping **(BOA, 2013 and Map of Downtown Riverhead Parking District, 12/29/2008[1])** identified the site as a public parking lot; however, the site is privately owned and proposed to be re-developed. Under existing conditions, on-site parking would only be available to serve on-site uses. For proposed conditions with the Riverview Lofts site use, on-site parking is not required since the site lies within the Downtown Parking District. Nevertheless, the Applicant recognizes that maintaining adequate parking is important for downtown Riverhead, and seeks to reduce the off-site parking demand of the proposed project by providing some on-site parking. This parking also provides a benefit to the residents of the subject site. As a result, the design team sought to provide on-site parking in consideration of the site size. The design review process resulted in the proposed site design to accommodate 55 spaces, some of which require a variance of the stall size and would be available for use by compact cars. The inclusion of this parking as part of the building design results in the need for a variance of the 80% maximum allowable building coverage. The outcome is a building that covers 91.75% of the site, or an 11.75% increase in building coverage. The project architect Stephen B. Jacobs Group, P.C. indicates that if the parking were not provided as per the proposed design, the building would be less than the 80% maximum allowable lot coverage, specifically 69% lot coverage.

[1] http://www.townofriverheadny.gov/docview.aspx?docid=30459

Consequently, the variance is requested in connection with project approvals in order to provide 55 parking stalls on site, where none are required, as well as the requested variance for the smaller size of some of the proposed parking stalls.

As shown in the plans, 25 of the 31 proposed studio units will exceed the maximum floor space of 450 SF allowed under the Town Zoning Code in the DC-1 district, thus requiring a ZBA variance. The Applicant's Limited Scope Marketing Study (see **Appendix A-1**) includes an analysis of the rental rates for both market-rate projects and affordable projects in the region. As part of that analysis, studio units in other projects in the region that are comparable to those of the proposed project were surveyed. That analysis indicates that, for both market-rate and affordable projects, studio units in the region were in excess of 450 SF (in fact, for the four market-rate projects reviewed, studio units average 525.5 SF in size, and the one affordable project reviewed had a studio unit size of 670 SF). This demonstrates that a precedence for studio units in excess of 450 SF is well-established in the region, justifying the appropriateness of a ZBA variance. This also supports the Applicant's need to exceed the allowed site coverage of 80%

Table 2-2 discusses the project's conformance to the standards against which the Board will review the special permit request and determine whether those standards are met.

With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I. states that, for a site within a designated Parking District, the requirements of the Town Zoning Code do not apply. That is, the presence and availability of free, public parking spaces off-site but nearby is expected to satisfy the parking needs of the residents and patrons of the development; the project is not required to provide any on-site parking spaces. However, in order to decrease the need for off-site municipal parking and provide a benefit to the site's residents, the Applicant will provide 55 on-site parking spaces (of which three will be handicapped spaces), and the balance of the project's parking needs will be met by off-site spaces within the Riverhead Parking District area. These spaces will be available to the project's residents on a first-come, first-served basis; patrons of the project's commercial spaces will park off-site, typical of other retail uses in the downtown. The two existing driveways onto McDermott Avenue will be closed, and the site will be accessed via a single, new driveway onto McDermott Avenue that leads directly into the internal groundlevel parking area beneath the building. This access will be "stop"-controlled for departing vehicles.

Sanitary wastewater from the project will be conveyed off-site via the existing network of the Riverhead Sewer District, and treated and discharged at the existing municipal facility. The project will conform to all applicable flow and design requirements of the Suffolk County Department of Health Services (SCDHS) and the Riverhead Sewer District (RSD).

The applicant has designed the project to:

- Conform to the Town Comprehensive Plan in terms of providing quality housing for households having a mix of incomes, in a downtown location with ground floor retail spaces;
- Conform to the goals and intent of the EMSURP and BOA for the area;

- Be consistent with the pertinent policies of the NYS Coastal Management Plan (CMP);
- Increase pedestrian traffic in the hamlet downtown area, to support commercial activity and enhance the hamlet downtown area aesthetic;
- Strike a balance between the yield permitted by the DC-1 zoning while remaining within a density that would not adversely impact the downtown hamlet character of the area and still support an economically viable project;
- Minimize potential adverse impact to groundwater resources by connecting to the public sanitary sewer system;
- Provide an aesthetically attractive development;
- Utilize an innovative drainage system design that will be reviewed and approved by the Town, to provide twice the minimum storage capacity than required by Town Code, and thereby minimize the potential impact to local stormwater runoff patterns from the release of overflow from the system onto Heidi Behr Way (see **Section 1.4.2**);
- Provide safe pedestrian and vehicle access in conformance with Town and County highway access limitations;
- Conform to all other appropriate land use requirements; and
- Provide superior site design, including appropriate on-site recreational amenities; walkability and sense of place through attractive community architecture and new plantings (eleven trees will be installed along McDermott Avenue; see **Sheet C-103.00**).

The environmental review process is a balancing process, wherein the potential adverse impacts of the proposed project are matched against its potential beneficial impacts, to give reviewing entities sufficient information and analysis to render an informed decision to approve or deny the application.

The analyses in this document support a conclusion that the potential adverse impacts of the proposed project will not be significant and will be geographically localized, and that the potential beneficial impacts will be significant.

- The proposed project is in conformance with and complements the local land use pattern; it generally conforms to the requirements of the DC-1 zoning district; it conforms to the Town Comprehensive Plan Update, the policies of the NYS CMP, and the EMSURP and BOA.
- The project also helps fulfill a need in the Town for quality housing for a mix of household incomes, by providing a substantial number of such units.
- The project would not strain the ability of any of the community services to adequately serve the site or project.
- The project will substantially increase the amount of property taxes generated by the site, which would offset at least a portion of the increased costs to provide such services, particularly educational expenses of the Riverhead CSD.
- With minor timing adjustments to the traffic signal at the intersection of East Main Street and McDermott Avenue/Maple Avenue for the northbound approach on McDermott Avenue, the project's TIS indicates that there would be no significant traffic impacts associated with the project.
- The project will not adversely impact resources because of its connections to the public sanitary and stormwater sewer systems.
- The site's soils do not present any engineering-related limitations on the project.
- The two ESAs prepared for the existing buildings on the site indicate the presence of a UST, and the potential presence of a second UST. These will be investigated prior to the onset of

construction and properly removed; any impacted soils will be properly remediated at that time, to the satisfaction of the appropriate County and NYS agencies.

- There are no cultural resources on the site, so that no direct impact to such resources could or would occur. The new building has been designed to have an architectural appearance conforming to that of its surroundings, and is oriented to present its narrow side facing East Main Street, to minimize its potential to visually dominate the character along that corridor.

Anticipated Impacts

Land Use, Zoning and Plans

Land Use

As the site is presently considered to be Commercial and Residential land use, and the proposed project is also commercial and residential, there would be no significant change in the land use category of the site, or to the pattern of land uses in the area. The amount of residential development in the vicinity would be increased by the proposed project, as would the amount of commercial space in that same area. However, the Town prepared supporting plans, and created and adopted zoning specifically to address the needs of the Town of Riverhead as embodied in the DC-1 district. This zoning is intended to establish land use that will assist in the revitalization of downtown Riverhead and this resultant land use has been supported by the Comprehensive Plan Update, the EMSURP, the NYS CMP, and the BOA. Therefore, since these uses characterize the hamlet downtown area, and these uses conform to the area's DC-1 zoning and the recommendations of the pertinent plans (as will be discussed below), neither of these increases would represent a significant adverse impact on land use.

Zoning

As the proposed project does not involve a change of zone of the site, there will be no impact on the pattern of zoning in the vicinity. **Table S-2** lists the various building bulk and setback requirements of the DC-1 zoning district, along with the pertinent quantity of the proposed project. As can be seen, the proposed project will conform to many of the applicable requirements of the DC-1 district, with the following six exceptions:

- Maximum Size of Studio Units
- Minimum Parking Stall Size
- Minimum Back-Up Aisle Width
- Minimum Parking Stall Size [handicapped]
- Minimum Access Aisle Width
- Minimum Width at Curb Cut

The project will require variances from the ZBA related to the above six items.

The variance for the size of the studio units is necessary to provide the type of unit that the applicant has determined would be appropriate to meet the market demand for such units; smaller studio units meeting the Town Code standard would not be as marketable or attractive to potential occupants as the units of the sizes proposed. As stated by the Applicant:

> We build many units across Long Island and the State, and in order to attract people to the downtown, all of the units need to be able to compete with other choices for housing, such as renting larger single-family homes or other apartments in the area. The studio sizes we are proposing are not especially large (especially outside of New York City) and we think will be attractive/functional units.

As stated in **Section 1.1**:

> The Applicant's Limited Scope Marketing Study (see **Appendix A-1**) includes an analysis of the rental rates for both market-rate projects and affordable projects in the region. As part of that analysis, studio units in other projects in the region that are comparable to those of the proposed project were surveyed. That analysis indicates that, for both market-rate and affordable projects, studio units in the region were in excess of 450 SF (in fact, for the four market-rate projects reviewed, studio units average 525.5 SF in size, and the one affordable project reviewed had a studio unit size of 670 SF). This demonstrates that a precedence for studio units in excess of 450 SF is well-established in the region, justifying the appropriateness of a ZBA variance.

The other five variances are needed as a result of the applicant's goal to maximize the number of parking spaces while striving to meet the requirements of the Town Code parking-related dimensional standards, in consideration of the limited space available for the parking spaces.

For the proposed project, on-site parking is not required since the property is in the Downtown Parking District. Nevertheless, the Applicant recognizes that maintaining adequate public parking is important for downtown Riverhead, and seeks to reduce the off-site parking demand of the proposed project by providing some on-site parking. This parking also provides a benefit to residents of the subject site. As a result, the design team sought to provide on-site parking, insofar as possible considering limitations posed by the site's size and configuration, as well as by the building's structure/architecture. The design review process resulted in the proposed site design to accommodate 55 spaces, some of which require a variance of the stall size and would be available for use by compact cars. The inclusion of this parking as part of the building design results in the need for a variance of the 80% maximum allowable building coverage. The outcome is a building that covers 91.75% of the site, or an 11.75% increase in building coverage. The project architect Stephen B. Jacobs Group, P.C. indicates that if the parking were not provided as per the proposed design, the building would conform to the 80% maximum allowable lot coverage.

Riverhead seeks residential occupancy for revitalization and a healthy downtown environment. Similarly, ground floor retail adds to the vibrancy to the downtown setting. The applicant has significant experience in designing successful projects with full occupancy. The economic feasibility of a project is critical to its success. Changes to the unit sizes/numbers, or commercial use are not advisable if the project is to be successful and meet the goals of the applicant and the Town of Riverhead to achieve the revitalization envisioned in the various Town land use plans.

Table S-2
CONFORMANCE TO BULK, HEIGHT & SETBACK REQUIREMENTS
DC-1 Zoning District

Parameter	Required	Provided
Town Zoning Code Section 301-142		
Lot Area, Minimum (SF)	5,000	37,167
Lot Width at Front Street, Minimum (feet)	50	382
Building Lot Coverage, Maximum with Sewer (%)	80	91.75.0*
Impervious Surfaces, Maximum (%)	100	100
Building Height, Maximum (feet)	60	60
Floor Area Ratio, Maximum with Sewer	4.00	3.15
Front Yard Depth, Minimum (feet)	0	<1
Side Yard Width, Minimum, Corner Lot (feet)	0	<1
Side Yard Depth, Minimum, Combined (feet)	0	<1
Rear Yard Depth, Minimum (feet)	0	<1
Parking Stall Size, Minimum (feet)	10 X 20	8.5 X 18*
Back-Up Aisle, Minimum (90º, feet)	24	20*
Parking Stall Size (Minimum (handicapped; feet)	10 X 20	8 X 18*
Access Aisle Width, Minimum (feet)	8	5*
Width at Curb Cut, Minimum (feet)	24	20*
Town Zoning Code Section 301-141		
Permitted Use:	---	---
Retail Store (Max., SF)	10,000	1,508
Restaurant	allowed	Complies
Studio Apartment (Min. to Max., SF)	300-450	410-519*
Town Zoning Code Section 301-231		
Off Street Parking	n/a	n/a

*Variance required from ZBA.

Riverhead seeks residential occupancy for revitalization and a healthy downtown environment. Similarly, ground floor retail adds to the vibrancy to the downtown setting. The applicant has significant experience in designing successful projects with full occupancy. The economic feasibility of a project is critical to its success. Changes to the unit sizes/numbers, or commercial use are not advisable if the project is to be successful and meet the goals of the applicant and the Town of Riverhead to achieve the revitalization envisioned in the various Town land use plans.

Table S-3 lists the Town Code standards under which the Town Board will review the special permit requested, to determine whether these standards have been met and the special permit can justifiably be approved and issued.

Land Use Plans

Town Comprehensive Plan (November 2003) - The plan recommended that the subject site be developed with uses conforming to the DC zoning district (see **Figure 2-3a**). Following are brief discussions as to whether and how the project conforms to the goals and recommendations of each of the nine Town Comprehensive Plan elements pertinent to the proposed project.

Table S-3
CONFORMANCE TO SPECIAL PERMIT STANDARDS

Standard	Building Lot Coverage Special Permit
§301-312 The Town Board and the Planning Board may consider, among other matters or factors which either Board may deem material, that:	
A. The site is particularly suitable for the location of such use in the community.	The project site is well-suited for the proposed mixed-use (i.e., upper-floor residential and ground floor commercial spaces) project, as such uses dominate successful downtown areas and are present in the Riverhead hamlet downtown area, and reflect the goals of established Town zoning and planning efforts specified for this area in land use plans.
B. The plot area is sufficient, appropriate and adequate for the use and the reasonably anticipated operation and expansion thereof.	The project site is adequately-sized to accommodate the proposed project. The project will provide 55 more parking stalls than are required by zoning, and the design and development of the building fits well within the proposed project site.
C. The characteristics of the proposed use are not such that its proposed location would be unsuitably near to a church, school, theater, recreational area or other place of public assembly.	The project site is located opposite both a church (to the north) and a public recreation area (to the south). However, the nature and magnitude of the project are such that neither of these public resources would be significantly or adversely impacted if the special permit were to be approved, and would in fact be enhanced by the types of development proposed.
D. Access facilities are adequate for the estimated traffic from public streets and sidewalks, so as to assure the public in relation to the general character of the neighborhood and other existing or permitted uses within it, and to avoid traffic congestion; and further that vehicular entrances and exits shall be clearly visible from the street and not be within 75 feet of the intersection of street lines at a street intersection except under unusual circumstances.	The project has been designed and engineered with proper geometry to conform to all applicable Town standards for vehicle access and provide a safe means of ingress and egress from the site. In this way, safe and proper roadway operations would be assured. The project site is located in the Riverhead hamlet downtown area, and so his provided with sidewalks along its northern and eastern boundaries.
E. All proposed curb cuts and street intersections have been approved by the street or highway agency which has jurisdiction.	The project has been designed and engineered to conform to all applicable Town standards for vehicle access, which design will be subject to detailed review by Town engineering staff during the site plan application review process, ensuring safe and proper roadway operations. All curb cuts will be approved by the appropriate agencies.
F. Adequate provisions have been made for emergency conditions.	The project has been designed and engineered to conform to all applicable Town standards for emergency vehicle access, as well as for operations related to emergency conditions. Further, the project's design will be reviewed and be subject to the approval of qualified Town planning and engineering staff, as well as by the Riverhead Fire Department and Riverhead Fire Marshal prior to the issuance of building permits. The project will conform with applicable building/fire code requirements for safety.
G. There are off-street parking and truck loading spaces at least in the number required by the provisions of this chapter, but in any case, an adequate number for the anticipated number of occupants, both employees and patrons or visitors; and further, that the layout of the spaces and driveways are convenient and conducive to safe operation.	It is noteworthy that the project site is within a Town-designated Parking District, wherein no on-site parking spaces would be required for a site in a DC-1 zoning district. However, as a benefit to the site's residents and in an effort to minimize use of off-site spaces, the project includes 55 parking spaces on-site, of which three will be handicapped spaces. These will be located an at-grade parking level beneath the structure. Providing these parking stalls where no such stalls are required is an important feature of the project that complements the use and its location in the Parking District. It is expected that sufficient spaces will be available in Town parking lots nearby to satisfy any parking needs over and above that addressed by the project's on-site spaces.
H. Adequate buffer yards, landscaping, walls, fences and screening are provided where necessary to protect adjacent properties and land uses.	The project has been designed and engineered to conform to all applicable Town standards for yard depths and building setbacks. The proposed building has been reviewed and approved by the ARB and conforms to applicable dimensional requirements of the Town DC-1 zoning district.
I. Where necessary, special setback, yard, height and building area coverage requirements, or easements, rights-of-way or restrictive covenants, shall be established.	It is not expected that any special setback, yard, height, easements, rights-of-way or covenants will be necessary or applicable to the proposed project. The project does require Town Board approval of a special permit for its lot coverage, but this exceedance (maximum 80% allowed, 91.75% requested) reflects the Applicant's intent to provide a benefit to the site's residents in the form of on-site parking. Inclusion of this area results in a structure that covers 91.75% pf the site, where a maximum of 80% may be covered, under the Town Code.
J. Where appropriate, a public or semipublic plaza or recreational or other public areas will be located on the property.	The project site is contiguous to an established, substantial Town open space amenity (the Peconic Riverfront Park) and is near another such amenity (the East End Arts Park). As a result, there is no substantial need for additional public space on the project site.
K. Adequate provisions will be made for the collection and disposal of stormwater runoff from the site and of sanitary sewage, refuse or other waste, whether liquid, solid, gaseous or of other character.	The project will connect to the Riverhead Sewer District to treat and dispose of all wastewater generated on the site. All stormwater runoff will be handled in an on-site drainage system sized to accommodate a 4-inch rain event, which is double the Town design requirement. Note that, in case an extreme rain event occurs, the system is designed and approved to overflow onto Town property to the south. All solid waste will be removed and disposed of by a private carter operating under contract with the project ownership. The nature of the project is such that no hazardous, or other types of wastes, whether solid, liquid or gaseous, will be generated.
L. Existing municipal services and facilities are adequate to provide for the needs of the proposed use.	It is anticipated that all Town facilities, services and systems that the project will utilize have capacities adequate to properly serve the site. The project represents only an incremental increase in the overall usage of these facilities, services and systems. Utility service providers have been contacted and notified of the project through this VDEIS.
M. The use will tend to generate or accumulate dirt or refuse or tend to create any type of environmental pollution, including vibration, noise,	The nature of the project is such that no generation of dirt, refuse, or other type of environmental pollution are associated with its occupancy or operation. Temporary dust and noise may occur during construction, but this is not a permanent condition and will controlled and mitigated through proper construction management and adherence to

light, electrical discharges, electromagnetism, odors, smoke or irritants, particularly where they are discernible on adjacent properties or boundary streets.	applicable hours of operation (see N. below).
N. The construction, installation or operation of the proposed use is such that there is a need for regulating the hours, days or similar aspects of its activity.	During the construction period, all such operations will conform to all applicable Town restrictions on hours of demolition and construction activities, truck-related operations and movements, debris removal, and noise and dust controls. The proposed project is residential and commercial in nature; as such, only the commercial component would be subject to Town restrictions on its hours of operation, to which it will conform.
O. The proposed use recognizes and provides for the further special conditions and safeguards required for particular uses as may be determined by the Town Board or the Planning Board.	The project has been designed to conform as closely as practicable to the Town Zoning Code, given the implications on its design necessitated by the Applicant's need to address an established Town goal of workforce housing. It does not include any uses that are expected to merit further special conditions or safeguards, but the Applicant is ready to discuss such matters with Town Board if it deems further restrictions may be warranted.
P. The design, layout and contours of all roads and rights-of-way encompassed within the site of the application are adequate and meet Town specifications.	The project, including its vehicle access point, has been designed and engineered to conform to all applicable Town standards. The project's design will be subject to detailed review by Town engineering staff during the site plan application review process, ensuring safe and proper roadway operations. The project will be approved through site plan review and will be constructed consistent with approved plans including design, layout, contours of roads and related site design requirements.
Q. Adequate provisions have been made for the collection and disposal or solid wastes, including but not limited to the screening of all containers.	The project will provide for the collection and storage of its solid wastes in dedicated spaces interior to the structure, until such time that these containers are emptied by a licensed private carter. Adequate provisions will be provided for all such wastes in screened containers with frequent scheduled removal.
R. That the intensity of the proposed specially permitted use is justified in light of similar uses within the zoning district.	The land use types and associated intensities of the project match those of the Riverhead hamlet downtown area. The project is below the maximum number of units permitted in the downtown area, and conforms with the applicable dimensional requirements of the DC-1 district as related to intensity of use.
§301-314 The Town Board shall determine that:	
A. The use will not prevent or substantially impair either the reasonable and orderly use or the reasonable and orderly development of other properties in the neighborhood.	The requested special permit is necessary as a consequence of the Applicant's intent to provide a benefit to the site's residents in the form of on-site parking. Inclusion of this area results in a structure that covers 91.75% pf the site, where a maximum of 80% may be covered, under the Town Code. Approval of this special permit request would not prevent the use of any adjacent or nearby properties, or impair the value of such properties. The physical impacts of the requested special permit will be limited only to the project site, and would not extend to any off-site areas. Consequently, the use will not prevent or impair the reasonable and orderly use or development of other properties in the downtown.
B. The hazards or disadvantages to the neighborhood from the location of such use at the property are outweighed by the advantage to be gained either by the neighborhood or the Town.	Approval of the special permit request would not present any hazard or disadvantage to the neighborhood. The special permit regarding site coverage exceedance is due to the Applicant's intent to reduce the need for off-site parking and provide a benefit to the site's residents in the form of on-site parking. Inclusion of this area results in a structure that covers 91.75% pf the site, where a maximum of 80% may be covered, under the Town Code.
C. The health, safety, welfare, comfort, convenience and order of the Town will not be adversely affected by the authorized use.	The special permit is necessary because of the Applicant's intent to provide a benefit to the site's residents in the form of on-site parking. Inclusion of this area results in a structure that covers 91.75% pf the site, where a maximum of 80% may be covered, under the Town Code. Approval would not prevent the use of any adjacent or nearby properties, or impair the value of such properties. Any effects of this special permit would be limited to only the project site, so that the nature and magnitude of this special permit would not impact the safety, health, welfare, comfort, convenience or order of the Town.
D. Such use will be in harmony with and promote the general purposes and intent of this chapter.	The special permit requested is necessary due the Applicant's intent to provide a benefit to the site's residents in the form of on-site parking. Inclusion of this area results in a structure that covers 91.75% pf the site, where a maximum of 80% may be covered, under the Town Code. As such, this special permit, if approved by the Town Board, would provide a project that would be more harmonious and beneficial to the Riverhead hamlet downtown area than a similar project that does not have this feature.

Land Use Element

The proposed project is intended to benefit from and contribute to the expansion and continued enhancement of downtown Riverhead. The project conforms to the mixed-use nature designated for the site by the Town Comprehensive Plan (as well as to the recommendations of the EMSURP; see below), in that it will provide for high-quality ground floor retail space and restaurant spaces (of which one would overlook the Peconic River corridor and Peconic Riverfront Park to the south). The proposed building will be designed to enhance the aesthetics of the area, by being built with an architectural styling that complements that of its surroundings. By incorporating a significant number of quality rental apartments for a mix of household income, the project would enhance the vitality and activity of the neighborhood. Inclusion of restaurant use overlooking the river would tend to enhance public appreciation and use of the Peconic Riverfront Park that lines the north bank of this natural feature.

Natural Resources Conservation Element

The project site has no natural features or resources to protect; the proposed project will not add to or remove any existing open space along the Peconic River corridor. The proposed project will nonetheless help to preserve and enhance the natural features proximate to the site, by attracting the public to the site and thereby increasing public and patron appreciation of the scenic and natural qualities of the river corridor, as well as of public use of the Peconic Riverfront Park and boardwalk.

Scenic and Historic Preservation Element

The proposed mixed-use building will be designed with an architectural styling that complements and enhances the built and aesthetic environment of the downtown commercial corridor, and thereby enhances the character of this community.

Business Districts Element

The proposed project is well-located as both a commercial and residential development; the increased residents will add to the customer base of local businesses and add to the vitality of the downtown, and its commercial component will help draw customers to the site and to other local businesses.

Economic Development Element

The proposed project will add to the economic base of downtown Riverhead by increasing employment and business spaces, with associated increased property tax generation and employee income.

Housing Element

The project will result in an increase in the number of quality housing units targeted for the housing market that is specifically intended by the Town Comprehensive Plan as in need of support. These units are in close and convenient proximity to public transit resources, for the use of its residents.

Transportation Element

Traffic engineering analysis indicates that the vehicle trips generated by the proposed project would not require any substantial off-site roadway improvements. The project may help to minimize the potential increase in local roadway use because of its location in the downtown area adjacent to public transit resources. This would tend to increase potential bus and Long Island Rail Road (LIRR) ridership and intermodal transportation in general.

Utility Service Element
The proposed project will not create any new utility resources, but will utilize available existing public utilities, particularly water (RWD) and wastewater treatment (RSD) services. In this way, the impacts on groundwater and surface water resources would be minimized.

Parks and Recreation Element
The proposed project will indirectly help to increase public use and enjoyment of the Peconic River and Peconic Riverfront Park along its northern bank south of the site, by incorporating a restaurant that overlooks this area. This would tend to increase public awareness of this natural and scenic resource.

East Main Street Urban Renewal Plan Update (2008) - The EMSURP recommended that the subject site be developed with ground floor shops and a central surface shared parking lot (see **Figure S-4**. Following are brief discussions as to whether and how the proposed project conforms to each of the eleven EMSURP recommendations pertinent to the proposed project.

1. *The proposed project will eliminate an underutilized property by demolishing existing buildings (and an adjacent, occupied property), and redeveloping both sites in a cohesive way with a single new structure, under the existing DC-1 zoning code, as envisioned by the EMSURP.*

2. *The existing vacant commercial structure at 221 East Main Street will be demolished by the proposed project, and will be replaced by a new structure architecturally designed to complement its surroundings.*

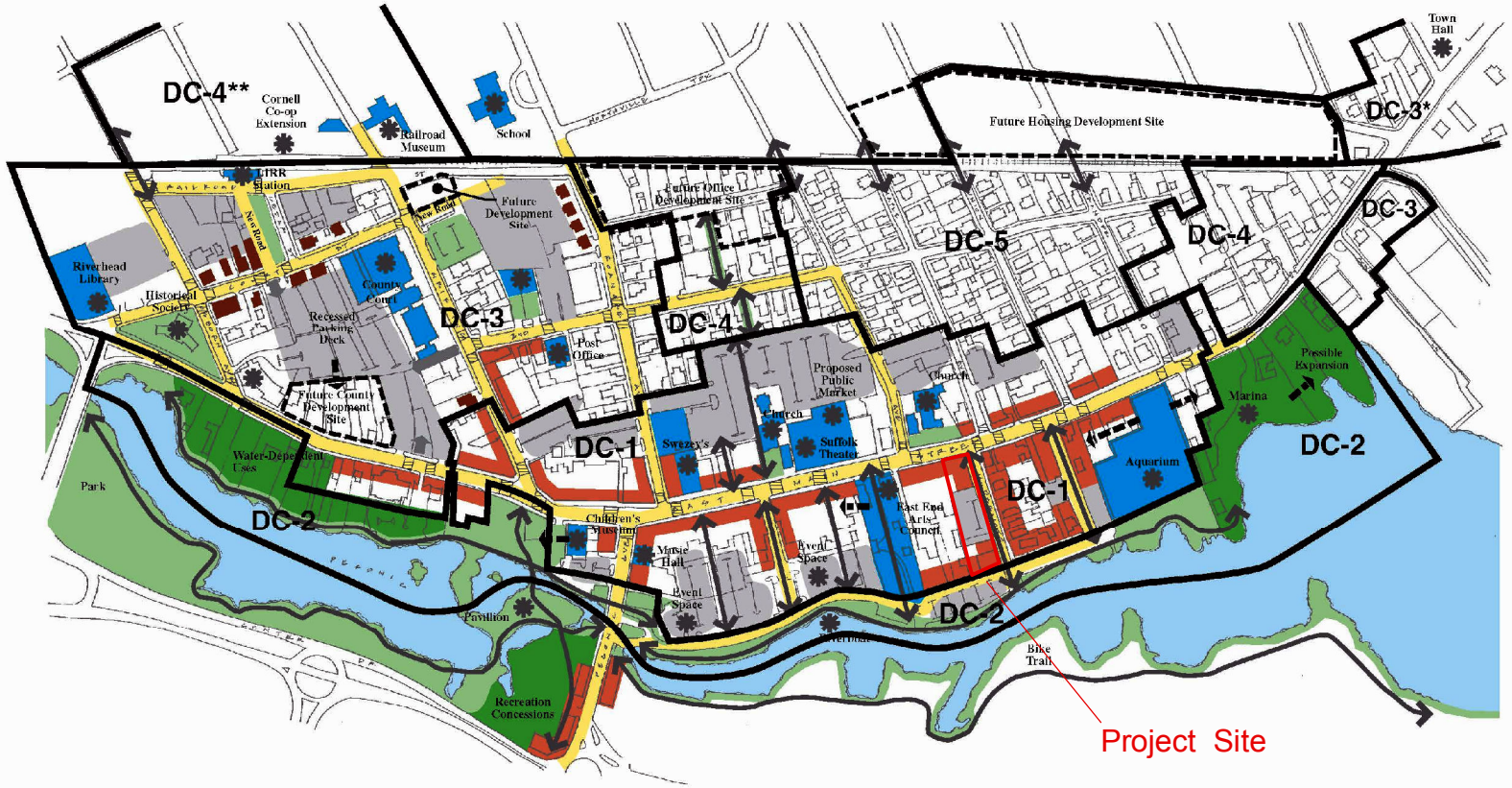
4. *The new structure will be designed with an architectural styling that complements the character of the structures in the adjacent portion of the East Main Street commercial corridor.*

6. *The proposed project, in conformance with the EMSURP and Town Comprehensive Plan, as well as with its DC-1 zoning, incorporates both commercial (i.e., retail and restaurant) spaces as well as a significant number of quality rental apartments for a mix of household incomes.*

7. *The proposed project includes a substantial number of quality rental apartment units for occupancy by households characterized by a mix of incomes qualified households.*

11. *The proposed project will not add to or remove any existing open space along the Peconic River corridor. The proposed project will nonetheless help to preserve and enhance the natural features proximate to the site, by attracting the public to the site and thereby increasing public and patron appreciation of the scenic and natural qualities of the river corridor, as well as of public use of the Peconic Riverfront Park and boardwalk.*

13. *The proposed new mixed-use structure will be 5 stories in height, or up to about 60 feet in height which does conform to zoning in terms of height/stories. Considering the rather restricted size of the property, a building of this height is necessary to provide the number of apartments in four levels above the required ground floor commercial spaces. It is noteworthy that the north-south orientation of the property (and therefore, of the building) is such that views for observers to the north would be restricted to the lowest degree practicable; these observers will view the new structure narrow edge-on, which would present the lowest degree of obscuration possible. Additional visual analysis is provided in* ***Section 2.7.***



TOWN OF RIVERHEAD

Figure 6-1: Downtown

DC-1 Main Street
DC-2 W aterfront
DC-3 Office
DC-4 Of fice/ResidentialTransition
DC-5 Residential

* Continued on Figure 6-8
** Continued on Figure 6-9

Parks/Open Space
Water-Dependent Uses
Landmarks/Activity Centers
Shared Parking
Ground Floor Shops
Infill Buildings
Priority Crosswalks
Possible Expansion
Streetscape Improvements
Pedestrian Corridors

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FIGURE S-4
PROPOSED DOWNTOWN LAND USE PLAN

Source: Architect
Not to Scale

N

Riverview Lofts
Riverhead

Voluntary DEIS

16. *In conformance with this element, the proposed project includes at least one, and possibly two restaurants (Restaurant 1 will be 5,000 SF in size, with 235 seats, and Restaurant 2 will be 6,115 SF, for 300 seats), the latter of which overlooks the Peconic River and the Peconic Riverfront Park as an amenity for diners, as well as a substantial number of quality rental apartments for a mix of household incomes.*

40. *As the project site is jn the Town Parking District, no on-site parking spaces are required; nevertheless, in an effort to provide a benefit to the site's residents, 55 spaces are proposed.*

    This EMSURP recommendation is inconsistent with the DC-1 zoning code, which does not require any on-site parking for those parcels located within the Parking District, due to the availability of centralized municipal parking. If on-site parking for the 116 residences per Town Code (1.5 spaces/unit) were required, the project could not be developed, as the 0.85-acre site is too small to provide 174 spaces; the project would have to be reduced substantially, to match the number of parking spaces that could be placed on the site. Such a reduction in yield would not be reasonable or feasible to the Applicant, on an economic basis.

50. *The subject site is within walking distance of employment opportunities, services, amenities, daily needs and transportation. Additional incentives do not appear needed; however, the applicant is willing to consider entering any such program that may come about for the overall EMSURA.*

54. *The applicant expects to provide a space interior to the building where all solid waste is gathered and stored to await removal and disposal by a licensed carter operation under contract.*

NYS Coastal Management Program (1982) - For the proposed project, Coastal Consistency Assessment materials were sent to the DOS Consistency Review Unit, for its review and approval. Of the 44 standards of the CMP, only nine apply to the proposed project, as follows:

Policy 11: Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.
The proposed project will redevelop the 0.85-acres site with a single, new structure that conforms to all applicable requirements regarding floor elevations and the base flood elevation in the FEMA Flood Hazard Zone. Further, the structure and the overall project design, will be subject to full and complete review by professionals in the applicable Town and County government offices during the site plan review process. Finally, the only potential for erosion to occur will be during the construction period, when soils are exposed to the elements (the completed project will cover the entire site in impervious surfaces, eliminating the potential for erosion in the operational period). As part of the construction process, the applicant will implement appropriate erosion-control measures. In this way, the potential for damage to property, as well as to the endangering of human lives from flooding and/or erosion, will be minimized.

Policy 22: Development, when located adjacent to the shore, will provide for water-related recreation, whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.
The site of the proposed project is not located along or adjacent to any shore and, as the project is for redevelopment of a site with a mixed residential and commercial project, it will not include any water-related recreational facilities, amenities or features. As noted, the site is not located along the Peconic River and as a result, this policy does not apply.

Policy 23: Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the state, its communities, or the nation.
There are no historic resources on the project site. The project site is within the Town Main Street Historic District, and abuts the Main Street National Historic District. A referral to the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) resulted in the following review findings from this state office:

> Based upon our review of the materials submitted and conversations with your office, it is the OPRHP's opinion that the proposed project, as designed and presented, will have No Adverse Impact upon historic resources.

Policy 25: Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.
The project site is already fully-developed and therefore no natural resources are present on it that could be either protected or restored. The proposed project will redevelop the site with a mixed residential and commercial project. The nearest natural resources are found along the south bank of the Peconic River, which is to the south of the project site; there is intervening development between these resources and the project site (i.e., Heidi Behr Way, public parking areas and a bulkhead along the north bank of the River). These resources will not be impacted by the proposed project, and will continue to be protected by existing Town, County, State and Federal regulations.

Policy 32: Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.
The proposed project will connect to the existing public sanitary sewer system of the Riverhead Sewer District for the treatment and disposal of all of its wastewater.

Policy 37: Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters
The proposed project is a mixed residential and commercial redevelopment on a 0.85-acre site in the downtown area of Riverhead. The site will be designed to Town specifications for stormwater containment and erosion control measures will be employed during construction. Given the downtown location, the site will be fully covered by impervious surfaces, primarily by the single structure, with the remainder covered by paved surfaces. As such, no landscaped surfaces will be present, eliminating a major source of potential fertilizer impact to surface water quality from the site. The natures of the proposed uses are such that no other significant sources of pollution that could adversely impact the quality of water in the Peconic River will be present. Drainage containment will provide improved conditions over the current site development which does not appear to have drainage containment. With the utilization of drainage containment per Town specifications as well as erosion control measures, non-point source discharge of nutrients, organics and erosion potential will be minimized through best management practices.

Policy 38: The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.
The proposed project will not adversely impact groundwater or surface water quality or quantity. The proposed project will connect to the Riverhead Sewer District and stormwater will be managed on-site per Town design specifications. The site is not directly adjacent to surface water and there will be no overland runoff from the project site to surface water under post-development conditions.

The proposed use will obtain water from the Riverhead Water District and does not represent a significant demand on water resources to supply domestic demand. Further, the project will conform to all applicable County and Riverhead Water District requirements, ensuring that no aspect of the project will impact this resource.

Policy 41: Land use or development in the coastal area will not cause national or state air quality standards to be violated.
The nature of the proposed project is such that no emissions of air pollutants will occur, ensuring that no adverse impacts to air quality will occur.

Policy 43: Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.
The nature of the proposed project is such that no emissions of air pollutants will occur, so that the proposed project will not contribute to the generation of acid rain.

Community Services

With respect to the community services discussed herein, it is expected that the project, when it is completed, occupied and fully operational, will participate in a PILOT (payment in lieu of taxes) program, which would increase public revenues generated by the site as compared to the revenues it currently generates. This revenue will be distributed among the various community services, which would help to offset at least a portion of any increased costs to provide services to the project site.

Public Schools – Using multipliers established by the Center for Urban Policy Research (CUPR) of Rutgers University (**Rutgers University June 2006**), it is estimated that 14 school-aged children will reside at the proposed project. For the project, a total of 212 residents are expected. **Table S-4** details how these values were calculated:

Table S-4
ANTICIPATED RESIDENTS*
Proposed Project

Residence (bedrooms)	**Number of Units**	**CUPR Multiplier** (capita per unit)		**Population** (rounded upwards)	
		Residents	School-Age Children	Residents	School-Age Children
Studio	31	1.67	0.08	51.77	2.48
One Bedroom	57	1.67	0.08	95.19	4.56
Two Bedrooms	28	2.31	0.23	64.68	6.44
Totals	**116**	---	---	211.64 (say 212)	13.48 (say 14)

* Assuming multipliers established by CUPR, Rutgers University, for 5+ units in structure, rented.

This will have a small incremental effect on enrollment and expenditures of the Riverhead CSD. The PILOT program will assist in off-setting this incremental increase and it is noted that this is a relatively small number of potential school-aged children that would be distributed over multiple age groups. As stated in the Riverhead CSD Superintendent's response e-mail:

> As per council, we do not take positions on individual projects or make comments. We will comply with Education law in all instances.

Police Protection - It is expected that the project will result in an increased potential for need of Riverhead Police Department emergency services, due to the increased development and human presence on the property. The Department's response letter states:

> At this point in time, we should be able to assume the additional police services needed for your proposed project. Obviously, as with all development in our Township, the increase in population and vehicles will have a negative impact on our agency.

Fire Protection and Ambulance Services - It is expected that the project will result in an increased potential for need of the emergency services of both the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. The Fire Department's response letter states:

> This letter may not be taken to express any opinion about this/these project(s) or the Fire Department's ability to respond to emergencies now or in the future.
>
> It is the District's position that it is incumbent on the project(s) developer(s) to design and construct this/these project(s) in full compliance with all applicable laws, codes, regulations, standards, etc.
>
> At such time that this/these project(s) have been fully designed and engineered the District expects that the Town of Riverhead Fire Marshall shall present the same to the District and Department. The District and Department reserve their right to comment on the same at an appropriate future date.

The ambulance corps' response letter confirmed that it *"…can and will provide emergency medical services to your Riverview Lofts project…"*

Public Water Supply - It is expected that the proposed project will consume a total of 39,645 gpd of potable water, to be supplied by the RWD. This increase in demand would represent 5.82% of the average daily pumpage of the RWD. The proposed project is not anticipated to impact the ability of the RWD to serve the subject site and existing customers. Each apartment will be equipped with software that monitors for leaks or water wastage

The project's design will be subject to detailed engineering review by the RWD as part of the Town's site plan review process, at which time final arrangements for infrastructure improvements will be made.

Sanitary Wastewater Treatment and Disposal - It is assumed that all 39,645 gpd of water supplied to the project site will leave the site daily as wastewater, to be conveyed via the Town's sewer district network to the STP on River Road. As this facility currently treats an average of about 1.0 million gpd, the proposed project would represent a 4.02% increase in loading at this facility. This STP has a permitted capacity of 1.5 million gpd, so that it has about 500,000 gpd of unfilled capacity; the proposed project represents an 8.04% reduction in the amount of available treatment capacity of this facility.

The RSD's response e-mail confirms that the district has capacity to serve the project and the applicant's plans to connect to the RSD are currently under review. A final letter of sewage treatment availability will be issued after an analysis of the flow impacts to the collection and conveyance systems is complete.

Energy Suppliers - It is expected that PSEG and National Grid can and will serve the proposed project with electrical and natural gas services, respectively. Generally, PSEG and National Grid provide services per their filed tariff and schedules in effect at the time service is required. As the project will remove both buildings presently on the site, the existing service connections will also be removed, to be replaced with new service connections; it is expected that the existing distribution system serving the site will not need to be replaced or supplemented to service the project.

Recreational Facilities – The proposed project will not encroach upon any of the existing park or recreational facilities in the vicinity. The anticipated 212 new residents of the project could potentially represent an impact on these recreational sites, by increasing the number of visitors to these sites, or of attendees at public events (e.g., street fairs, farmer's markets, parades, etc.), held at these sites. However, such impacts are not expected to be significant, as these public parks are large enough to accommodate all likely, day-to-day visitors, included those attributable to the proposed project, and it is not expected that many of the project's residents would opt to visit any of these facilities at the same time, thereby reducing the magnitude of any incremental increase in visitation. Finally, the number of local public recreational sites available to the project's residents would tend to spread the project's visitation geographically, to reduce the potential impact of visitation at any one site.

With respect to impacts from project residents increasing attendance at a public event, such occasions are planned by their sponsors (and are subject to Town review and approval) to provide ample space for attendees to be accommodated. As this analysis is limited to public recreational sites in the immediate vicinity, it is expected that project residents that choose to attend would choose to walk, which would eliminate a potential parking impact at the event or facility.

<u>Transportation</u>

The findings of the revised Traffic Impact Study (TIS) dated July 2017 are summarized herein.

Trip Generation - It should also be noted that, according to studies conducted by the Institute of Transportation Engineers (ITE), traffic associated with a retail and restaurant developments is not 100% newly generated, a significant portion of these trips will be "pass-by" traffic. It is expected that at least 40% of the peak hour trips generated by the retail and restaurant development on the site would originate from traffic already using the roadway traveling to or from another destination. No passby credit was applied to the retail portion of the project since it is only a small portion of the project. Passby credits were applied for the restaurant component of the proposed project in accordance with ITE guidelines.

The proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

Anticipated LOS [level of service] and Roadway Conditions, Main Street at Peconic Avenue/Roanoke Avenue - In the No Build Condition, at the intersections Main Street and Peconic Avenue/Roanoke Avenue, eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

Anticipated LOS and Roadway Conditions, East Main Street at McDermott Avenue/Maple Avenue - Under the No Build Condition, all the approach movements at the intersection of East Main Street and McDermott Avenue/Maple Avenue operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

Anticipated LOS and Roadway Conditions, Peconic Avenue at Parking Lot Access - Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.

Conclusion - Nelson & Pope, LLP has investigated the potential traffic and parking impacts associated with the proposed development to be located at the southwest corner of East Main Street and McDermott Avenue in Riverhead, New York. The following is a summary of this investigation and the findings thereof:

> *Based on the results of the TIS, it is the professional opinion of N&P, LLP that the proposed project will not result in significant traffic impacts in the study area.*

Parking - With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I. states that, for a site within a designated Parking District, the requirements of the Town Zoning Code do not apply. That is, the presence and availability of sufficient free, public parking spaces off-site but nearby would

satisfy Town conditions that parking will be available to residents of the development; the project is not required to provide any on-site parking spaces. However, in order to decrease the need for off-site parking and provide a benefit to the project's residents, the Applicant will provide 55 on-site parking spaces (of which three will be handicapped spaces), and the balance of parking needs will be met by off-site spaces within the Riverhead Parking District area. As shown on **Sheet C-100.00**, if the site were not in the parking district, the Town Code would require a minimum of 358 on-site parking spaces.

An inventory of available parking in proximity to the site is provided in the TIS to further support the finding that inclusion in the Downtown Parking District provides parking opportunities for residents and patrons of the Riverview Lofts and associated retail use on the subject site.

The anticipated parking needs of the proposed project with those of the other nearby sites proposed for development were evaluated in a cumulative Parking Analysis (see **Appendix C**). That evaluation also considers the ability of the existing parking lots in the area to accommodate these cumulative parking needs.

Water Resources

The proposed project will connect to the RSD and as a result, wastewater will be managed in a manner that ensures that no groundwater impacts will occur. Drainage will be stored and recharged on-site in conformance with Town requirements and subject to Town engineering review. Consequently, potential drainage impacts are also addressed through design. Discussion of these design features as related to water resources is provided herein.

Groundwater Conditions - The volume of water recharged on the site is not expected to significantly change by the project as compared to the site in its existing condition. This is because the site is presently covered entirely by impervious surfaces, and will continue to be entirely impervious-surfaced after the project is constructed. However, the proposed project will be designed to contain runoff from proposed new impervious surfaces; under current conditions, it is not expected that all stormwater is retained on site. This means that the volume of stormwater runoff generated on the site is the same; but storage of stormwater will increase such that less off-site runoff is expected to occur.

All stormwater runoff generated on the site will be retained and recharged to groundwater by means of an on-site drainage system. Likewise, all wastewater generated on the site will be conveyed off-site via the Town sewer system for treatment and disposal. In this way, the existing elevation of the water table beneath the site would not significantly change, so that the direction of groundwater flow would not change from its current southerly direction.

Connection to the Town sewer system and the lack of landscaped surfaces would ensure that the potential for adverse impacts on groundwater quality are minimized for the proposed project. The project will connect to the Town sanitary system, so that its wastewater would be conveyed off-site and treated to a tertiary level, thereby minimizing the amount of nitrogen from the site that ultimately is recharged to the water table, and at a location distant from the project site.

Surface Water Conditions – The project will not adversely impact any surface water resources. Generally, the primary source of such an impact would be from the escape of stormwater runoff from a site to a surface water resource (e.g., a pond/wetland, a creek or river, etc.). But, as noted above, the site will retain more stormwater capacity under proposed conditions than current conditions, so that runoff generated on the site will be recharged on-site, and only in case of an extreme rain event would excess runoff overflow the site, to Town property to the south (where it would be conveyed to that drainage system). This means that for the design storm, no runoff from the site (along with any contamination that may be carried in that water) will reach the nearest surface water resource that is in a downslope location, the Peconic River.

The project is designed in conformance with FEMA flood plain elevation requirements, so that no adverse impacts in this regard are expected. As shown in **Figure S-5**, the southern portion of the subject site is in FEMA Flood Hazard Zone AE, which designates an area that is subject to the 1% annual flood ("100-year flood"), also known as the Base Flood. This is the flood that has a 1% chance of being equaled or exceeded in any given year. Specifically, the Base Flood Elevation of this part of the AE zone is established at 7 feet asl. The first floor of the building will be elevated such that the bottom of any structural member will be above 7 feet asl to comply with FEMA design as implemented by the Town.

Soils

The test hole report indicates that the soils on the site are expected to be capable of properly supporting the proposed structure, with the use of appropriate piles. Thus, no adverse soil-related impacts in this this regard are anticipated.

Considering the small size of the site, its flat surface, and the fact that it is already fully developed, it is not expected that the necessary clearing and grading operations would be limited by any soil-related condition.

The Phase I ESAs prepared for the 221 East Main Street and 31 McDermott Avenue buildings (see **Section 1.3.2**) noted that a 1,000-gallon #2 fuel oil tank is present on the former site, and that a gasoline storage tank may exist on the latter site. Prior to initiating the demolition process, both tanks will be investigated and both tanks (if present) will be removed in accordance with proper county and state requirements, and any soil contamination that may have occurred will be properly remediated as part of that removal and certification process. Such potential contamination, if discovered, would not represent an adverse impact on the project, as any such contamination will be properly remediated.

Erosion control measures to be implemented during the construction phase are expected to include measures recommended in the NYS Department of Environmental Conservation (NYSDEC) Technical Guidance Manual, such as:

- Silt fence, storm drain inlet protection, hay bales and good housekeeping procedures will be used;
- Construction equipment and vehicles will be parked and loaded/unloaded within the site;
- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system;
- The construction process will begin with establishment of flagged clearing limits, followed by

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FIGURE S-5
FLOOD HAZARD ZONE MAP, FEMA

Source: ESRI Web Mapping Service, FEMA

Scale: 1 inch = 100 feet

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Riverhead

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installation of the erosion control measures; and
- The drainage system will provide permanent stormwater controls once construction is completed.

Cultural Resources

The subject site is located within the Town Downtown Historic District and is across from an historic church. Architectural review is important and required for this site and is completed by the Architectural Review Board. The project was subject to ARB review and discussion at various meetings, the latest of which occurred on April 19, 2017. As per a recommendation of the ARB, the building's massing at the main residential entrance has been set back. On May 17, 2017, the ARB recommended approval of the proposed project to the Town Board (see **Appendix B-13**), with the following two minor comments:

- More development should be made of the cornice
- Please submit final working drawings with all necessary details when available

The Applicant and project architect will ensure that both comments will be addressed to ARB and Town Board satisfaction. It is noted that the fifth story of the building has been "stepped" back and the building façade along McDermott Avenue is varied, both architectural features that provide mitigation in terms of height and mass of the building.

As the subject site is entirely developed, it is expected that no undiscovered pre-historic era resources remain on the site, as any such resources that may have been present would have been destroyed when the site was developed about 70 years ago. As the OPRHP correspondence confirms that there are no historic era cultural resources on the subject site, the proposed project would not directly impact such resources, nor would the removal of the two existing buildings result in an impact on cultural resources. The OPRHP letter confirms that the proposed project will not result in any adverse impacts to cultural resources, as follows:

> Based upon our review of the materials submitted and conversations with your office, it is the OPRHP's opinion that the proposed project, as designed and presented, will have No Adverse Impact upon historic resources.

Visual Resources

The proposed project is expected to change the visual character of the site and views of the site by replacing two smaller low structures with a single, larger and taller structure proximity. The existing character of the subject property as a site in need of revitalization will be removed and replaced with an attractive five-story mixed use building that conforms to the DC-1 zoning, provides housing for various income levels, provides a street presence in the form of commercial use along the sidewalk, and provides an anchor to revitalize this portion of East Main Street. It is noted that an additional development is proposed to the west of the subject site at 203-213 East Main Street.

The change in visual character that will result from the proposed project and the adjoining proposed development is consistent with the Town's intended use of the site and area, pursuant to the EMSURP and DC-1 zoning. The EMSURP outlined a program to revitalize East Main Street through urban renewal which is part of the Town's comprehensive plan initiative for downtown Riverhead. The EMSURP combined with the DC-1 zoning envisions mixed use

buildings up to five stories in height to provide incentives for re-development, and stimulate revitalization of the downtown area. This initiative is grounded in the Town Comprehensive Plan Update, the EMSURP, the NYS CMP, and the BOA. The proposed use of the subject site as well as the site at 203-213 East Main Street provides a means of realizing this urban renewal and revitalization initiative that the Town has envisioned through these studies and zoning code provisions. The economic and social benefits of revitalization are numerous and formed the basis for the Town's planning initiatives that are being implemented through redevelopment of 221 East Main Street and other sites in the area pursuant to existing zoning. The redevelopment of this site will anchor the south side of East Main Street west of McDermott Avenue and promote the planning goals of the Town for revitalization and provision of apartments for various income levels.

Additional assessment of visual resources is provided to further examine the proposed project in the context of the site and area. The most effective way to assess the change in visual character is to provide illustrations of how the proposed project will appear from various vantage points, and as a result, a series of architectural graphics have been prepared to portray the character of the site in the context of the area. **Appendix B-10** presents a number of computer-simulated views of the proposed building. As can be seen, the building will feature an architectural style complementary to that of the commercial buildings adjacent and to the east of the site (see also **Appendix B-3**).

With respect to the visual context of the project site and its surroundings along McDermott Avenue and East Main Street, the figures in **Appendix B-11** compare the site's existing character to its (simulated) appearance after construction of the proposed building. The figures show that, while the proposed building will change the appearance of the site for observers, the building has been designed with an architectural style that complements that of the neighborhood, and so will be attractive and appropriate within the East Main Street downtown area.

Note that the DC-1 code provides a minimum zero front yard depth, in order to support the main street character along this portion of East Main Street; the code also allows for a five-story structure. The proposed mixed-use building will conform to both of these regulations, so that the existing street line of buildings along the East Main Street corridor will be preserved. While the proposed project will represent the first siting of a taller structure than is currently present along this segment of East Main Street (which would tend to contrast with the smaller height and bulk of adjacent and nearby buildings), the building has been designed to feature an architectural theme that, through its use of building materials, colors and textures, complements that of the adjacent buildings and of the corridor in general (see **Sheet A-016.00**). It is noted that the fifth story of the building has been "stepped" back and the building façade along McDermott Avenue is varied, both architectural features that provide mitigation in terms of height and mass of the building. The visual appearance of the proposed structure is best determined in review of the visual simulations provided in **Appendices B-10, 11** and **12** as well as **B-3**.

An additional photo-simulation has been prepared to assist in visualizing the proposed project and the massing of the adjacent 203-213 East Main Street proposal, in the context of the character of the community **(Appendix B-12)**. This analysis includes views of the project site

from seven (7) viewing angles and shows architectural details of the proposed project and the massing of the two proposals. Note that more detailed views of the 203-213 East Main Street structure (so that its architectural treatment, material colors and textures, fenestration, etc.) are not available, so that only its proposed dimensions can be added to the simulations. However, the graphics clearly identify the massing of this building in the context of its surroundings which include the proposed project site at 221 East Main Street.

This visual impact assessment considers the following key points:

- While the area is comprised of a mix of uses, architectural styles and heights of buildings, there is currently a dominance of one, two and three-story buildings in the area of the site and along East Main Street as depicted in photographs in Appendix D of **Appendix B-7**. Existing structures on the east side of McDermott Avenue are primarily two-story structures. The proposed structure will be in contrast with building heights in the vicinity of the proposed project site. Specifically, the proposed building will be three-stories taller than existing buildings on the east side of McDermott Avenue and two-stories higher than three-story buildings on Main Street. Visual renderings in **Appendices B-10, 11** and **12** and **B-3** identify the appearance and relation to the existing visual character of the area.
- It is noted that the fifth story of the building has been "stepped" back and the building façade along McDermott Avenue is varied, both architectural features that provide mitigation in terms of height and mass of the building.
- There is precedent for a five-story building near a traditional structure with historic context, specifically the approved five-story hotel at the Preston House site at 428 East Main Street.
- The proposed use conforms to zoning in terms of height and all dimensional requirements related to site design/alignment.
- The proposed project will redevelop a deteriorated site in need of revitalization.
- The proposed project includes a five-story mixed-use building in conformance with DC-1 zoning (except for the size of the studio units and parking space dimensions), and is consistent with the Towns goals for downtown revitalization as embodied in studies, including the Town Comprehensive Plan Update, the EMSURP, the NYS CMP, and the BOA.
- The project will anchor the portion of East Main Street west of McDermott Avenue with an attractively styled building that complements the main street setting and promotes revitalization.
- The project will further the Town's housing goals by providing units for a range of income levels.
- The proposed project will further social and economic goals of the Town by stimulating revitalization of East Main Street to support existing businesses in the downtown, increase spending, provide tax revenue and/or PILOT program, sales tax revenue, employment and related benefits.
- In keeping with the character of the Town Main Street Historic District, the building's design integrates elements from other structures along East Main Street, such as brick detailing.
- The architecture of the project has been preliminarily recommended for approval by the Town ARB an advisory entity responsible for architectural review to *"promote visual qualities in the environment which bring value to the community; to foster the attractiveness of the community as a place to live and work; to preserve the character and quality of our heritage by maintaining the integrity of those areas which have a discernable character or are of special historic significance; to protect public and private investments in the area; and to raise the level of community awareness and expectations for the quality of its environment."* The ARB will offer its final recommendation when the SEQRA review process is completed.

Town Code Section 301-143 includes Supplementary Guidelines, specifically in Subsection A (3), the following criteria are provided: "Building shape, massing and siting should reflect the prevalent character of surrounding buildings on the block." The proposed project is located within the "block" beginning at Mc Dermott Avenue- westerly to Peconic Avenue and southerly to Heidi Behr Way and northerly along the south side of East Main Street. This area is dominated by buildings that are one, two and three-stories in height. The Town has established a code that is expected to result in revitalization of the downtown area and contemplates buildings up to five-stories in height. If the Town is to realize the revitalization goals for the downtown, it is expected that recognition of a trend toward taller buildings that conform to the DC-1 will occur. Similar provisions would have applied to other five-story buildings more remote from this site including Summerwind, Hyatt, and Sea Star, which were established in areas where five-story buildings did not previously exist. This assessment recognizes the deviation from the specific guidance offered in Town Code Section 301-143. Supplementary Guidelines, Subsection A (3), and provides further information here for consideration of this deviation in the context of visual character, mitigation and conformance with land use goals.

Based on the visual assessment, there will be a change in the visual character of the site and area. The site is in need of revitalization, and the proposed use is consistent with Town planning goals for redevelopment of the area to achieve this revitalization. The appearance of the building has been carefully considered and mitigated where possible through architectural design ("stepped back fifth-story, building articulation along McDermott Avenue, and architectural elements such as brick detailing as part of design). The proposed project will establish a use characteristic of a main street setting that is expected to complement this area of East Main Street advance goals of the Town's comprehensive plan and stimulate revitalization along this portion of East Main Street.

As noted above, the proposed project is subject to review by the ARB and the LPC, as the subject site in within an historic district. However, at its May 17, 2017 meeting, the LPC determined that it has no jurisdiction over the project, as the project site contains no qualified landmarks. The project was subject to ARB review and discussion at various meetings, the latest of which occurred on April 19, 2017. As per a recommendation of the ARB, the building's massing at the main residential entrance has been set back. On May 17, 2017, the ARB recommended approval of the proposed project to the Town Board (see **Appendix B-13**), with the following two minor comments:

- More development should be made of the cornice
- Please submit final working drawings with all necessary details when available

The Applicant and project architect will ensure that both comments will be addressed to ARB and Town Board satisfaction.

A Shadow Study was prepared for the project by the architect (see **Appendix B-14**). That analysis indicates that the homes along the eastern side of McDermott Avenue would experience some impact from shadows cast by the proposed building, but these impacts would be limited in time to the winter months, and then in duration, only to mid- to late-afternoon hours. Shadows

cast to the north, toward the church and Doroszka properties, would extend to the structures themselves, but only during the morning hours and only during the winter months.

Proposed Mitigation

Land Use, Zoning and Plans

- As no adverse impacts with respect to land use are anticipated, no additional mitigation measures with respect land uses are necessary or proposed.
- While the project will not conform to all the bulk requirements of the DC-1 zoning district (thereby necessitating the special permit and six variances), analysis indicates that neither the special permit nor the variances, if approved, would adversely impact the area, or set an unacceptable precedent for future development on other sites. The special permit/variances are needed to enable the project to move forward with as little potential for adverse effect regarding zoning as practicable. Thus, no additional mitigation with respect to zoning is necessary or proposed.
- The proposed project has been designed to conform to all applicable recommendations of the Town Comprehensive Plan, the EMSURP and the NYS CMP standards as practicable. Thus, no additional mitigation in this regard is necessary or proposed.

Community Services

- It is expected that the proposed project will increase the need for and usage of those community facilities and services pertinent to commercial and residential spaces, and, hence the costs that such services will expend. However, the expected increase in taxes generated and/or a PILOT program will help offset at least portions of the increased needs for and costs of community services.
- The Riverhead CSD will benefit from an increase in annual school tax revenue and/or a PILOT program as compared to the amount of school taxes generated by the site in its current condition. This increased revenue will assist in offsetting some of the increased district expenditures necessitated by the expected 14 new students generated by the project.
- The proposed project may increase the potential need for emergency security services of the Riverhead Police Department. However, to mitigate this potential increase in calls, the proposed building and parking level will be equipped with security lighting and emergency alarms.
- The proposed project may increase the potential need for emergency security services of the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. However, to mitigate these potential increases in calls, the proposed building and parking level will be equipped with fire and smoke alarms, emergency lighting systems, and sprinklers, as required by NYS Fire and Building Codes. These features will increase the level of safety from fires and minimize the potential for use of ambulance services.
- Pertinent input from the Riverhead Volunteer Fire Department will be solicited throughout the site plan application process to ensure that the site layout and the building are designed to provide adequate provisions for emergency vehicle access and adequate hydrant and standpipe locations.
- The project will increase the consumption of water on-site. In consideration of this increase in demand, water-conserving plumbing fixtures and mechanical systems will be utilized in construction, which will further minimize the volume of water required from the public water supply.
- Each apartment will be equipped with software that monitors for leaks or water wastage.
- While the project will increase the consumption of energy resources, it is anticipated that sustainable energy-conserving measures, including energy-saving wall insulations, triple-glazed windows and energy efficient mechanical

Transportation

- As recommended by the TIS, after completion of the project, minor signal timing adjustments at the intersection of East Main Street at McDermott Avenue/Maple Avenue will be made for the northbound McDermott Avenue approach, improve the northbound LOS E to LOS C during the PM peak hour and LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.
- The proposed project will provide 55 on-site parking stalls to complement the available public parking in existing municipal parking lots in the area of the proposed project, where no parking is required since the project is within the Riverhead Parking District.

Water Resources

- As no adverse impacts to groundwater quality or quantity are anticipated to occur because of the project, no additional mitigation is necessary or proposed.
- As no adverse impacts on the elevation of the water table or direction of groundwater flow beneath the subject site are expected, from the project, no additional mitigation is necessary or proposed.
- No impacts on the quality or quantity of water in the Peconic River or any other surface water resource in the vicinity is anticipated to occur from the project, no additional mitigation s necessary or proposed.
- The proposed project will conform to the applicable building elevation requirements associated with its presence within the AE Zone (as delineated by the FEMA Flood Hazard Zone Map). Therefore, no adverse impacts in this regard are expected, and no additional mitigation is necessary or proposed.

Soils

- A detailed grading and drainage plan will be prepared for the site plan application, and will provide details of overall site grading and will require Town Division of Planning review and Planning Board approval prior to implementation.
- Any soil contamination that may have occurred because of oil storage tank leakage will be properly evaluated and remediated prior to initiation of the demolition phase. The remediation process will be subject to the review and approval of proper county and state entities, which will certify that such remediation was properly conducted, and that the process is complete.
- Erosion at the site and sedimentation at downslope locations may occur during the construction phase of the project. These potential impacts will be overcome by implementing erosion control measures and installing proper drainage facilities as part of the construction activities.

Cultural Resources

- The fifth story of the building has been “stepped” back and the building façade along McDermott Avenue is varied, both architectural features that provide mitigation in terms of height and mass of the building.
- The Applicant will ensure that the project architect addresses the ARB comment regarding the building’s cornice.

Visual Resources

- Potential adverse impacts have been mitigated to the maximum extent practicable by use of an architectural styling that complements the other structures in the neighborhood (so that it would not contrast with the context of the resources).
- It is noted that the fifth story of the building has been “stepped” back and the building façade along McDermott Avenue is varied, both architectural features that provide mitigation in terms of height and mass of the building.

- The Applicant will ensure that the project architect addresses the ARB comment regarding the building's cornice.

Alternatives Considered

SEQRA requires the consideration of alternatives to the proposed project. The specific alternatives to be analyzed should represent uses and yields that are reasonable to and feasible for the applicant, and implementation of technologies for these alternatives and other options to the proposed project that would achieve the applicant's objectives must be within the applicant's capabilities. More specifically, 6NYCRR Part 617.9(b)(5)(v) indicates that alternatives should include "a description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor." The purpose of the alternatives analysis is to determine the merits of the proposed project as compared to those of other possible uses, sites and technologies that would also achieve the applicant's objectives, and potentially reduce environmental impacts. The discussion and analysis of the alternatives should be conducted at a level of detail sufficient to allow for this informed comparison, to be conducted by the decision-making agencies. Alternative 1 is the "No Action" alternative, which is required by SEQRA and is intended to represent site conditions if the proposed project is not implemented. For the subject application, the following alternatives were evaluated:

- **Alternative 1: No Action** - assumes that the site remains unchanged from its current use and condition; no re-development occurs.
- **Alternative 2: Mixed-Use Development** - assumes re-development of the site under its existing zoning, with a structure similar to the proposed project, of a mixed commercial and residential project having 12,623± SF of ground floor commercial space and 116 apartments on floors 2 through 5.
- **Alternative 3: Hotel Development** - assumes re-development of the site under its existing zoning, with a structure similar to the proposed project, of a hotel having 12,623± SF of ground floor administrative/maintenance/mechanical spaces and 110 rooms on floors 2 through 5. A special permit for this scenario will be required from the Town Board.
- **Alternative 4: Mixed-Use Development -** assumes a mixed-use residential project in a single, building that is not more than three stories high that reflects EMSURP recommendations regarding conformance to the building heights to the east and the west, and maintenance of vistas southward from the buildings on the north side of East Main Street.
- **Alternative 5: Townhouse Development** - assumes townhouse development conforming to the DC-1 zoning district.
- **Alternative 6: Conforming Proposed Project** - assumes a project similar in nature to the proposed project, but conforming to Town Code requirements for lot coverage, and studio apartment size, and providing on-site parking for the residences, at a rate of 1 space/unit. The Applicant could provide on-site parking and meet the allowed maximum site coverage, by: reducing the number of residences, by making the residences smaller in size, by reducing the ground floor commercial spaces, or by a combination of these measures.

Permits and Approvals Required

Prior to the issuance of any permits or approvals, the applicant and Lead Agency must fulfill the requirements of SEQRA. This Voluntary DEIS describes the proposed project, catalogues site

and area resources, discusses potential environmental impacts of the project, presents measures to mitigate adverse impacts, and examines alternatives to the project.

This Voluntary DEIS provides the Board (as lead agency under SEQRA) and all involved agencies with information necessary to render informed decisions on the site plan application. This document ensures that the Town Board takes a "hard look" at the project and will assist in determining potential impacts of the proposed project in order to support a SEQRA determination of significance.
Table S-5 is a list of the permits and approvals anticipated necessary for the proposed project.

Table S-5
PERMITS AND APPROVALS REQUIRED

Applicable Board/Agency	Permit/Approval Type
Town Board	Site Plan approval Special Permit (Site Coverage)
Town Building Department	Building Permit
	239f review (to SCDPW*)
	Demolition Permit
Town Fire Marshal	Site Plan review
Town Highway Superintendent	Highway Work Permit
Town Zoning Board of Appeals	Variances
Town ARB	Site Plan review (approval recommended May 15, 2017)
Town LPC	Site Plan review (approval recommended May 15, 2017)
Town Conservation Advisory Council	Site Plan review
RSD	Sanitary Sewer System Connection approval
RWD	Water Supply System Connection approval
SCDHS	Sanitary Sewer System review
	Water Supply System review
SCPC*	Referral
NYSDOT	Highway Work Permit
NYS GOSR/HCR*	Concurrence memo and FONSI (dated July 21, 2017)

* SCDPW - Suffolk County Department of Public Works; SCPC - Suffolk County Planning Commission; GOSR/HCR - Governor's Office of Storm Recovery/Homes and Community Renewal.

SECTION 1.0

DESCRIPTION OF THE PROPOSED PROJECT

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Introduction

This document is a Voluntary Draft Environmental Impact Statement (DEIS) for a project known as **Riverview Lofts** (hereafter, the *"proposed project"*). The site of this proposal is in the downtown area of Riverhead hamlet, Town of Riverhead (hereafter, *"the project site"* or *"the subject site"*). **Figures 1-1a and 1-1b** provide regional and local location maps of the project site, respectively *(all figures will be found in the section following the main text of this document)*. Note that the site is currently occupied by two structures, whose street addresses are 221 East Main Street and 31 McDermott Avenue.

The proposed use is consistent with the Town of Riverhead Zoning Code designation for the subject site, which is DC-1. A mixed-use development of this type is encouraged by zoning and is well-grounded in the planning efforts of the Town as embodied in the East Main Street Urban Renewal Plan (EMSURP) plan, and the Town of Riverhead Peconic River/Route 25 Corridor Step II Brownfields Opportunity Area (BOA) plan and is consistent with Town initiatives to revitalize downtown Riverhead as will be further discussed. Further, the project will provide needed quality housing for households characterized by a mix of incomes, in a pedestrian-friendly, transit-oriented environment. The site is within the Town Main Street Historic District (see **Figure 1-2**).

The site is composed of two contiguous developed tax lots, designated as listed in **Table 1-1** (see also **Topographical Survey**; *all plans will be found in pouches at the back of this document*):

Table 1-1
PROJECT SITE IDENTIFICATION

Parameter	221 East Main Street [(1)] (Section/Block/Lot)	31 McDermott Avenue [(1)] (Section/Block/Lot)	Total
Tax Lot Designation [(2)]	129/1/21	129/1/22	---
Square Feet (SF)	26,597	10,570	37,167
Current Use	Commercial (vacant)	Commercial (occupied)	---

(1) Both tax lots are in District 0600 (Town of Riverhead).
(2) Per Suffolk County Tax Map (SCTM) designation; see **Figure 1-2**.

The approximately 0.85-acre project site is located at the southwestern corner of the intersection of East Main Street and McDermott Avenue; the site is roughly rectangular in shape, with its narrow northern side fronting on the south side of East Main Street, while its longer eastern side fronts on the west side of McDermott. The site is currently developed and occupied on the north by a vacant, one-story brick commercial structure that fronts on East Main Street (the "221 East Main Street building"), and on the south by an occupied two-story frame commercial/residential building (the "31 McDermott Avenue structure"). The central portion of the property features an at-grade parking lot for the 221 East Main Street structure. This privately-owned parking area is accessed only from McDermott Avenue; there is no vehicle access from East Main Street. This privately-owned parking area is accessed only from McDermott Avenue; there is no vehicle

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FIGURE 1-1a
REGIONAL LOCATION MAP

Source: ESRI Web Mapping Service

Scale: 1 inch = 1,000 feet

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Riverview Lofts
Riverhead

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FIGURE 1-1b
LOCAL LOCATION MAP

Source: ESRI Web Mapping Service

Scale: 1 inch = 100 feet

N

Riverview Lofts
Riverhead

Voluntary DEIS

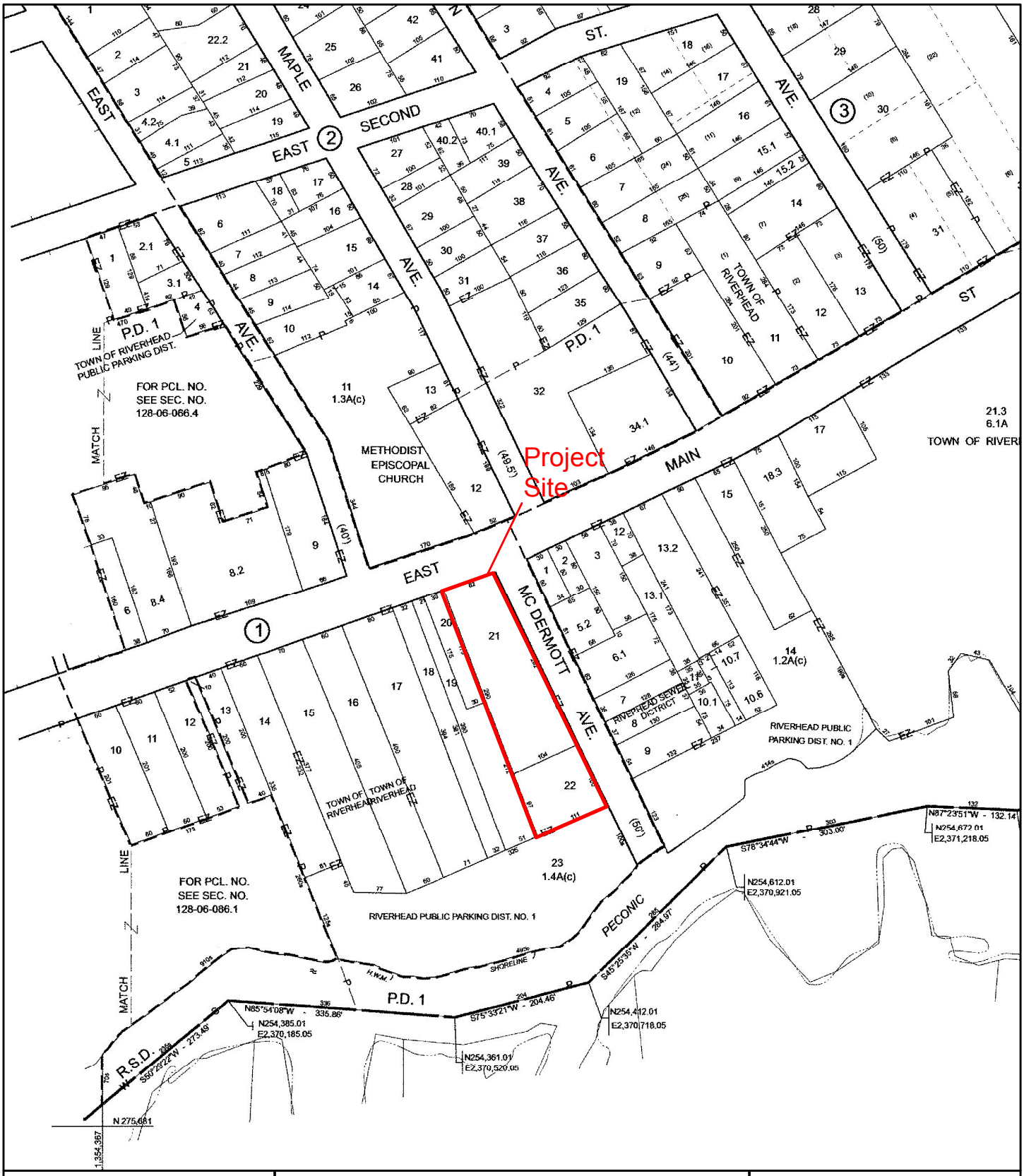

FIGURE 1-2
TAX LOT MAP

Source: ESRI wms; Suffolk County records
Scale: 1 inch = 200 feet

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access from East Main Street. As this portion of the site is currently unused, this parking area is used by the public for parking. On-site parking will consist of 55 spaces (of which three will be set aside as handicapped spaces) although none are required since the subject site is within the Riverhead Parking District which considers the abundance of Town parking available on the street and in lots throughout the downtown area as will be further discussed herein. The parking area is primarily vacant due to vacancies in the on-site building, though it is currently used by the public.

The applicant, Georgica Green Ventures, LLC, seeks Board approval to demolish the two existing structures on the site, and construct a single five-story mixed-use structure featuring 12,623 SF of first-floor commercial spaces (at-grade with East Main Street) and four floors of apartments (116 units; see **Sheets C-101.00, A-013.00, A-014.00 and A-015.00,** and **Table 1-2)**). Note that specific type(s) of tenants are not presently known for the commercial spaces; in order to provide a "conservative" analysis of potential impacts, this document assume restaurant use for 11,115 SF of this area; the remaining 1,508 SF is assumed to be retail space.

Because the subject site slopes downward toward to south from East Main Street, the proposed lower level for parking beneath the structure will be accessed via McDermott Avenue (see **Sheet A-016.00** and **Figure 1-3**). These spaces will be available to the project's residents on a first-come, first-served basis; patrons of the project's commercial spaces will park elsewhere.

Of the 116 apartments, 115 will be rented, and one (1) apartment will be set aside for occupancy by the building superintendent. There will be space on the rooftop for a gathering place for the building's residents. As described below and as sought by the Town for the DC-1 district, the 115 rental apartments will be leased based upon the household income of the residents. The provision of work force and next generation housing for various income levels is a key beneficial feature of the project that furthers the housing goals of the Town.

To determine the rent applied to each household, the average family income (AMI) for a family of four in the Nassau-Suffolk region was determined. Then, 60%, 90% and 130% of this value were assumed to represent the three "Tiers" of household incomes that would qualify a household for occupancy of a studio, a one-bedroom, or a two-bedroom unit. For each of the three types of unit within each "Tier," the household income needed to afford the anticipated gross rental rate was calculated. Finally, as the applicant anticipates that electricity will be paid by the resident, the gross rental rate was reduced by an appropriate amount to reach a net monthly rent. **Table 1-3** summarizes the pertinent data for each Tier.

In addition, there are number of agencies contributing to the funding for the project, and include:

- New York State (NYS) Homes & Community Renewal
- NYS Housing Finance Agency
- Governor's Office of Storm Recovery
- Suffolk County Department of Economic Development and Planning (SC Affordable Housing Opportunities Program)
- Riverhead Industrial Development Agency
- NYS Empire State Development (RESTORE NY Communities Initiative Municipal Grant Program)

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FIGURE 1-3
ARCHITECT'S RENDERING

Source: Architect
Not to Scale

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Riverview Lofts
Riverhead

Voluntary DEIS

Table 1-2
USES, UNITS & YIELDS IN BUILDING
Proposed Project

Retail Space (SF)	**Other Commercial Spaces** (SF) [1]	**Residences** [2] (units)	**Residential Space** (SF; estimated)	**Other Spaces** (SF; estimated)	**Total Floor Spaces** (SF)
Lower Level (55 Parking Spaces)					
---	---	---	---	20,995 [3]	20,995
First Floor					
1,508	11,115	---	---	8,310 [4]	20,933
Second Floor					
---	---	6 studio 15 one-bedroom 7 two-bedroom 28 units	2,790 10,110 7,735 20,635	5,070 [5]	25,705
Third Floor					
---	---	8 studio 15 one-bedroom 7 two-bedroom 30 units	3,720 10,110 7,735 21,565	4,140 [5]	25,705
Fourth Floor					
---	---	8 studio 15 one-bedroom 7 two-bedroom 30 units	3,720 10,110 7,735 21,565	4,140 [5]	25,705
Fifth Floor					
---	---	9 studio 12 one-bedroom 7 two-bedroom 28 units	4,185 8,088 7,735 20,008	4,752 [5]	24,760
Roof					
---	---	---	---	165	165
Totals					
1,508	11,115	31 studio 57 one-bedroom 28 two-bedroom [6] 116 units	14,415 38,418 30,940 83,773	47,572 [5]	143,968

(1) The plans show two restaurants: Restaurant 1 has 5,000 SF/235 seats, and Restaurant 2 has 6,115 SF/300 seats. Restaurants were used for maximum use impact analysis in terms of wastewater and water use, trip generation and parking; however, these spaces may be occupied by other types of commercial uses depending on market conditions.

(2) Studio units vary from 410 to 520 SF (465 SF average); one-bedroom units vary from 560 to 788 SF (674 SF average); and two-bedroom units vary from 875 to 1,334 SF (1,105 SF average).

(3) Includes Parking, Utilities and Lobby spaces.

(4) Includes Utilities, Lobby, Building Amenities, and Building Storage spaces.

(5) Includes Laundry, Storage, and Hallway spaces.

(6) Of which one unit set aside for building superintendent use.

Table 1-3
SUMMARY OF INFORMATION ON UNITS AND RENTS (1)

Parameter	Household Income Limit	Net Monthly Rent (2)	Units
87 Units (Tier I: for Households Earning 60% of the AMI)			
Studio Units	$46,560	$976	25
One-Bedroom Units	$49,860	$1,210	44
Two-Bedroom Units	$59,880	$1,452	18
Subtotal	---	---	**87**
13 Units Tier II: (for Households Earning 90% of the AMI)			
Studio Units	$59,850	$1,125	4
One-Bedroom Units	$74,790	$1,464	5
Two-Bedroom Units	$89,820	$1,655	4
Subtotal	---	---	**13**
15 Units (Tier III: for Households Earning 130% of the AMI)			
Studio Units	$86,450	$1,326	2
One-Bedroom Units	$108,830	$1,639	8
Two-Bedroom Units	$129,740	$1,955	5
Subtotal	---	---	**15**
TOTAL RENTAL UNITS	---	---	**115**

(1) One two-bedroom unit set aside for the building superintendent; it will not generate rental income.
(2) Reflects rent reduction, as residents pay electricity cost.

Table 1-4 presents information on the funding sources for the proposed project.

As noted, the project conforms to the 2003 Town Comprehensive Plan and to the goals and intent of the 2008 Update of the Town's EMSURP and the BOA, and will conform to many of the applicable Town Zoning Code bulk and setback requirements for development in the site's DC-1 zoning district. However, the project requires six (6) variances from the Town Zoning Board of Appeals (ZBA), one to exceed the maximum size of the studio units and five related to the on-site parking spaces (see **Sheet C-002.00**), as follows:

- Minimum Parking Stall Size
- Minimum Back-Up Aisle Width
- Minimum Parking Stall Size [handicapped]
- Minimum Access Aisle Width
- Minimum Width at Curb Cut

In addition, the project needs a Town Board (hereafter, *"the Board"*) special permit to exceed the maximum allowed building coverage (80% of the site allowed, 91.75% requested).

Table 1-4
FUNDING SOURCES*
Proposed Project

Source Origin	Source Name	Source Description	Estimated Total Amount
NYS HFA	HFA TE Bonds	Fixed taxable bonds to fund mortgage loans for individual rental developments.	$10,920,000
NYS HCR	HCR MIHP	Provides gap funding to developments that include a component of units that will be occupied by households earning up to 130% of AMI, will increase the total number of mixed and middle-income units throughout the State.	$1,200,000
NYS HCR	HCR NCP	Provide financing to stimulate the new construction of rental housing affordable to households that earn 60% of AMI and that may advance one or more of the specific housing priorities of New York State.	$13,900,000
Suffolk County	Suffolk Acquisition Loan	Suffolk County Workforce Housing Acquisition Program, acting through its Department of Economic Development and Planning, may issue bonds to acquire sites for qualifying workforce housing developments.	$900,000
NYS GOSR	CDBG-DR	Community Development Block Grant program as Disaster Recovery grants to rebuild the affected areas and provide crucial seed money to start the recovery process.	$6,500,000
ESD	Restore NY Loan	Empire State Development Restore NY Loan	$250,000
Suffolk County	Suffolk Infrastructure Loan	Suffolk County Workforce Housing Infrastructure Program, acting through its Department of Economic Development and Workforce Housing, may issue bonds to fund certain approved infrastructure improvements for qualifying workforce housing developments.	$2,100,000
NYS HCR	LIHTC Equity	Raymond James Tax Credit Fund, Inc.	$11,879,629
NYS HCR	SLIHC Equity	SLIHC will increase the total number of mixed and middle-income units (60-90% AMI) throughout the State. - Raymond James Tax Credit Fund Inc.	$4,874,513
Georgica Green Ventures, LLC	Deferred Development Loan	Developer Fee Loan	

* HFA-Housing Finance Agency; HCR-Homes & Community Renewal.

As noted above, the subject site is privately owned and currently has 27 parking stalls. Prior Town reports and mapping **(BOA, 2013 and Map of Downtown Riverhead Parking District, 12/29/2008[1])** identified the site as a public parking lot; however, the site is privately owned and proposed to be re-developed. Under existing conditions, on-site parking would only be available to serve on-site uses. For proposed conditions with the Riverview Lofts site use, on-site parking is not required since the site lies within the Downtown Parking District. Nevertheless, the

[1] http://www.townofriverheadny.gov/docview.aspx?docid=30459

Applicant recognizes that maintaining adequate parking is important for downtown Riverhead, and seeks to reduce the off-site parking demand of the proposed project by providing some on-site parking. This parking also provides a benefit limited to the residents of the subject site; no commercial use parking is proposed. As a result, the design team sought to provide on-site parking in consideration of the site size. The design review process resulted in the proposed site design to accommodate 55 spaces, some of which require a variance of the stall size and would be available for use by compact cars. The inclusion of this parking as part of the building design results in the need for a variance of the 80% maximum allowable building coverage. The outcome is a building that covers 91.75% of the site, or an 11.75% increase in building coverage. The project architect Stephen B. Jacobs Group, P.C. indicates that if the parking were not provided as per the proposed design, the building would be less than the 80% maximum allowable lot coverage, specifically 69% lot coverage. Consequently, the variance is requested in connection with project approvals in order to provide 55 parking stalls on site, where none are required, as well as the requested variance for the smaller size of some of the proposed parking stalls.

As shown in the plans, 25 of the 31 proposed studio units will exceed the maximum floor space of 450 SF allowed under the Town Zoning Code in the DC-1 district, thus requiring a ZBA variance. The Applicant's Limited Scope Marketing Study (see **Appendix A-1**) includes an analysis of the rental rates for both market-rate projects and affordable projects in the region. As part of that analysis, studio units in other projects in the region that are comparable to those of the proposed project were surveyed. That analysis indicates that, for both market-rate and affordable projects, studio units in the region were in excess of 450 SF (in fact, for the four market-rate projects reviewed, studio units average 525.5 SF in size, and the one affordable project reviewed had a studio unit size of 670 SF). This demonstrates that a precedence for studio units in excess of 450 SF is well-established in the region, justifying the appropriateness of a ZBA variance. This also supports the Applicant's need to exceed the allowed site coverage of 80%

Table 2-2 discusses the project's conformance to the standards against which the Board will review the special permit request and determine whether those standards are met.

With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I. states that, for a site within a designated Parking District, the requirements of the Town Zoning Code do not apply. That is, the presence and availability of free, public parking spaces off-site but nearby is expected to satisfy the parking needs of the residents and patrons of the development; the project is not required to provide any on-site parking spaces. However, in order to decrease the need for off-site municipal parking and provide a benefit to the site's residents, the Applicant will provide 55 on-site parking spaces (of which three will be handicapped spaces), and the balance of the project's parking needs will be met by off-site spaces within the Riverhead Parking District area. These spaces will be available to the project's residents on a first-come, first-served basis; patrons of the project's commercial spaces will park off-site, typical of other retail uses in the downtown. The two existing driveways onto McDermott Avenue will be closed, and the site will be accessed via a single, new driveway onto McDermott Avenue that leads directly into the internal

groundlevel parking area beneath the building. This access will be "stop"-controlled for departing vehicles.

Sanitary wastewater from the project will be conveyed off-site via the existing network of the Riverhead Sewer District (RSD), and treated and discharged at the existing municipal facility. The project will conform to all applicable flow and design requirements of the Suffolk County Department of Health Services (SCDHS) and the RSD.

The applicant has designed the project to:

- Conform to the Town Comprehensive Plan in terms of providing quality housing for households having a mix of incomes, in a downtown location with ground floor retail spaces;
- Conform to the goals and intent of the EMSURP and BOA for the area;
- Be consistent with the pertinent policies of the NYS Coastal Management Plan (CMP);
- Increase pedestrian traffic in the hamlet downtown area, to support commercial activity and enhance the hamlet downtown area aesthetic;
- Strike a balance between the yield permitted by the DC-1 zoning while remaining within a density that would not adversely impact the downtown hamlet character of the area and still support an economically viable project;
- Minimize potential adverse impact to groundwater resources by connecting to the public sanitary sewer system;
- Provide an aesthetically attractive development;
- Utilize an innovative drainage system design that will be reviewed and approved by the Town, to provide twice the minimum storage capacity than required by Town Code, and thereby minimize the potential impact to local stormwater runoff patterns from the release of overflow from the system onto Heidi Behr Way (see **Section 1.4.2**);
- Provide safe pedestrian and vehicle access in conformance with Town and County highway access limitations;
- Conform to all other appropriate land use requirements; and
- Provide superior site design, including appropriate on-site recreational amenities; walkability and sense of place through attractive community architecture and new plantings (eleven trees will be installed along McDermott Avenue; see **Sheet C-103.00**).

The Applicant prepared an Economic Impact Analysis of the proposed project (see **Appendix A-2**), to determine whether and to what degree the project will contribute to the community's long-term economic health. The following is taken from the Summary of that document:

> …this analysis examines the economic impacts that are associated with the construction and annual operations of the proposed project, located in downtown Riverhead, New York. Economic impacts include direct, indirect and induced benefits on output, employment and associated labor income during the construction phase and during a year of stabilized operations of the proposed project. This analysis was prepared using methods, data and information that are considered to be industry standard for such economic impact analyses.
>
> ***Definition of Economic Impacts***
> A *direct impact* arises from the first round of buying and selling. These direct impacts can be used to identify additional rounds of buying and selling for other sectors of the economy and to identify the impact of spending by local households. An *indirect impact* refers to the increase in sales of other

industry sectors, which include further round-by-round sales. An *induced impact* accounts for the changes in output and labor income by those employed within the region, resulting from direct and indirect impacts. The *total impact* is the sum of the direct, indirect and induced impacts.

Key Findings

It is projected that the construction period and annual operations of the proposed project will contribute positively to the local economy. During the construction period, opportunities for employment will offer direct, indirect and induced benefits among businesses and households located throughout the region. During the annual operations of the proposed project, long term jobs will also offer direct, indirect and induced benefits to the local economy, Suffolk County and the region as a whole. The new jobs created during both the short-term construction period, as well as long-term annual operations will help to increase business and household income in the community. In turn, as spending increases, this creates additional jobs and further increases business and household income throughout the local economy and into other parts of the region.

Anticipated Economic Impacts

- For the purpose of this analysis, it is anticipated that the construction of the proposed project will commence in the fall of 2017, with construction occurring over a period of 24 months. It is anticipated that the proposed project will be completed during the fall of 2019.
- The construction period is projected to represent a total of approximately $33.66 million in investment. The $33.66 million in direct output is projected to generate an indirect impact of over $14.3 million, and an induced impact of nearly $15.7 million, bringing the total economic impact on output to over $63.6 million during the 24-month long construction period.
- It is projected that the construction period will necessitate 123.0 full time equivalent (FTE) employees annually over the 24-month construction period.
- The 123.0 FTE jobs created annually during the construction period will have an indirect impact of 112.1 FTE employees and an induced impact of 108.6 FTE employees in other industry sectors, bringing the total impact of construction to 343.8 FTE jobs during the construction period. This job creation – direct, as well as indirect and induced – is most crucial during Long Island's present economic state, and presents opportunities for persons who are unemployed throughout the region.
- Labor income from the construction jobs are estimated to amount to $68,900 per year, per employee. Assuming that the construction period lasts 24 months, this represents approximately $137,800 per worker, for a total of over $17.0 million in collective earnings among the 123.0 FTE construction workers. This labor income is projected to have an indirect impact of over $5.0 million and an induced impact of nearly $5.4 million, bringing the total economic impact of the construction to over $27.4 million in labor income.
- It is assumed that the operational phase of development will begin upon the completion of the 24-month long construction period, anticipated to occur in the fall of 2019. For the purpose of this analysis, it is assumed that the first year of stabilized operations will occur in 2020. At that point in time, and for the purpose of this analysis, it is assumed that the proposed project will be operating at or near full occupancy, with the majority of its units and the commercial space leased and occupied.
- Direct output is estimated to total $5.7 million per year. This includes revenue generated in the form of monthly rent for the residential units, as well as lease rates and sales revenues that occur within the commercial space.
- The direct operational revenues are projected to generate an indirect impact of over $624,000 and an induced impact of over $945,000 per year. This additional output is generated through round-by-round sales made at various merchants in other sectors of the regional economy. These

include local retailers, service providers, banks, grocers, restaurants, financial institutions, insurance companies, health and legal services providers, and other establishments in the region.

- The sum of the direct, indirect and induced impacts results in a total economic impact on output of over $4.5 million during annual operations.
- In total, it is estimated that the proposed project would create 32.0 FTE jobs during annual operations.
- The 32.0 FTE direct employment positions are projected to result in an indirect impact of 3.7 FTE jobs, and an induced impact of 6.1 FTE jobs throughout the region, bringing the total economic impact of operational employment to 41.8 FTE jobs during stabilized operations.
- The 32.0 FTE employees are anticipated to earn a total of $1.1 million in collective labor income. This direct labor income is projected to result in an indirect impact of nearly $208,000 and an induced impact of over $322,000, bringing the total economic impact of labor income to over $1.6 million during annual operations.

A summary of key economic findings is provided in **Table 1-5**.

Table 1-5
SUMMARY OF KEY ECONOMIC FINDINGS

Economic Impact Parameter	Output (Revenue)	Employment (Number of Jobs)	Labor Income (Wages)
Economic Impact of Construction			
Direct Impact	$33,660,169	123.0	$17,013,693
Indirect Impact	$14,304,011	112.1	$5,076,753
Induced Impact	$15,688,414	108.6	$5,393,246
Total Economic Impact of Construction	$63,652,594	343.8	$27,483,693
Economic Impact of Annual Operations			
Direct Impact	$2,940,813	32.0	$1,114,195
Indirect Impact	$624,538	3.7	$207,914
Induced Impact	$945,694	6.1	$322,752
Total Economic Impact of Annual Operations	$4,511,045	41.8	$1,644,861

Source: Project program provided by Georgica Green Ventures, LLC; NYS Department of Labor; International Council of Shopping Centers and Urban Land Institute; Analysis by NPV, LLC, via IMPLAN software.

The environmental review process is a balancing process, wherein the potential adverse impacts of the proposed project are matched against its potential beneficial impacts, to give reviewing entities sufficient information and analysis to render an informed decision to approve or deny the application.

The analyses in this document support a conclusion that the potential adverse impacts of the proposed project will not be significant and will be geographically localized, and that the potential beneficial impacts will be significant.

- The proposed project is in conformance with and complements the local land use pattern; it generally conforms to the requirements of the DC-1 zoning district; it conforms to the Town Comprehensive Plan Update, the policies of the NYS CMP, and the EMSURP and BOA.
- The project also helps fulfill a need in the Town for quality housing for a mix of household incomes, by providing a substantial number of such units.

- The project would not strain the ability of any of the community services to adequately serve the site or project.
- The project will increase the amount of property taxes generated by the site, which would offset at least a portion of the increased costs to provide such services, particularly educational expenses of the Riverhead CSD.
- With minor timing adjustments to the traffic signal at the intersection of East Main Street and McDermott Avenue/Maple Avenue for the northbound approach on McDermott Avenue, the project's TIS indicates that there would be no significant traffic impacts associated with the project.
- The project will not adversely impact resources because of its connections to the public sanitary and stormwater sewer systems.
- The site's soils do not present any engineering-related limitations on the project.
- The two ESAs prepared for the existing buildings on the site indicate the presence of a UST, and the potential presence of a second UST. These will be investigated prior to the onset of construction and properly removed; any impacted soils will be properly remediated at that time, to the satisfaction of the appropriate County and NYS agencies.
- There are no cultural resources on the site, so that no direct impact to such resources could or would occur. The new building has been designed to have an architectural appearance conforming to that of its surroundings, and is oriented to present its narrow side facing East Main Street, to minimize its potential to visually dominate the character along that corridor.

1.2 Project Background

A site plan application was submitted to the Board in December 2016, to allow for the development of the proposed project. As part of that application package, the applicant prepared a Part 1 EAF form, which generally describes the project and provides general information to the Town with respect to potential impacts of the project. The EAF Part 1 is contained herein, in **Appendix B-1**. Subsequently, and in an effort to provide the Board with additional project information and potential impact analyses, the applicant prepared a Supplement to the EAF Part 1, and submitted it to the Board in December 2016.

The Town Board conducted a coordinated review among involved agencies to assume lead agency status beginning on May 25, 2017. Having received concurrence from involved agencies, the Town Board assumed lead agency and deemed this Voluntary DEIS acceptable for circulation to involved agencies and the public on June 20, 2017 for a period of 30 days, to end on July 20, 2017 (see **Appendix B-2**). This document ensures that the Board takes a "hard look" at the project and will assist in determining potential impacts of the proposed project in order to support a State Environmental Quality Review Act (SEQRA) determination of significance.

1.3 Project Location and Existing Site Conditions

1.3.1 Project Location

The subject site is in the East Main Street Urban Renewal Area in the Town of Riverhead, Suffolk County (see **Figure 1-4**), and is zoned DC-1 in a mixed-use area. The subject site is

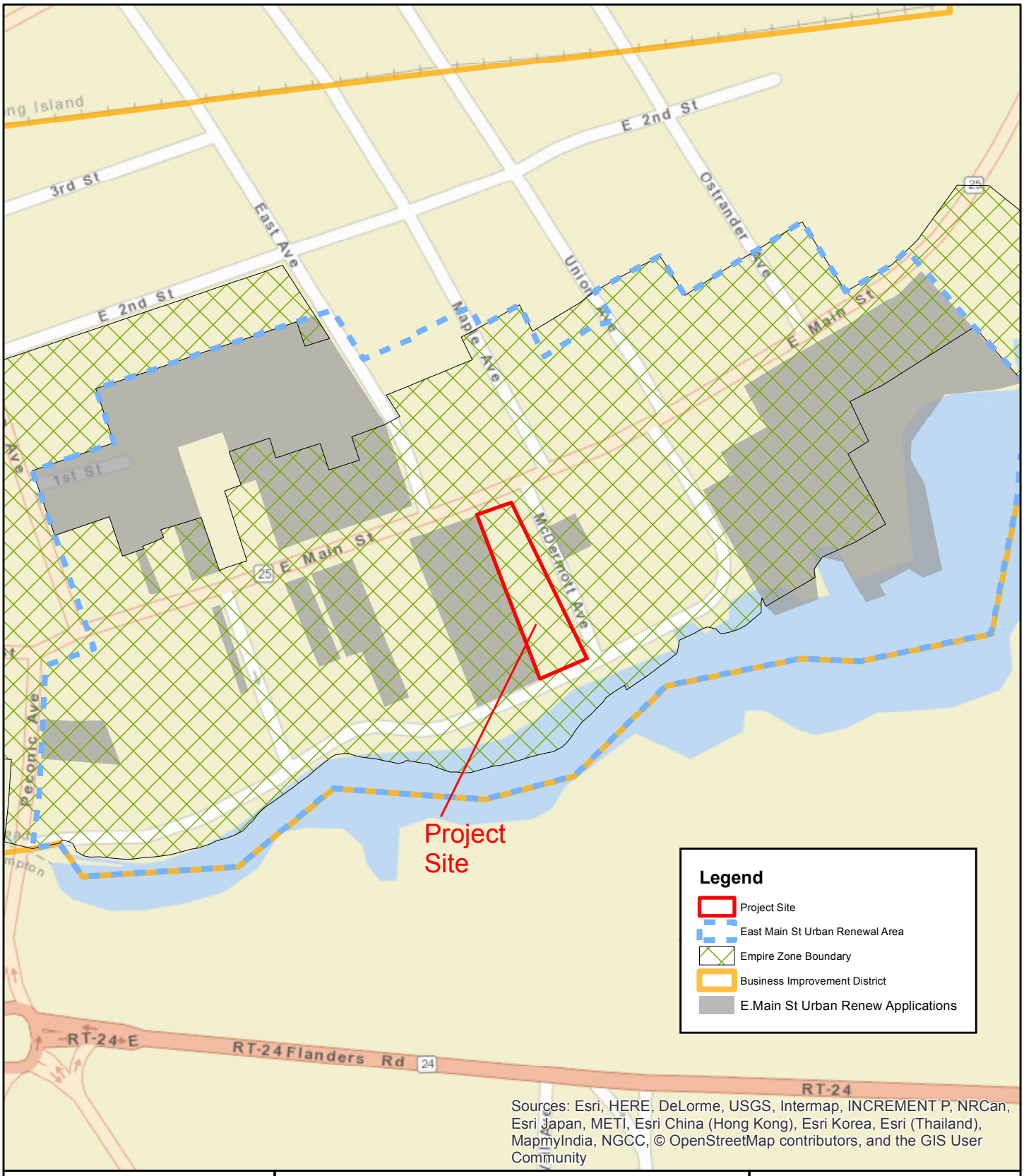
approximately 37,167 SF (0.85 acres) in size and located at the southwestern corner of the intersection of East Main Street and McDermott Avenue, in the downtown area of Riverhead hamlet. To the north of the site are commercial and residential properties lining the East Main Street commercial corridor, and the Riverhead United Methodist Church and Doroszka House (both historically significant structures in the Town Main Street Historic District); across McDermott Avenue to the east are residential properties, beyond which is the Long Island Aquarium. To the south is Heidi Behr Way and a public park (the Town's Peconic Riverfront Park) along the north bank of the Peconic River and a Town parking lot, and to the west is a vacant lot (previously occupied by a Sears store, since demolished), the East End Arts Park, and various commercial properties associated with the East Main Street commercial corridor.

The subject site is in the New York State Empire Zone, Business Improvement District (BID; see **Figure 1-5**), RSD, the Riverhead Water District (RWD), the Town Main Street Historic District (see **Figure 2-16a**), and the Riverhead Parking District (see **Figure 1-6**). The proposed project is considered a continuation of the urban renewal efforts of earlier projects in the vicinity, consistent with the intent of the 2008 Update of the EMSURP and the Town of Riverhead Peconic River/Route 25 Corridor Step II Brownfields Opportunity Area (BOA) Nomination Study (April 2016). Note that the property abutting the west side of the subject site, previously occupied by a Sears store (since demolished), is a designated "brownfield site" (see **Figure 1-7**); this site is presently under application for re-development with a mixed-use project.

The property is more specifically identified as Suffolk County Tax Map (SCTM) District 0600, Section 129, Block 1, Lots 21 and 22. The street addresses of the two tax lots are 221 East Main Street (tax lot 21), and 31 McDermott Avenue (tax lot 22).

The site is within the following planning and/or service zones and districts:

- Downtown Center-1 (DC-1) Zoning District
- Town of Riverhead East Main Street Urban Renewal Area
- NYS Coastal Zone
- Town Peconic River/Route 25 Corridor Step II Brownfield Opportunity Area (BOA)
- Peconic Bay Critical Environmental Area
- Peconic Bay Estuary Program Natural Resource Area
- Town Tidal Wetlands jurisdictional area
- NYSDEC Tidal Wetlands jurisdictional area
- Hurricane Storm Surge Areas 2 & 3
- Riverhead Parking District
- Town of Riverhead BID
- Town Main Street Historic District
- Long Island North Shore Heritage Area
- Groundwater Management Zone IV (600 gallons per day per acre; gpd/acre)
- Federal Emergency Management Agency (FEMA) Flood Hazard Zone AE (southern half of site)
- FEMA Flood Hazard Zone X (northern half of site)
- Riverhead Central School District (CSD)
- Riverhead Volunteer Fire Department
- Riverhead Volunteer Ambulance Corps, Inc.



NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

FIGURE 1-5
BUSINESS IMPROVEMENT DISTRICT (BID) MAP

Source: ESRI wms;
Town of Riverhead records
Scale: 1 inch = 300 feet

N

Riverview Lofts
Riverhead

Voluntary DEIS

1.4 Project Design and Layout

1.4.1 Overall Site Layout

To construct the proposed project, the two existing commercial structures, paved surfaces, and associated utility service connections, as well as any and all underground storage tanks, will first be removed. This phase is discussed in more detail in **Section 1.5**.

The proposed project consists of a single, five-story mixed commercial/residential structure on the subject site. The building will be accessed by vehicles only from its McDermott Avenue frontage; however, there will be pedestrian access from both the East Main Street and McDermott Avenue frontages. There will be first-floor commercial space including 1,508 SF of retail space and two restaurants, totaling 11,115 SF (note that these restaurant spaces may be occupied instead by other types of commercial spaces, to be determined based on market conditions). Above the ground level retail will be four floors of apartments as: 31 studios, 57 one-bedroom and 28 two-bedroom units (one of which will be set aside for rent-free occupancy by the building superintendent). Occupancy will be subject to review and jurisdiction of the Town.

Refer to **Table 1-6** for a list of the current and anticipated future conditions of the project site.

Potable water will be supplied by the RWD, wastewater will be conveyed off-site to the RSD sewage treatment plan (STP) to the east, and stormwater generated on-site will be handled in a drainage system reviewed and approved by the Town. Electrical power will be provided by PSEG, and natural gas will be available from National Grid.

All solid waste will be collected on-site, stored temporarily in closed containers within the structure, and removed by a properly licensed carter on a regular basis, for disposal, as follows:

> The project's trash will be collected in movable mini dumpsters. Once full, the mini dumpsters will be and set aside in the trash room on the parking level. There will be approximately 4 dumpsters, each with a capacity of 4 CY; two dumpsters will be utilized for residential trash and two dumpsters for commercial trash.
>
> In discussions with Mattituck Environmental Services LLC, it was determined that the capacity of the mini dumpsters was sufficient for this property. The trash pick-up schedule for residential is anticipated to be twice per week, and to be adjusted as necessary to accommodate the property. Each restaurant will have a schedule for pick up with the trash company
>
> Garbage from the site will be collected on schedule directly from the trash room. The carting company will arrive early in the morning alongside the building on McDermott Avenue and the carter will enter the trash room and wheel out the dumpsters to load into the trash truck. When they are finished loading, they will return the dumpsters to the trash room. No trash will be left out on the streets.

1.4.3 Vehicle Access and Parking

Vehicle Access

The proposed project will close the two existing accesses onto McDermott Avenue, and install a single, new driveway onto McDermott Avenue to provide vehicle access into the lower level parking area beneath the structure. This access will be controlled by a Stop sign for exiting vehicles. There will be no vehicular access directly onto East Main Street. It is expected that deliveries to the site will be accommodated by smaller trucks (e.g., FedEx deliveries, etc.) accessing the parking level.

As part of the Town's site plan review process, the Town Fire Marshal and representatives of the Riverhead Fire Department will evaluate the project design for proper access for emergency and fire equipment access.

Parking

As noted in **Section 1.1**, the subject site is located within the Riverhead Parking District. The Town Zoning Code Section 301-231 I states *"…where a public parking district has been created, the owner of property within such district need not provide off-street parking areas required by this chapter."* That is, the presence and availability of free, public parking spaces off-site but nearby would satisfy parking such that off-site spaces will be available to residents of the area. As shown on **Sheet C-100.00**, if the project site were not in the Town parking district, a total of 358 on-site parking spaces would be required.

The project will provide a total of 55 spaces in the parking level beneath the structure, for the use of residents of the site use; three of these spaces will be set aside as handicapped spaces. Patrons of the site's commercial spaces will have to use off-site parking spaces, along the street or in the several nearby Town parking lots.

1.4.4 Water Supply and Sanitary Wastewater Disposal Systems

Water Supply System

Potable water will be provided to the proposed project from the RWD distribution system. It is anticipated that the project will be served via the main beneath East Main Street, off which distribution lines run southerly beneath McDermott Avenue. However, the final determination of this connection will be made as part of the water supply connection application review process. All necessary associated meters, easements and installations will be provided to ensure adequate water supply.

Assuming the sanitary design flow rates used by the SCDHS for wastewater systems, each studio unit will consume 150 gpd of potable water, and each one- or two-bedroom unit will consume 225 gpd. In addition, the 1,508 SF of retail space will consume 45 gpd (assuming a 0.03 gpd/SF consumption rate), and each of the 535 restaurant seats would demand 30 gpd. The building's non-habitable utility spaces and the parking area will not require water supply and, there will be no demand for irrigation. Therefore, a total of 39,645 gpd of water will be consumed (see **Table 1-7**). Each apartment will be equipped with software that monitors for leaks or water wastage.

site lighting system may be performed while the interior of the building is being completed (i.e., tilework, wall paneling, lighting and plumbing fixtures, painting, rugs, furnishings, etc.). Utility system commissioning will complete the construction process.

As a supplement to the above-described narrative, the following general description of the construction process has been prepared by the Applicant's construction manager:

> Upon completion of both demolition and site clearing, excavations to the depth of the building footings and pile caps will occur, followed by driving of piles. Approximately 550 [steel pipe; see **Appendix B-8**] piles, each having a capacity of 50 tons, will be installed over an eight-week period. Support of excavation, if necessary, will then be put in place. Just prior to concrete operations, underground tanks and drainage structures will be installed and piped into place. Afterwards, cast-in-place concrete formwork will start, including pile caps, footings, foundation walls, piers, columns, grade beams, parking slab and the first-floor deck will be poured to establish the concrete podium the four floors above. Construction of the podium phase is expected to take three months. Following the podium phase, erection of the wood frame superstructure will begin. Pre-assembled wood panels and trusses will be delivered to the site and placed in sequence to erect exterior and interior floor layouts and subsequent placing of the floor truss system. Simultaneous with the wood panel system, masonry CMU shafts will be built for the elevators and stairwell enclosures. It is anticipated this phase will take three months to accomplish. Once the superstructure is erected, scaffolding will be placed and the building envelope will begin encompassing, sheathing, insulation, windows, exterior finishes, roof installation and details which is expected to take five months. Once the structure is deemed weathertight, interior buildout can commence. Interior construction beginning with electrical, plumbing and mechanical roughing, followed by sheetrock, taping, installation of kitchen cabinets, prime and finish painting, floor and wall finishes, doors, frames, hardware, electrical and plumbing fixtures and toilet accessories. In parallel sequence with the interior work will be installation of elevators and steel pan stairs. It is anticipated this ongoing work will take eight months. During the eight-month interior scope packages, scaffolding will be removed and first floor retail and entrance work along the McDermott Avenue and East Main Street building sides can move forward. After the I work is completed, curbs, sidewalks and planting will be undertaken. Final phases of the project will provide for commissioning and system testing, building department sign offs, punch list items and final clean up over a two- month period.

The following general description of the construction access and staging has been prepared by the Applicant's construction manager:

> The primary access into the site will be located at the point of entry to the parking garage area off McDermott Avenue, which will also subsequently be utilized as a construction staging area for the project, supplemented by use of the sidewalks along the McDermott Avenue and East Main Street frontages (see **Sheet C-001.00**). The route of truck deliveries entering and leaving the site will only be allowed from the East Main Street approach. The southern portion of the site will be used initially until the concrete first floor frame is established and we can create off-site space below that deck. With respect to the sidewalks, in order to facilitate construction, we need provide a sidewalk shed and close off the sidewalk on East Main Street and provide a protected 5-foot wide pedestrian walkway in the roadway running east-west along the sidewalk shed. The top of the sidewalk shed would be used both to store materials and to erect scaffolding that will be necessary to finish the north elevation of the five-story building. A construction fence would be placed at the curb line on the west side of McDermott Avenue; within the fence we would place a construction trailer and scaffolding to allow

completion of the east side building elevation. Pedestrian traffic would be directed to the sidewalk on the east side of McDermott Avenue. We will work with the civil engineer to provide coordinated drawings with local and State agencies for water, gas, sewer and electric utilities and their impact on McDermott Avenue closures.

The Applicant's construction manager has prepared the following discussion of the construction worker parking provisions:

During the project's initial construction phases, demolition, pile installation, earthwork and concrete work, there would be limited numbers of workers on the site (perhaps 20-25), and not all workers would be present at the same time. Since work will take place during weekdays, we believe there should be more than ample spaces in the nearby municipal lots to accommodate construction worker parking needs. Later, during the interior phases of construction (i.e., with mechanical and carpentry trade members present), the number of construction workers present may average 80 to 110 at the same time but, generally, with carpooling and trade workers coming in pickups and the like the actual number of vehicles would be less than the number of construction workers present. Again, the available local parking fields should be able to accommodate this need. If not, in a similar way as was done for other previous projects in the downtown, we will look to lease parking spaces in local private and/or public lots and shuttle workers to and from the site, if distant from the work site.

1.5.3 Erosion Control During Construction

The following discussion presents erosion and sedimentation control guidelines to be observed during construction to minimize impacts (see also **Sheet C-104.00**). In general, because of the implementation of these measures, sediment will not be transported off-site by stormwater runoff, so that no significant level of impact on adjacent sites or local water quality of the Peconic River is expected. However, should any sediment escape from the site, it will be swept back onto the site by manual or mechanical means (depending upon the amount of fugitive sediments) under the direction of the construction manager. During the construction process, inspections of the construction site will be regularly performed under the supervision of a qualified professional to ensure that erosion controls are properly maintained.

In general, the construction manager, in combination with the various specialized contractors, will be responsible for all construction activities, and installation and maintenance of the erosion and sediment controls. The construction manager will also be responsible for ensuring proper storage and stockpiling of construction materials and that building supplies will be stored in designated areas, and that measures are implemented to prevent/reduce wind-blown dust. The construction manager will be responsible for securing an approved carter to empty the construction waste dumpsters and haul waste from the site to an approved location for disposal.

It is expected that the erosion control plan will incorporate recommended measures of the NYSDEC Technical Guidance Manual, and use of measures such as:

- Silt fence, storm drain inlet protection, hay bales and good housekeeping procedures will be used;
- Construction equipment and vehicles will be parked and loaded/unloaded within the site;

- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system;
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures; and
- The drainage system will provide permanent stormwater controls once construction is completed.

The property will be operated by the site's owner, which will be responsible for all on-site maintenance and repair, including all the interior spaces and exterior surfaces, the site's drainage system, the connection to the public sanitary sewer system, snow removal, garbage pick-up, etc.

1.6 Permits and Approvals Required

Prior to the issuance of any permits or approvals, the applicant and Lead Agency must fulfill the requirements of SEQRA. This Voluntary DEIS describes the proposed project, catalogues site and area resources, discusses potential environmental impacts of the project, presents measures to mitigate adverse impacts, and examines alternatives to the project.

This Voluntary DEIS provides the Board (as lead agency under SEQRA) and all involved agencies with information necessary to render informed decisions on the site plan application. This document ensures that the Town Board takes a "hard look" at the project and will assist in determining potential impacts of the proposed project in order to support a SEQRA determination of significance.

Table 1-8 is a list of the permits and approvals anticipated to be necessary for the proposed project.

Table 1-8
PERMITS AND APPROVALS REQUIRED

Applicable Board/Agency	Permit/Approval Type
Town Board	Site Plan approval Special Permit (Site Coverage)
Town Building Department	Building Permit
	239f review (to SCDPW*)
	Demolition Permit
Town Fire Marshal	Site Plan review
Town Highway Superintendent	Highway Work Permit
Town Zoning Board of Appeals	Variances
Town ARB	Site Plan review (approval recommended May 15, 2017)
Town LPC	Site Plan review (approval recommended May 15, 2017)
Town Conservation Advisory Council	Site Plan review
RSD	Sanitary Sewer System Connection approval
RWD	Water Supply System Connection approval
SCDHS	Sanitary Sewer System review
	Water Supply System review
SCPC*	Referral
NYSDOT	Highway Work Permit
NYS GOSR/HCR*	Concurrence memo and FONSI (dated July 21, 2017)

* SCDPW - Suffolk County Department of Public Works; SCPC - Suffolk County Planning Commission; GOSR/HCR - Governor's Office of Storm Recovery/Homes and Community Renewal.

SECTION 2.0

EXISTING CONDITIONS, ANTICIPATED IMPACTS AND PROPOSED MITIGATION

2.0 EXISTING CONDITIONS, ANTICIPATED IMPACTS AND PROPOSED MITIGATION

2.1 Land Use, Zoning, and Plans

2.1.1 Existing Conditions

Land Use

Figure 2-1 depicts the land use categories of properties adjacent to the project site, as well as of sites in the immediate vicinity. As can be seen, the land use categories of the site are presently "Commercial" and "Residential," as both structures are predominantly commercial buildings (though the northerly structure, at 221 East Main Street is presently vacant), and the 31 McDermott Avenue building has a single apartment. The following table describes the land uses of the properties abutting the site and in the vicinity:

Direction	Abutting Properties	In the Vicinity
to the north	Commercial, Religious/Institutional, Residential	Residential
to the east	Commercial, Residential, Public Parking	Commercial, Residential, Recreation
to the south	Public Open Space, Public Parking	Public Open Space, Vacant
to the west	Vacant (former Commercial), Public Parking	Public Open Space, Commercial

The pattern of land uses near the site is dominated by the Commercial uses of properties fronting on both sides of East Main Street to both the east and west of the site, though the two sites opposite the subject property (on the north side of East Main Street) are Religious/Institutional (the Riverhead United Methodist Church) and Residential uses. In the area between East Main Street and the Peconic River, the intensity of the land use categories decreases in a southerly direction, to include first Residential uses, then Recreation (the Long Island Aquarium), and Parking and Public Open Spaces (e.g., Peconic Riverfront Park and the East End Arts Park).

Zoning

Figure 2-2 depicts the zoning designations of properties adjacent to the project site, as well as of sites in the immediate vicinity of the project site. As can be seen, the site is zoned DC-1, which is the zoning category that the Town Board had determined appropriate for the site and vicinity as an outcome of the EMSURP. The following table identifies the zoning classifications of the properties abutting the site and in the vicinity:

Direction	Abutting Properties	In the Vicinity
to the north	DC-1	DC-4, DC-5
to the east	DC-1	DC-1, DC-2, DC-3, DC-4
to the south	DC-2	DC-2
to the west	DC-1	DC-1, DC-2, DC-3

The zoning pattern in the area reflects the recommendations of the EMSURP that was adopted by the Town, incorporating the several types of DC districts recommended in that plan. Zoning near the subject site is dominated by the DC-1 district, which is the district assigned to all

their activities with each other, and as a result, inconsistent decisions about the use of coastal resources were made.

The Coastal Management Program has provided a means for improving this situation by describing the forty-four coastal policies with which all State agency actions must be consistent.

Generally, the policies fall under three headings: promotion of beneficial use of coastal resources; prevention of their impairment; and management of major activities substantially affecting numerous resources. The criteria embodied in these policies require all agencies to take into account the interrelationships that exist or should exist in the coastal area.

The Department of State (DOS), as the agency responsible for administering the New York State Coastal Management Program (NYS CMP) is committed to balancing competing land and water uses in the coastal zone. Consistency Review is the tool which enables the DOS to manage coastal uses and resources while facilitating cooperation and coordination with involved State, federal and local agencies. The "consistency" of a proposed activity with the NYS CMP is determined through a set of coastal policies and procedures designed to enable appropriate economic development while advancing the protection and preservation of ecological, cultural, historic, recreational, and esthetic values.

The project site is within the NYS Coastal Zone, and so is subject to review by the NYS Department of State (DOS) under the Coastal Management Program (CMP). As the Town of Riverhead does not have a Local Waterfront Revitalization Program (LWRP) plan in place at the present time, the NYSDOS will review the project for consistency with the 44 standards of the CMP (see **Section 2.1.2**).

2.1.2 Anticipated Impacts

Land Use

As the site is presently considered to be Commercial and Residential land use, and the proposed project is also commercial and residential, there would be no significant change in the land use category of the site, or to the pattern of land uses in the area. The amount of residential development in the vicinity would be increased by the proposed project, as would the amount of commercial space in that same area. However, the Town prepared supporting plans, and created and adopted zoning specifically to address the needs of the Town of Riverhead as embodied in the DC-1 district. This zoning is intended to establish land use that will assist in the revitalization of downtown Riverhead and this resultant land use has been supported by the Comprehensive Plan Update, the EMSURP, the NYS CMP, and the BOA. Therefore, since these uses characterize the hamlet downtown area, and these uses conform to the area's DC-1 zoning and the recommendations of the pertinent plans (as will be discussed below), neither of these increases would represent a significant adverse impact on land use.

Zoning

As the proposed project does not involve a change of zone of the site, there will be no impact on the pattern of zoning in the vicinity.

orientation of the property (and therefore, of the building) is such that views for observers to the north would be restricted to the lowest degree practicable; these observers will view the new structure narrow edge-on, which would present the lowest degree of obscuration possible. Additional visual analysis is provided in ***Section 2.7.***

16. Encourage maritime uses, including retail, restaurants, boat and canoe rentals, and commercial use of the Peconic River, in the portion of the EMSURA that is west of Atlantis Marine World Aquarium. This block could also include workforce housing for employees of maritime trade and a museum dedicated to the history of the waterfront.
    In conformance with this element, the proposed project includes at least one, and possibly two restaurants (Restaurant 1 will be 5,000 SF in size, with 235 seats, and Restaurant 2 will be 6,115 SF, for 300 seats), the latter of which overlooks the Peconic River and the Peconic Riverfront Park as an amenity for diners, as well as a substantial number of quality rental apartments for a mix of household incomes.

40. Revise the Code of the Town of Riverhead and/or to the Parking District guidelines to require that any development with a residential component of more than four units provide parking for those units on-site at a rate of at least one parking space per unit. Commercial components of mixed-use developments could be accommodated in the Town-owned parking provided by the Parking District.
    As the project site is jn the Town Parking District, no on-site parking spaces are required; nevertheless, in an effort to provide a benefit to the site's residents, 55 spaces are proposed.

    This EMSURP recommendation is inconsistent with the DC-1 zoning code, which does not require any on-site parking for those parcels located within the Parking District, due to the availability of centralized municipal parking. If on-site parking for the 116 residences per Town Code (1.5 spaces/unit) were required, the project could not be developed, as the 0.85-acre site is too small to provide 174 spaces; the project would have to be reduced substantially, to match the number of parking spaces that could be placed on the site. Such a reduction in yield would not be reasonable or feasible to the Applicant, on an economic basis.

50. Encourage private developers to provide incentives for patrons and employees to use public transportation to travel to and from the EMSURA. Movie and hotel discounts, free or discounted merchandise, shuttle service between the EMSURA and the LIRR station should be considered.
    The subject site is within walking distance of employment opportunities, services, amenities, daily needs and transportation. Additional incentives do not appear needed; however, the applicant is willing to consider entering any such program that may come about for the overall EMSURA.

54. Garbage and other waste materials should be completely contained within the container. No accumulation of garbage or waste materials should be permitted outside the confines of the container, and garbage should not accumulate so that the container cover cannot be firmly closed as to prevent animals from gaining access to the container.
    The applicant expects to provide a space interior to the building where all solid waste is gathered and stored to await removal and disposal by a licensed carter operation under contract.

NYS Coastal Management Program (1982) - For the proposed project, Coastal Consistency Assessment materials were sent to the DOS Consistency Review Unit, for its review and approval. Of the 44 standards of the CMP, only nine apply to the proposed project, as follows:

Policy 11: Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.
The proposed project will redevelop the 0.85-acres site with a single, new structure that conforms to all applicable requirements regarding floor elevations and the base flood elevation in the FEMA Flood Hazard Zone. Further, the structure and the overall project design, will be subject to full and complete review by professionals in the applicable Town and County government offices during the site plan review process. Finally, the only potential for erosion to occur will be during the construction period, when soils are exposed to the elements (the completed project will cover the entire site in impervious surfaces, eliminating the potential for erosion in the operational period). As part of the construction process, the applicant will implement appropriate erosion-control measures. In this way, the potential for damage to property, as well as to the endangering of human lives from flooding and/or erosion, will be minimized.

Policy 22: Development, when located adjacent to the shore, will provide for water-related recreation, whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.
The site of the proposed project is not located along or adjacent to any shore and, as the project is for redevelopment of a site with a mixed residential and commercial project, it will not include any water-related recreational facilities, amenities or features. As noted, the site is not located along the Peconic River and as a result, this policy does not apply.

Policy 23: Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the state, its communities, or the nation.
There are no historic resources on the project site. The project site is within the Town Main Street Historic District, and abuts the Main Street National Historic District. A referral to the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) resulted in the following review findings from this state office:

> Based upon our review of the materials submitted and conversations with your office, it is the OPRHP's opinion that the proposed project, as designed and presented, will have No Adverse Impact upon historic resources.

Policy 25: Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.
The project site is already fully-developed and therefore no natural resources are present on it that could be either protected or restored. The proposed project will redevelop the site with a mixed residential and commercial project. The nearest natural resources are found along the south bank of the Peconic River, which is to the south of the project site; there is intervening development between these resources and the project site (i.e., Heidi Behr Way, public parking areas and a bulkhead along the north bank of the River). These resources will not be impacted by the proposed project, and will continue to be protected by existing Town, County, State and Federal regulations.

Policy 32: Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.
The proposed project will connect to the existing public sanitary sewer system of the Riverhead Sewer District for the treatment and disposal of all of its wastewater.

Policy 37: Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters
The proposed project is a mixed residential and commercial redevelopment on a 0.85-acre site in the downtown area of Riverhead. The site will be designed to Town specifications for stormwater containment and erosion control measures will be employed during construction. Given the downtown location, the site will be fully covered by impervious surfaces, primarily by the single structure, with the remainder covered by paved surfaces. As such, no landscaped surfaces will be present, eliminating a major source of potential fertilizer impact to surface water quality from the site. The natures of the proposed uses are such that no other significant sources of pollution that could adversely impact the quality of water in the Peconic River will be present. Drainage containment will provide improved conditions over the current site development which does not appear to have drainage containment. With the utilization of drainage containment per Town specifications as well as erosion control measures, non-point source discharge of nutrients, organics and erosion potential will be minimized through best management practices.

Policy 38: The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.
The proposed project will not adversely impact groundwater or surface water quality or quantity. The proposed project will connect to the Riverhead Sewer District and stormwater will be managed on-site per Town design specifications. The site is not directly adjacent to surface water and there will be no overland runoff from the project site to surface water under post-development conditions. The proposed use will obtain water from the Riverhead Water District and does not represent a significant demand on water resources to supply domestic demand. Further, the project will conform to all applicable County and Riverhead Water District requirements, ensuring that no aspect of the project will impact this resource.

Policy 41: Land use or development in the coastal area will not cause national or state air quality standards to be violated.
The nature of the proposed project is such that no emissions of air pollutants will occur, ensuring that no adverse impacts to air quality will occur.

Policy 43: Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.
The nature of the proposed project is such that no emissions of air pollutants will occur, so that the proposed project will not contribute to the generation of acid rain.

2.1.3 Proposed Mitigation

- As no adverse impacts with respect to land use are anticipated, no additional mitigation measures with respect land uses are necessary or proposed.
- While the project will not conform to all the bulk requirements of the DC-1 zoning district (thereby necessitating the special permit and six variances), analysis indicates that neither the special permit nor the variances, if approved, would adversely impact the area, or set an unacceptable precedent for future development on other sites. The special permit/variances are needed to enable the project to move forward with as little potential for adverse effect regarding zoning as practicable. Thus, no additional mitigation with respect to zoning is necessary or proposed.

- The proposed project has been designed to conform to all applicable recommendations of the Town Comprehensive Plan, the EMSURP and the NYS CMP standards as practicable. Thus, no additional mitigation in this regard is necessary or proposed.

2.2 Community Services

Figure 2-4 shows the locations of the public schools in the neighborhood, **Figure 2-5** is a map depicting the location of public safety and security-related services, **Figure 2-6** depicts water supply services in the area, **Figure 2-7** shows the locations of the public wastewater treatment and stormwater systems in the vicinity, **Figure 2-8** shows the locations of nearby park and recreational sites, and **Figure 2-9** shows the presence and local route of the public transportation services in the area.

For this application, letters were sent to the community service providers, soliciting information on services available and currently provided, as well as service provider input regarding the proposed project and their ability to provide services. **Appendix D** contains these letters, with the service provider response letters that were received.

2.2.1 Existing Conditions

Public Schools

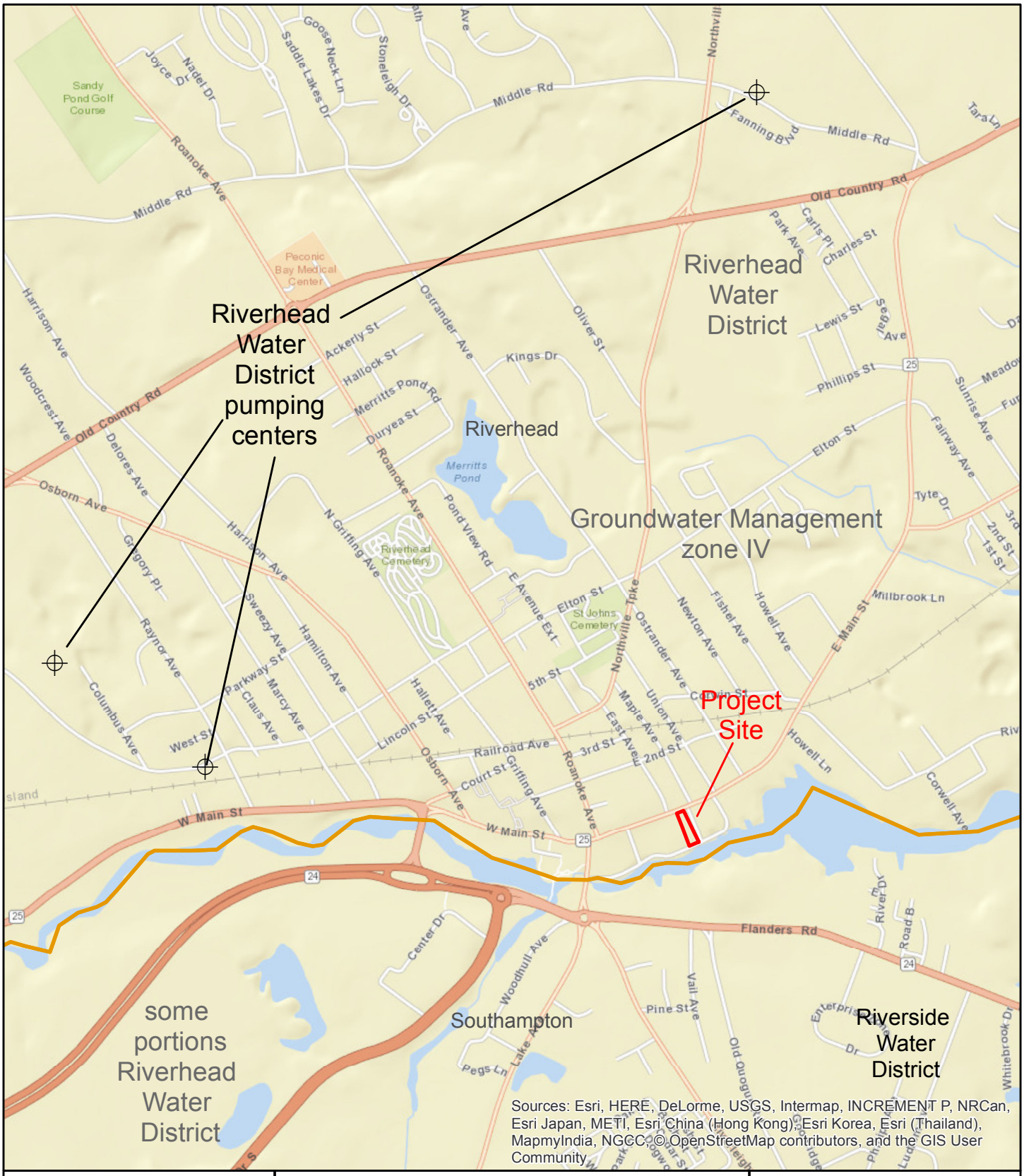
The project site is within the Riverhead CSD. According to the district's website (www.riverhead.net), there are four schools serving Kindergarten through 4th Grade (the Roanoke Avenue, Riley Avenue, Phillips Avenue and Aquebogue Elementary schools), one school for 5th and 6th Grades (Pulaski Street), one school for 7th and 8th Grades (Riverhead Middle School), and one high school (Riverhead High School). For the 2016-2017 school year, the district has a total of about 5,400 students, as follows:

Roanoke Avenue Elementary School – 400
Riley Avenue Elementary School – 600 (est.)
Phillips Avenue Elementary School – 550 (est.)
Aquebogue Elementary School – 450
Pulaski Street School – 800
Riverhead Middle School – 800
Riverhead High School – 1,800

As the site is currently occupied by a vacant store, several occupied stores, and one small apartment, it is not expected that the site currently has any school-age residents, and so generates no impacts on either school district enrollments or expenditures.

Police Protection

The subject site is served by the Riverhead Police Department, whose headquarters is located at 210 Howell Avenue. The current Chief of the department is David J. Hegermiller, and the Department's webpage is: www.townofriverheadny.gov/.



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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FIGURE 2-6
COMMUNITY SERVICES MAP, PUBLIC WATER SUPPLY

Source: ESRI WMS; Suffolk SCWA maps

Scale: 1 inch = 1,500 feet

N

Riverview Lofts
Riverhead

Voluntary DEIS

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FIGURE 2-9
COMMUNITY SERVICES MAP
PUBLIC TRANSIT

Source: ESRI wms;
Town of Riverhead records
Scale: 1 inch = 500 feet

N

Riverview Lofts
Riverhead

Voluntary DEIS

Considering the site's current condition and occupancy, it is not expected that it represents any significant impacts on the patrol responsibilities of the Riverhead Police Department in terms of site security/oversight.

Fire Protection and Ambulance Services

Fire Protection - The subject site is within the Riverhead Fire District, and is served by the Riverhead Volunteer Fire Department, whose website is www.riverheadfire.org. The Department has its Headquarters at 540 Roanoke Avenue, in Riverhead, and has three additional facilities, on Hamilton Avenue (Station 1), Hubbard Avenue (Station 2), and Twomey Avenue (Station 3, in Calverton). The Department is served by a total of about 175 personnel, distributed as follows:

- Red Bird Hook & Ladder Company 1 (25 personnel assigned)
- Fire Police Patrol Company 1 (27 personnel assigned)
- Reliable Hose & Engine Company 1 (30 personnel assigned)
- Washington Engine Company 2 (32 personnel assigned)
- Ever-Ready Engine Company 3 (27 personnel assigned)
- Eagle Hose Company 4 (33 personnel assigned)

Ambulance Services - The subject site is served with emergency medical services by the Riverhead Volunteer Ambulance Corps, Inc., located at 1111 Osborn Avenue, in Riverhead. As indicated on its website (www.riverheadvac.com), the Corps has four ambulances and three Responder vehicles.

Public Water Supply

The project site is within the RWD and so is served with potable water by that entity. As shown in the **Topographical Survey**, the RWD has a main beneath East Main Street, off which distribution lines run southerly beneath McDermott Avenue. Based on information provided in the District's *"Water News"* for Spring 2016, the RWD pumped a total of about 252.25 million gallons of water in 2015, for an average of 691,100 gpd.

Based on the uses and yields of the structure at 31 McDermott Avenue, it is estimated that that building currently consumes 484 gpd of potable water; as the 221 East Main Street building is presently vacant, it consumes no potable water is supplied to or consumed in it. Thus, the project site presently accounts for 0.06% of the RWD's average daily water pumpage. It is noted that the vacant retail space could become occupied at any time.

Sanitary Wastewater Treatment and Disposal

The site and area are within the RSD, and so are connected to the sanitary sewer system that conveys all wastewater generated in the district to the STP on River Road, to the east of the subject site. The **Topographical Survey** shows that there is a sanitary sewer main beneath McDermott Avenue, as well as an east-west main that passes beneath the project site to the sewage pump station just east of the site.

Table 2-5b
LOS SUMMARY, Existing Conditions
Unsignalized Intersection

Intersection	Approach	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	15.8	C	17.0	C	16.6	C
		R	13.5	B	14.2	B	14.0	B
	SB	LT	9.1	A	9.4	A	9.5	A

Main Street at Peconic Avenue/Roanoke Avenue - The intersections of West Main Street at Peconic Avenue and East Main Street at Roanoke Avenue are approximately 55 feet apart as measured between stop lines. The distance between the two intersections provides one westbound through lane, one westbound left turn lane and a 22-foot wide eastbound lane that currently operates as a separate eastbound left turn lane and an eastbound through lane. These two left turn lanes provide storage for two cars each. These two intersections are controlled by two traffic signals operating under the same controller.

Under the Existing Condition, the eastbound West Main Street through movement at Peconic Avenue operate at LOS D, D and E during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operate at LOS F during the weekday AM, PM and Saturday midday peak hours. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and D during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall LOS C during the weekday AM, PM and Saturday midday peak hours.

East Main Street at McDermott Avenue/Maple Avenue - The northbound McDermott Avenue leg and southbound Maple Avenue leg at this intersection are slightly offset from each other (approximately 20 feet) with each approach providing one lane for all traffic movements. The intersection is controlled by a two-phase traffic signal.

Under the Existing Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM, PM and Saturday midday peak hours.

Peconic Avenue at Parking Lot Access - The parking lot access intersects Peconic Avenue to form the Stop Controlled leg of a T-intersection. Peconic Avenue provides one lane per travel direction with a two-way left turn lane. The westbound parking lot access provides one left turn lane and one right turn lane. Under the Existing Condition, the southbound Peconic Avenue approach operates at LOS A. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM, PM and Saturday midday peak hours.

Parking

There is unstriped paved surface area sufficient for an estimated 40 parking spaces on the subject site, distributed as 27 unused spaces south of the vacant 221 East Main Street structure, and 13 spaces adjoining the occupied 31 McDermott Avenue building. There are also several Town parking lots in the vicinity (see **Figure 1-6),** off Heidi Behr Way to the east and west.

2.3.2 Anticipated Impacts

The findings of the N&P TIS dated June 2017 are summarized herein.

Trip Generation

In order to identify the impacts the proposed project will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. The trip generation estimates for the proposed project were prepared utilizing data found under Land Use Code 220 – Apartments, Land Use Code 820-Shopping Center and Land Use Code 931 –Quality Restaurant within the Institute of Transportation Engineers' [ITE] publication, *Trip Generation, Ninth Edition*. This publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country.

We also prepared a trip generation comparison for the project which consisted of performing estimates for 2 scenarios. Scenario 1: 116 apartment units, 1,508 SF of retail and 535 seats of quality restaurant. Scenario 2: 116 apartment units and 12,623 SF of retail. The comparison revealed that Scenario 1 is anticipated to have higher trip generation and therefore this is the scenario for which the analysis was prepared, representing a worst-case scenario.

It should also be noted that, according to studies conducted by the ITE, traffic associated with a retail and restaurant developments is not 100% newly generated, a significant portion of these trips will be "pass-by" traffic. It is expected that at least 40% of the peak hour trips generated by the retail and restaurant development on the site would originate from traffic already using the roadway traveling to or from another destination. No passby credit was applied to the retail portion of the project since it is only a small portion of the project. Passby credits were applied for the restaurant component of the proposed project in accordance with ITE guidelines.

The following **Table 2-6** summarizes the trip generation estimates for the proposed project. As can be seen, the proposed project is projected to generate 79 trips (21 entering and 58 exiting) during the weekday AM peak hour, 167 trips (109 entering and 58 exiting) during the weekday PM peak hour and 252 trips (142 entering and 110 exiting) during the Saturday midday peak hour.

Anticipated Level of Service (LOS) and Roadway Conditions

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *Highway Capacity Manual (2010)*, published by the *Transportation Research Board*. The Synchro Version 9 software was used to analyze the study intersections and provide a LOS measurement of the intersection operations. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix D [of **Appendix C**].

Table 2-6
TRIP GENERATION
Proposed Project

Time Period	Distribution	**Apartments** (116 units; ITE LUC 220)	**Retail** (1,508 SF; ITE LUC 820)	**Restaurant** (535 seats; ITE LUC 931)	Totals
Weekday AM Peak Hour	Enter	12	1	8	21
	Exit	50	0	8	58
	Total	**62**	**1**	**16**	**79**
Weekday PM Peak Hour	Enter	54	3	52	109
	Exit	29	3	26	58
	Total	**83**	**6**	**78**	**167**
Saturday Midday Peak Hour	Enter	34	4	104	142
	Exit	34	3	73	110
	Total	**68**	**7**	**177**	**252**

Source: Trip Generation,9th Edition, published by ITE

Tables 2-7a and 2-7b, 2-8a and 2-8b, and 2-9a and 2-9b illustrate the LOS summaries for the study intersections for the Weekday AM and PM Peak Hours, as well as the Saturday Midday Peak Hour, respectively.

Table 2-7a
LOS SUMMARY, Proposed Project
Weekday AM Peak Hour, Signalized Intersections

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
East/West Main St. at Peconic Ave.	EB	T	49.3	D	54.6	D
		R	27.3	C	27.3	C
	WB	L	16.7	B	18.7	B
		T	2.7	A	2.7	A
	NB	L	96.8	F	94.5	F
		R	32.2	C	31.9	C
		Intersection	32.6	C	33.2	C
East/West Main St. at Roanoke Ave.	EB	L	22.9	C	23.0	C
		T	3.7	A	3.8	A
	WB	TR	47.5	D	48.4	D
	SB	R	34.5	C	34.3	C
		Intersection	24.7	C	25.2	C
East/West Main St. at Maple/McDermott Ave.	EB	LTR	5.1	A	6.6	A
	WB	LTR	5.1	A	6.6	A
	NB	LTR	31.2	C	40.4	D
	SB	LTR	20.6	C	28.0	C
		Intersection	8.7	A	12.0	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-7b
LOS SUMMARY, Proposed Project
Weekday AM Peak Hour, Unsignalized Intersection

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	18.2	C	19.1	C
		R	14.2	B	14.3	B
	SB	LT	9.4	A	9.4	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-8a
LOS SUMMARY, Proposed Project
Weekday PM Peak Hour, Signalized Intersections

Intersection	Approach	Movement	No Build Condition		Build Condition		Build Condition, w/Modifications	
			Delay	LOS	Delay	LOS	Delay	LOS
East/West Main St. at Peconic Ave.	EB	T	55.9	E	70.4	E		
		R	24.3	C	25.5	C		
	WB	L	25.6	C	36.5	D		
		T	3.3	A	3.5	A		
	NB	L	89.8	F	89.7	F		
		R	28.1	C	26.6	C		
Intersection			32.6	C	36.8	C		
East/West Main St. at Roanoke Ave.	EB	L	29.1	C	30.0	C		
		T	3.0	A	3.2	A		
	WB	TR	50.6	D	53.2	D		
	SB	R	41.4	D	40.0	D		
Intersection			30.6	C	31.1	C		
East/West Main St. at Maple/McDermott Ave.	EB	LTR	4.8	A	6.1	A	6.6	A
	WB	LTR	7.2	A	9.9	A	10.7	B
	NB	LTR	29.5	C	41.0	D	34.6	C
	SB	LTR	44.9	D	42.6	D	37.1	D
Intersection			11.0	B	14.7	B	14.1	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-8b
LOS SUMMARY, Proposed Project
Weekday PM Peak Hour, Unsignalized Intersection

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	18.2	C	19.1	C
		R	14.2	B	14.3	B
	SB	LT	9.4	A	9.4	A

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-9a
LOS SUMMARY, Proposed Project
Saturday Midday Peak Hour, Signalized Intersections

Intersection	Approach	Movement	No Build Condition		Build Condition		Build Condition, w/Modifications	
			Delay	LOS	Delay	LOS	Delay	LOS
East/West Main St. at Peconic Ave.	EB	T	117.4	F	122.4	F		
		R	24.8	C	25.2	C		
	WB	L	101.9	F	114.7	F		
		T	2.9	A	3.1	A		
	NB	L	94.9	F	94.9	F		
		R	24.2	C	24.0	C		
		Intersection	63.5	E	67.2	E		
East/West Main St. at Roanoke Ave.	EB	L	35.8	D	37.3	D		
		T	3.6	A	4.3	A		
	WB	TR	49.3	D	52.1	D		
	SB	R	42.0	D	41.4	D		
		Intersection	27.2	C	28.2	C		
East/West Main St. at Maple/McDermott Ave.	EB	LTR	7.0	A	10.8	B	12.4	B
	WB	LTR	7.2	A	10.2	B	11.6	B
	NB	LTR	40.2	D	67.9	E	52.8	D
	SB	LTR	36.8	D	37.3	D	33.0	C
		Intersection	12.9	B	21.2	C	19.8	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Table 2-9b
LOS SUMMARY, Proposed Project
Saturday Midday Peak Hour, Unsignalized Intersection

Intersection	Approach	Movement	No Build Condition		Build Condition	
			Delay	LOS	Delay	LOS
Peconic Ave. at Parking Lot Access	WB	L	20.5	C	25.0	D
		R	15.4	B	15.9	B
	SB	LT	10.0	B	10.3	B

Notes: LOS = Level of Service, Delay = seconds/vehicle

Main Street at Peconic Avenue/Roanoke Avenue - In the No Build Condition, the eastbound West Main Street through movement at Peconic Avenue operates at LOS D, E and F during the weekday AM, PM and Saturday midday peak hour respectively. The northbound Peconic Avenue left turn movement operates at LOS F during the weekday AM, PM and Saturday midday peak hours. The westbound left turn movement operates at LOS F during the Saturday midday peak hour. The rest of the traffic movements at the intersection operates at LOS C or better during the weekday AM, PM and Saturday midday peak hours. All the traffic movements at the intersection of East Main Street and Roanoke Avenue operate at LOS D or better. Overall, the intersection of West Main Street at Peconic Avenue operates at LOS C, C and E during the weekday AM, PM and Saturday midday peak hours respectively and the intersection of East Main Street at Roanoke Avenue operates at overall

LOS C during the weekday AM, PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at No Build LOS.

East Main Street at McDermott Avenue/Maple Avenue -Under the No Build Condition, all the approach movements to this intersection operate at LOS D or better during both the weekday AM, PM and Saturday midday peak hours. Overall, the intersection of East Main Street at McDermott Ave/Maple Avenue operates at LOS A during the weekday AM peak hour and at LOS B during the PM and Saturday midday peak hours. After the completion of the project all the approach movements will continue to operate at LOS D or better except for the McDermott Avenue northbound approach which is anticipated to operate at LOS D and E during the weekday PM and Saturday midday peak hours, respectively. Minor signal timing adjustments will improve the northbound LOS D to LOS C during the PM peak hour and from LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours [see **Table 2-9a**].

Peconic Avenue at Parking Lot Access - Under the No Build Condition, the southbound Peconic Avenue left turn movement operates at LOS A during the AM and PM peak hours and at LOS B during the Saturday peak hour. The westbound Parking lot access left turn movement operates at LOS C during the weekday AM, PM and Saturday midday peak hours. The westbound right turn movement operates at LOS B during the weekday AM and Saturday midday peak hours and at LOS C during the PM peak hour. After the completion of the project, the approach movements to the intersection will continue to operate at No Build LOS during all peak hours.

Conclusion

Nelson & Pope has investigated the potential traffic and parking impacts associated with the proposed development to be located at the southwest corner of East Main Street and McDermott Avenue in Riverhead, New York. The following is a summary of this investigation and the findings thereof:

Based on the results of the TIS, it is the professional opinion of N&P, LLP that the proposed project will not result in significant traffic impacts in the study area.

Parking

With respect to the number of parking spaces provided relative to the amount of development proposed, Town Zoning Code Section 301-231 I. states that, for a site within a designated Parking District, the requirements of the Town Zoning Code do not apply. That is, the presence and availability of sufficient free, public parking spaces off-site but nearby would satisfy Town conditions that parking will be available to residents of the development; the project is not required to provide any on-site parking spaces. However, in order to decrease the need for off-site parking and provide a benefit to the project's residents, the Applicant will provide 55 on-site parking spaces (of which three will be handicapped spaces), and the balance of parking needs will be met by off-site spaces within the Riverhead Parking District area. As shown on **Sheet C-100.00**, if the site were not in the parking district, the Town Code would require a minimum of 358 on-site parking spaces.

An inventory of available parking in proximity to the site is provided in the TIS and shown in **Figure 1-6**, to further support the finding that inclusion in the Downtown Parking District provides parking opportunities for residents and patrons of the Riverview Lofts and associated retail use on the subject site.

The anticipated parking needs of the proposed project with those of the other nearby sites proposed for development were evaluated in a cumulative Parking Analysis (see **Appendix C**). That evaluation also considers the ability of the existing parking lots in the area to accommodate these cumulative parking needs (see **Section 3.2.4**).

2.3.3 Proposed Mitigation

- As recommended by the TIS, after completion of the project, minor signal timing adjustments at the intersection of East Main Street at McDermott Avenue/Maple Avenue will be made for the northbound McDermott Avenue approach, improve the northbound LOS E to LOS C during the PM peak hour and LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.
- The proposed project will provide 55 on-site parking stalls to complement the available public parking in existing municipal parking lots in the area of the proposed project, where no parking is required since the project is within the Riverhead Parking District.

2.4 Water Resources

2.4.1 Existing Conditions

Groundwater Conditions

The **Topographical Survey** shows that the subject varies in elevation from a high of 14 feet above mean sea level (asl), found along the site's northern border, along East Main Street, to a low of 4 feet asl, in the parking area south of the structure at 31 McDermott Avenue, in the site's southern portion.

Site-specific information on the elevation of the water table is contained in the Geotechnical Evaluation (**Appendix B-8**), which analyzes the results of a series of four soil borings installed in the central and southern portions of the site. Among the physical and engineering-related data related to these borings (discussed below in **Section 2.5**), observations of the depth to the water table encountered in these borings is also provided. The data show that the northernmost boring, designated Boring #1, installed in the parking area between the two structures, encountered the water table at a depth of 4 feet below ground surface (bgs). As the elevation of the ground surface at this point is about 6 feet asl, the elevation of the water table beneath this portion of the project site is about 2 feet asl. The southernmost boring, Boring #4, is in the parking area south of the 31 McDermott Avenue structure. Groundwater was encountered here at a depth of 3.5 feet bgs here. Since the **Topographical Survey** shows that the elevation in the area of Boring #4 is just over 4 feet asl, it may be inferred that the water table is at an elevation of about 0.5 feet asl here. This represents the shortest depth to the water table beneath the site.

The forgoing analysis indicates that the water table slopes downward toward the south beneath the site. Based on this conclusion, and supported by the orientation of the contours of the water table as shown in **Figure 2-11**, it is expected that groundwater in the water table and, therefore, in the shallow (i.e., Upper Glacial) aquifer, flows in a southerly direction, toward the Peconic River.

To estimate the depth to the water table for the site's highest area (i.e., along its East Main Street frontage, see above), it is necessary to estimate the elevation of the water table beneath that area as well. Assuming that the water table is flat but sloping upward toward the north, simple geometry would indicate that the water table is at an elevation about 4 feet asl beneath this portion of the subject site, so that the depth to the water table here is about 10 feet.

In summary, the depth to the water table beneath the site varies from 10 feet in the north to 0.5 feet at the southern boundary of the site.

Surface Water Conditions

There are no surface water bodies on the subject site. The nearest surface water is the Peconic River, which flows west-to-east south of the site, beyond the Town Peconic Riverfront Park. **Figures 2-12 and 2-13** depict the locations of the freshwater and tidal (i.e., marine/saltwater) wetlands in the vicinity, as designated by the NYSDEC and National Wetland Inventory (NWI), respectively. As can be seen, there are no freshwater wetlands proximate to the site, but there are substantial tidal wetlands designated by both the NYSDEC and NWI along both banks of the Peconic River.

Figure 2-14 depicts the FEMA compilation of Flood Hazard Zones for the area of the subject site. As can be seen, the site is split into two zones: the northern portion of the property (including the building at 221 East Main Street) is within an area designated "Zone X," while the southern part (encompassing the building at 31 McDermott Avenue) is designated "Zone AE." Zone X indicates an area outside the statistical 500-year flood plain. Zone AE means an area that is subject to the 1% annual flood ("100-year flood"), also known as the Base Flood. This is the flood that has a 1% chance of being equaled or exceeded in any given year. Specifically, the Base Flood Elevation of this part of the AE zone is established at 7 feet asl. The first floor of the building will be elevated such that the bottom of any structural member will be above 7 feet asl to comply with FEMA design as implemented by the Town.

2.4.2 Anticipated Impacts

The proposed project will connect to the Riverhead Sewer District and as a result, wastewater will be managed in a manner that ensures that no groundwater impacts will occur. Drainage will be stored and recharged on-site in conformance with Town requirements and subject to Town engineering review. Consequently, potential drainage impacts are also addressed through design. Discussion of these design features as related to water resources is provided herein.

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FIGURE 2-11
WATER TABLE CONTOUR MAP

Source: ESRI Web Mapping Service, USGS
Scientific Investigations Map 3270, 2010 data
Scale: 1 inch = 1,500 feet

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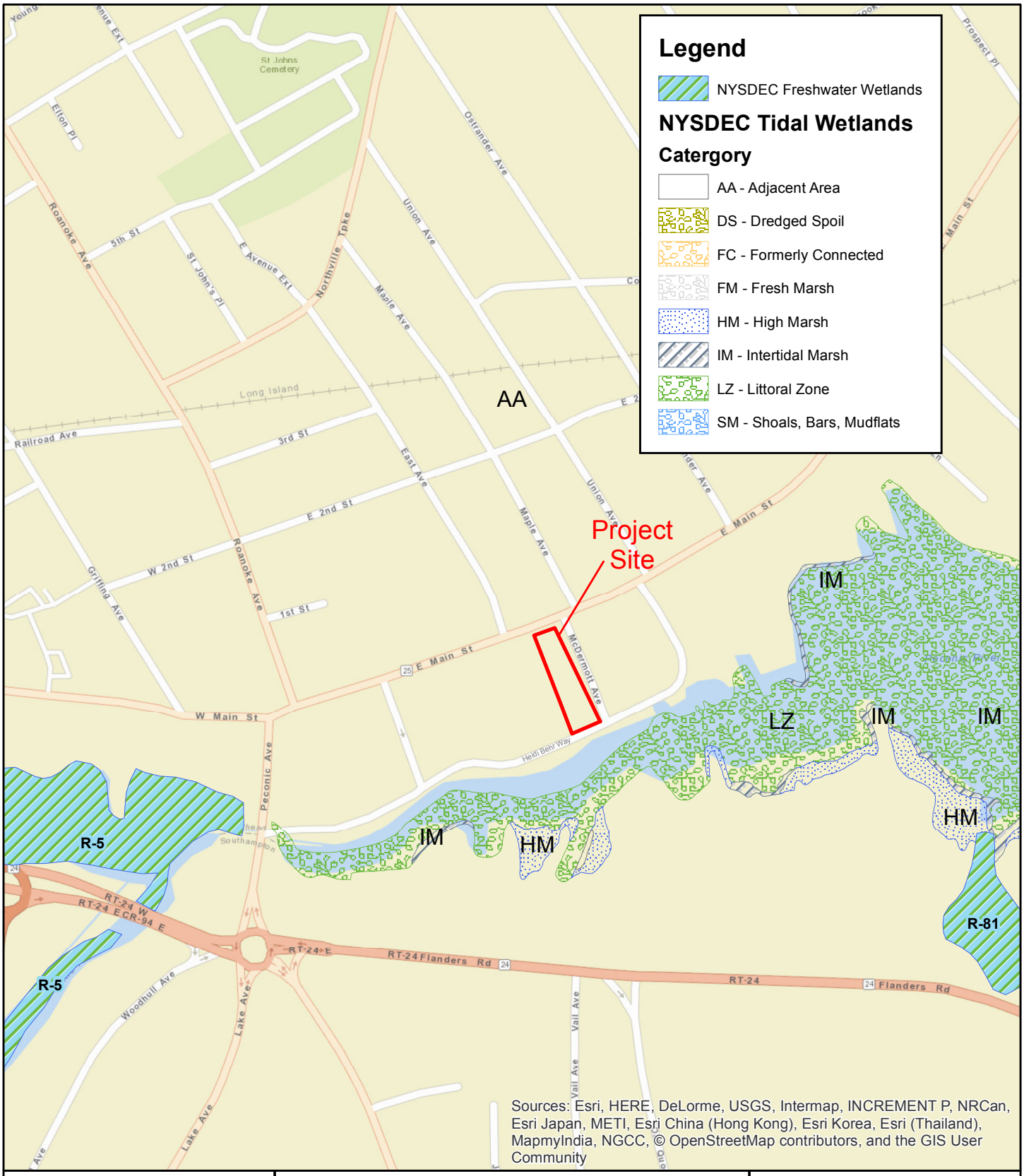

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FIGURE 2-12
WETLANDS MAP, NYSDEC

Source: ESRI Web Mapping Service, NYSDEC Freshwater & Tidal Wetlands Maps
Scale: 1 inch = 500 feet

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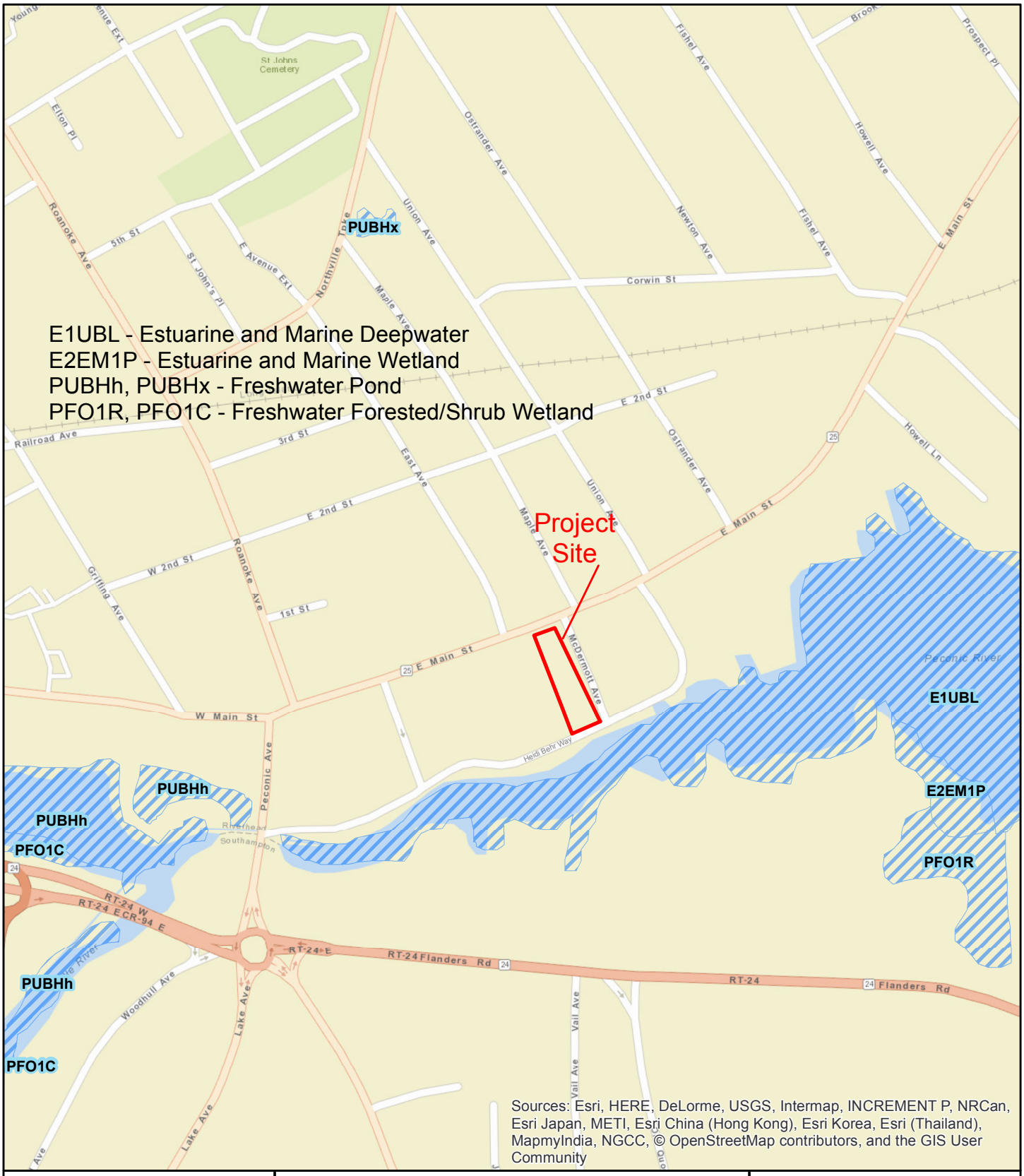

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FIGURE 2-13
WETLANDS MAP, NWI

Source: ESRI wms; US Fish & Wildlife, National Wetlands Inventory maps
Scale: 1 inch = 500 feet

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FIGURE 2-14
FLOOD HAZARD ZONE MAP, FEMA

Source: ESRI Web Mapping Service, FEMA

Scale: 1 inch = 100 feet

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Groundwater Conditions

The volume of water recharged on the site is not expected to significantly change by the project as compared to the site in its existing condition. This is because the site is presently covered entirely by impervious surfaces, and will continue to be entirely impervious-surfaced after the project is constructed. However, the proposed project will be designed to contain runoff from proposed new impervious surfaces; under current conditions, it is not expected that all stormwater is retained on site. This means that the volume of stormwater runoff generated on the site is the same; but storage of stormwater will increase such that less off-site runoff is expected to occur.

All stormwater runoff generated on the site will be retained and recharged to groundwater by means of an on-site drainage system. Likewise, all wastewater generated on the site will be conveyed off-site via the Town sewer system for treatment and disposal. In this way, the existing elevation of the water table beneath the site would not significantly change, so that the direction of groundwater flow would not change from its current southerly direction.

Connection to the Town sewer system and the lack of landscaped surfaces would ensure that the potential for adverse impacts on groundwater quality are minimized for the proposed project. The proposed project will connect to the Town sanitary system, so that its wastewater would be conveyed off-site and treated to a tertiary level, thereby minimizing the amount of nitrogen from the site that ultimately is recharged to the water table, and at a location distant from the project site.

Surface Water Conditions

The project will not adversely impact any surface water resources. Generally, the primary source of such an impact would be from the escape of stormwater runoff from a site to a surface water resource (e.g., a pond/wetland, a creek or river, etc.). But, as noted above, the site will retain more stormwater capacity under proposed conditions than current conditions, so that runoff generated on the site will be recharged on-site, and only in case of an extreme rain event would excess runoff overflow the site, to Town property to the south (where it would be conveyed to that drainage system). This means that for the design storm, no runoff from the site (along with any contamination that may be carried in that water) will reach the nearest surface water resource that is in a downslope location, the Peconic River.

The project is designed in conformance with FEMA flood plain elevation requirements, so that no adverse impacts in this regard are expected. As shown in **Figure 2-14**, the southern portion of the subject site is in FEMA Flood Hazard Zone AE, which designates an area that is subject to the 1% annual flood ("100-year flood"), also known as the Base Flood. This is the flood that has a 1% chance of being equaled or exceeded in any given year. Specifically, the Base Flood Elevation of this part of the AE zone is established at 7 feet asl. The first floor of the building will be elevated such that the bottom of any structural member will be above 7 feet asl to comply with FEMA design as implemented by the Town.

2.4.3 Proposed Mitigation

- As no adverse impacts to groundwater quality or quantity are anticipated to occur because of the project, no additional mitigation is necessary or proposed.
- As no adverse impacts on the elevation of the water table or direction of groundwater flow beneath the subject site are expected, from the project, no additional mitigation is necessary or proposed.
- No impacts on the quality or quantity of water in the Peconic River or any other surface water resource in the vicinity is anticipated to occur from the project, no additional mitigation s necessary or proposed.
- The proposed project will conform to the applicable building elevation requirements associated with its presence within the AE Zone (as delineated by the FEMA Flood Hazard Zone Map). Therefore, no adverse impacts in this regard are expected, and no additional mitigation is necessary or proposed.

2.5 Soils

2.5.1 Existing Conditions

The Soil Survey of Suffolk County, prepared by the US Department of Agriculture in 1975[1], is a useful source of soils information, which identifies soil types resulting from natural deposition and modification, as well as man-induced alterations associated with land use. The Soil Survey indicates that the soil types underlying the subject property is classified as "Urban" (see **Figure 2-15**). According to the Soil Survey, this soil type

> …consists of areas that are more than 80 percent covered by buildings and pavements. Examples are parking lots, business districts of larger villages, and densely-developed industrial parks. Examination and identification of the soils in these areas are impractical."

Because the Soil Survey could not determine the characteristics of the Urban soil type, the on-site test boring report (see **Appendix B-8**) was reviewed for information on the characteristics of the site's soils. The following has been taken from the test hole report.

> This report was developed from conventional and standard soil testing procedures and engineering analysis. Asphalt, brown sand/loam, medium to fine sand and gravel (fill) was recovered from grade to 4-feet below grade at boring location B-1 and from grade to 2-feet below grade at boring location B-2 [refer to the Boring Location Map in **Appendix B-8**]. Asphalt, brown sand, fine to medium sand, red brick and gravel (fill) was recovered from grade to 4-feet below grade at boring location B-3. Asphalt, brown sand, medium to fine sand, coarse to medium sand and trace gravel (fill) was recovered from grade to 2-feet below grade at boring location B-4. Dark brown peat, light brown sand, coarse to fine sand and gravel was recovered from 4-feet to 8-feet below grade at boring location; from 4-feet to 6-feet below grade at boring locations B-2 and B-3; and from 6-feet to 10-feet below grade at boring location B-4. Gray clay, sandy clay, silty clay and silty sand were recovered from 35-feet to 57-feet below grade at boring location B-1; from 25-feet to 37-feet below grade at boring location B-2; and from 35-feet to 47-feet below grade at boring location B-4. Trace silt was

[1] Updated/digitized maps used for figures from Soil Survey Geographic Database for Suffolk County, New York (SSURGO); USDA Natural Resources Conservation Service; 2010; updated September 24, 2015; the Suffolk County Soil Survey (**Warner, 1975)** provides soil descriptions/constraints.

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FIGURE 2-15
SOIL MAP

Source: ESRI WMS; NRCS WMS
Scale: 1 inch = 200 feet

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recovered from 30-feet to 37-feet below grade at boring location B-3. Fine to medium sand, coarse to medium sand and gravel was recovered at the remaining depths of all boring locations.

2.5.2 Anticipated Impacts

The test hole report indicates that the soils on the site are expected to be capable of properly supporting the proposed structure, with the use of appropriate piles. Thus, no adverse soil-related impacts in this this regard are anticipated.

As shown on **Sheet C-002.0**0, a total cut of 67,530 CY are planned, offset by 18,650 CY of fill. The applicant proposes to retain as much of the cut material on-site as fill, but only if that cut material displays acceptable characteristics for this use. Any and all excess soil material will be removed by a licensed hauler, and taken to an approved disposal facility.

Considering the small size of the site, its flat surface, and the fact that it is already fully developed, it is not expected that the necessary clearing and grading operations would be limited by any soil-related condition.

The Phase I ESAs prepared for the 221 East Main Street and 31 McDermott Avenue buildings (see **Section 1.3.2**) noted that a 1,000-gallon #2 fuel oil tank is present on the former site, and that a gasoline storage tank may exist on the latter site. Prior to initiating the demolition process, both tanks will be investigated and both tanks (if present) will be removed in accordance with proper county and state requirements, and any soil contamination that may have occurred will be properly remediated as part of that removal and certification process. Such potential contamination, if discovered, would not represent an adverse impact on the project, as any such contamination will be properly remediated.

Erosion control measures to be implemented during the construction phase are discussed in detail in **Section 1.5.3**, and are expected to include measures recommended in the NYSDEC Technical Guidance Manual, such as:

- Silt fence, storm drain inlet protection, hay bales and good housekeeping procedures will be used;
- Construction equipment and vehicles will be parked and loaded/unloaded within the site;
- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system;
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures; and
- The drainage system will provide permanent stormwater controls once construction is completed.

2.5.3 Proposed Mitigation

- A detailed grading and drainage plan will be prepared for the site plan application, and will provide details of overall site grading and will require Town Division of Planning review and Planning Board approval prior to implementation.

- Any soil contamination that may have occurred because of oil storage tank leakage will be properly evaluated and remediated prior to initiation of the demolition phase. The remediation process will be subject to the review and approval of proper county and state entities, which will certify that such remediation was properly conducted, and that the process is complete.
- Erosion at the site and sedimentation at downslope locations may occur during the construction phase of the project. These potential impacts will be overcome by implementing erosion control measures and installing proper drainage facilities as part of the construction activities.

2.6 Cultural Resources

2.6.1 Existing Conditions

The term *"cultural resources"* refers to both pre-historic era and historic era resources such as buried evidences (such as campfires, waste "middens," foundations, and walls) and structures that merit preservation and protection for the benefit of future generations.

As shown in **Figure 2-16a**, the subject site is within the Town Main Street Historic District, which also encompasses the Main Street National Historic District; note that the subject site is not within the Main Street National Historic District, but abuts it to the south, across East Main Street. **Figure 2-16b** is portion of a State Historic Preservation Office (SHPO) map depicting the locations of established cultural resources proximate to the subject site. As can be seen, there are no such resources on the subject site; the nearest are within the Town Main Street Historic District (the Riverhead United Methodist Church and the Doroszka House, to the north across East Main Street), and in the Main Street National Historic District, along both sides of East Main Street in downtown Riverhead to the north and the west.

Pursuant to Chapter 209 Architectural Review, 209 -1. (3), the purpose and intent of architectural review shall, "Preserve the character and quality of our heritage by maintaining the integrity of those areas which have a discernable character or are of special historic significance." **Section 2.6.2** provides the updated status of Town architectural review.

Correspondence received from the NYS Office of Parks, Recreation and Historic Preservation (OPRHP), Division for Historic Preservation confirms that the buildings currently found on the project site are not considered historically significant (see **Appendix B-9**):

> We note the site for this proposed project is directly across the street from the Riverhead Main Street Historic District, listed in the State and National Registers of Historic Places. More specifically, the buildings at 221 East Main Street and 31 McDermott Avenue have been determined "not eligible" for inclusion in the historic registers; we therefore have no concerns with their removal.

2.6.2 Anticipated Impacts

The subject site is located within the Town Downtown Historic District and is across from an historic church. Architectural review is important and required for this site and is completed by the Architectural Review Board. The project was subject to ARB review and discussion at

3.2.3 Community Services

Public Schools

Details on the breakdown of the residences for the other project are not available so, assuming the same breakdown of studio, one-bedroom and two-bedroom units as the proposed project, an estimated 307 people would reside in the other project, of which 20 would be school-age children. In combination with the estimated 212 residents and 14 school-age children in the proposed project, totals of 529 residents and 34 school-age children are expected. Population is a planned result of the zoning of these sites and is intended to provide consumers for existing and future businesses as well as vitality to the downtown area. With respect to the Riverhead CSD, the cumulative effect of these two projects will increase the district enrollment and expenditures for education of students; however, this will be at least partially offset by the increased taxes (or PILOT payments, in the case of the proposed project) generated.

Police Protection

Both sites require some level of police protection at present, either for past use or present vacant conditions which may encourage vandalism. The occupancy of both sites by residential use will increase the level of presence and activity on the sites which will assist in curtailing vandalism. It is expected that each of the two projects will result in some increased potential for Riverhead Police Department emergency services (due to the increased development and human presence on the property); however, this increase is expected to be limited and within the capabilities of the Department such that the Riverhead Police will be able to accommodate the additional potential need of police services. In addition, the Police Department will benefit from an increase in tax revenue from these two projects.

Fire Protection and Ambulance Services

In a manner similar to that of police services, each of the projects reviewed here would separately, incrementally increase the potential need of fire and ambulance services (of the Riverhead Volunteer Fire Department and the Riverhead Volunteer Ambulance Corps, Inc.), so that the cumulative effect of the two proposals would be heightened in comparison to existing conditions. However, new construction will conform to current fire and building codes and will be subject to site plan review which will include Fire Marshal/Fire Department input. It is expected that the Riverhead Fire Department and the Riverhead Volunteer Ambulance Corps, Inc. will be able to accommodate the additional potential need of fire and ambulance services and as noted with respect to police services, fire/ambulance service providers will benefit from an increase in tax revenue from these two projects.

Public Water Supply

Former uses on both sites were connected to the RWD and resulted in demand for water supply. This demand will be incrementally increased by both projects; however, the demand is expected to be within the capability of the RWD to provide given the existing RWD facilities. It is expected that the proposed project will consume a total of 39,645 gpd of potable water, and the other project would consume an estimated 39,118 gpd, for a cumulative impact on the RWD of 78,763 gpd. This would represent an increase in demand of 11.4% on the average daily pumpage of the RWD. Considering the large volume of water currently supplied by the RWD, and that the distribution system is already present in the area, the increased demand is not

anticipated to significantly cumulatively impact the RWD. Each project will be subject to review and connection to the water district, and will pay their proportional share of the design, connection and tariffs for water supply provided thus generating revenues for the District.

It should be noted that each project's design will be subject to detailed engineering review by the RWD as part of the Town's site plan review process, which would ensure that adequate consideration is given to the water supply needs of each project, as well as to address any supply concerns of the RWD.

Sanitary Wastewater Treatment and Disposal

The existing/former uses at both project sites are connected to the Riverhead Sewer District and have been provided with wastewater treatment services. An incremental increase wastewater will occur as a result of these two planned projects. It is assumed that all 39,645 gpd of water supplied to the proposed project, and the 38,630 gpd of water supplied to the other project for domestic puproses will be conveyed off-site daily as wastewater. The combined 78,275 gpd will be conveyed via the RSD's network to its STP on River Road. As this facility currently treats an average of about 1.0 million gpd, the 78,275 gpd would represent a 7.8% increase in wastewater at this facility. This STP has a permitted capacity of 1.5 million gpd, so that it has about 500,000 gpd of unfilled capacity; the cumulative impact of the two projects would represent a 15.7% reduction in the amount of available treatment capacity of this facility. Considering the RSD's large available capacity at the STP, and the presence of the public sanitary sewer network in the vicinity, the increased demand is not anticipated to significantly cumulatively impact the RSD.

Each of the two projects under consideration here will submit detailed, engineered plans to the RSD for review of the flow impacts to the collection and conveyance systems and, if approved, a letter of sewage treatment availability will be issued. Such a review will ensure that adequate consideration is given to the wastewater treatment needs of each project. In addition, project sponsors will offset the cost of design and the projects will each be charged in accordance with connection and treatment fees of the District such that revenues will be provided to offset costs of treatment.

Energy Suppliers

It is expected that PSEG and National Grid can and will serve both the proposed project and the other project with electrical and natural gas services, respectively. Generally, PSEG and National Grid provide services per their filed tariffs and schedules in effect at the time services are required. As the proposed project will remove both buildings presently on the site (the site of the other project was previously cleared), new service connections will be necessary. Except for these new service connections, it is not expected that the existing distribution systems will need to be upgraded to serve either project site. Considering the available capacity of these utility services and the presence of distribution networks, it is not expected that the cumulative impact on each utility will be significant.

Each project will submit detailed, engineered plans to each utility for review and approval for services. Such reviews will ensure that adequate consideration is given to the electricity and natural gas needs of each project. PSEG and National Grid have established connection fees and

rate schedules which both projects will be subject to, thus providing revenues commensurate with utility demand.

Recreational Facilities

Neither of the two projects will encroach into or otherwise adversely impact any of the existing park or recreational facilities in the vicinity. Each project will incrementally increase the number of potential patrons of local and regional park and recreation sites, but this cumulative impact would not significantly impact the use of any of these sites, in consideration of the following:

- it is acknowledged and expected that Peconic Riverfront Park, being adjacent to each project site, would tend to attract the majority of new visits generated. However, this facility is large enough to accommodate this increase, particularly in that only a low percentage of these new residents would patronize this facility at any one time.
- there are a substantial number of recreational facilities for the new residents to choose from. This would tend to distribute these visits broadly and conversely reduce the number of these visits (and their associated impacts) at any one park/recreational site.
- the number of new site residents is small in comparison to the number of local and regional residents, so that any increase in park/recreational site patronization attributed to these two projects would be small as well.
- Adding to residents in the area that enjoy the existing downtown setting which includes the waterfront park and street environment is a planned condition that benefits the downtown and adds vibrancy and assists with revitalization.

Summary

While these two applications would combine to incrementally increase the demand upon local community services (e.g., schools, police, fire and ambulance services, water supply, sanitary wastewater treatment, energy supplies and recreational facilities), significant cumulative impacts are not anticipated, as:

- each service provider has available capacity to adequately serve the two projects, and
- each service provider will receive increased funds (from taxes, PILOT payments or fees), which would offset at least a portion of the increased costs of those services.

3.2.4 Transportation

In addition to those of the proposed project, the TIS also considers a number of other pending projects in the vicinity, thus ensuring that potential traffic impacts of these are analyzed cumulatively, and are addressed through mitigation and improvements, if necessary. The TIS includes the 203-213 East Main Street project in its analyses (see **Appendix C** and **Section 2.3**).

The cumulative traffic analysis recommends the following mitigation measure:

> As recommended by the TIS, after completion of the project, minor signal timing adjustments at the intersection of East Main Street at McDermott Avenue/Maple Avenue will be made for the northbound McDermott Avenue approach, improve the northbound LOS E to LOS C during the PM

peak hour and LOS E to LOS D during the Saturday peak hour. Overall, the intersection will operate at LOS B during all peak hours after the timing adjustments during the PM and Saturday peak hours.

As noted in **Section 1.3.1**, the project site is within the Town Peconic River/Route 25 Corridor Step II BOA, in which Town initiatives to revitalize downtown Riverhead have been planned and evaluated. This evaluation included a traffic impact analysis that compared existing zoning and a reasonable development scenario that included additional residential units in the downtown and thus, the Town has expected an increase in density and planned accordingly for this additional development in the downtown, finding it appropriate and necessary to achieve the planning goals of the Town.

It should be noted that each of the other pending projects considered in the TIS analysis will be subject to a separate Town review to determine potential traffic impacts, and so will build on the analysis provided herein with respect to their cumulative impacts. Site plan review and curb cut permits from the State will provide forums for further consideration of traffic and appropriate mitigation. As a result, there is a framework for consideration of actions under site-specific review to ensure that adverse cumulative traffic-related impacts would not occur.

Section 2.3.2 notes that the parking needs of the proposed project and those of the other nearby sites proposed for development were evaluated in the TIS (see Parking Analysis, in **Appendix C**). That evaluation also considers the ability of the existing parking lots in the area to accommodate these cumulative parking needs. **Table 3-1** presents the results of that analysis. It shows the number of parking spaces needed for each use in each of the two projects considered; it also compares the parking required per Town Code to the parking needs experienced at similar projects in Babylon, Patchogue and Farmingdale and per ITE values. The table shows that, assuming the proposed parking needs, the cumulative parking demand will be easily met by the available parking, whereas assuming Town Code ratios of needed spaces, the combined projects parking needs would exceed the available supply.

This difference reflects the fact that the proposed parking needs are based on the experience of other downtown projects, whereas parking needs per the Town Code do not.

Table 3-1
COMPARISON OF PARKING NEEDS

Project	Use	Parking Ratio		Parking Demand	
		Proposed	Per Town Code	Proposed	Per Town Code
Proposed Project	Residences (116 units)	1 space/unit	1.5 spaces/unit	116	174
	Restaurants (535 seats)	1 space 3 seats	1 space/3 seats	179	178.3
	Retail (1,508 SF)	3 spaces/1,000 SF	1 space/250 SF	5	5.7
	Totals	---	---	*300*	*358*
203-213 East Main Street	Residences (170 units)	1 space/unit	1.5 spaces/unit	170	255
	Retail (3,750 SF)	3 spaces/1,000 SF	1 space/250 SF	11	15
	Totals	---	---	*181*	*220*
Total Parking Required				***481***	***628***
Total Parking Available*				***504***	***504***

* Total Parking Available is available parking in the parking district plus parking on the project site.

The cumulative parking evaluation concluded:

1. A parking assessment was conducted for the proposed project and an adjacent planned project (203-213 East Main Street) to determine if there is adequate parking near the study area to support the proposed project. As part of the Transit Oriented Development (TOD) Growth Plan in the Riverhead BOA project, Nelson & Pope, LLP conducted a detailed Parking and Public Transportation Study of Downtown Riverhead. The Downtown Riverhead parking study inventoried the parking supply and parking restrictions in the study area. It also identified the peak parking periods and associated peak occupancy by location, calculated the average parking duration and turnover by location. For the purpose of the proposed project, additional parking counts were conducted in the parking areas closer the proposed project to identify current parking utilization.

2. Parking accumulation survey was conducted at the parking areas between the hours of 10:00 AM and 8:00 PM on a half-hourly basis on the following dates:

    - Friday August 19th, 2016 to cover a typical summer weekday
    - Saturday August 29th, 2016 to cover a typical Summer Saturday.

3. The parking data was summarized to identify the peak parking demand in the vicinity of the proposed project.

4. Peak parking demand of the proposed uses was estimated using parking data contained with the ITE Parking Generation Manual 4th Edition, data within the files of Nelson & Pope, LLP and Town parking requirements for developments outside the Downtown Parking District.

5. Based on the peak parking demand, the proposed project and adjacent planned project will require a total of 481 parking spaces. With the peak parking utilization within the study area, there will be at least 504 parking spaces available during the weekday and weekend peak periods. The available parking exceeds the peak parking demand.

3.2.5 Water Resources

Generally, the primary sources of impact to groundwater quality are by the on-site recharge of nitrogen in sanitary wastewater, and by the on-site recharge of stormwater. As described in this document, the proposed project and the 203-213 East Main Street projects will connect to the public sanitary sewer system, so that all wastewater generated on each site will be conveyed to an off-site facility for treatment and recharge, by the RSD. As each site is already connected to this system (or, for the other project site, is unoccupied), there is presently no source of nitrogen impact to groundwater quality on either site. The two development proposals under consideration in this analysis will continue to not represent sources of cumulative groundwater impact.

In general, both of the projects reviewed here will be subject to the review and approval of the RSD, ensuring that no impacts to groundwater quality would occur from either proposal, thereby minimizing the potential for adverse cumulative impacts to groundwater from nitrogen in wastewater.

All stormwater generated on these two development sites will be handled in on-site drainage systems based on Riverhead engineering design guidelines. The design and installation of these systems will be subject to the review of the Town, thereby ensuring that these systems will operate properly. In this way, the potential for adverse cumulative impacts to groundwater resources from stormwater will be minimized.

The only surface water body that could be impacted by either or both of the projects being analyzed herein is the Peconic River, which abuts each site, to the south (across Heidi Behr Way). The potential for cumulative impacts to this surface water resource would be from runoff from either site flowing in the downslope direction and into the river. However, as described above, each project will include an on-site drainage system engineered to accumulate all potential runoff generated on these sites and direct it into on-site recharge facilities. Town engineering requirements prohibit a site design that would allow runoff from exiting a site, which ensures protection of surface water resources. By use of these systems, the potential for cumulative impacts to this surface water resource will be obviated.

3.2.6 Soils

Soils are a site-specific characteristic having potential limitation that would be dealt with on a site-specific basis as each development application is reviewed by Town engineering staff. Each individual site should be subject to evaluation of its soils to ensure that any constraints are addressed in project design. Town engineering staff will review and must approve grading, drainage and erosion control plans as part of its site plan review; each applicant will implement these controls and thereby ensure stabilization of erodible soils and minimization of potential impacts to soils. The combination of pending projects does not represent a significant loss of unique or agricultural soils, and therefore can be evaluated and protected as needed based on specific project designs.

3.2.7 Cultural Resources

The subject site lies across from an historic church and the site-specific impacts of this condition are considered in **Section 2.6**. Any use of the 203-213 East Main Street site will be subject ARB review and approval. Potential cultural resource impacts related to visual resources are addressed for the proposed project site specifically in **Section 2.7**. Cumulative consideration of such impacts are provided in **Section 3.2.8** below.

From the standpoint of OPRHP review of cultural resources, the site-specific review by OPRHP gives some insight into potential impacts related to the 203-213 East Main Street site. Cultural (i.e., archaeological and/or historic) resources are a site- and area-specific resource for which potential impacts would be dealt with as part of individual project reviews. As both sites under review here have been disturbed and developed, it is not expected that there are any cultural resources on either. This has been confirmed for the proposed project site by the OPRHP. As a result, no cumulative impact on on-site cultural resources is anticipated, as no such resources are present on either site.

3.2.8 Visual Resources

Each of these two projects will change the appearance of their sites. Consequently, there will be a cumulative impact on the visual resources of the immediate vicinity and on character of the community (see **Appendices B-11 and B-12**). Specifically, View 6 of the two projects depicts a significant alteration in the downtown streetscape and view shed from this viewing angle. **Section 2.7** addresses visual resources in detail, and includes graphic representations of the community character based on the implementation of these two projects.

These uses are subject to the dimensional requirements of the DC-1 zoning that was created by the Town to promote these projects and spur revitalization of the downtown. The context of these sites in the area is regulated under the Town Zoning Code, and site plans are subject to review by the Town Board and Architectural Review Board.

The Riverview Lofts project has been subject to ARB review and through this process, the architectural details of the building were evaluated and mitigation offered in the form of changes to architectural details, "step back" of the fifth story of the building and articulation of the building along McDermott Avenue. It is expected that the project at 203-213 East Main Street will be subject to similar review and through this evaluation, mitigation and project changes may occur that would reduce potential visual impacts of that specific site.

As a result, it is acknowledged that cumulatively, both projects represent a substantial change in the visual character of this segment of East Main Street. The current buildings in this area are predominantly one, two and three-story buildings. If both projects are constructed, the height would increase by three stories over existing two-story buildings and two stories over existing three-story buildings. While ARB review and architectural changes may occur with respect to 203-213 East Main Street, the overall building mass will be increased on this section of East Main Street.

Consideration of visual resources is important and as noted there is acknowledgment that both projects will result in a change in visual conditions. On balance, the projects conform to the zoning dimensional requirements, particularly with respect to height, as provided for in the DC-1 zone which resulted from planning studies and assists with the implementation of Town planning goals for the sites and area. Visual change is inevitable; however, this change is planned for and will catalyze the revitalization and land use community character and aesthetic conditions that the Town envisioned through planning and zoning.

In summary, it is acknowledged that impacts on the visual context of cultural resources in the vicinity may occur along East Main Street to the north and west of the subject site, because of the size and proximity of the proposed five-story structures. For the proposed project, these impacts have been mitigated to the maximum extent practicable by use of architectural stylings that complement the other structures in the neighborhood (so that these new structures would not add a contrasting use upon the context of these resources). The proposed project has received the approval of the ARB. The 203-213 East Main Street project must still be subject to ARB review for architectural styling and building characteristics. Overall, these two sites will be redeveloped in conformance with existing DC-1 zoning for either the proposed uses or if not

these proposed projects, then some other project that would conform with zoning as intended by the Town. Visual change is an inevitable consequence of redevelopment of these sites; however, this change will catalyze revitalization, generate jobs and tax (or PILOT) revenue and will provide retail shopping opportunities as well as diverse housing opportunities in the downtown.

3.2.9 Conclusions

Based on the necessity to conform to zoning and the various land use plans and development regulations (applied at the Town and County levels), the governmental scrutiny each project will undergo in order to receive the necessary approvals and permits, and in consideration of the types and extents of impacts anticipated from these projects, it is not expected that significant cumulative impacts would result. The implementation of these projects in conformance with zoning will achieve the planning goals of the Town in conformance with DC-1 zoning and supporting plans, and when considering social, economic and environmental factors, on balance, these projects are beneficial in addressing Town needs and planning goals for downtown Riverhead.

3.3 Adverse Impacts that Cannot Be Avoided

The existing site conditions have been characterized and the potential impacts of the proposed project have been assessed. Some impacts may still exist for which no mitigation is available. The impacts themselves have been quantitatively and qualitatively discussed in previous sections of this document. The impacts of the proposed project will be minimized where possible, but this section acknowledges those impacts which may still occur:

Short-Term/Construction Period Impacts

- Despite implementation of the proposed mitigation measures, localized erosion impacts may occur but will be controlled to the maximum extent practicable.
- Despite implementation of the proposed mitigation measures, fugitive dust may still be generated though water truck spray and on-site management will seek to control any such impacts.
- Construction vehicle-related traffic will occur, which may adversely impact local traffic conditions though this will be temporary and not permanent.
- Despite implementation of the proposed mitigation measures, noise associated with construction activities will be generated, which may adversely impact local residents; however, construction will comply with hours of operational requirements of the Town.

Long-Term/Post-Construction Impacts

- Increased intensity of land use on the site (over current site conditions).
- Clearing, grading, and redevelopment on the entire 0.85-acre site.
- Increased total anticipated water consumption and wastewater generation on the site, from 484 gpd at present to 39,871 gpd associated with the project. Water will be supplied by the RWD and wastewater treatment will be provided by the RSD.
- Increase in vehicle trips generated on the site and on area roadways over existing conditions (minor off-site signal timing adjustment proposed).

- Assuming that all 14 of the school-aged children anticipated to reside in the proposed project would attend local schools in the Riverhead CSD, with associated increase in school district expenditures.
- There will be an increased potential need for emergency services of the Riverhead Police Department and the Riverhead Fire Department (offset by increases in tax revenues generated by the proposed project).
- There will be increased demand on the energy services of PSEG and National Grid (to be paid for according to rate tariffs).

3.4 Irreversible and Irretrievable Commitment of Resources

This section is intended to identify those natural and human resources listed in **Section 2.0** that will be consumed, converted or made unavailable for future use as a result of the proposed project. Development of the proposed project will result in irreversible and irretrievable commitment of resources. The importance of this commitment of resources is not anticipated to be significant however, due to the fact that these losses do not involve any resources that are in short supply, semi-precious or precious to the community or region, or are otherwise substantial.

It is difficult to quantify the exact commitment of resources; however, once the project is complete, the following irreversible and irretrievable losses of resources are expected:

- Building materials used for construction, including but not limited to: wood, asphalt, concrete, fiberglass, steel, aluminum, brick, etc.
- Energy and related resources used in the construction, operation and maintenance of the proposed project, including fossil fuels, electricity and water.
- Potable water to be consumed by the operation of the project, totaling an estimated 39,871 gpd.

3.5 Effects on the Use and Conservation of Energy Resources

An increase in the consumption of energy resources would typically be expected from the intensification of land use on a site, particularly for sites which had been undeveloped or underutilized. The proposed development site is already developed, so that the property currently consumes energy resources, in the forms of electricity and natural gas. Nevertheless, the proposed project will increase the amount of development on the site, so that an increase in the overall amount of energy resources is expected. However, use of new, energy-efficient building materials (e.g., insulations, windows, weather stripping, door seals, etc.) and mechanical systems, (e.g., air conditioners, heating systems, HVAC systems, water heaters, heat pumps, etc.) is anticipated, which would mitigate the increased usage of energy resources. Incorporation of such energy-conserving measures is not only required by New York State and the Town of Riverhead, but is a sensible business practice, particularly in light of the increasing cost of energy resources. It is expected that the existing public utility services of PSEG and National Grid will be more than adequate to meet the expected increased demand.

Each of the alternative scenarios, like the proposed project, would connect to the public sanitary sewer system of the RSD. It is assumed that all of the water supplied to the site would leave the site as wastewater, for treatment and disposal at the Town STP facility. As shown in **Table 4-1**, Alternative 1 would generate the least wastewater of all four scenarios evaluated, followed by Alternative 3, then by Alternative 2. The proposed project would generate the most wastewater. Similar to the proposed project, it is expected that PSEG and National Grid can and will serve any of the alternatives with electrical and natural gas services, respectively. Except for Alternative 1 (wherein no changes to site conditions are assumed), the proposed project and Alternatives 2 and 3 will remove both buildings presently on the site, so that the existing service connections will also be removed, to be replaced with new service connections. It is expected that the existing distribution system immediately upstream of these new connections will not need to be replaced or supplemented to service the proposed project or Alternatives 2 or 3.

Because the square footages of the structure assumed for the proposed project and Alternatives 2 and 3 are similar, it is expected that the amounts of electricity and natural gas required to power and heat the structure would be similar. Alternative 1, because it represents a lesser amount of floor space in active use than the other scenarios, is expected to consume substantially less electricity and natural gas than the other scenarios.

Neither the proposed project nor any of the alternatives will encroach into or otherwise adversely impact any of the existing park or recreational facilities in the vicinity, particularly of Peconic Riverfront Park. To the contrary, the proposed project and Alternatives 2 and 3 would increase the number of potential patrons of local and regional park and recreation sites. The impact of this potential increase in park visitation would be incremental, as not all residents would attend these facilities at the same time, there are a number of differing recreational sites to choose from, and the increase represented by the proposed project or alternatives is small compared to the large number of residents already in the area.

4.2.3 Transportation

As shown in **Table 4-1**, it is expected that the number of peak hour vehicle trips generated by the proposed project would exceed those for Alternatives 1 and 3 for all peak hours evaluated, so that the potential impacts of the proposed project on local roadway conditions or intersection operations would exceed those for Alternatives 1 and 3. The TIS (which was prepared for the proposed project) reviewed the anticipated impacts at local intersections, and recommended only minor signal timing adjustments for the northbound McDermott Avenue approach at the intersection of East Main Street at McDermott Avenue/Maple Avenue. Such a mitigation would enable this intersection to operate at LOS B during all peak hours. Since Alternatives 1 and 3 would generate fewer peak hour vehicle trips than the proposed project, it is expected that provision of the mitigation for trips generated by the proposed project for either of these two alternatives would adequately address their potential adverse impacts.

Alternative 2, however, would generate more trips than the proposed project during the weekday AM peak hour, a similar number during the weekday PM peak hour, and fewer trips than the proposed project for the Saturday Midday peak hour. Thus, implementing the mitigation

designed for the proposed project for Alternative 2 would more than adequately address impacts of Alternative 2 for the weekday PM and Saturday Midday peak hours, and may be sufficient to address its impacts during the weekday AM peak hour as well.

4.2.4 Water Resources

Based on the SCDHS design rates for sanitary wastewater generation (see **Table 4-1)**, Alternative 1 would consume the lowest amount of water of all four scenarios evaluated, and would therefore generate the least sanitary wastewater. Alternative 3 would use the next-lowest amount of water, followed by Alternative 2. The proposed project would consume the most water in its operation, and so would generate the most sanitary wastewater.

It is expected that similar volumes of stormwater runoff would be generated by the three development scenarios, so that on-site drainage systems having similar layouts and capacities would be constructed for all three scenarios. As a result, similar impacts to groundwater and surface water resources would be expected.

4.2.5 Soils

Because the buildings assumed for Alternatives 2 and 3 would be similar to that of the proposed project (in regard to footprint and presence of a lower parking level), it is expected that similar impacts to soil resources would occur, from excavation for the building foundation.

4.2.6 Cultural and Visual Resources

It is expected that, since the structures assumed for Alternatives 2 and 3 would be similar in size, height and general appearance as that of the proposed project, the potential impacts on the cultural and visual resources of the vicinity would be impacted to a degree similar to that of the proposed project.

SECTION 5.0

REFERENCES