Traffic Impact Study

Proposed Mixed-Use Development
Block 201, Lots 10-14
Block 205, Lots 1, 2, and 4
Borough of Englewood Cliffs
Bergen County, New Jersey

Prepared for:
CFI Development, LLC

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John R. Corak, PE
Senior Project Manager
NJ P.E. License No. 54973

Matthew J. Seckler, PE, PP, PTOE
Principal
NJ P.E. License No. 48731

STONEFIELD
92 Park Ave
Rutherford, NJ 07070

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INTRODUCTION

This Traffic Impact Study was prepared to investigate the potential impacts of the proposed mixed-use development on the adjacent roadway network. The subject property is located along Bayview Avenue in the Borough of Englewood Cliffs, Bergen County, New Jersey. The site location is shown on appended **Figure 1**.

The subject property is designated as Block 201, Lots 10 through 14 and Block 205, Lots 1, 2, and 4 as depicted on the Borough of Englewood Cliffs Tax Map. The site has approximately 50 feet of frontage along Bayview Avenue, approximately 393 feet of frontage along Sylvan Avenue, and approximately 289 feet of frontage along Fifth Street. The existing site is occupied by six (6) buildings and undeveloped land. Access is presently provided via one (1) right-in/right-out driveway for each property along Sylvan Avenue and one (1) full-movement driveway along Bayview Avenue. Under the proposed development program, the existing structures would be razed and a 48-unit residential development and 8,072 square feet of commercial/retail would be constructed. Access is proposed via one (1) left-turn ingress restricted driveway along Sylvan Avenue and one (1) ingress-only driveway along Bayview Avenue.

METHODOLOGY

Stonefield Engineering & Design, LLC has prepared this Traffic Impact Study in accordance with the recommended guidelines and practices outlined by the Institute of Transportation Engineers (ITE) within Transportation Impact Analyses for Site Development. A detailed field investigation was performed to assess the existing conditions of the adjacent roadway network. A data collection effort was completed to identify the existing traffic volumes at the study intersections to serve as a base for the traffic analyses. Capacity analysis, a procedure used to estimate the traffic-carrying ability of roadway facilities over a range of defined operating conditions, was performed using the Highway Capacity Manual, 7th Edition (HCM) and Synchro 12 Software for all study conditions to assess the roadway operations.

For an unsignalized intersection, Level of Service (LOS) A indicates operations with delay of less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 50 seconds per vehicle. For a signalized intersection, LOS A indicates operations with delay of less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 80 seconds per vehicle. The Technical Appendix contains the Highway Capacity Analysis Detail Sheets for the study intersections analyzed in this assessment. The traffic signal timing utilized within the signalized analysis is based on timing directives provided by the New Jersey Department of Transportation (NJDOT).

2026 EXISTING CONDITION

2026 EXISTING ROADWAY CONDITIONS

The proposed mixed-use development is located along Bayview Avenue in the Borough of Englewood Cliffs, Bergen County, New Jersey. The subject property is designated as Block 201, Lots 10 through 14 and Block 205, Lots 1, 2, and 4 as depicted on the Borough of Englewood Cliffs Tax Map. The site has approximately 50 feet of frontage along Bayview Avenue, approximately 393 feet of frontage along Sylvan Avenue and approximately 289 feet of frontage along Fifth Street. Land uses in the area are a mix of commercial, residential, recreational, medical, and religious uses.

Sylvan Avenue (U.S. Route 9W) is classified as an Urban Principal Arterial roadway with a general north-south orientation and is under the jurisdiction of the NJDOT. Along the site frontage, the roadway provides two (2) lanes of travel in each direction and has a posted speed limit of 30 mph with restrictions in effect school days 8:00 a.m. to 5:00 p.m. to reduce the posted speed limit to 25 mph. Curb and sidewalk are provided along both sides of the roadway, shoulders are not provided, and on-street parking is permitted along both sides of the roadway. Sylvan Avenue provides north-south mobility throughout Bergen County and provides access to the Palisades Interstate Parkway to the north and U.S. Route 46 and the NJ Turnpike to the south, serving a mix of commercial, residential, recreational, medical, and religious uses along its length.

Bayview Avenue is a local roadway with a general east-west orientation and is under the jurisdiction of the Borough of Englewood Cliffs. Along the site frontage, the roadway provides one (1) lane of travel in each direction and has a posted speed limit of 25 mph. Curb is provided along both sides of the roadway, sidewalk and shoulders are not provided, and on-street parking is permitted along both sides of the roadway with parking restrictions in effect on school from days 8:00 a.m. to 5:00 p.m. along the northerly side of the roadway. Bayview Avenue provides east-west mobility within the Borough of Englewood Cliffs and access to Hudson Terrace (County Route 505) at its easterly terminus, serving predominately residential uses along its length.

Irving Avenue is a local roadway with general east-west orientation and is under the jurisdiction of the Borough of Englewood Cliffs. Adjacent to the site, the roadway provides one (1) lane of travel in each direction and has no posted speed limit. Curb is provided along both sides of the roadway, sidewalk is provided intermittently along the northerly side of the roadway, and shoulders are not provided. On-street parking is permitted along both sides of the roadway with parking restrictions in effect on school days from 8:00 a.m. to 5:00 p.m. along the northerly side of the roadway. Irving Avenue provides east-west mobility within the Borough of Englewood Cliffs, serving predominantly residential uses along its length.

Bayview Avenue and Sylvan Avenue intersect to form a four (4)-leg intersection controlled by a two (2)-phase traffic signal operating on a 90-second background cycle length. The eastbound and westbound approaches of Bayview Avenue each provide one (1) full-movement lane. The northbound and southbound approaches of Sylvan Avenue each provide one (1) shared left-turn/through lane and one (1) shared through/right-turn lane. Crosswalks and pedestrian signals are provided across all approaches of the intersection. Pedestrian ramps are provided across the westerly leg of the intersection.

Irving Avenue and Sylvan Avenue intersect to form an unsignalized intersection with the eastbound approach of Irving Avenue operating under stop control. The eastbound approach of Irving Avenue provides one (1) shared left-turn/right-turn lane. The northbound approach of Sylvan Avenue provides one (1) shared left-turn/through lane and one (1) exclusive through lane. The southbound approach of Sylvan Avenue provides one (1) exclusive through lane and one (1) shared through/right-turn lane. Crosswalks and pedestrian ramps are provided across the westerly leg of the intersection.

2026 EXISTING TRANSIT SERVICE

The subject site is located within 131 feet (1-minute walk) from bus stops that service three (3) NJ Transit bus routes and two (2) Coach USA bus routes, with the nearest stop located at the intersection of Sylvan Ave at Bayview Ave. NJ Transit Bus Routes 786, 186, and 156 provide service to New York Port Authority Bus Terminal and various points of interest throughout Bergen and Hudson Counties. Coach USA Bus Routes 9/9A and 9W provide service to New York Port Authority Bus Terminal, George Washington Bridge Bus Terminal, and various points of interest throughout Bergen County and Rockland County, New York. The non-vehicular transportation modes available in the general vicinity of the subject site are summarized on **Table 1**.

TABLE 1: MULTI-MODAL TRANSPORTATION OPTIONS

Travel Mode	Proximity to Site	Peak Commuter Period Headways	Destination(s)	Time Travel to Major Destination
NJ Transit Bus Route 156	44 Feet	Inbound: 12 minutes Outbound: 30 minutes	NY Waterway, NY Port Authority Bus Terminal	To NY Port Authority Bus Terminal: 77 minutes
NJ Transit Bus Route 186	44 Feet	Inbound: 15 minutes Outbound: 15 minutes	Dumont, Coytesville, George Washington Bridge Bus Terminal	George Washington Bridge Bus Terminal: 16 minutes
NJ Transit Bus Route 756	44 Feet	Inbound: 35 minutes Outbound: 60 minutes	Fort Lee, Teaneck, Brookchester, North Hackensack, Paramus	To Garden State Plaza: 51 minutes To Bergen Community College: 67 minutes
Coach USA Bus Route 9/9A	Along Site Frontage	Inbound: 30 minutes Outbound: 30 minutes	NY Port Authority Bus Terminal	To NY Port Authority Bus Terminal: 38 minutes

2026 EXISTING TRAFFIC VOLUMES

Manual turning movement counts were collected during the typical weekday morning, weekday evening, and Saturday midday time periods to evaluate existing traffic conditions and identify the specific hours when traffic activity on the adjacent roadways is at a maximum and could be potentially impacted by the development of the site. Specifically, manual turning movement counts at the intersection of Bayview Avenue and Sylvan Avenue were conducted on the following dates and during the following times:

- Tuesday, January 8, 2019, from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 7:00 p.m.
- Saturday, January 5, 2019, from 11:00 a.m. to 2:00 p.m.

Manual turning movement counts at the intersection of Irving Avenue and Sylvan Avenue were conducted on the following dates and during the following times:

- Thursday, February 28, 2019, from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 7:00 p.m.
- Saturday, February 23, 2019, from 11:00 a.m. to 2:00 p.m.

The study time periods were chosen as they are representative of the peak periods of both the adjacent roadway network and the proposed development. The traffic volume data was collected and analyzed to identify the design peak hour in accordance with HCM and ITE guidelines. Based on the review of the count data the weekday morning peak hour occurred from 8:00 a.m. to 9:00 a.m.; the weekday evening peak hour occurred from 4:45 p.m. to 5:45 p.m., and the Saturday midday peak hour occurred from 11:45 a.m. to 12:45 p.m. The Technical Appendix contains a summary of the turning movement count data.

North Jersey Transportation Planning Authority (NJTPA) provides an annual 0.5% annual increase in population change between the years 2015 to 2050 for the Borough of Englewood Cliffs in Bergen County.

The 2026 Existing Traffic Volumes were calculated using the 2019 turning movement count data and the 0.5% growth rate per year. The 2025 Existing weekday morning, weekday evening, and Saturday midday peak-hour volumes are summarized on appended **Figure 2**.

2026 EXISTING LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was conducted for the 2026 Existing Condition during the weekday morning, weekday evening, and Saturday midday peak-hours at the study intersection. Under the existing condition, the signalized intersection of Bayview Avenue and Sylvan Avenue is calculated to operate at overall Level of Service A during each of the peak hours studied. The eastbound and westbound approaches of Bayview Avenue are calculated to operate at an acceptable Level of Service D during each of the peak hours studied. The turning movements at the unsignalized intersection of Irving Avenue and Sylvan Avenue are calculated to operate at Level of Service C or better during the weekday morning and Saturday midday peak hours and at Level of Service D or better during the weekday evening peak hour.

2028 NO-BUILD CONDITION

BACKGROUND GROWTH

The 2026 Existing Condition traffic volume data was grown to a future horizon year of 2028, which is a conservative estimate for when the proposed mixed-use development is expected to be fully constructed. In accordance with industry guidelines, the existing traffic volumes at the study intersections were increased by 2.75% annually for two (2) years to generate the 2026 Base Traffic Volumes. These volumes are summarized on appended **Figure 3**. The 2.75% background growth rate was obtained from the NJDOT Annual Background Growth Rate Table.

OTHER PLANNED DEVELOPMENT PROJECTS

To evaluate the future traffic conditions, it is important to consider the potential site-generated traffic of other projects that could influence the traffic volume at the study intersections. Other planned development projects include those that as of the date of the traffic counts, were either in the entitlement process or approved for building permits in proximity to the proposed development. Based on consultations with Lisette Duffy of the Borough of Englewood Cliffs Clerk's office, the following development is anticipated to impact traffic volumes within the study area:

- LG Electronics Headquarters Building – 350,806 square feet of office space between Sylvan Avenue and Hudson Terrace to the northeast of the study area

Appended **Figure 4** illustrates the site-generated traffic associated with the proposed LG Electronics Headquarters Building assigned to the study area network.

2028 NO-BUILD TRAFFIC VOLUMES

The site-generated trips associated with the LG Electronics Headquarters Building were added to the 2028 Base Traffic Volumes to calculate the 2028 No-Build Traffic Volumes for the weekday morning, weekday evening, and Saturday midday peak hours. These volumes are summarized on appended **Figure 5**.

2028 NO-BUILD LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was also conducted for the 2028 No-Build Condition during the weekday morning, weekday evening, and Saturday midday peak hours at the study intersections. The signalized intersection of Sylvan Avenue and Bayview Avenue is calculated to operate generally consistent with the findings of the Existing Condition during each of the study peak hours. The turning movements at the unsignalized intersection of Irving Avenue and Sylvan Avenue are calculated to generally consistent with the findings of the Existing Condition during the Saturday midday peak hour, at Level of Service D or better during the weekday morning peak hour, and at Level of Service E or better during the weekday evening peak hour.

2028 BUILD CONDITION

The site-generated traffic volume of the proposed mixed-use development was estimated to identify the potential impacts of the project. For the purpose of this analysis, a complete project "build out" is assumed within two (2) years of the preparation of this study.

TRIP GENERATION

Trip generation projections for the proposed mixed-use development were prepared utilizing the ITE's Trip Generation Manual, 12th Edition. Trip generation rates associated with Land Use 220 "Multifamily Housing (Low-Rise)" and Land Use 822 "Strip Retail Plaza (<40k)" were cited for the 48 residential units and 8,072 square feet of commercial/retail space. **Table 2** provides the weekday morning, weekday evening, and Saturday midday peak hour trip generation volumes associated with the proposed development.

TABLE 2 – PROPOSED TRIP GENERATION

	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
Land Use	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
48 Unit Multifamily Housing (Low-Rise) *ITE Land Use 220*	7	23	30	19	11	30	9	15	24
8,072 SF Strip Retail Plaza (<40K) *ITE Land Use 822*	17	15	32	33	33	66	27	27	54
Total	**24**	**38**	**62**	**52**	**44**	**96**	**36**	**42**	**78**

As stated within Chapter 10 of ITE's Trip Generation Handbook, 3rd Edition, there are instances when the total number of trips generated by a site is different from the amount of new traffic added to the street system by the generator. Strip Retail Plazas are specifically located on or adjacent to busy streets to attract motorists already on the roadway. Therefore, the proposed ITE Land Use 822, associated with the development would be expected to attract a portion of its trips from the traffic passing the site on the way from an origin to an ultimate destination. These trips do not add new traffic to the adjacent roadway system and are referred to as pass-by trips.

Based upon NJDOT approved pass-by rates for similar Land Use 820 "Shopping Center" 34% of the site-generated traffic during the weekday evening peak hour, and 26% during the Saturday peak hour is comprised of pass-by traffic. **Table 3** shows the additional site generated traffic for the proposed development after applying the appropriate trip reductions to account for pass-by traffic.

TABLE 3 – PROPOSED TRIP GENERATION – NEW & PASS-BY TRIPS

	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
Land Use	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
ITE Land Use 220 "New" Trips	7	23	30	19	11	30	9	15	24
ITE Land Use 822 "New" Trips	17	15	32	22	22	44	20	20	40
Total "New" Trips	24	38	62	41	33	74	29	35	64
"Pass-By" Trips *ITE Land Use 220*	-	-	-	-	-	-	-	-	-
"Pass-By" Trips *ITE Land Use 822*	-	-	-	11	11	22	7	7	14
Total "Pass-By" Trips	-	-	-	11	11	22	7	7	14
Total	**24**	**38**	**62**	**52**	**44**	**96**	**36**	**42**	**78**

Factors such as transit use and walkability have been found to significantly decrease the trip generation of residential developments located proximate to transit. Based on American Community Survey data provided by the U.S. Census Bureau, approximately 16% of Borough of Englewood Cliffs residents living in Census Tract

160, where the site is located, use public transportation, walk, or use means other than single-passenger vehicles to commute to work. Based on the available transit options within walking distance to the subject site and commuter characteristic data provided by the U.S. Census Bureau, a reduction in external site-generated traffic originating and departing from the site can be applied to account for transit use. To maintain a conservative analysis, no transit trip reduction was applied to the proposed trip generation.

TRIP ASSIGNMENT/DISTRIBUTION

The trips generated by the proposed development were distributed according to the existing travel pattern along the adjacent roadway network and the access management plan of the site. The "New" Site-Generated Traffic Volumes are illustrated on appended **Figure 6** and the "Pass-By" Site-Generated Traffic Volumes are illustrated on appended **Figure 7**. The "New" and "Pass-By" Site-Generated Traffic Volumes were added together to calculate the Total Site-Generated Traffic Volumes and are illustrated on appended **Figure 8.**

2028 BUILD TRAFFIC VOLUMES

The Total Site-Generated Trips were added to the 2028 No-Build Traffic Volumes to calculate the 2028 Build Traffic Volumes and are shown on appended **Figure 9**.

2028 BUILD LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was also conducted for the 2028 Build Condition during the weekday morning, weekday evening, and Saturday midday peak hours at the study intersections and proposed site driveways. Appended **Table A1** compares the 2026 Existing, 2028 No-Build, and 2028 Build Conditions Level of Service and delay values.

The signalized intersection of Bayview Avenue and Sylvan Avenue is calculated to operate generally consistent with the findings of the No-Build Condition during each of the peak hours studied. The unsignalized intersection of Irving Avenue and Sylvan Avenue is calculated to operate generally consistent with the findings of the No-Build Condition during the Saturday midday peak hour, at Level of Service E or better during the weekday morning peak hour, and exceeding Level of Service E during the weekday evening peak hour. During the weekday evening peak hours, the software analysis indicates the eastbound turning movements would exceed Level of Service E, however the analysis does not consider platooning effects along Sylvan Avenue and the available gaps in traffic to complete turning movements.

Along Sylvan Avenue, traffic signals at Bayview Avenue and at Washington Avenue are coordinated, which creates gaps in traffic to facilitate turning movements from driveways and minor intersecting streets. Based on the volume-to-capacity ratios at the Irving Avenue and site driveway approaches, the future traffic volumes at these approaches would not exceed the capacity of the intersection. Additional analysis of vehicular gaps along

Sylvan Avenue was conducted to determine if there is a sufficient number of gaps in traffic to facilitate turning movements during the critical weekday evening peak hour.

2028 BUILD CONDITION GAP ANALYSIS

To determine the number of gaps in traffic for vehicles to complete left-turn maneuvers from Irving Avenue and the proposed site driveway onto Sylvan Avenue, vehicular gaps in the northbound and southbound directions were recorded during the critical weekday evening peak period. Gaps along Sylvan Avenue were recorded on Wednesday, April 3, 2019 from 4:30 p.m. to 6:30 p.m.

The data was analyzed using minimum gap acceptance rates as specified within the HCM. An available gap, or critical headway, represents the minimum time interval between oncoming vehicles that a motorist will accept to execute a turning movement. The critical headway times utilized in the analysis are specified within HCM for completing a left-turn on a four (4)-lane roadway (across two (2) lanes of oncoming traffic). Specifically, the base critical headway required for a single vehicle to complete a left-turn is 7.5 seconds, the minimum follow-up headway required for additional vehicles to complete a left-turn is 3.5 seconds per additional vehicle.

The total number and duration of gaps in Sylvan Avenue traffic were evaluated in terms of the minimum gap acceptance and follow-up times. **Table 4** provides a comparison of the total capacity of the left-turn movements and the total projected left-turn traffic volume at the Irving Avenue and the proposed site driveway approaches during the critical peak hour. The gap data collected at Irving Avenue and the proposed site driveway location is provided within the Technical Appendix.

TABLE 4 – IRVING AVENUE/SITE DRIVEWAY – LEFT-TURN VOLUME vs. CAPACITY

Movement	Total Available Gaps (Vehicles)	Total Left-Turn Volume (Vehicles)
Left-Turn from Site Driveway	111	24
Left-Turn from Irving Avenue		10

As shown in Table 4, there is a sufficient number of available gaps along Sylvan Avenue to accommodate the projected left-turn volume from Irving Avenue and the proposed site driveway along Sylvan Avenue during the weekday evening peak hour.

SITE CIRCULATION/PARKING SUPPLY

A review was conducted of the proposed mixed-use development using the Site Plan prepared by Collazuol Engineering & Surveying Associates LLC, dated December 23, 2025. In completing this review, particular attention was focused on the site access, circulation, and parking supply.

Access is proposed via one (1) left-turn ingress restricted driveway along Sylvan Avenue and one (1) ingress-only driveway along Bayview Avenue. The proposed building would be centrally located along the Sylvan Avenue frontage of the site, with ground-level surface parking on the southeasterly side of the building and covered parking located on the ground level of the proposed building structure. Two-way vehicular circulation throughout the site would be facilitated by drive aisles with a minimum width of 24 feet.

Regarding the parking requirement for the residential portion of the proposed development, the Township of Englewood Cliffs requires 1.7 parking spaces per dwelling unit. For the residential portion of the proposed development consisting of 48 units, this equates to 82 required parking spaces. Regarding the parking requirement for the retail portion of the proposed development, the Township of Englewood Cliffs requires one (1) parking space per 200 square feet of retail space. For the retail portion of the proposed development consisting of 8,072 square feet, this equates to 41 required parking spaces. The total parking requirement for this development is 123 parking spaces. The site would provide 111 total parking spaces. The right-angle spaces would be located along the 24-foot-wide two-way drive aisles and would be a minimum of nine (9) feet wide by 18 feet deep in accordance with industry standards.

As per P.L. 2021, c.171 (C.40:55D-66.18 et al.), all projects involving multifamily dwellings with more than five (5) units must have 15% of the parking supply be pre-wired for electric vehicle charging stations ("make-ready"). Of the make-ready spaces, 5% must be ADA compliant. For the proposed parking supply of 111 parking spaces, this equates to 19 make-ready spaces with one (1) being ADA accessible. The electric vehicle requirements consider electric vehicle spaces as a minimum of two (2) parking spaces for the purpose of satisfying parking requirements, up to a 10% reduction of the total requirement. As such, the development plan would be considered to provide 123 (111 + 12) total parking spaces, whereas 123 are required.

Based on the Borough of Englewood Cliffs Ordinance parking requirements, the proposed parking supply of 111 spaces would be sufficient to support the expected parking demand of the proposed development.

CONCLUSIONS

This report was prepared to examine the potential traffic impact of the proposed mixed-use development. The analysis findings, which have been based on industry-standard guidelines, indicate that the proposed development would not have a significant impact on the traffic operations of the adjacent roadway network. There are sufficient gaps in traffic along Sylvan Avenue to facilitate turning movements from Irving Avenue and the proposed site driveway along Sylvan Avenue. The vehicle storage supply along the westbound approach of Bayview Avenue is sufficient to support the queues at the signalized intersection. The site driveways and on-site layout have been designed to provide for effective access to and from the subject property, and the parking supply meets the Englewood Cliffs Ordinance requirements and would be sufficient to support this project.

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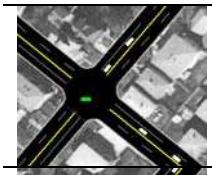
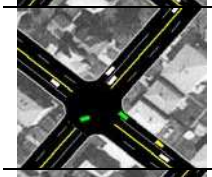
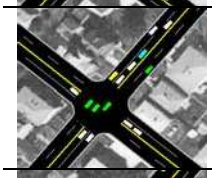
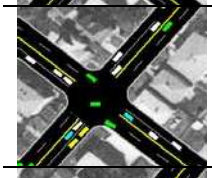
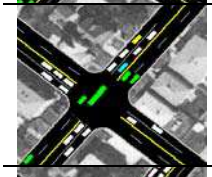
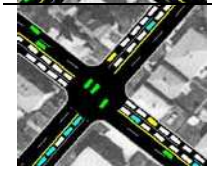
TECHNICAL APPENDIX

LEVEL OF SERVICE/AVERAGE CONTROL DELAY CRITERIA

LEVEL OF SERVICE /AVERAGE CONTROL DELAY CRITERIA

The ability of a roadway to effectively accommodate traffic demand is determined through an assessment of the volume-to-capacity ratio, delay and Level of Service of the lane group and/or intersection. The volume-to-capacity ratio is the ratio of traffic flow rate to capacity for a given transportation facility. As defined within the Highway Capacity Manual, 7th Edition (HCM), intersection delay is the total additional travel time experienced by drivers, passengers, or pedestrians as a result of control measures and interaction with other users of the facility, divided by the volume departing from the corresponding cross section of the facility. Level of service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience.

For an unsignalized intersection, LOS A indicates operations with delay less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 50 seconds per vehicle. For a signalized intersection, LOS A indicates operations with delay less than 10 seconds per vehicle and LOS F denotes operations with delay in excess of 80 seconds per vehicle.

	Level Of Service (LOS)	Signalized Delay Range (average control delay in sec/veh)	Unsignalized Delay Range (average control delay in sec/veh)
	A	<=10	<=10
	B	>10 and <=20	>10 and <=15
	C	>20 and <=35	>15 and <=25
	D	>35 and <=55	>25 and <=35
	E	>55 and <=80	>35 and <=50
	F	>80	>50

Source: Highway Capacity Manual, 7th Edition

STONEFIELD

Table A1: Comparative Level of Service (Delay) Table

Borough of Englewood Cliffs, Bergen County, New Jersey

X (n) = Level of Service (seconds of delay)

		Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
Intersection	**Lane Group**	**2026 Existing Condition**	**2028 No-Build Condition**	**2028 Build Condition**	**2026 Existing Condition**	**2028 No-Build Condition**	**2028 Build Condition**	**2026 Existing Condition**	**2028 No-Build Condition**	**2028 Build Condition**
Bayview Avenue (E/W) & Sylvan Avenue (N/S)	EB Left/Through/Right	D (40.1)	D (40.0)	D (40.2)	D (42.3)	D (42.6)	D (42.8)	D (40.5)	D (40.4)	D (40.4)
	WB Left/Through/Right	D (42.2)	D (42.1)	D (42.1)	D (40.6)	D (40.7)	D (40.6)	D (41.2)	D (41.2)	D (41.1)
	NB Left/Through	A (3.3)	A (4.7)	A (4.7)	A (2.6)	A (2.7)	A (2.7)	A (2.1)	A (2.2)	A (2.2)
	NB Through/Right	A (3.4)	A (4.9)	A (4.9)	A (2.6)	A (2.8)	A (2.8)	A (2.2)	A (2.2)	A (2.3)
	SB Left/Through	A (3.1)	A (3.4)	A (3.5)	A (3.9)	A (5.9)	A (6.5)	A (2.3)	A (2.4)	A (2.5)
	SB Through/Right	A (3.2)	A (3.6)	A (3.7)	A (4.0)	A (5.3)	A (5.4)	A (2.4)	A (2.5)	A (2.6)
	Overall	**A (6.9)**	**A (7.2)**	**A (7.2)**	**A (6.0)**	**A (6.8)**	**A (7.0)**	**A (3.8)**	**A (3.9)**	**A (3.9)**
Irving Avenue/Site Driveway (E/W) & Sylvan Avenue (N/S)	EB Left/Through/Right	C (23.8)	D (32.1)	E (36.6)	D (25.4)	E (46.7)	F (58.2)	C (20.5)	C (22.3)	C (23.3)
	WB Left/Through/Right	No Volume	No Volume	E (45.1)	No Volume	No Volume	E (47.2)	No Volume	No Volume	C (20.3)
	NB Left	A (9.3)	A (9.7)	A (9.7)	B (11.7)	B (14.7)	B (14.7)	A (9.7)	A (9.9)	A (9.9)
	NB Through	A (0.7)	A (1.0)	A (1.0)	A (1.2)	A (2.2)	A (2.2)	A (0.2)	A (0.3)	A (0.3)

TURNING MOVEMENT COUNT DATA

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Bayview Avenue (EB/WB)
and Sylvan Avenue (NB/SB)
Englewood Cliffs, Bergen County, New Jersey
Tuesday, January 8, 2019

File Name : s-19005
Site Code : 00019005
Start Date : 1/8/2019
Page No : 1

Groups Printed- Auto - HV - B/SB

	Bayview Avenue Eastbound					Bayview Avenue Westbound					Sylvan Avenue Northbound					Sylvan Avenue Southbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
07:00 AM	1	0	1	1	3	2	0	7	0	9	1	108	1	0	110	5	158	1	0	164	286
07:15 AM	2	0	2	0	4	1	1	6	0	8	3	96	3	0	102	3	180	6	0	189	303
07:30 AM	1	7	3	2	13	9	2	5	0	16	1	104	1	0	106	9	182	2	0	193	328
07:45 AM	1	1	0	0	2	5	0	14	0	19	0	124	0	0	124	6	162	2	0	170	315
Total	5	8	6	3	22	17	3	32	0	52	5	432	5	0	442	23	682	11	0	716	1232
08:00 AM	1	0	0	1	2	4	1	4	0	9	0	110	2	0	112	4	87	1	0	92	215
08:15 AM	1	2	1	0	4	4	0	1	0	5	0	105	1	0	106	10	110	1	0	121	236
08:30 AM	6	5	9	0	20	8	3	16	0	27	5	156	6	0	167	3	161	2	0	166	380
08:45 AM	5	9	15	3	32	7	8	21	0	36	10	248	3	0	261	4	190	1	0	195	524
Total	13	16	25	4	58	23	12	42	0	77	15	619	12	0	646	21	548	5	0	574	1355
*** BREAK ***																					
04:00 PM	2	1	3	1	7	1	0	7	0	8	0	179	6	0	185	5	236	2	0	243	443
04:15 PM	3	0	5	0	8	5	3	7	0	15	1	162	3	0	166	10	212	1	0	223	412
04:30 PM	4	3	3	0	10	1	2	3	0	6	5	129	4	0	138	5	168	1	0	174	328
04:45 PM	4	6	11	1	22	7	2	3	0	12	2	131	2	0	135	18	241	1	0	260	429
Total	13	10	22	2	47	14	7	20	0	41	8	601	15	0	624	38	857	5	0	900	1612
05:00 PM	6	5	14	0	25	3	1	9	0	13	1	177	5	0	183	27	337	1	1	366	587
05:15 PM	3	5	3	3	14	2	2	7	0	11	0	138	6	0	144	5	277	0	0	282	451
05:30 PM	3	3	5	0	11	7	1	6	0	14	0	141	4	0	145	14	194	0	0	208	378
05:45 PM	3	6	7	1	17	1	0	6	0	7	0	148	3	0	151	13	231	1	0	245	420
Total	15	19	29	4	67	13	4	28	0	45	1	604	18	0	623	59	1039	2	1	1101	1836
06:00 PM	7	3	13	3	26	8	0	4	1	13	1	108	4	0	113	18	247	0	0	265	417
06:15 PM	6	5	5	2	18	1	2	4	0	7	0	152	8	0	160	15	240	0	0	255	440
06:30 PM	6	3	8	5	22	2	2	10	0	14	3	112	2	0	117	11	222	0	0	233	386
06:45 PM	0	1	2	0	3	2	2	7	0	11	3	146	4	0	153	11	180	1	0	192	359
Total	19	12	28	10	69	13	6	25	1	45	7	518	18	0	543	55	889	1	0	945	1602
Grand Total	65	65	110	23	263	80	32	147	1	260	36	2774	68	0	2878	196	4015	24	1	4236	7637
Apprch %	24.7	24.7	41.8	8.7		30.8	12.3	56.5	0.4		1.3	96.4	2.4	0		4.6	94.8	0.6	0		
Total %	0.9	0.9	1.4	0.3	3.4	1	0.4	1.9	0	3.4	0.5	36.3	0.9	0	37.7	2.6	52.6	0.3	0	55.5	
Auto	65	64	110	23	262	78	31	147	1	257	36	2689	66	0	2791	195	3915	24	1	4135	7445
% Auto	100	98.5	100	100	99.6	97.5	96.9	100	100	98.8	100	96.9	97.1	0	97	99.5	97.5	100	100	97.6	97.5
HV	0	1	0	0	1	0	0	0	0	0	0	35	0	0	35	0	48	0	0	48	84
% HV	0	1.5	0	0	0.4	0	0	0	0	0	0	1.3	0	0	1.2	0	1.2	0	0	1.1	1.1
B/SB	0	0	0	0	0	2	1	0	0	3	0	50	2	0	52	1	52	0	0	53	108
% B/SB	0	0	0	0	0	2.5	3.1	0	0	1.2	0	1.8	2.9	0	1.8	0.5	1.3	0	0	1.3	1.4

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Bayview Avenue (EB/WB)
and Sylvan Avenue (NB/SB)
Englewood Cliffs, Bergen County, New Jersey
Tuesday, January 8, 2019

File Name : s-19005
Site Code : 00019005
Start Date : 1/8/2019

	Bayview Avenue Eastbound					Bayview Avenue Westbound					Sylvan Avenue Northbound					Sylvan Avenue Southbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	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	1	0	0	1	2	4	1	4	0	9	0	110	2	0	112	4	87	1	0	92	215
08:15 AM	1	2	1	0	4	4	0	1	0	5	0	105	1	0	106	10	110	1	0	121	236
08:30 AM	6	5	9	0	20	8	3	16	0	27	5	156	6	0	167	3	161	2	0	166	380
08:45 AM	5	9	15	3	32	7	8	21	0	36	10	248	3	0	261	4	190	1	0	195	524
Total Volume	13	16	25	4	58	23	12	42	0	77	15	619	12	0	646	21	548	5	0	574	1355
% App. Total	22.4	27.6	43.1	6.9		29.9	15.6	54.5	0		2.3	95.8	1.9	0		3.7	95.5	0.9	0		
PHF	.542	.444	.417	.333	.453	.719	.375	.500	.000	.535	.375	.624	.500	.000	.619	.525	.721	.625	.000	.736	.646
Auto	13	16	25	4	58	22	11	42	0	75	15	606	12	0	633	21	529	5	0	555	1321
% Auto	100	100	100	100	100	95.7	91.7	100	0	97.4	100	97.9	100	0	98.0	100	96.5	100	0	96.7	97.5
HV	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	0	13	0	0	13	22
% HV	0	0	0	0	0	0	0	0	0	0	0	1.5	0	0	1.4	0	2.4	0	0	2.3	1.6
B/SB	0	0	0	0	0	1	1	0	0	2	0	4	0	0	4	0	6	0	0	6	12
% B/SB	0	0	0	0	0	4.3	8.3	0	0	2.6	0	0.6	0	0	0.6	0	1.1	0	0	1.0	0.9
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	4	6	11	1	22	7	2	3	0	12	2	131	2	0	135	18	241	1	0	260	429
05:00 PM	6	5	14	0	25	3	1	9	0	13	1	177	5	0	183	27	337	1	1	366	587
05:15 PM	3	5	3	3	14	2	2	7	0	11	0	138	6	0	144	5	277	0	0	282	451
05:30 PM	3	3	5	0	11	7	1	6	0	14	0	141	4	0	145	14	194	0	0	208	378
Total Volume	16	19	33	4	72	19	6	25	0	50	3	587	17	0	607	64	1049	2	1	1116	1845
% App. Total	22.2	26.4	45.8	5.6		38	12	50	0		0.5	96.7	2.8	0		5.7	94	0.2	0.1		
PHF	.667	.792	.589	.333	.720	.679	.750	.694	.000	.893	.375	.829	.708	.000	.829	.593	.778	.500	.250	.762	.786
Auto	16	18	33	4	71	19	6	25	0	50	3	570	17	0	590	63	1026	2	1	1092	1803
% Auto	100	94.7	100	100	98.6	100	100	100	0	100	100	97.1	100	0	97.2	98.4	97.8	100	100	97.8	97.7
HV	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	11	0	0	11	16
% HV	0	5.3	0	0	1.4	0	0	0	0	0	0	0.7	0	0	0.7	0	1.0	0	0	1.0	0.9
B/SB	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	1	12	0	0	13	26
% B/SB	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	2.1	1.6	1.1	0	0	1.2	1.4

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Bayview Avenue (EB/WB)
and Sylvan Avenue (NB/SB)
Englewood Cliffs, Bergen County, New Jersey
Saturday, January 5, 2019

File Name : s-19005_sat
Site Code : 00019005
Start Date : 1/5/2019
Page No : 1

Groups Printed- Auto - HV - B/SB

	Bayview Avenue Eastbound					Bayview Avenue Westbound					Sylvan Avenue Northbound					Sylvan Avenue Southbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
11:00 AM	6	0	1	0	7	3	0	6	0	9	0	113	2	0	115	11	151	4	0	166	297
11:15 AM	1	1	0	1	3	5	1	3	2	11	2	115	3	1	121	14	161	0	0	175	310
11:30 AM	1	0	2	0	3	3	0	6	1	10	3	121	7	1	132	10	172	1	0	183	328
11:45 AM	0	0	2	1	3	0	0	5	0	5	1	127	9	0	137	7	166	4	0	177	322
Total	8	1	5	2	16	11	1	20	3	35	6	476	21	2	505	42	650	9	0	701	1257
12:00 PM	2	1	1	0	4	1	0	5	0	6	2	141	7	0	150	8	190	0	0	198	358
12:15 PM	2	1	1	0	4	3	0	6	1	10	2	151	6	0	159	8	203	1	0	212	385
12:30 PM	4	2	6	0	12	4	0	12	1	17	4	140	6	0	150	2	192	0	0	194	373
12:45 PM	2	0	2	0	4	8	0	7	0	15	3	134	2	0	139	5	189	0	0	194	352
Total	10	4	10	0	24	16	0	30	2	48	11	566	21	0	598	23	774	1	0	798	1468
01:00 PM	1	1	0	1	3	6	0	3	0	9	2	127	4	1	134	4	171	1	0	176	322
01:15 PM	0	0	2	1	3	5	0	2	1	8	1	136	6	0	143	3	183	0	0	186	340
01:30 PM	0	0	0	1	1	3	0	3	2	8	1	127	4	0	132	11	175	1	0	187	328
01:45 PM	0	2	3	0	5	4	0	5	0	9	2	135	4	1	142	7	169	0	0	176	332
Total	1	3	5	3	12	18	0	13	3	34	6	525	18	2	551	25	698	2	0	725	1322
Grand Total	19	8	20	5	52	45	1	63	8	117	23	1567	60	4	1654	90	2122	12	0	2224	4047
Apprch %	36.5	15.4	38.5	9.6		38.5	0.9	53.8	6.8		1.4	94.7	3.6	0.2		4	95.4	0.5	0		
Total %	0.5	0.2	0.5	0.1	1.3	1.1	0	1.6	0.2	2.9	0.6	38.7	1.5	0.1	40.9	2.2	52.4	0.3	0	55	
Auto	19	8	20	5	52	45	1	63	8	117	23	1540	60	4	1627	90	2095	12	0	2197	3993
% Auto	100	100	100	100	100	100	100	100	100	100	100	98.3	100	100	98.4	100	98.7	100	0	98.8	98.7
HV	0	0	0	0	0	0	0	0	0	0	0	19	0	0	19	0	20	0	0	20	39
% HV	0	0	0	0	0	0	0	0	0	0	0	1.2	0	0	1.1	0	0.9	0	0	0.9	1
B/SB	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	7	0	0	7	15
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.5	0	0.3	0	0	0.3	0.4

	Bayview Avenue Eastbound					Bayview Avenue Westbound					Sylvan Avenue Northbound					Sylvan Avenue Southbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	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 12:00 PM																					
12:00 PM	2	1	1	0	4	1	0	5	0	6	2	141	7	0	150	8	190	0	0	198	358
12:15 PM	2	1	1	0	4	3	0	6	1	10	2	151	6	0	159	8	203	1	0	212	385
12:30 PM	4	2	6	0	12	4	0	12	1	17	4	140	6	0	150	2	192	0	0	194	373
12:45 PM	2	0	2	0	4	8	0	7	0	15	3	134	2	0	139	5	189	0	0	194	352
Total Volume	10	4	10	0	24	16	0	30	2	48	11	566	21	0	598	23	774	1	0	798	1468
% App. Total	41.7	16.7	41.7	0		33.3	0	62.5	4.2		1.8	94.6	3.5	0		2.9	97	0.1	0		
PHF	.625	.500	.417	.000	.500	.500	.000	.625	.500	.706	.688	.937	.750	.000	.940	.719	.953	.250	.000	.941	.953
Auto	10	4	10	0	24	16	0	30	2	48	11	555	21	0	587	23	771	1	0	795	1454
% Auto	100	100	100	0	100	100	0	100	100	100	100	98.1	100	0	98.2	100	99.6	100	0	99.6	99.0
HV	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	2	0	0	2	9
% HV	0	0	0	0	0	0	0	0	0	0	0	1.2	0	0	1.2	0	0.3	0	0	0.3	0.6
B/SB	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	5
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0	0.7	0	0.1	0	0	0.1	0.3

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Irving Avenue (EB)
and Sylvan Avenue (NB/SB)
Englewood Cliffs, Bergen County, New Jersey
Saturday, February 23, 2019

File Name : s-19005.01_sat
Site Code : 00019005
Start Date : 2/23/2019
Page No : 1

Groups Printed- Auto - HV - B/SB

	Irving Avenue Eastbound				Sylvan Avenue Northbound				Sylvan Avenue Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	3	0	6	9	5	0	0	5	0	0	7	7	21
11:15 AM	5	0	7	12	10	0	0	10	0	0	12	12	34
11:30 AM	6	0	3	9	5	0	0	5	0	0	2	2	16
11:45 AM	11	0	9	20	2	0	0	2	0	0	8	8	30
Total	25	0	25	50	22	0	0	22	0	0	29	29	101
12:00 PM	2	0	5	7	5	0	0	5	0	0	5	5	17
12:15 PM	8	0	4	12	1	0	0	1	0	0	6	6	19
12:30 PM	3	0	1	4	6	0	0	6	0	0	5	5	15
12:45 PM	3	0	3	6	6	0	0	6	0	0	9	9	21
Total	16	0	13	29	18	0	0	18	0	0	25	25	72
01:00 PM	11	0	4	15	4	0	0	4	0	0	3	3	22
01:15 PM	1	0	2	3	5	0	0	5	0	0	5	5	13
01:30 PM	3	0	7	10	5	0	0	5	0	0	5	5	20
01:45 PM	4	0	6	10	5	0	0	5	0	0	7	7	22
Total	19	0	19	38	19	0	0	19	0	0	20	20	77
Grand Total	60	0	57	117	59	0	0	59	0	0	74	74	250
Apprch %	51.3	0	48.7		100	0	0		0	0	100		
Total %	24	0	22.8	46.8	23.6	0	0	23.6	0	0	29.6	29.6	
Auto	60	0	57	117	59	0	0	59	0	0	74	74	250
% Auto	100	0	100	100	100	0	0	100	0	0	100	100	100
HV	0	0	0	0	0	0	0	0	0	0	0	0	0
% HV	0	0	0	0	0	0	0	0	0	0	0	0	0
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0

	Irving Avenue Eastbound				Sylvan Avenue Northbound				Sylvan Avenue Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:45 AM to 12:30 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 11:45 AM													
11:45 AM	11	0	9	20	2	0	0	2	0	0	8	8	30
12:00 PM	2	0	5	7	5	0	0	5	0	0	5	5	17
12:15 PM	8	0	4	12	1	0	0	1	0	0	6	6	19
12:30 PM	3	0	1	4	6	0	0	6	0	0	5	5	15
Total Volume	24	0	19	43	14	0	0	14	0	0	24	24	81
% App. Total	55.8	0	44.2		100	0	0		0	0	100		
PHF	.545	.000	.528	.538	.583	.000	.000	.583	.000	.000	.750	.750	.675
Auto	24	0	19	43	14	0	0	14	0	0	24	24	81
% Auto	100	0	100	100	100	0	0	100	0	0	100	100	100
HV	0	0	0	0	0	0	0	0	0	0	0	0	0
% HV	0	0	0	0	0	0	0	0	0	0	0	0	0
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070
201.340.4468 t. 201.340.4472 f.

Intersection of Irving Avenue (EB)
and Sylvan Avenue (NB/SB)
Englewood Cliffs, Bergen County, New Jersey
Thursday, February 28, 2018

File Name : s-19005.01
Site Code : 00019005
Start Date : 2/28/2019
Page No : 1

Groups Printed- Auto - HV - B/SB

	Irving Avenue Eastbound				Sylvan Avenue Northbound				Sylvan Avenue Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	0	2	5	8	0	0	8	0	0	9	9	22
07:15 AM	1	0	5	6	7	0	0	7	0	0	8	8	21
07:30 AM	8	0	7	15	9	0	0	9	0	0	7	7	31
07:45 AM	7	0	3	10	13	0	0	13	0	0	15	15	38
Total	19	0	17	36	37	0	0	37	0	0	39	39	112
08:00 AM	7	0	14	21	13	0	0	13	0	0	19	19	53
08:15 AM	5	0	12	17	14	0	0	14	0	0	14	14	45
08:30 AM	15	0	15	30	10	0	0	10	0	0	13	13	53
08:45 AM	12	0	12	24	14	0	0	14	0	0	22	22	60
Total	39	0	53	92	51	0	0	51	0	0	68	68	211
*** BREAK ***													
04:00 PM	3	0	1	4	10	0	0	10	0	0	6	6	20
04:15 PM	2	0	6	8	11	0	0	11	0	0	6	6	25
04:30 PM	3	0	1	4	7	0	0	7	0	0	8	8	19
04:45 PM	2	0	3	5	16	0	0	16	0	0	15	15	36
Total	10	0	11	21	44	0	0	44	0	0	35	35	100
05:00 PM	2	0	2	4	4	0	0	4	0	0	12	12	20
05:15 PM	4	0	5	9	15	0	0	15	0	0	10	10	34
05:30 PM	1	0	3	4	19	0	0	19	0	0	14	14	37
05:45 PM	5	0	9	14	18	0	0	18	0	0	15	15	47
Total	12	0	19	31	56	0	0	56	0	0	51	51	138
06:00 PM	2	0	3	5	8	0	0	8	0	0	6	6	19
06:15 PM	1	0	9	10	13	0	0	13	0	0	14	14	37
06:30 PM	6	0	4	10	1	0	0	1	0	0	4	4	15
06:45 PM	3	0	2	5	7	0	0	7	0	0	4	4	16
Total	12	0	18	30	29	0	0	29	0	0	28	28	87
Grand Total	92	0	118	210	217	0	0	217	0	0	221	221	648
Apprch %	43.8	0	56.2		100	0	0		0	0	100		
Total %	14.2	0	18.2	32.4	33.5	0	0	33.5	0	0	34.1	34.1	
Auto	91	0	118	209	215	0	0	215	0	0	216	216	640
% Auto	98.9	0	100	99.5	99.1	0	0	99.1	0	0	97.7	97.7	98.8
HV	0	0	0	0	2	0	0	2	0	0	2	2	4
% HV	0	0	0	0	0.9	0	0	0.9	0	0	0.9	0.9	0.6
B/SB	1	0	0	1	0	0	0	0	0	0	3	3	4
% B/SB	1.1	0	0	0.5	0	0	0	0	0	0	1.4	1.4	0.6

Stonefield Engineering & Design, LLC

92 Park Avenue, Rutherford, NJ 07070

201.340.4468 t. 201.340.4472 f.

Intersection of Irving Avenue (EB)
and Sylvan Avenue (NB/SB)
Englewood Cliffs, Bergen County, New Jersey
Thursday, February 28, 2018

File Name : s-19005.01
Site Code : 00019005
Start Date : 2/28/2019

	Irving Avenue Eastbound				Sylvan Avenue Northbound				Sylvan Avenue Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	7	0	14	21	13	0	0	13	0	0	19	19	53
08:15 AM	5	0	12	17	14	0	0	14	0	0	14	14	45
08:30 AM	15	0	15	30	10	0	0	10	0	0	13	13	53
08:45 AM	12	0	12	24	14	0	0	14	0	0	22	22	60
Total Volume	39	0	53	92	51	0	0	51	0	0	68	68	211
% App. Total	42.4	0	57.6		100	0	0		0	0	100		
PHF	.650	.000	.883	.767	.911	.000	.000	.911	.000	.000	.773	.773	.879
Auto	39	0	53	92	50	0	0	50	0	0	65	65	207
% Auto	100	0	100	100	98.0	0	0	98.0	0	0	95.6	95.6	98.1
HV	0	0	0	0	1	0	0	1	0	0	1	1	2
% HV	0	0	0	0	2.0	0	0	2.0	0	0	1.5	1.5	0.9
B/SB	0	0	0	0	0	0	0	0	0	0	2	2	2
% B/SB	0	0	0	0	0	0	0	0	0	0	2.9	2.9	0.9
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	2	0	3	5	16	0	0	16	0	0	15	15	36
05:00 PM	2	0	2	4	4	0	0	4	0	0	12	12	20
05:15 PM	4	0	5	9	15	0	0	15	0	0	10	10	34
05:30 PM	1	0	3	4	19	0	0	19	0	0	14	14	37
Total Volume	9	0	13	22	54	0	0	54	0	0	51	51	127
% App. Total	40.9	0	59.1		100	0	0		0	0	100		
PHF	.563	.000	.650	.611	.711	.000	.000	.711	.000	.000	.850	.850	.858
Auto	9	0	13	22	53	0	0	53	0	0	51	51	126
% Auto	100	0	100	100	98.1	0	0	98.1	0	0	100	100	99.2
HV	0	0	0	0	1	0	0	1	0	0	0	0	1
% HV	0	0	0	0	1.9	0	0	1.9	0	0	0	0	0.8
B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0
% B/SB	0	0	0	0	0	0	0	0	0	0	0	0	0

GAP ANALYSIS SUMMARY TABLE

STONEFIELD
engineering & design

GAP COUNT SUMMARY AND ANALYSIS

Left-turn from Site Driveway/Irving Avenue to Sylvan Avenue

Englewood Cliffs, Bergen County, New Jersey

Count Conducted: April 3, 2019

SE&D Job No.: S-19005

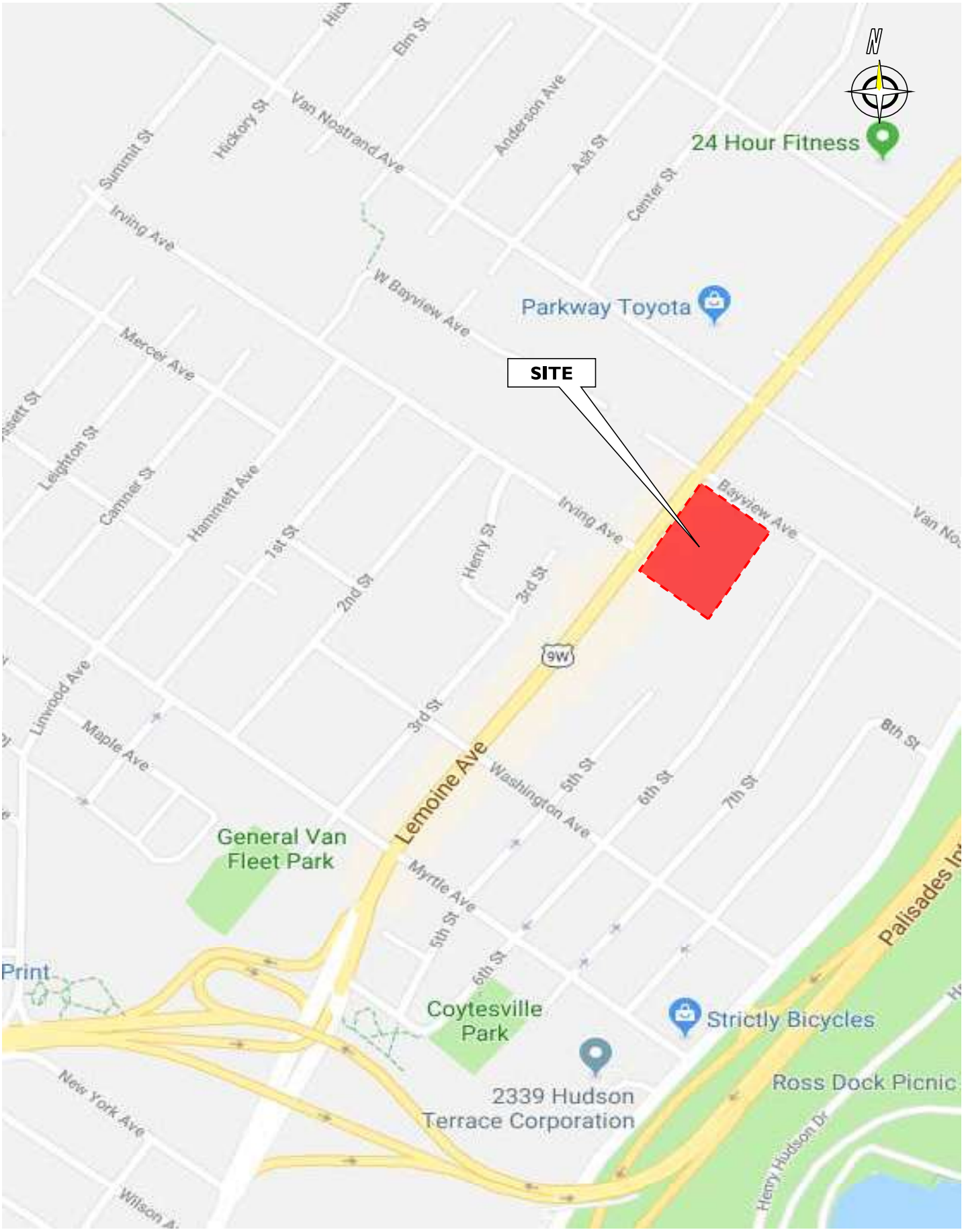
	AVAILABLE GAPS (SECONDS)							
TIME	**0 - 7.49**	**7.5 - 10.99**	**11 - 14.49**	**14.5 - 17.99**	**18 - 21.49**	**21.5 - 24.99**	**25 - 28.49**	**28.5+**
4:45 PM	109	4	1	1	0	0	0	0
4:50 PM	93	2	4	0	0	1	0	0
4:55 PM	102	3	1	1	0	1	0	0
5:00 PM	148	2	1	0	0	0	0	0
5:05 PM	132	1	1	0	1	0	0	0
5:10 PM	148	1	1	0	0	1	0	0
5:15 PM	122	3	0	0	2	0	0	0
5:20 PM	129	3	3	0	0	0	0	0
5:25 PM	115	2	1	0	0	1	0	0
5:30 PM	133	1	3	0	0	0	0	0
5:35 PM	128	2	1	0	1	0	0	0
5:40 PM	129	5	0	2	0	0	0	0
Total Gaps								
4:45 PM-5:45 PM Peak	1488	29	17	4	4	4	0	0
Vehicles/Gap	0	1	2	3	4	5	6	7
Vehicular Capacity (4:45 PM-5:45 PM Peak)		29	34	12	16	20	0	0
						Total Capacity (Vehicles):		**111**

Base Critical Gap: 7.5 seconds

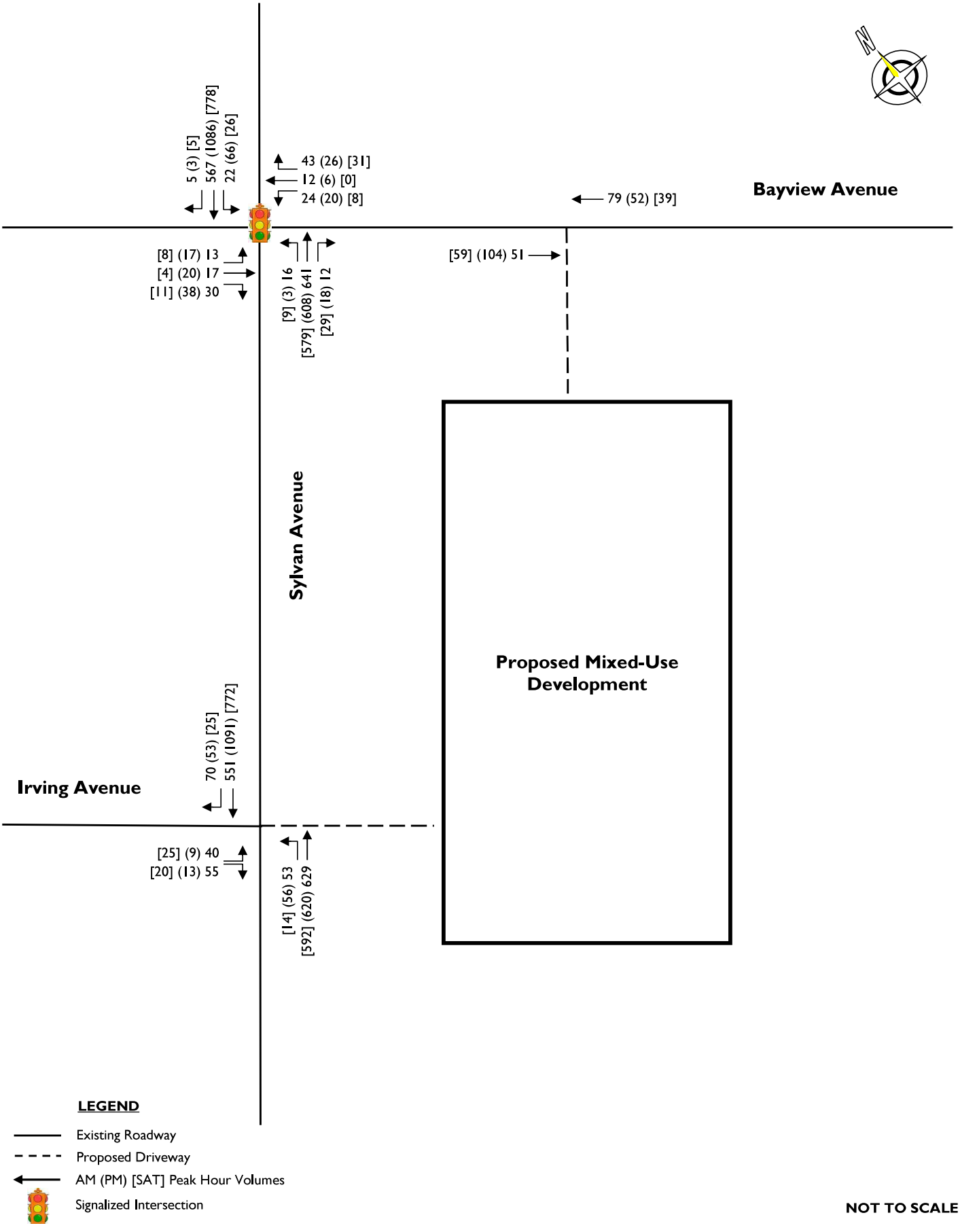
Follow-Up Gap: 3.5 seconds

Gap Required For:
1 Vehicle: 7.5 seconds
2 Vehicles: 11.0 seconds
3 Vehicles: 14.5 seconds
4 Vehicles: 18.0 seconds
5 Vehicles: 21.5 seconds
6 Vehicles: 25.0 seconds
7 Vehicles: 28.5 seconds

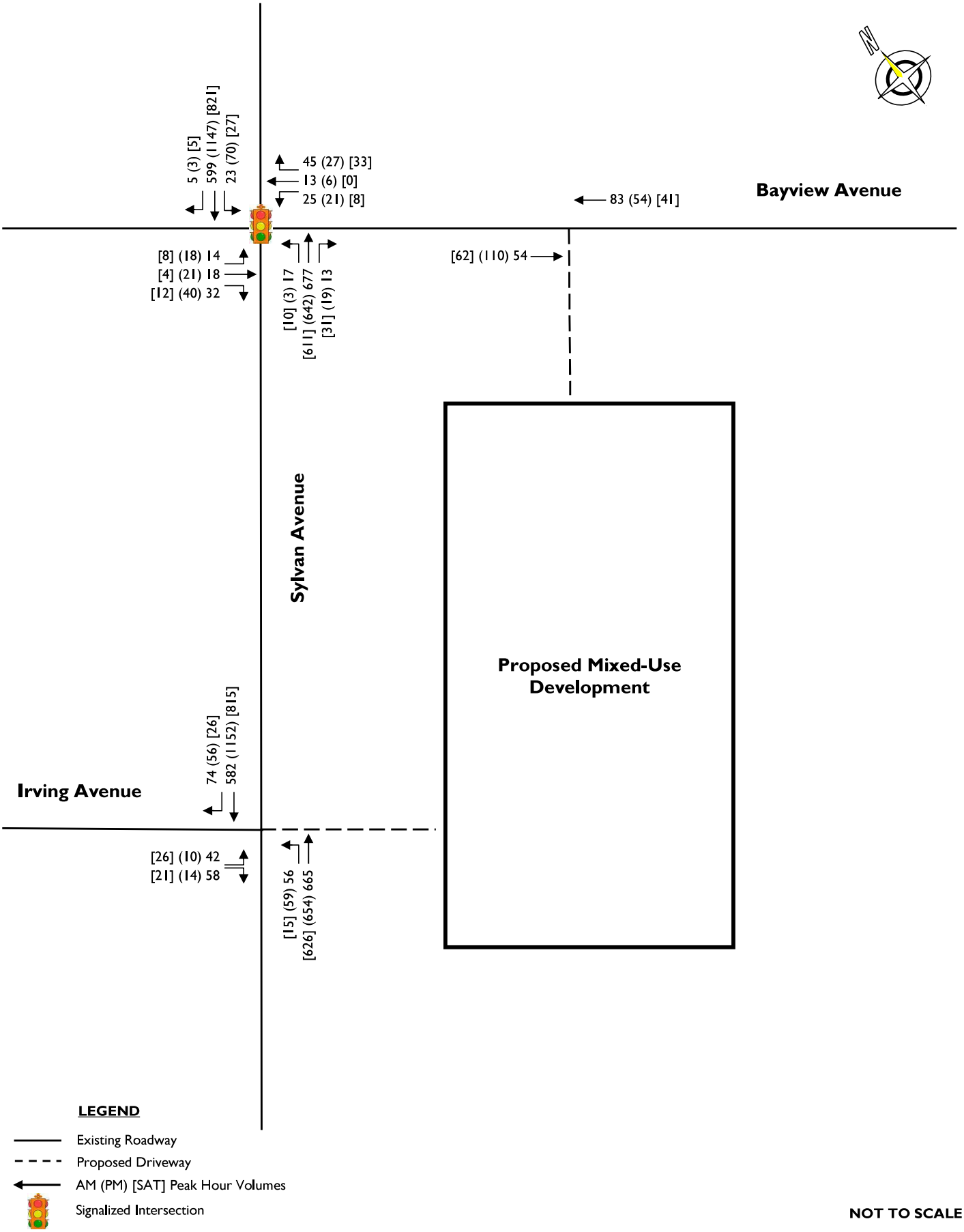
FIGURES



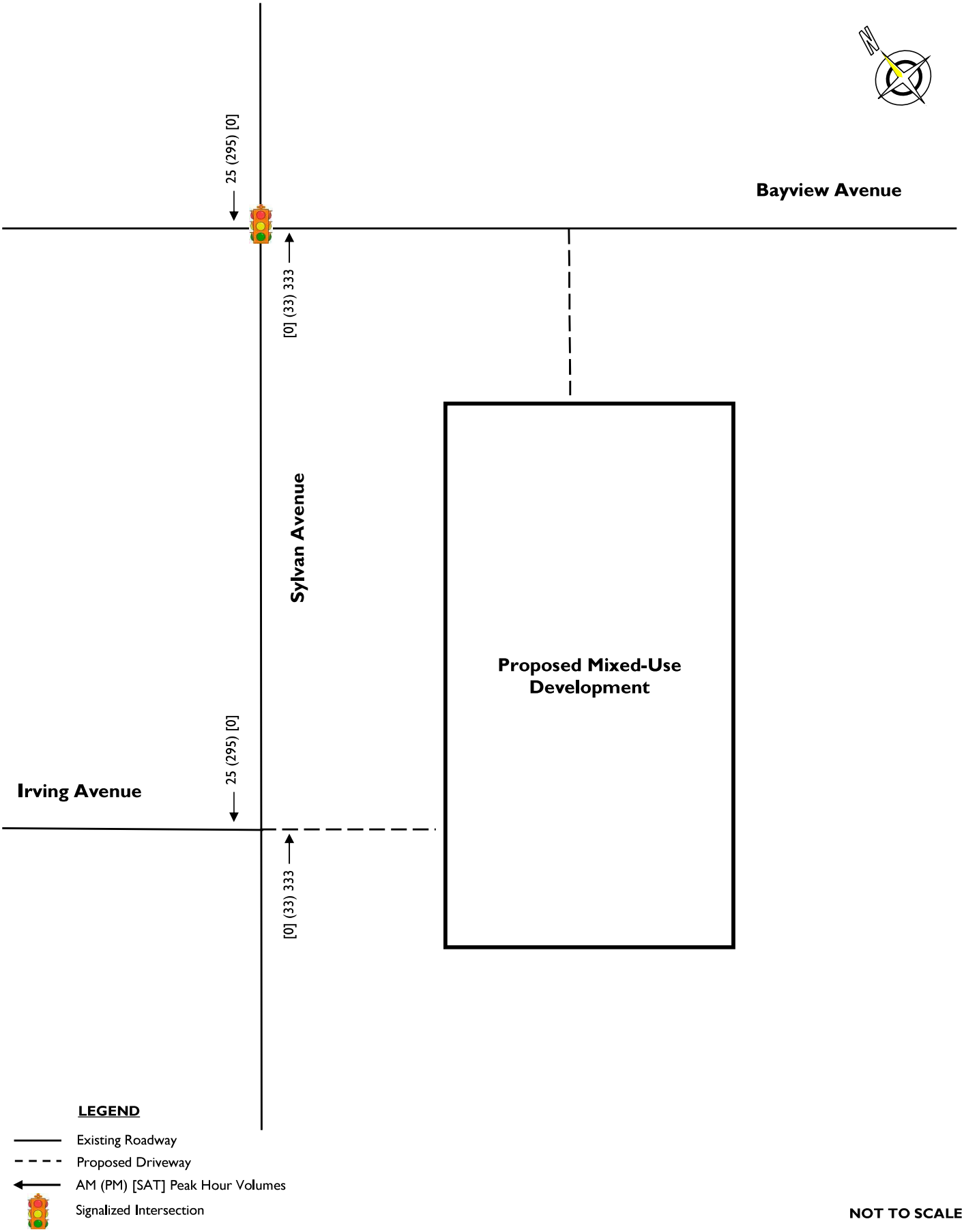
STONEFIELD	**Proposed Residential Development** **Sylvan Avenue & Bayview Avenue** **Englewood Cliffs, Bergen County, New Jersey** **Traffic Impact Study**	**FIGURE 1** **Site Location Map**



STONEFIELD	**Proposed Residential Development** **Sylvan Avenue & Bayview Avenue** **Englewood Cliffs, Bergen County, New Jersey** **Traffic Impact Study**	**FIGURE 2** **2026 Existing Traffic Volumes**



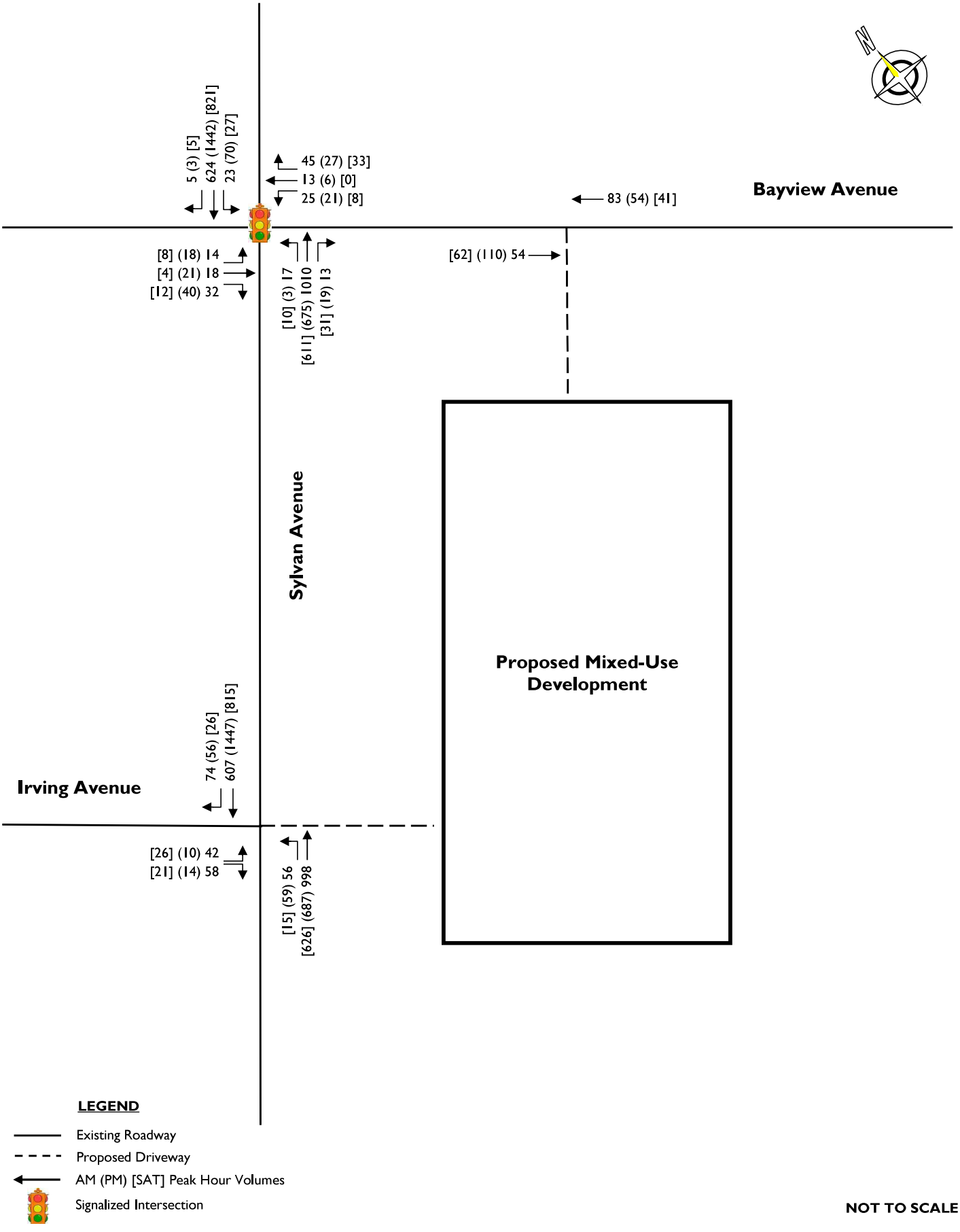
STONEFIELD	**Proposed Residential Development** **Sylvan Avenue & Bayview Avenue** **Englewood Cliffs, Bergen County, New Jersey** **Traffic Impact Study**	**FIGURE 3** **2028 Base Traffic Volumes**



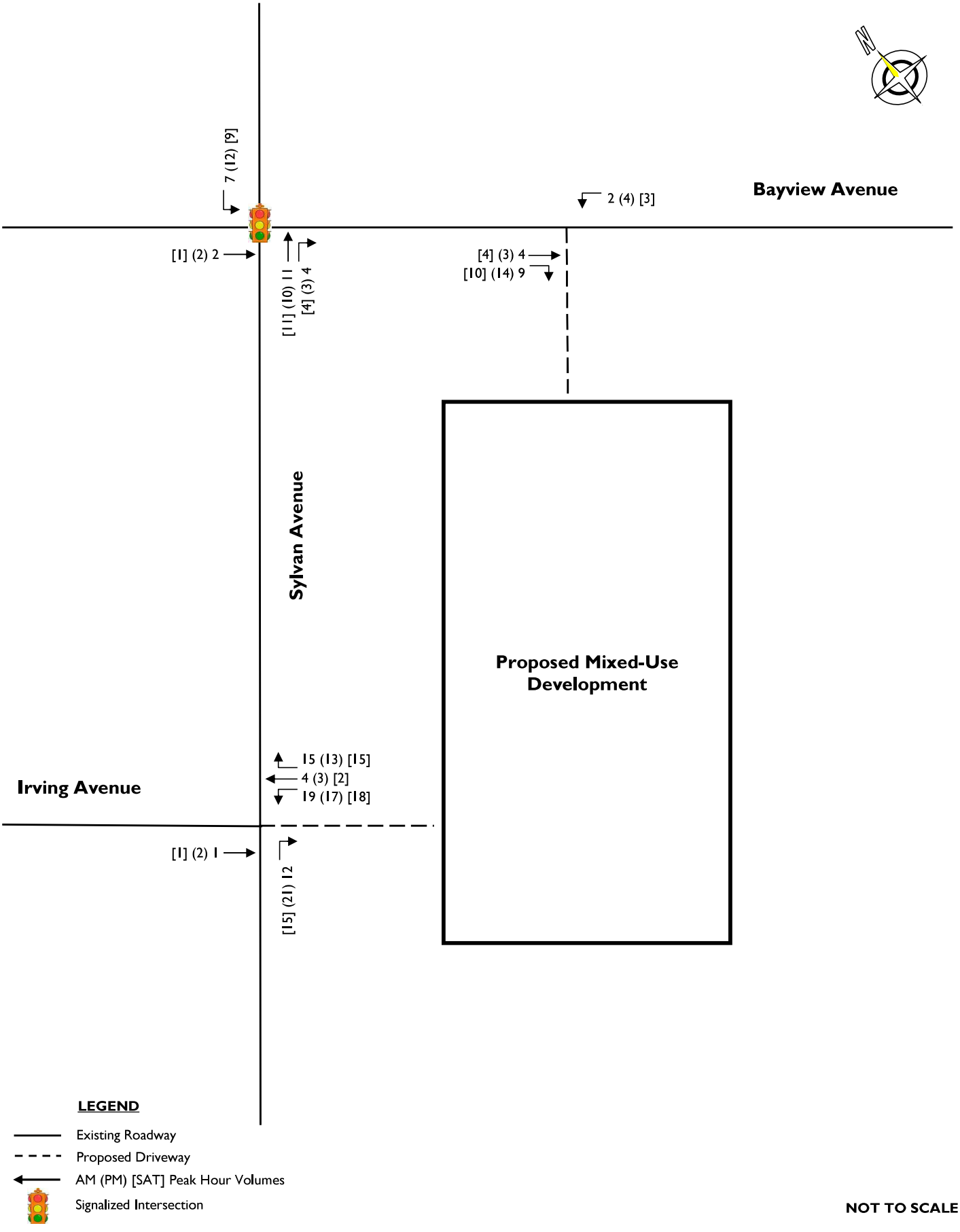
STONEFIELD

Proposed Residential Development
Sylvan Avenue & Bayview Avenue
Englewood Cliffs, Bergen County, New Jersey
Traffic Impact Study

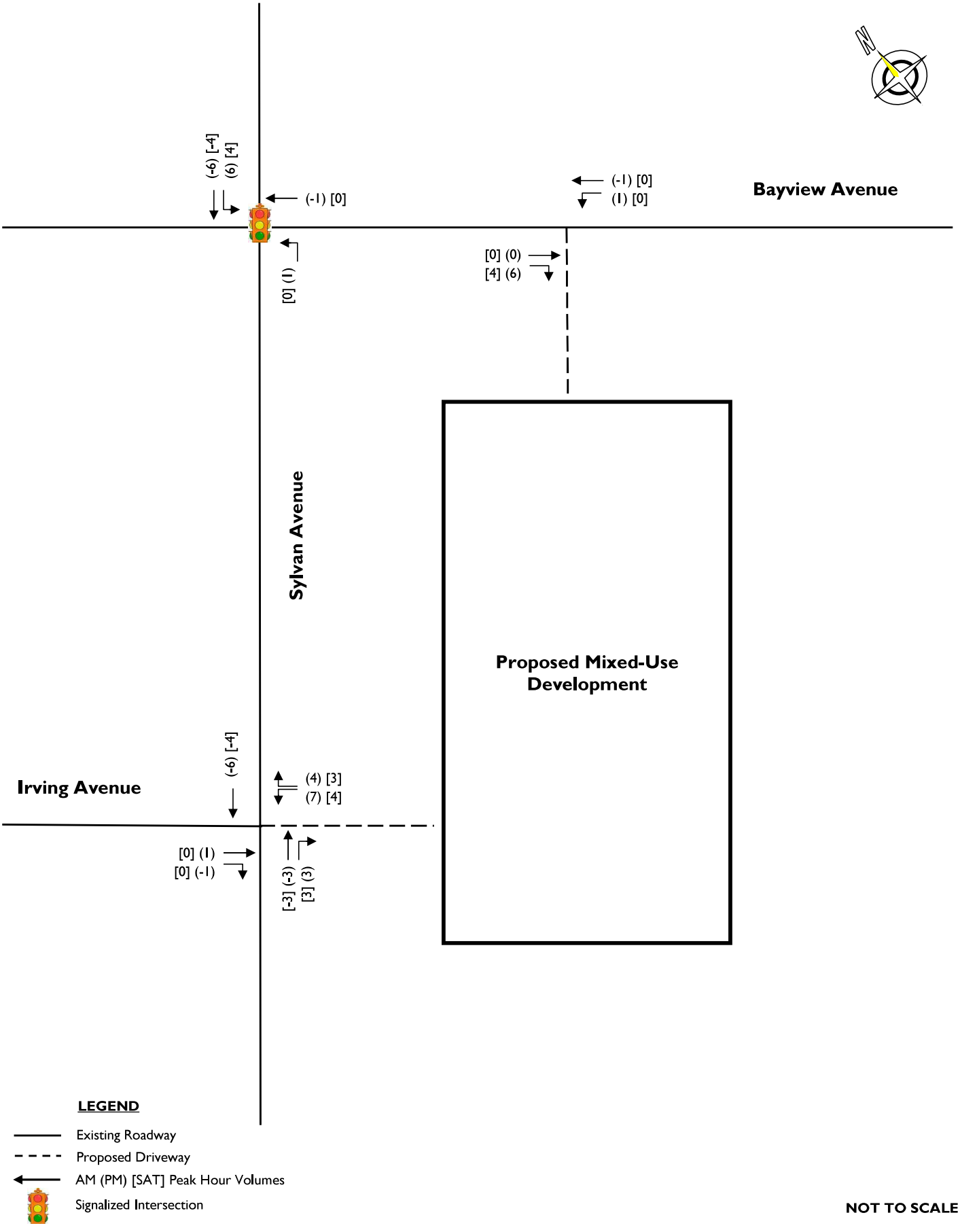
FIGURE 4
Other Planned Projects
Future Traffic Volumes



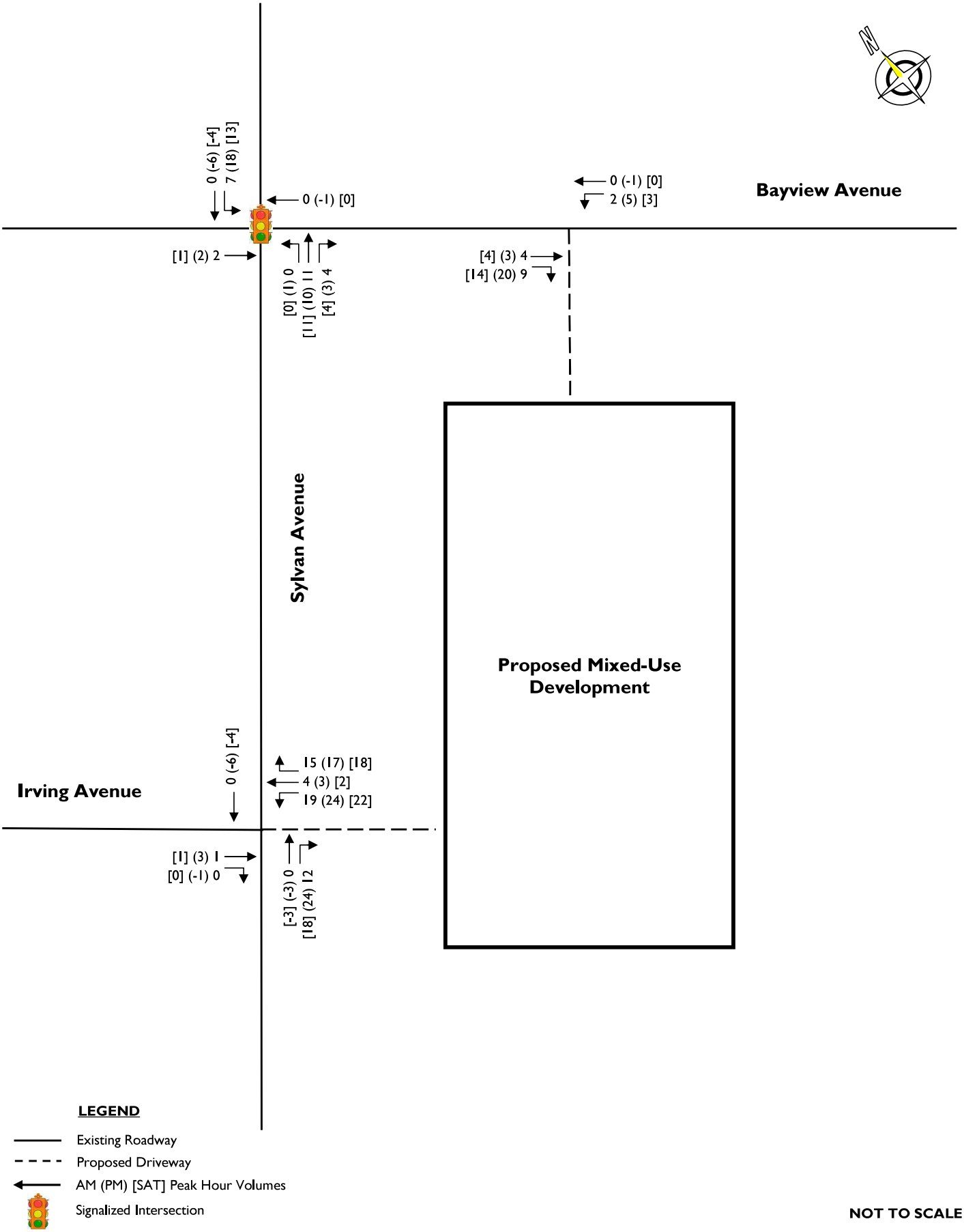
STONEFIELD	**Proposed Residential Development** **Sylvan Avenue & Bayview Avenue** **Englewood Cliffs, Bergen County, New Jersey** **Traffic Impact Study**	**FIGURE 5** **2028 No-Build Traffic Volumes**



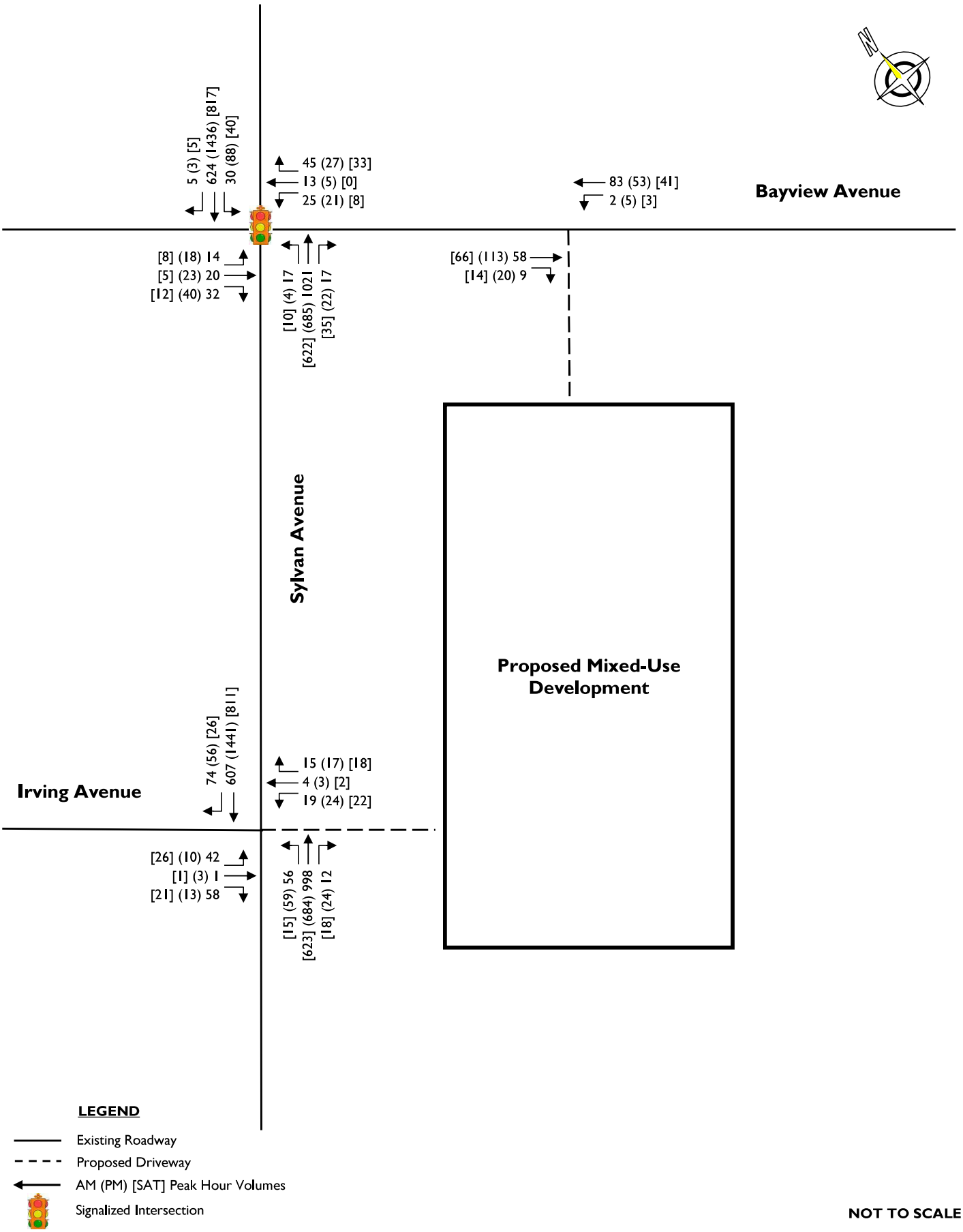
STONEFIELD	Proposed Residential Development Sylvan Avenue & Bayview Avenue Englewood Cliffs, Bergen County, New Jersey Traffic Impact Study	FIGURE 6 "New" Site-Generated Traffic Volumes



STONEFIELD	**Proposed Residential Development** **Sylvan Avenue & Bayview Avenue** **Englewood Cliffs, Bergen County, New Jersey** **Traffic Impact Study**	**FIGURE 7** **"Pass-By" Site-Generated Traffic Volumes**



STONEFIELD	**Proposed Residential Development** **Sylvan Avenue & Bayview Avenue** **Englewood Cliffs, Bergen County, New Jersey** **Traffic Impact Study**	**FIGURE 8** **Total Site-Generated Traffic Volumes**



STONEFIELD	**Proposed Residential Development** **Sylvan Avenue & Bayview Avenue** **Englewood Cliffs, Bergen County, New Jersey** **Traffic Impact Study**	**FIGURE 9** **2028 Build Traffic Volumes**

HIGHWAY CAPACITY ANALYSIS DETAIL SHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	17	30	24	12	43	16	641	12	22	567	5
Future Volume (veh/h)	13	17	30	24	12	43	16	641	12	22	567	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2100	2100	2116	2048	2184	2100	2067	2100	2100	2034	2100
Adj Flow Rate, veh/h	20	26	40	37	18	66	25	986	18	34	872	8
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	0	0	0	4	8	0	0	2	0	0	4	0
Cap, veh/h	77	66	81	92	34	88	80	2939	53	112	2805	25
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	306	734	904	442	378	985	48	3727	67	87	3558	32
Grp Volume(v), veh/h	86	0	0	121	0	0	529	0	500	456	0	458
Grp Sat Flow(s),veh/h/ln	1944	0	0	1805	0	0	1973	0	1869	1832	0	1846
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	6.3
Cycle Q Clear(g_c), s	3.7	0.0	0.0	5.7	0.0	0.0	6.5	0.0	7.0	5.5	0.0	6.3
Prop In Lane	0.23		0.47	0.31		0.55	0.05		0.04	0.07		0.02
Lane Grp Cap(c), veh/h	223	0	0	214	0	0	1598	0	1474	1487	0	1455
V/C Ratio(X)	0.39	0.00	0.00	0.57	0.00	0.00	0.33	0.00	0.34	0.31	0.00	0.31
Avail Cap(c_a), veh/h	538	0	0	511	0	0	1598	0	1474	1487	0	1455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	0.0	39.8	0.0	0.0	2.7	0.0	2.8	2.6	0.0	2.7
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.4	0.0	0.0	0.6	0.0	0.6	0.5	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	0.0	0.0	4.9	0.0	0.0	3.8	0.0	3.7	3.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.1	0.0	0.0	42.2	0.0	0.0	3.3	0.0	3.4	3.1	0.0	3.2
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		86			121			1029			914	
Approach Delay, s/veh		40.1			42.2			3.3			3.2	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	77.0	13.0	77.0	13.0
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	55.0	24.0	55.0	24.0
Max Q Clear Time (g_c+I1), s	9.0	5.7	8.3	7.7
Green Ext Time (p_c), s	9.5	0.2	8.2	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	6.9
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	0	55	0	0	0	53	629	0	0	551	70
Future Vol, veh/h	40	0	55	0	0	0	53	629	0	0	551	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	2	0	0	0	0	4
Mvmt Flow	61	0	63	0	0	0	60	715	0	0	626	80

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1144	1501	353	1148	1541	357	706	0	0	-	-	0
Stage 1	666	666	-	835	835	-	-	-	-	-	-	-
Stage 2	478	835	-	313	706	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	216	187	716	215	179	712	888	-	-	0	-	-
Stage 1	420	460	-	332	386	-	-	-	-	0	-	-
Stage 2	543	386	-	678	442	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	198	171	716	179	163	712	888	-	-	-	-	-
Mov Cap-2 Maneuver	198	171	-	179	163	-	-	-	-	-	-	-
Stage 1	420	460	-	304	353	-	-	-	-	-	-	-
Stage 2	497	353	-	619	442	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	23.79	0	1.35	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	280	-	-	313	-	-	-
HCM Lane V/C Ratio	0.068	-	-	0.394	-	-	-
HCM Ctrl Dly (s/v)	9.3	0.7	-	23.8	0	-	-
HCM Lane LOS	A	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.8	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	20	38	20	6	26	3	608	18	66	1086	3
Future Volume (veh/h)	17	20	38	20	6	26	3	608	18	66	1086	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2018	2100	2184	2184	2184	2100	2051	2100	2067	2067	2100
Adj Flow Rate, veh/h	22	25	43	25	8	33	4	770	23	84	1375	3
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	5	0	0	0	0	0	3	0	2	2	0
Cap, veh/h	74	47	65	98	32	75	43	3021	90	173	2806	6
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.80	0.80	0.80	0.80	0.80	0.80
Sat Flow, veh/h	319	617	856	566	417	983	3	3768	112	160	3501	8
Grp Volume(v), veh/h	90	0	0	66	0	0	418	0	379	726	0	736
Grp Sat Flow(s),veh/h/ln	1792	0	0	1966	0	0	2038	0	1846	1789	0	1880
Q Serve(g_s), s	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	11.5
Cycle Q Clear(g_c), s	4.3	0.0	0.0	2.8	0.0	0.0	4.6	0.0	4.6	9.7	0.0	11.5
Prop In Lane	0.24		0.48	0.38		0.50	0.01		0.06	0.12		0.00
Lane Grp Cap(c), veh/h	186	0	0	205	0	0	1674	0	1480	1479	0	1507
V/C Ratio(X)	0.48	0.00	0.00	0.32	0.00	0.00	0.25	0.00	0.26	0.49	0.00	0.49
Avail Cap(c_a), veh/h	513	0	0	540	0	0	1674	0	1480	1479	0	1507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.3	0.0	0.0	39.7	0.0	0.0	2.2	0.0	2.2	2.7	0.0	2.9
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.4	1.2	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.0	0.0	2.6	0.0	0.0	2.5	0.0	2.3	5.5	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.3	0.0	0.0	40.6	0.0	0.0	2.6	0.0	2.6	3.9	0.0	4.0
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		90			66			797			1462	
Approach Delay, s/veh		42.3			40.6			2.6			4.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	78.1	11.9	78.1	11.9
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	55.0	24.0	55.0	24.0
Max Q Clear Time (g_c+I1), s	6.6	6.3	13.5	4.8
Green Ext Time (p_c), s	6.5	0.3	16.9	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	6.0
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	13	0	0	0	56	620	0	0	1091	53
Future Vol, veh/h	9	0	13	0	0	0	56	620	0	0	1091	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	2	0	0	0	0	0
Mvmt Flow	9	0	13	0	0	0	57	633	0	0	1113	54

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1571	1887	584	1304	1914	316	1167	0	0	-	-	0
Stage 1	1140	1140	-	747	747	-	-	-	-	-	-	-
Stage 2	431	747	-	557	1167	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	118	120	541	172	117	748	594	-	-	0	-	-
Stage 1	217	278	-	376	423	-	-	-	-	0	-	-
Stage 2	579	423	-	488	270	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	104	106	541	149	103	748	594	-	-	-	-	-
Mov Cap-2 Maneuver	104	106	-	149	103	-	-	-	-	-	-	-
Stage 1	217	278	-	332	374	-	-	-	-	-	-	-
Stage 2	511	374	-	476	270	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	25.39	0	2.03	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	298	-	-	199	-	-	-
HCM Lane V/C Ratio	0.096	-	-	0.113	-	-	-
HCM Ctrl Dly (s/v)	11.7	1.2	-	25.4	0	-	-
HCM Lane LOS	B	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.4	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	4	11	8	0	31	9	579	29	26	778	5
Future Volume (veh/h)	8	4	11	8	0	31	9	579	29	26	778	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2100	2100	2184	2184	2184	2100	2067	2100	2100	2084	2100
Adj Flow Rate, veh/h	9	4	11	9	0	31	10	623	31	28	837	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	81	35	51	65	10	88	59	2994	148	105	3076	18
Arrive On Green	0.06	0.06	0.06	0.06	0.00	0.06	0.82	0.82	0.82	0.82	0.82	0.82
Sat Flow, veh/h	417	560	826	260	154	1426	22	3671	181	76	3771	22
Grp Volume(v), veh/h	24	0	0	40	0	0	347	0	317	445	0	425
Grp Sat Flow(s),veh/h/ln	1803	0	0	1840	0	0	2026	0	1849	1977	0	1892
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	4.8
Cycle Q Clear(g_c), s	1.1	0.0	0.0	1.8	0.0	0.0	3.3	0.0	3.4	4.5	0.0	4.8
Prop In Lane	0.37		0.46	0.22		0.77	0.03		0.10	0.06		0.01
Lane Grp Cap(c), veh/h	167	0	0	163	0	0	1693	0	1508	1655	0	1543
V/C Ratio(X)	0.14	0.00	0.00	0.25	0.00	0.00	0.21	0.00	0.21	0.27	0.00	0.28
Avail Cap(c_a), veh/h	520	0	0	531	0	0	1693	0	1508	1655	0	1543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.1	0.0	0.0	40.4	0.0	0.0	1.8	0.0	1.8	1.9	0.0	2.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.3	0.4	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	1.6	0.0	0.0	1.5	0.0	1.4	2.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.5	0.0	0.0	41.2	0.0	0.0	2.1	0.0	2.2	2.3	0.0	2.4
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		24			40			664			870	
Approach Delay, s/veh		40.5			41.2			2.1			2.4	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	79.4	10.6	79.4	10.6
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	55.0	24.0	55.0	24.0
Max Q Clear Time (g_c+I1), s	5.4	3.1	6.8	3.8
Green Ext Time (p_c), s	4.8	0.0	6.9	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	3.8
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	0	20	0	0	0	14	592	0	0	772	25
Future Vol, veh/h	25	0	20	0	0	0	14	592	0	0	772	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	27	0	22	0	0	0	15	643	0	0	839	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1205	1527	433	1093	1540	322	866	0	0	-	-	0
Stage 1	853	853	-	674	674	-	-	-	-	-	-	-
Stage 2	352	674	-	420	866	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	198	181	650	232	179	743	786	-	-	0	-	-
Stage 1	325	379	-	415	457	-	-	-	-	0	-	-
Stage 2	643	457	-	587	373	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	194	177	650	219	174	743	786	-	-	-	-	-
Mov Cap-2 Maneuver	194	177	-	219	174	-	-	-	-	-	-	-
Stage 1	325	379	-	405	446	-	-	-	-	-	-	-
Stage 2	628	446	-	568	373	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	20.47	0	0.44	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	83	-	-	281	-	-	-
HCM Lane V/C Ratio	0.019	-	-	0.174	-	-	-
HCM Ctrl Dly (s/v)	9.7	0.2	-	20.5	0	-	-
HCM Lane LOS	A	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	18	32	25	13	45	17	1010	13	23	624	5
Future Volume (veh/h)	14	18	32	25	13	45	17	1010	13	23	624	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2100	2100	2116	2048	2184	2100	2067	2100	2100	2034	2100
Adj Flow Rate, veh/h	22	28	43	38	20	69	26	1554	20	35	960	8
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	0	0	0	4	8	0	0	2	0	0	4	0
Cap, veh/h	79	68	83	92	37	91	65	2978	38	101	2694	22
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	316	730	900	433	394	985	31	3793	49	73	3431	28
Grp Volume(v), veh/h	93	0	0	127	0	0	831	0	769	479	0	524
Grp Sat Flow(s),veh/h/ln	1946	0	0	1812	0	0	1999	0	1872	1687	0	1846
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	13.5	0.0	0.0	7.7
Cycle Q Clear(g_c), s	4.0	0.0	0.0	6.0	0.0	0.0	13.0	0.0	13.5	6.0	0.0	7.7
Prop In Lane	0.24		0.46	0.30		0.54	0.03		0.03	0.07		0.02
Lane Grp Cap(c), veh/h	230	0	0	220	0	0	1611	0	1470	1367	0	1450
V/C Ratio(X)	0.40	0.00	0.00	0.58	0.00	0.00	0.52	0.00	0.52	0.35	0.00	0.36
Avail Cap(c_a), veh/h	538	0	0	512	0	0	1611	0	1470	1367	0	1450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	0.0	39.7	0.0	0.0	3.5	0.0	3.5	2.7	0.0	2.9
Incr Delay (d2), s/veh	1.1	0.0	0.0	2.4	0.0	0.0	1.2	0.0	1.3	0.7	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	0.0	0.0	5.2	0.0	0.0	7.7	0.0	7.4	3.6	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.0	0.0	0.0	42.1	0.0	0.0	4.7	0.0	4.9	3.4	0.0	3.6
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		93			127			1600			1003	
Approach Delay, s/veh		40.0			42.1			4.8			3.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	76.7	13.3	76.7	13.3
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	55.0	24.0	55.0	24.0
Max Q Clear Time (g_c+I1), s	15.5	6.0	9.7	8.0
Green Ext Time (p_c), s	18.7	0.3	10.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	7.2
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	0	58	0	0	0	56	998	0	0	607	74
Future Vol, veh/h	42	0	58	0	0	0	56	998	0	0	607	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	2	0	0	0	0	4
Mvmt Flow	48	0	66	0	0	0	64	1134	0	0	690	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1426	1993	387	1606	2035	567	774	0	0	-	-	0
Stage 1	732	732	-	1261	1261	-	-	-	-	-	-	-
Stage 2	694	1261	-	345	774	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	145	106	687	112	101	552	837	-	-	0	-	-
Stage 1	383	430	-	183	244	-	-	-	-	0	-	-
Stage 2	404	244	-	649	411	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	129	95	687	90	90	552	837	-	-	-	-	-
Mov Cap-2 Maneuver	129	95	-	90	90	-	-	-	-	-	-	-
Stage 1	383	430	-	163	217	-	-	-	-	-	-	-
Stage 2	359	217	-	587	411	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	32.09	0	1.42	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	191	-	-	244	-	-	-
HCM Lane V/C Ratio	0.076	-	-	0.467	-	-	-
HCM Ctrl Dly (s/v)	9.7	1	-	32.1	0	-	-
HCM Lane LOS	A	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.3	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	21	40	21	6	27	3	675	19	70	1442	3
Future Volume (veh/h)	18	21	40	21	6	27	3	675	19	70	1442	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2018	2100	2184	2184	2184	2100	2051	2100	2067	2067	2100
Adj Flow Rate, veh/h	23	27	46	27	8	34	4	854	24	89	1825	3
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	5	0	0	0	0	0	3	0	2	2	0
Cap, veh/h	74	47	66	102	31	75	43	3021	85	146	2854	5
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.80	0.80	0.80	0.80	0.80	0.80
Sat Flow, veh/h	317	619	862	602	403	976	3	3770	106	128	3562	6
Grp Volume(v), veh/h	96	0	0	69	0	0	462	0	420	1001	0	916
Grp Sat Flow(s),veh/h/ln	1798	0	0	1980	0	0	2031	0	1847	1816	0	1880
Q Serve(g_s), s	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	5.2	0.0	17.0
Cycle Q Clear(g_c), s	4.6	0.0	0.0	2.9	0.0	0.0	5.2	0.0	5.3	18.3	0.0	17.0
Prop In Lane	0.24		0.48	0.39		0.49	0.01		0.06	0.09		0.00
Lane Grp Cap(c), veh/h	187	0	0	207	0	0	1668	0	1480	1499	0	1506
V/C Ratio(X)	0.51	0.00	0.00	0.33	0.00	0.00	0.28	0.00	0.28	0.67	0.00	0.61
Avail Cap(c_a), veh/h	514	0	0	540	0	0	1668	0	1480	1499	0	1506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	0.0	0.0	39.7	0.0	0.0	2.3	0.0	2.3	3.5	0.0	3.5
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.5	2.4	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	0.0	0.0	2.7	0.0	0.0	2.8	0.0	2.6	9.3	0.0	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.6	0.0	0.0	40.7	0.0	0.0	2.7	0.0	2.8	5.9	0.0	5.3
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		96			69			882			1917	
Approach Delay, s/veh		42.6			40.7			2.7			5.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		78.1		11.9		78.1		11.9				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		55.0		24.0		55.0		24.0				
Max Q Clear Time (g_c+I1), s		7.3		6.6		20.3		4.9				
Green Ext Time (p_c), s		7.5		0.3		23.6		0.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			6.8									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	14	0	0	0	59	687	0	0	1447	56
Future Vol, veh/h	10	0	14	0	0	0	59	687	0	0	1447	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	2	0	0	0	0	0
Mvmt Flow	10	0	14	0	0	0	60	701	0	0	1477	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1976	2327	767	1560	2355	351	1534	0	0	-	-	0
Stage 1	1505	1505	-	821	821	-	-	-	-	-	-	-
Stage 2	471	821	-	738	1534	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	65	72	432	120	70	718	430	-	-	0	-	-
Stage 1	129	186	-	339	391	-	-	-	-	0	-	-
Stage 2	548	391	-	380	180	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	54	59	432	96	57	718	430	-	-	-	-	-
Mov Cap-2 Maneuver	54	59	-	96	57	-	-	-	-	-	-	-
Stage 1	129	186	-	280	323	-	-	-	-	-	-	-
Stage 2	452	323	-	368	180	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	46.75	0	3.18	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	285	-	-	110	-	-	-
HCM Lane V/C Ratio	0.14	-	-	0.222	-	-	-
HCM Ctrl Dly (s/v)	14.7	2.2	-	46.7	0	-	-
HCM Lane LOS	B	A	-	E	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.8	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	4	12	8	0	33	10	611	31	27	821	5
Future Volume (veh/h)	8	4	12	8	0	33	10	611	31	27	821	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2100	2100	2184	2184	2184	2100	2067	2100	2100	2084	2100
Adj Flow Rate, veh/h	9	4	12	9	0	33	11	657	33	29	883	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	79	34	55	64	9	91	61	2983	148	103	3072	17
Arrive On Green	0.06	0.06	0.06	0.06	0.00	0.06	0.81	0.81	0.81	0.81	0.81	0.81
Sat Flow, veh/h	396	541	865	246	149	1446	24	3662	182	74	3771	21
Grp Volume(v), veh/h	25	0	0	42	0	0	366	0	335	469	0	448
Grp Sat Flow(s),veh/h/ln	1802	0	0	1840	0	0	2020	0	1848	1974	0	1892
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	5.2
Cycle Q Clear(g_c), s	1.1	0.0	0.0	1.9	0.0	0.0	3.6	0.0	3.7	4.8	0.0	5.2
Prop In Lane	0.36		0.48	0.21		0.79	0.03		0.10	0.06		0.01
Lane Grp Cap(c), veh/h	168	0	0	165	0	0	1686	0	1506	1650	0	1541
V/C Ratio(X)	0.15	0.00	0.00	0.25	0.00	0.00	0.22	0.00	0.22	0.28	0.00	0.29
Avail Cap(c_a), veh/h	520	0	0	531	0	0	1686	0	1506	1650	0	1541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	0.0	0.0	40.4	0.0	0.0	1.9	0.0	1.9	2.0	0.0	2.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.3	0.4	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.0	1.7	0.0	0.0	1.6	0.0	1.5	2.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.4	0.0	0.0	41.2	0.0	0.0	2.2	0.0	2.2	2.4	0.0	2.5
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		25			42			701			917	
Approach Delay, s/veh		40.4			41.2			2.2			2.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.3		10.7		79.3		10.7				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		55.0		24.0		55.0		24.0				
Max Q Clear Time (g_c+I1), s		5.7		3.1		7.2		3.9				
Green Ext Time (p_c), s		5.2		0.0		7.4		0.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			3.9									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	0	21	0	0	0	15	626	0	0	815	26
Future Vol, veh/h	26	0	21	0	0	0	15	626	0	0	815	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	28	0	23	0	0	0	16	680	0	0	886	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1273	1613	457	1156	1627	340	914	0	0	-	-	0
Stage 1	900	900	-	713	713	-	-	-	-	-	-	-
Stage 2	373	713	-	443	914	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	180	165	631	212	162	727	754	-	-	0	-	-
Stage 1	304	360	-	394	438	-	-	-	-	0	-	-
Stage 2	625	438	-	569	355	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	175	160	631	199	158	727	754	-	-	-	-	-
Mov Cap-2 Maneuver	175	160	-	199	158	-	-	-	-	-	-	-
Stage 1	304	360	-	383	427	-	-	-	-	-	-	-
Stage 2	609	427	-	548	355	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	22.3	0	0.48	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	84	-	-	259	-	-	-
HCM Lane V/C Ratio	0.022	-	-	0.197	-	-	-
HCM Ctrl Dly (s/v)	9.9	0.3	-	22.3	0	-	-
HCM Lane LOS	A	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	20	32	25	13	45	17	1021	17	30	624	5
Future Volume (veh/h)	14	20	32	25	13	45	17	1021	17	30	624	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2100	2100	2116	2048	2184	2100	2067	2100	2100	2034	2100
Adj Flow Rate, veh/h	22	31	43	38	20	69	26	1571	26	46	960	8
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	0	0	0	4	8	0	0	2	0	0	4	0
Cap, veh/h	78	71	81	92	36	91	65	2967	49	125	2555	21
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	307	769	874	435	395	987	30	3778	62	103	3253	27
Grp Volume(v), veh/h	96	0	0	127	0	0	844	0	779	461	0	553
Grp Sat Flow(s),veh/h/ln	1950	0	0	1817	0	0	2000	0	1870	1535	0	1847
Q Serve(g_s), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	13.8	0.0	0.0	8.2
Cycle Q Clear(g_c), s	4.1	0.0	0.0	5.9	0.0	0.0	13.3	0.0	13.8	5.7	0.0	8.2
Prop In Lane	0.23		0.45	0.30		0.54	0.03		0.03	0.10		0.01
Lane Grp Cap(c), veh/h	229	0	0	220	0	0	1612	0	1469	1250	0	1450
V/C Ratio(X)	0.42	0.00	0.00	0.58	0.00	0.00	0.52	0.00	0.53	0.37	0.00	0.38
Avail Cap(c_a), veh/h	540	0	0	512	0	0	1612	0	1469	1250	0	1450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	0.0	39.7	0.0	0.0	3.5	0.0	3.6	2.7	0.0	3.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	2.4	0.0	0.0	1.2	0.0	1.4	0.8	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	0.0	0.0	5.2	0.0	0.0	7.9	0.0	7.6	3.4	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.2	0.0	0.0	42.1	0.0	0.0	4.7	0.0	4.9	3.5	0.0	3.7
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		96			127			1623			1014	
Approach Delay, s/veh		40.2			42.1			4.8			3.6	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	76.7	13.3	76.7	13.3
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	55.0	24.0	55.0	24.0
Max Q Clear Time (g_c+I1), s	15.8	6.1	10.2	7.9
Green Ext Time (p_c), s	19.1	0.3	10.6	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	7.2
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	1	58	19	4	15	56	998	12	0	607	74
Future Vol, veh/h	42	1	58	19	4	15	56	998	12	0	607	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	2	0	0	0	0	4
Mvmt Flow	48	1	66	22	5	17	64	1134	14	0	690	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1428	2007	387	1614	2042	574	774	0	0	-	-	0
Stage 1	732	732	-	1268	1268	-	-	-	-	-	-	-
Stage 2	697	1275	-	345	774	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	144	105	687	111	101	548	837	-	-	0	-	-
Stage 1	383	430	-	181	242	-	-	-	-	0	-	-
Stage 2	403	240	-	649	411	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	119	93	687	88	89	548	837	-	-	-	-	-
Mov Cap-2 Maneuver	119	93	-	88	89	-	-	-	-	-	-	-
Stage 1	383	430	-	161	215	-	-	-	-	-	-	-
Stage 2	339	213	-	585	411	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	36.62	45.08	1.41	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	186	-	-	225	132	-	-
HCM Lane V/C Ratio	0.076	-	-	0.511	0.328	-	-
HCM Ctrl Dly (s/v)	9.7	1	-	36.6	45.1	-	-
HCM Lane LOS	A	A	-	E	E	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.6	1.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	23	40	21	5	27	4	685	22	88	1436	3
Future Volume (veh/h)	18	23	40	21	5	27	4	685	22	88	1436	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2018	2100	2184	2184	2184	2100	2051	2100	2067	2067	2100
Adj Flow Rate, veh/h	23	29	46	27	6	34	5	867	28	111	1818	3
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	5	0	0	0	0	0	3	0	2	2	0
Cap, veh/h	73	49	65	104	27	77	44	3000	96	174	2769	5
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.80	0.80	0.80	0.80	0.80	0.80
Sat Flow, veh/h	311	644	845	621	355	1005	4	3744	120	161	3455	6
Grp Volume(v), veh/h	98	0	0	67	0	0	471	0	429	1010	0	922
Grp Sat Flow(s),veh/h/ln	1799	0	0	1981	0	0	2024	0	1845	1743	0	1880
Q Serve(g_s), s	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	11.7	0.0	17.2
Cycle Q Clear(g_c), s	4.7	0.0	0.0	2.8	0.0	0.0	5.3	0.0	5.4	21.2	0.0	17.2
Prop In Lane	0.23		0.47	0.40		0.51	0.01		0.07	0.11		0.00
Lane Grp Cap(c), veh/h	187	0	0	208	0	0	1662	0	1478	1441	0	1506
V/C Ratio(X)	0.52	0.00	0.00	0.32	0.00	0.00	0.28	0.00	0.29	0.70	0.00	0.61
Avail Cap(c_a), veh/h	515	0	0	538	0	0	1662	0	1478	1441	0	1506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	0.0	0.0	39.7	0.0	0.0	2.3	0.0	2.3	3.7	0.0	3.5
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.9	0.0	0.0	0.4	0.0	0.5	2.9	0.0	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	0.0	0.0	2.6	0.0	0.0	2.9	0.0	2.7	9.6	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.8	0.0	0.0	40.6	0.0	0.0	2.7	0.0	2.8	6.5	0.0	5.4
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		98			67			900			1932	
Approach Delay, s/veh		42.8			40.6			2.8			6.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		78.1		11.9		78.1		11.9				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		55.0		24.0		55.0		24.0				
Max Q Clear Time (g_c+I1), s		7.4		6.7		23.2		4.8				
Green Ext Time (p_c), s		7.8		0.3		22.6		0.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			7.0									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	3	13	24	3	17	59	684	24	0	1441	56
Future Vol, veh/h	10	3	13	24	3	17	59	684	24	0	1441	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0	2	0	0	0	0	0
Mvmt Flow	10	3	13	24	3	17	60	698	24	0	1470	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1970	2342	764	1567	2358	361	1528	0	0	-	-	0
Stage 1	1499	1499	-	831	831	-	-	-	-	-	-	-
Stage 2	471	843	-	737	1528	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	66	71	434	118	69	709	432	-	-	0	-	-
Stage 1	130	187	-	335	387	-	-	-	-	0	-	-
Stage 2	548	382	-	381	181	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	51	58	434	90	57	709	432	-	-	-	-	-
Mov Cap-2 Maneuver	51	58	-	90	57	-	-	-	-	-	-	-
Stage 1	130	187	-	276	320	-	-	-	-	-	-	-
Stage 2	437	316	-	363	181	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	58.23	47.21	3.08	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	264	-	-	93	129	-	-
HCM Lane V/C Ratio	0.139	-	-	0.284	0.349	-	-
HCM Ctrl Dly (s/v)	14.7	2.2	-	58.2	47.2	-	-
HCM Lane LOS	B	A	-	F	E	-	-
HCM 95th %tile Q(veh)	0.5	-	-	1.1	1.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	5	12	8	0	33	10	622	35	40	817	5
Future Volume (veh/h)	8	5	12	8	0	33	10	622	35	40	817	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2100	2100	2100	2184	2184	2184	2100	2067	2100	2100	2084	2100
Adj Flow Rate, veh/h	9	5	12	9	0	33	11	669	38	43	878	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	78	38	53	64	10	92	60	2963	167	146	2963	17
Arrive On Green	0.06	0.06	0.06	0.06	0.00	0.06	0.81	0.81	0.81	0.81	0.81	0.81
Sat Flow, veh/h	382	593	836	245	150	1446	23	3639	205	125	3639	20
Grp Volume(v), veh/h	26	0	0	42	0	0	376	0	342	464	0	462
Grp Sat Flow(s),veh/h/ln	1812	0	0	1840	0	0	2022	0	1844	1893	0	1892
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	5.4
Cycle Q Clear(g_c), s	1.1	0.0	0.0	1.9	0.0	0.0	3.7	0.0	3.8	4.8	0.0	5.4
Prop In Lane	0.35		0.46	0.21		0.79	0.03		0.11	0.09		0.01
Lane Grp Cap(c), veh/h	169	0	0	166	0	0	1688	0	1502	1585	0	1541
V/C Ratio(X)	0.15	0.00	0.00	0.25	0.00	0.00	0.22	0.00	0.23	0.29	0.00	0.30
Avail Cap(c_a), veh/h	522	0	0	531	0	0	1688	0	1502	1585	0	1541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	0.0	0.0	40.3	0.0	0.0	1.9	0.0	1.9	2.0	0.0	2.1
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.4	0.5	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.0	1.7	0.0	0.0	1.7	0.0	1.6	2.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.4	0.0	0.0	41.1	0.0	0.0	2.2	0.0	2.3	2.5	0.0	2.6
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		26			42			718			926	
Approach Delay, s/veh		40.4			41.1			2.2			2.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.3		10.7		79.3		10.7				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		55.0		24.0		55.0		24.0				
Max Q Clear Time (g_c+I1), s		5.8		3.1		7.4		3.9				
Green Ext Time (p_c), s		5.3		0.0		7.7		0.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			3.9									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	1	21	22	2	18	15	623	18	0	811	26
Future Vol, veh/h	26	1	21	22	2	18	15	623	18	0	811	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	28	1	23	24	2	20	16	677	20	0	882	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1268	1625	455	1161	1629	348	910	0	0	-	-	0
Stage 1	896	896	-	720	720	-	-	-	-	-	-	-
Stage 2	372	729	-	441	910	-	-	-	-	-	-	-
Critical Hdwy	6.5	5.5	5.9	6.5	5.5	5.9	4.1	-	-	-	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	181	162	633	211	162	720	757	-	-	0	-	-
Stage 1	306	362	-	390	435	-	-	-	-	0	-	-
Stage 2	626	431	-	570	356	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	169	158	633	197	157	720	757	-	-	-	-	-
Mov Cap-2 Maneuver	169	158	-	197	157	-	-	-	-	-	-	-
Stage 1	306	362	-	380	424	-	-	-	-	-	-	-
Stage 2	590	419	-	548	356	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	23.28	20.3	0.46	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	79	-	-	249	281	-	-
HCM Lane V/C Ratio	0.022	-	-	0.21	0.163	-	-
HCM Ctrl Dly (s/v)	9.9	0.3	-	23.3	20.3	-	-
HCM Lane LOS	A	A	-	C	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.6	-	-

TRAFFIC SIGNAL TIMING DIRECTIVE

Englewood Cliffs Borough Bergen County

90 SECOND BACKGROUND CYCLE

PHASE	1-6	7-10	11,13,16,17	12,14,15,18	TIME
Without Pedestrian Actuation					
1. Route US 9W RO W	G	R	DW	W	66-49
Pedestrian Clearance	G	R	DW	FDW	6
Change	Y	R	DW	DW	4*
Clearance	R	R	DW	DW	2
2. Bayview Avenue R O W	R	G	DW	DW	7-24
Change	R	Y	DW	DW	3
Clearance	R	R	DW	DW	2
With Pedestrian Actuation					
1. Route US 9W R O W	G	R	DW	W	53-49
Pedestrian	G	R	DW	FDW	6
Change	Y	R	DW	DW	4*
Clearance	R	R	DW	DW	2
2. Bayview Avenue R O W	R	G	W	DW	10
Pedestrian	R	G	FDW	DW	10
Vehicle Extension	R	G	DW	DW	04
Change	R	Y	DW	DW	3
Clearance	R	R	DW	DW	2
Emergency Flash:	Y	R			

*An offset of eight (8) seconds is to be maintained from the beginning of yellow to Route US 9W traffic at Palisades Avenue to the beginning of yellow to Route US 9W traffic at this intersection.

Disconnect the memory circuit and employ a two (2) second vehicle extension interval on Phase 2.

The manual control is to be connected.

Between the hours of 10:00 p.m. and 6:00 a.m., daily, the signal is to operate on a "Free-Float" basis, with a minimum green time of thirty (30) seconds (walk) to Phase 1 traffic.