



**650 Grove Street, Jersey City, NJ
– Traffic Impact Study**

Block 6101, Lot 2

May 6, 2021

Prepared for:

Newport Associates Development
Company

Prepared by:

Stantec Consulting Services, Inc.

650 GROVE STREET, JERSEY CITY, NJ – TRAFFIC IMPACT STUDY

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Approved by 

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Table of Contents

EXECUTIVE SUMMARY	I
1.0 INTRODUCTION.....	1
1.1 BACKGROUND.....	1
1.2 STUDY AREA	1
2.0 CAPACITY ANALYSIS METHODOLOGY	2
3.0 2019 EXISTING CONDITION.....	3
3.1 DATA COLLECTION	3
3.2 PEAK HOUR TRAFFIC VOLUMES	3
3.3 CAPACITY ANALYSIS RESULTS.....	3
4.0 2026 NO BUILD CONDITION	4
4.1 SITE-SPECIFIC DEVELOPMENTS.....	4
4.2 BACKGROUND GROWTH.....	4
4.2.1 Socioeconomic Forecasting Data.....	4
4.2.2 Modal Split	5
4.3 PEAK HOUR TRAFFIC VOLUMES	5
4.4 CAPACITY ANALYSIS RESULTS.....	5
5.0 2026 BUILD CONDITION.....	6
5.1 TRIP GENERATION.....	6
5.2 TRIP DISTRIBUTION	6
5.3 PEAK HOUR TRAFFIC VOLUMES	6
5.4 CAPACITY ANALYSIS RESULTS.....	6
6.0 CONCLUSION	7
LIST OF TABLES	
Table 1 – HCM Level of Service Criteria	2
Table 2 – Jersey City Socioeconomic Growth Projections.....	5
LIST OF FIGURES	
Figure 1 – Study Area Location Map	1

Executive Summary

Stantec has completed this Traffic Impact Study in support of the applicant, Newport Associates Development Company (NADC), who is proposing to redevelop a vacant parcel with a 10-story mixed-use building at the address of 650 Grove Street, located in Block 6101, Lot 2 in the City of Jersey City (the City), New Jersey. The mixed-use building as currently proposed consists of 108 dwelling units and 34,258 square feet of office space. The site to be redeveloped is located on the south side of 18th Street, bounded to the east by Marin Boulevard and to the west by Grove Street. The site driveway is proposed to connect to 18th Street at an unsignalized location via a mid-block driveway apron.

Due to current pandemic conditions, pre-pandemic turning movement count volumes were requested from and provided by the City's Division of Engineering, Traffic & Transportation for study area intersections. Turning movement counts at 18th Street intersections with Grove Street and Marin Boulevard were conducted during average weekday conditions on Wednesday, February 22, 2017 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. Turning movement counts also included classification of trucks and buses, as well as pedestrian crossing movements. After reducing the counted peak period traffic volumes, it was determined that the AM and PM peak hours for the study area were 8:00 AM to 9:00 AM and 5:00 PM to 6:00 PM, respectively.

After accounting for seasonal traffic adjustments, historic traffic growth, projected traffic growth, trips to be generated by nearby developments, and trips to be generated by this studied development, volumes were calculated for 2019 Existing, 2026 No Build, and 2026 Build Conditions based on a horizon construction and site population year of 2026. Capacity analysis results were generated using Synchro 10 (a traffic operations/capacity analysis software package used to estimate both existing and future travel conditions) to compare traffic operations between these conditions. This software tool was calibrated with roadway geometry, signal timing, and traffic volume data in a best effort to match existing and future travel conditions.

Capacity analysis results show that construction of the proposed development would not result in any changes to Level of Service (further defined in this report) for study area roadways. Impacts to existing failing conditions at the 18th Street intersection with Marin Boulevard would be negligible with average intersection delay increasing by no more than one second per vehicle. Furthermore, the proposed site driveway would operate acceptably at LOS C or better. Therefore, the proposed development would not significantly impact study area traffic operations, and no mitigation measures would be required.

1.0 INTRODUCTION

1.1 BACKGROUND

Stantec has completed this Traffic Impact Study (TIS) in support of the applicant, Newport Associates Development Company (NADC), who is proposing to redevelop a vacant parcel with a 10-story mixed-use building at the address of 650 Grove Street, located in Block 6101, Lot 2 in the City of Jersey City (the City), New Jersey. The mixed-use building consists of 108 dwelling units and 34,258 square feet of office space. The site located on the south side of 18th Street, bounded to the east by Marin Boulevard and to the west by Grove Street. The site driveway is proposed to connect to 18th Street at an unsignalized location via a mid-block driveway apron. A map of the study area and the project site is shown in **Figure 1**.

Figure 1 – Study Area Location Map



1.2 STUDY AREA

The study area for this TIS includes the 18th Street signalized intersections with Grove Street and Marin Boulevard. Grove Street is of a north-south orientation and has an approximate width of 40' with one travel lane in each direction. 20-foot lanes on Grove Street approaches to 18th Street allow for traffic to turn left while through or right turn traffic may simultaneously pass side-by-side to the right of the left turning vehicle (this behavior was approximated within the capacity analysis model with NB and SB left turn bays on Grove Street). Marin Boulevard is of a north-south orientation and ranges from 28' to 48' in width, accommodating left and right turning lanes on the northbound approach to the intersection with 18th Street. 18th Street is of an east-west orientation and ranges from 48' to 82' in width generally consisting of a cross-section of two travel lanes in each direction. NJ TRANSIT Bus Route 126 service is provided on 18th Street in front of the site providing connections to the Port Authority Bus Terminal during weekday AM and PM peak periods.

2.0 CAPACITY ANALYSIS METHODOLOGY

Capacity analysis is used by traffic engineers as a tool to measure the existing or projected performance of a roadway facility. Capacity analyses for existing signalized and future unsignalized intersections (proposed development site driveways) were performed using Synchro 10. Roadway geometry, signal timing, and traffic data were entered into the capacity analysis model. Signal timing information for the subject intersections was obtained from the City. Synchro provides volume-to-capacity (V/C) ratios, average control delay, and Level of Service (LOS) for each lane group. All Synchro output printouts for study area intersections are included in **Appendix A**.

LOS is an evaluation of the quality of intersection operations and measures the average delay a driver experiences while traveling through an intersection. LOS is dependent on a range of defined operating conditions such as traffic demand, lane geometry, and traffic signal timing and phasing. LOS can range from A to F and is based on the average control delay per vehicle. For a signalized intersection, LOS A indicates operations with an average control delay less than 10 seconds per vehicle, while LOS F describes operations with an average control delay in excess of 80 seconds per vehicle. For an unsignalized intersection, LOS A indicates operations with an average control delay less than 10 seconds per vehicle, while LOS F describes operations with an average control delay in excess of 50 seconds per vehicle. Typically, traffic engineers consider LOS D or better operations at signalized intersections, and LOS E or better operations at unsignalized intersections, to be acceptable from the perspective of driver delay. The delay criteria for LOS at signalized and unsignalized intersections based on the Highway Capacity Manual, Version 6 (HCM) are summarized in **Table 1**.

Table 1 – HCM Level of Service Criteria

Level of Service	Average Control Delay (seconds/vehicle)	
	Signalized	Unsignalized
A	Less than or equal to 10.0	Less than or equal to 10.0
B	>10.0 and ≤ 20.0	>10.0 and ≤ 15.0
C	>20.0 and ≤ 35.0	>15.0 and ≤ 25.0
D	>35.0 and ≤ 55.0	>25.0 and ≤ 35.0
E	>55.0 and ≤ 80.0	>35.0 and ≤ 50.0
F	Greater than 80.0 or V/C greater than 1.0	Greater than 50.0 or V/C greater than 1.0

The V/C ratio relates the demand at an intersection (traffic volume) to the available capacity. The available capacity for each movement varies depending on number of lanes, lane width, perception/reaction time, green time, and cycle length, among others. A V/C ratio of 1.0 means that the demand for a particular movement is equal to the capacity. A movement with a V/C ratio at or over 1.0 (designated as LOS F) is considered undesirable because the movement volume exceeds the capacity, which results in queuing, indicative of unmet demand.

3.0 2019 EXISTING CONDITION

3.1 DATA COLLECTION

Due to current pandemic conditions, pre-pandemic turning movement count volumes were requested from and provided by the City's Division of Engineering, Traffic & Transportation for study area intersections. Turning movement counts at 18th Street intersections with Grove Street and Marin Boulevard were conducted during average weekday conditions on Wednesday, February 22, 2017 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. Turning movement counts also included classification of trucks and buses, as well as pedestrian crossing movements. Vehicle and pedestrian turning movement volumes are included in **Appendix B**.

3.2 PEAK HOUR TRAFFIC VOLUMES

After reducing the counted peak period traffic volumes, it was determined that the AM and PM peak hours for the study area were 8:00 AM to 9:00 AM and 5:00 PM to 6:00 PM, respectively. These peak hour volumes were then factored up by approximately 7.3%, as per guidance for Urban Minor Arterials from the New Jersey Department of Transportation¹, to seasonally adjust February volumes to more seasonably average traffic conditions. Additionally, volumes were grown from 2017 to 2019 pre-pandemic volume levels utilizing AM and PM peak hour annual growth rates of 1.5% and 2.8%, respectively, from NADC's Traffic Monitoring Program². Overall, including seasonal and yearly growth adjustments, 2019 AM and PM peak hour count volumes were grown by 10.5% and 13.4% to calculate 2019 Existing Condition volumes. **Exhibit 1** depicts the peak hour traffic volumes at the study intersections during the 2019 Existing Condition.

3.3 CAPACITY ANALYSIS RESULTS

Exhibit 2 shows the capacity analysis results for the 2019 Existing Condition. According to capacity analysis results, all study area lane groups operate acceptably at LOS D or better during both peak hours, with the exception of the following:

Intersection of 18th Street & Marin Boulevard

- The westbound 18th Street approach operates at LOS F during the PM peak hour.
- The southbound Marin Boulevard approach operates at LOS F during both AM and PM peak hours.
- According to average delay, the intersection operates at LOS F during the PM peak hour.

¹ <https://www.state.nj.us/transportation/refdata/roadway/pdf/AxleSeasonalFactors2017.pdf>

² Rates developed from historic counts as summarized in the *Newport 2019 Traffic Monitoring Program* dated October 25, 2019

4.0 2026 NO BUILD CONDITION

The “No Build Condition” refers to projected future traffic conditions within the study area during the year of construction completion of the proposed development, but before trip generation from the proposed development is added to study area roadway volumes. A comparison of traffic operations between the “No Build Condition” and the “Build Condition” attempts to quantify the traffic impact that the proposed development will have. The current anticipated year of development construction completion is 2026. Both the 2026 No Build and Build Conditions account for future traffic volumes, whether from trips generated by nearby site-specific developments or from background traffic growth.

4.1 SITE-SPECIFIC DEVELOPMENTS

It is anticipated that the construction and population of nearby, known developments will result in additional traffic on study area streets during 2026. As such trips, for these developments (either proposed, approved, or currently under construction) were generated using the *ITE Trip Generation Manual* and land use data from specific, nearby developments (i.e. units, square footage, etc.) from the City Planning Division³ and NADC. Trips were generated for the following developments and were added to future year volumes:

- 75 Park Lane S, 359 residential units and 7,248 SF retail space;
- 2 Shore Lane, 71 residential units and 15,603 SF retail space
- 700 Washington Boulevard (Parcel 4B/C), 391 residential units and 8,181 SF retail space;
- Newport Parcel 4 (Parcel 4A), 338 residential units and 13,900 SF retail space; and,
- 659 Grove Street, 140 residential units and 11,350 SF retail space.

According to trip generation data from **Exhibit 3**, these developments result in a total of 194 and 201 additional AM and PM peak hour trips, respectively, on City downtown/waterfront streets. Utilizing historic trip distribution data from NADC (**Exhibit 4**, which was also used to distribute trips generated by the development studied in this report onto local streets), it is estimated that approximately 30% of these total trips travel through the study area and are connecting to major destinations, such as Hoboken and the Holland Tunnel. The increment volumes for site-specific development traffic is shown in **Exhibit 5**.

4.2 BACKGROUND GROWTH

4.2.1 Socioeconomic Forecasting Data

The North Jersey Transportation Planning Authority (NJTPA) published socioeconomic forecasts⁴ in November 2017 that provide population, household, and employment growth projections out to 2045 by

³ https://us.ftp.opendatasoft.com/analyzejerseycity/files/Development_Maps/Downtown_Development_3.5.2020.pdf

⁴ <https://www.njtpa.org/Data-Maps/Demographics-GIS/Forecasts.aspx>

individual municipalities and counties. As shown in **Table 2**, these growth projections were averaged out to develop a compounded annual growth rate (CAGR) of approximately 1.1% per year.

4.2.2 Modal Split

It should be noted, however, that not all future land use development growth and ensuing trip generation projected for Jersey City will be directly impacting the roadway network as the vast majority of travel is done by public transportation, walking, or cycling, especially in the City's downtown waterfront area. As such, the projected CAGR of 1.1% per year was factored down with mode share data from the US Census to develop a background growth rate of approximately a quarter of a percent per year, which is more appropriate for projecting actual traffic volume growth on study area roadways. Conversely, mode share data was also utilized to calculate pedestrian crossing movements at study area intersections that would be generated by proposed developments.

Table 2 – Jersey City Socioeconomic Growth Projections

Geographical Area	Population			Households			Employment		
	2015	2045	Increase	2015	2045	Increase	2015	2045	Increase
City of Jersey City	260,335	369,381	41.9%	130,189	160,912	23.6%	102,340	155,876	52.3%
Avg. 30-yr Growth	39.3%								
Average CAGR	1.10%								
Auto Mode Share ⁵	23%								
Actual CAGR, Say	0.25%								

By applying the roughly quarter percent CAGR to 2019 Existing Condition study area traffic volumes for a seven-year period, background growth increment traffic volumes were calculated, as shown in **Exhibit 6**.

4.3 PEAK HOUR TRAFFIC VOLUMES

2019 Existing Condition volumes (**Exhibit 1**) were added to site-specific development volumes (**Exhibit 5**) and background growth volumes (**Exhibit 6**) to calculate 2026 No Build Condition volumes (**Exhibit 7**).

4.4 CAPACITY ANALYSIS RESULTS

Exhibit 2 shows the capacity analysis results for the 2026 No Build Condition. All study area lane groups would continue to operate at the same LOS, with the following failing lane groups:

Intersection of 18th Street & Marin Boulevard

- The westbound 18th Street approach operates at LOS F during the PM peak hour.
- The southbound Marin Boulevard approach operates at LOS F during both AM and PM peak hours.
- According to average delay, the intersection operates at LOS F during the PM peak hour.

⁵ A non-auto mode share of approximately 77% was calculated from US Census commuting data for study area census tracts.

5.0 2026 BUILD CONDITION

The development that is being evaluated to quantify traffic impacts is a 10-story mixed-use building at the address of 650 Grove Street. The mixed-use building as currently proposed consists of 108 dwelling units and 34,258 square feet of office space. A comparison of traffic operations between the “No Build Condition” and the “Build Condition” attempts to quantify the traffic impact that the proposed development will have.

5.1 TRIP GENERATION

Trips were generated for this development by utilizing methodologies in the 10th edition of the *ITE Trip Generation Manual* to quantify the impact of new traffic on study area roadways. Trips were generated using Land Use Codes (LUCs) 222 for “High-Rise Multifamily Housing” and 710 for “General Office Building”. Trip reduction credits were made as per the National Cooperative Highway Research Program (NCHRP) Report 684 to capture trips traveling in between both land uses proposed within the same building. Additionally, trip generation was reduced by approximately 77%⁶ to reflect more local commuting habits (public transportation and walking) as compared to other more suburban sites on which the trip generation calculations are based. As shown in **Exhibit 8**, the proposed development would generate 23 and 19 trips onto the study area roadway network during AM and PM peak hour conditions, respectively.

5.2 TRIP DISTRIBUTION

These site-generated trips were subsequently distributed onto roadways utilizing trip distribution data (**Exhibit 4**) to calculate the increment in volumes generated by the development, as shown in **Exhibit 9**.

5.3 PEAK HOUR TRAFFIC VOLUMES

2026 No Build Condition volumes (**Exhibit 7**) were added to proposed development traffic volumes (**Exhibit 9**) to calculate 2026 Build Condition volumes during AM and PM peak hour conditions shown in **Exhibit 10**.

5.4 CAPACITY ANALYSIS RESULTS

Exhibit 2 shows the capacity analysis results for the 2026 Build Condition. Capacity analysis results show that, with construction of the proposed development, all study area lane groups would continue to operate at the same LOS when compared to the 2026 No Build Condition. Impacts to existing failing conditions at the 18th Street intersection with Marin Boulevard would be negligible with average intersection delay increasing by no more than one second per vehicle. Furthermore, the proposed site driveway would operate acceptably at LOS C or better. Therefore, the proposed development would not significantly impact study area traffic operations, and no mitigation measures would be required.

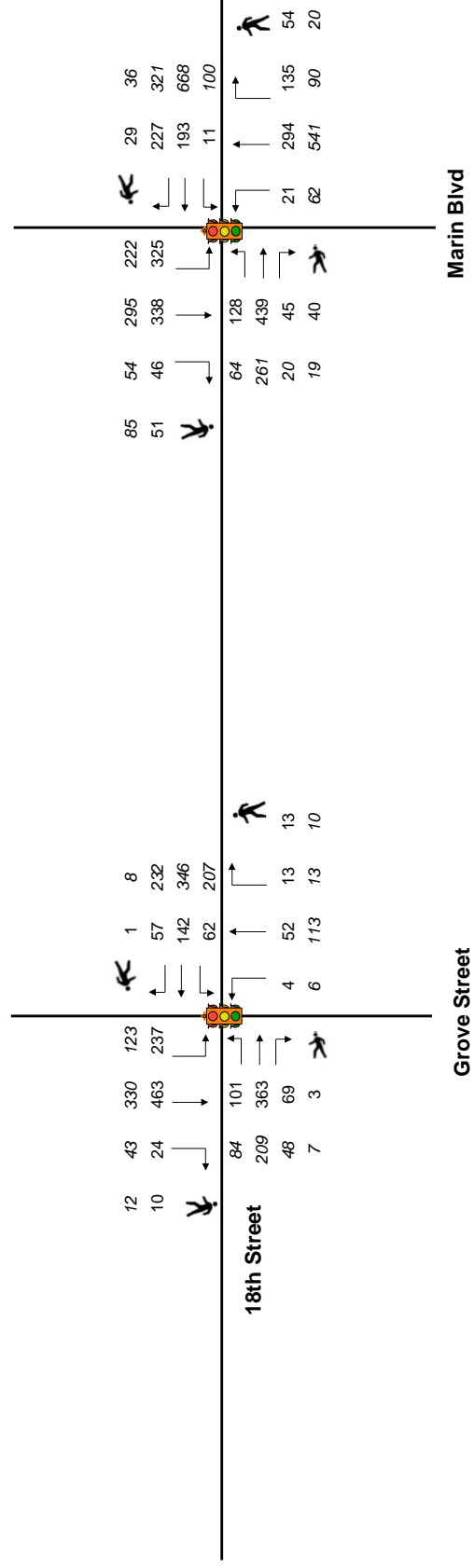
⁶ A non-auto mode share of approximately 77% was calculated from US Census commuting data for study area census tracts.

Conclusion

6.0 CONCLUSION

Stantec has completed this Traffic Impact Study in support of the applicant, NADC, who is proposing to redevelop a vacant parcel with a 10-story mixed-use building at the address of 650 Grove Street, located in Block 6101, Lot 2. Impacts to existing failing conditions at the 18th Street intersection with Marin Boulevard would be negligible with average intersection delay increasing by no more than one second per vehicle. Furthermore, the proposed site driveway would operate acceptably at LOS C or better. Therefore, the analysis results show that in the 2026 Build Condition, the proposed development would not significantly impact the traffic operations of study area intersections, and no mitigation measures would be required.

EXHIBITS



LEGEND

- XXX AM Peak Hour Pedestrian Volumes (8:00 AM - 9:00 AM)
- XXX PM Peak Hour Pedestrian Volumes (5:00 PM - 6:00 PM)
- XXX AM Peak Hour Vehicle Volumes (8:00 AM - 9:00 AM)
- XXX PM Peak Hour Vehicle Volumes (5:00 PM - 6:00 PM)
- Traffic Signal



Traffic Impact Study
650 Grove Street Development
Jersey City, New Jersey

EXHIBIT 1
2019 Existing Condition
Peak Hour Volumes

EXHIBIT 2

Intersection Capacity Analysis Results

AM and PM Peak Hours

Intersection		AM Peak Hour (8:00 AM to 9:00 AM)										PM Peak Hour (5:00 PM to 6:00 PM)									
		2019 Existing Condition			2026 No Build Condition			2026 Build Condition			2019 Existing Condition			2026 No Build Condition			2026 Build Condition				
		V/C Ratio	Delay	Level of Service	V/C Ratio	Delay	Level of Service	V/C Ratio	Delay	Level of Service	V/C Ratio	Delay	Level of Service	V/C Ratio	Delay	Level of Service	V/C Ratio	Delay	Level of Service		
18th Street & Grove Street <i>Signalized</i>	EB-LTR	0.42	12.3	B	0.43	12.4	B	0.44	12.5	B	0.31	10.7	B	0.32	10.8	B	0.33	10.9	B		
	WB-LTR	0.22	10.5	B	0.23	10.4	B	0.24	10.4	B	0.63	16.1	B	0.65	16.3	B	0.66	16.5	B		
	NB-L	0.03	17.2	B	0.04	17.6	B	0.04	17.6	B	0.03	16.7	B	0.03	16.9	B	0.03	16.9	B		
	NB-TR	0.12	14.6	B	0.12	14.7	B	0.12	14.6	B	0.21	17.3	B	0.21	17.4	B	0.21	17.3	B		
	SB-L	0.59	27.0	C	0.60	27.5	C	0.60	27.6	C	0.30	20.4	C	0.31	20.6	C	0.31	20.6	C		
	SB-TR	0.85	38.7	D	0.87	40.5	D	0.87	40.5	D	0.62	25.3	C	0.63	25.7	C	0.63	25.7	C		
18th Street & Marin Boulevard <i>Signalized</i>	Intersection	-	22.4	C	-	23.0	C	-	22.9	C	-	17.4	B	-	17.6	B	-	17.7	B		
	EB-LTR	0.88	37.6	D	0.93	43.9	D	0.93	44.6	D	0.60	23.7	C	0.62	24.2	C	0.63	24.4	C		
	WB-LTR	0.44	10.9	B	0.51	12.0	B	0.51	12.1	B	1.22	132.7	F	1.29	164.3	F	1.30	166.6	F		
	NB-L	0.09	17.9	B	0.10	18.0	B	0.11	18.3	B	0.25	20.8	C	0.27	21.3	C	0.28	21.5	C		
	NB-T	0.48	22.4	C	0.49	22.5	C	0.49	22.5	C	0.83	35.5	D	0.84	36.7	D	0.84	36.7	D		
	NB-R	0.24	4.4	A	0.26	4.3	A	0.26	4.3	A	0.16	4.7	A	0.19	4.5	A	0.19	4.5	A		
18th Street & 650 Grove Driveway <i>Unsignalized</i>	SB-LTR	1.07	69.2	F	1.11	84.6	F	1.11	85.2	F	1.10	85.2	F	1.19	119.7	F	1.19	119.7	F		
	Intersection	-	38.3	D	-	44.7	D	-	45.0	D	-	82.4	F	-	102.5	F	-	103.4	F		
	WB-LT	INTERSECTION DOES NOT EXIST						0.01	9.9	A	INTERSECTION DOES NOT EXIST						0.00	8.5	A		
	NB-LR	INTERSECTION DOES NOT EXIST						0.04	20.2	C	INTERSECTION DOES NOT EXIST							0.04	17.4	C	

Source: Synchro 10 (methodology using Highway Capacity Manual, 6th Edition analysis)

EXHIBIT 3

Trips Generated by Nearby Site-Specific Developments Currently Approved or Under Construction AM and PM Peak Hour Trip Generation

Peak Hour Trip Generation ²								
City Development Site Code ¹	Development Name	Type	Dwelling Units	Retail/Office Space	AM Peak Hour			
					IN	OUT	IN	OUT
# 60	75 Park Lane S	Residential	359		7	33	31	15
		Retail		7,248 SF	6	6	2	3
# 145	2 Shore Lane	Residential	71		1	6	6	3
		Retail		15,603 SF	13	14	5	6
# 169	700 Washington Blvd (Parcel 4B/C)	Residential	391		10	25	30	22
		Retail		8,181 SF	2	1	5	6
# 191	Newport Parcel 4 (Parcel 4A)	Residential	338		6	28	26	12
		Retail		13,900 SF	11	12	4	5
# 192	659 Grove Street	Residential	140		3	8	7	4
		Retail		11,350 SF	1	1	4	5
Trip Generation Total for Site-Specific Developments:					60	134	120	81

Notes:

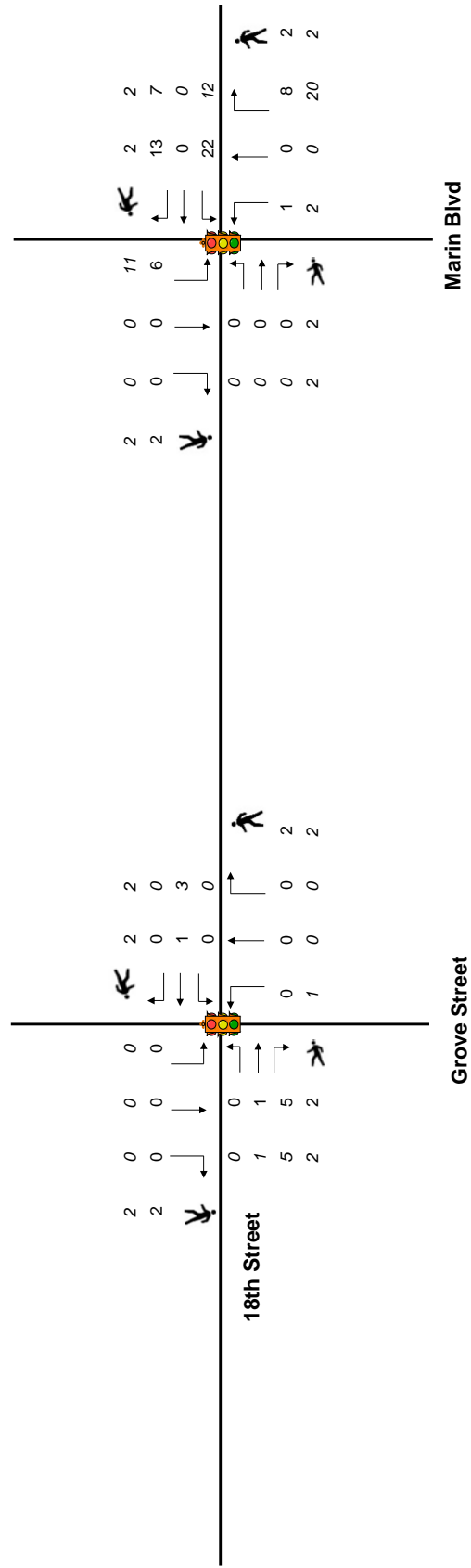
1. Site code data obtained from https://us.fti.opendatasoft.com/analyses/city/files/Development_Maps/Downtown_Development_3.5.2020.pdf. Showing information as of March 2020.

2. Previously calculated trip generation figures were obtained from the *Newport Parcel 4B/C Traffic Impact Assessment Update*, dated 8/20/20. 659 Grove trip generation figures are from separate, but concurrent application.

EXHIBIT 4
Newport Trip Assignment Distribution

MAJOR ACCESS ROUTE	OFFICE	RETAIL	RESIDENTIAL	HOTEL
Routes 1 and 9	25%	15%	25%	35%
New Jersey Turnpike	25%	15%	25%	35%
Holland Tunnel	10%	10%	20%	15%
Hoboken Local Streets	10%	10%	10%	5%
Jersey City Local Streets	30%	50%	20%	10%

SOURCE: *Newport Transportation Monitoring Program Results*, Vollmer Associates LLP, June 1994.

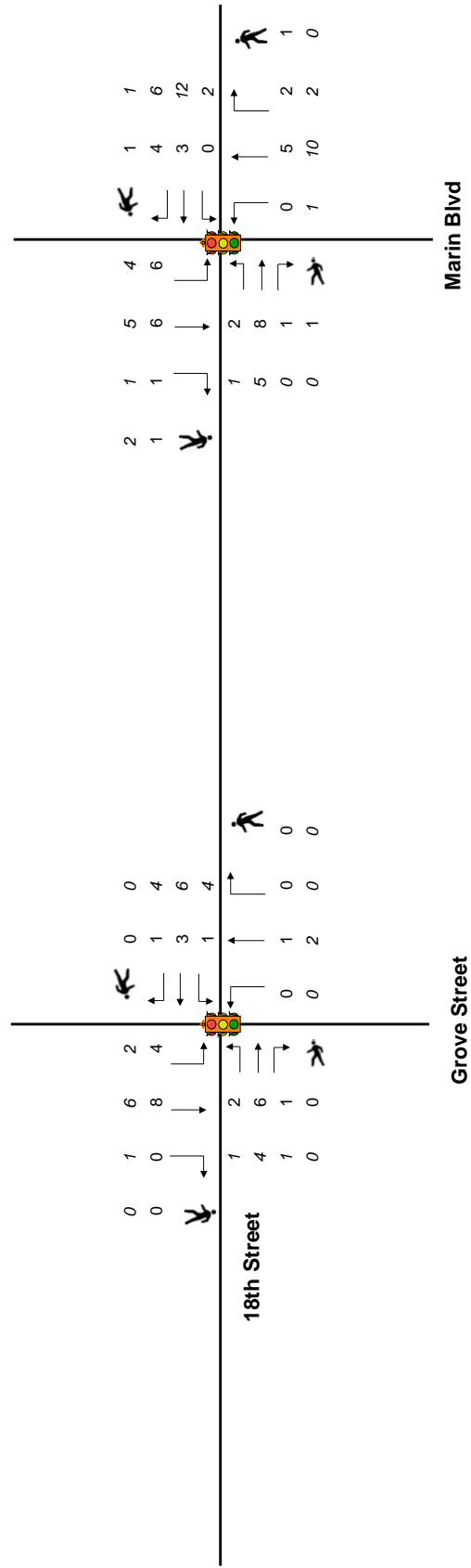


- LEGEND**
- XXX AM Peak Hour Pedestrian Volumes (8:00 AM - 9:00 AM)
 - XXX PM Peak Hour Pedestrian Volumes (5:00 PM - 6:00 PM)
 - XXX AM Peak Hour Vehicle Volumes (8:00 AM - 9:00 AM)
 - XXX PM Peak Hour Vehicle Volumes (5:00 PM - 6:00 PM)
 - Traffic Signal



Traffic Impact Study
650 Grove Street Development
Jersey City, New Jersey

EXHIBIT 5
Site-Specific Increment
Peak Hour Volumes

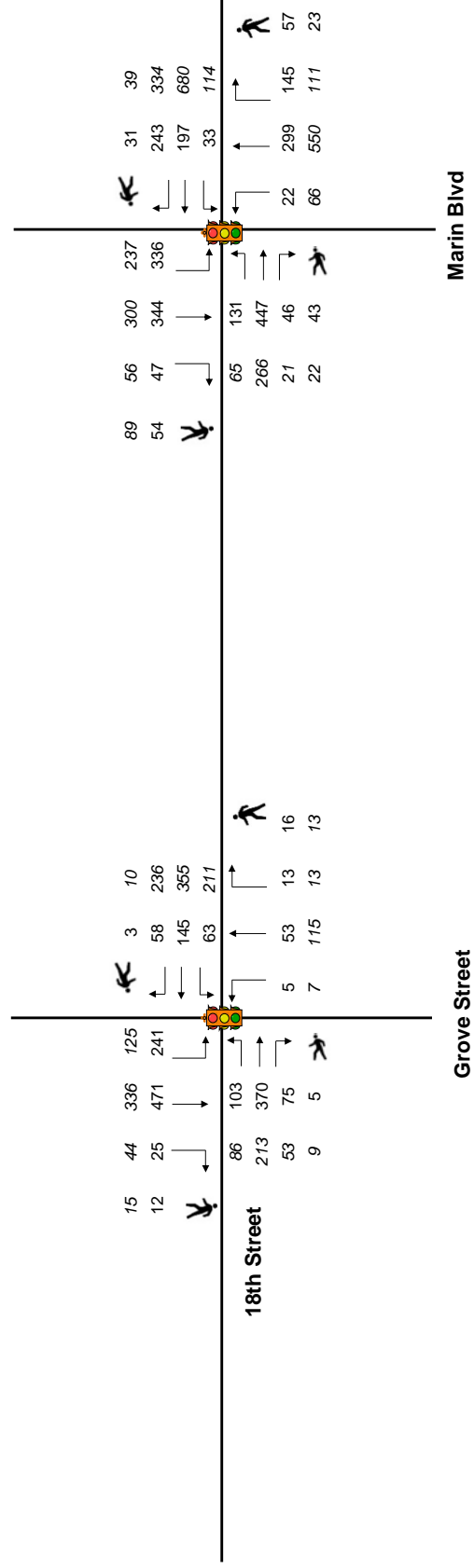


- LEGEND**
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 - XXX PM Peak Hour Pedestrian Volumes (5:00 PM - 6:00 PM)
 - XXX AM Peak Hour Vehicle Volumes (8:00 AM - 9:00 AM)
 - XXX PM Peak Hour Vehicle Volumes (5:00 PM - 6:00 PM)
 - Traffic Signal



Traffic Impact Study
650 Grove Street Development
Jersey City, New Jersey

EXHIBIT 6
Background Traffic Growth
Peak Hour Volumes



LEGEND

- XXX AM Peak Hour Pedestrian Volumes (8:00 AM - 9:00 AM)
- XXX PM Peak Hour Pedestrian Volumes (5:00 PM - 6:00 PM)
- XXX AM Peak Hour Vehicle Volumes (8:00 AM - 9:00 AM)
- XXX PM Peak Hour Vehicle Volumes (5:00 PM - 6:00 PM)
- Traffic Signal



Traffic Impact Study
650 Grove Street Development
Jersey City, New Jersey

EXHIBIT 7
2026 No Build Condition
Peak Hour Volumes

EXHIBIT 8

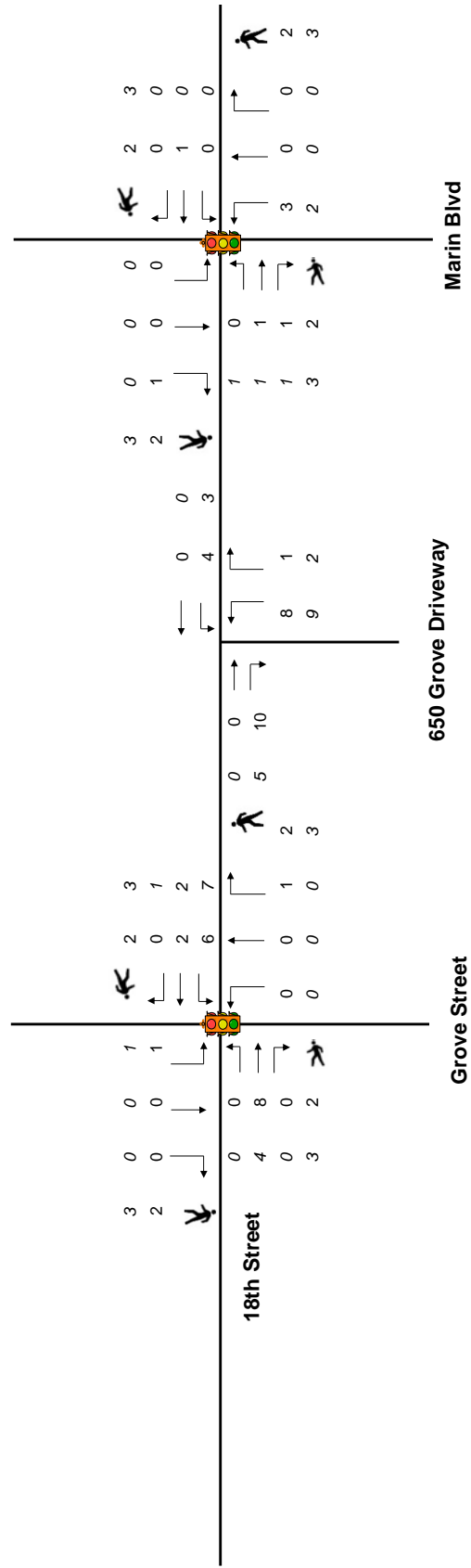
AM and PM Peak Hour Trip Generation for Proposed Development

LUC	650 Grove Street Description	Size	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
222	High-Rise Multifamily Housing	108 units	10	33	43	28	17	45
710	General Office Building	34,258 SF	51	8	59	6	35	41
Total Trips			61	41	102	34	52	86
Vehicle Trips Generated ¹			14	9	23	8	12	20
Internal Trips (2%) ²	Housing		0	0	0	0	0	0
	Office		0	0	0	0	0	0
	Total		0	0	1	0	0	0
External Trips, Trips on Roadway (98%)	Housing		3	7	10	6	4	10
	Office		11	2	13	1	8	9
	Total		14	9	23	7	12	19

Notes:

1. A non-auto mode share of approximately 77% was applied to all Land Use Code (LUC) trip generation from ITE based on US Census commuting survey data for surrounding Hudson County Census Tracts 77 and 78.

2. Based on the assumption that trips generated by residential units would visit other uses on site (from NCHRP Report 684 methodology). May contain rounding errors.

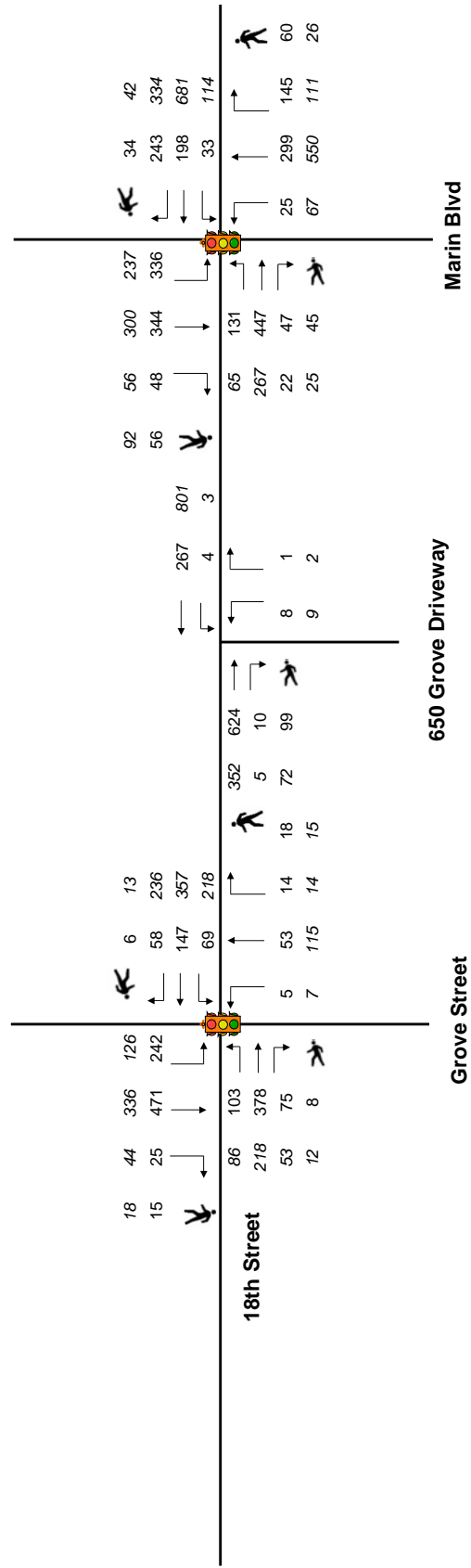


- LEGEND**
- XXX AM Peak Hour Pedestrian Volumes (8:00 AM - 9:00 AM)
 - XXX PM Peak Hour Pedestrian Volumes (5:00 PM - 6:00 PM)
 - XXX AM Peak Hour Vehicle Volumes (8:00 AM - 9:00 AM)
 - XXX PM Peak Hour Vehicle Volumes (5:00 PM - 6:00 PM)
 - Traffic Signal



Traffic Impact Study
650 Grove Street Development
Jersey City, New Jersey

EXHIBIT 9
Development Increment
Peak Hour Volumes



- LEGEND**
- XXX AM Peak Hour Pedestrian Volumes (8:00 AM - 9:00 AM)
 - XXX PM Peak Hour Pedestrian Volumes (5:00 PM - 6:00 PM)
 - XXX AM Peak Hour Vehicle Volumes (8:00 AM - 9:00 AM)
 - XXX PM Peak Hour Vehicle Volumes (5:00 PM - 6:00 PM)
 - Traffic Signal



Traffic Impact Study
650 Grove Street Development
Jersey City, New Jersey



















EXHIBIT 10
2026 Build Condition
Peak Hour Volumes

APPENDIX A

Synchro Printout Sheets

1: Grove Street & 18th Street
NADC Traffic Impact Study

2019 Existing Condition
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	363	69	62	142	57	4	52	13	237	463	24
Future Volume (vph)	101	363	69	62	142	57	4	52	13	237	463	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	150		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3221	0	0	3161	0	1604	1631	0	1604	1675	0
Flt Permitted		0.819			0.755		0.206			0.711		
Satd. Flow (perm)	0	2662	0	0	2415	0	347	1631	0	1189	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			62			14			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		890			463			343			321	
Travel Time (s)		24.3			12.6			9.4			8.8	
Confl. Peds. (#/hr)	1		3	3		1	10		13	13		10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	580	0	0	283	0	4	71	0	258	529	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effect Green (s)		41.5			41.5		29.5	29.5		29.5	29.5	
Actuated g/C Ratio		0.52			0.52		0.37	0.37		0.37	0.37	
v/c Ratio		0.42			0.22		0.03	0.12		0.59	0.85	
Control Delay		12.3			10.5		17.2	14.6		27.0	38.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		12.3			10.5		17.2	14.6		27.0	38.7	
LOS		B			B		B	B		C	D	
Approach Delay		12.3			10.5			14.8			34.9	
Approach LOS		B			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 22.4

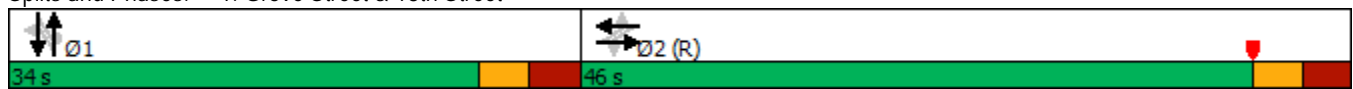
Intersection LOS: C

Intersection Capacity Utilization 103.8%

ICU Level of Service G



















Analysis Period (min) 15

Splits and Phases: 1: Grove Street & 18th Street



2: Marin Blvd & 18th Street NADC Traffic Impact Study

2019 Existing Condition
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	439	45	11	193	227	21	294	135	325	338	46
Future Volume (vph)	128	439	45	11	193	227	21	294	135	325	338	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	9	12	11	13	13	13
Storage Length (ft)	0		0	0		0	0		180	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3235	0	0	2957	0	1547	1810	1487	0	1808	0
Flt Permitted		0.694			0.932		0.415				0.558	
Satd. Flow (perm)	0	2258	0	0	2757	0	667	1810	1405	0	1023	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			247				147		7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		463			388			460			306	
Travel Time (s)		12.6			10.6			12.5			8.3	
Confl. Peds. (#/hr)	29		40	40		29	51		54	54		51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	665	0	0	469	0	23	320	147	0	770	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		3			3			2		1	1 2	
Permitted Phases	3			3			2		2	2		
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0	34.0	15.0		
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5			
Act Effect Green (s)		26.5			26.5		29.5	29.5	29.5		46.0	
Actuated g/C Ratio		0.33			0.33		0.37	0.37	0.37		0.58	
v/c Ratio		0.88			0.44		0.09	0.48	0.24		1.07	
Control Delay		37.6			10.9		17.9	22.4	4.4		69.2	
Queue Delay		0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay		37.6			10.9		17.9	22.4	4.4		69.2	
LOS		D			B		B	C	A		E	
Approach Delay		37.6			10.9			16.7			69.2	
Approach LOS		D			B			B			E	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 38.3

Intersection LOS: D

Intersection Capacity Utilization 118.4%

ICU Level of Service H



















Analysis Period (min) 15

Splits and Phases: 2: Marin Blvd & 18th Street



1: Grove Street & 18th Street
NADC Traffic Impact Study

2019 Existing Condition
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	209	48	207	346	232	6	113	13	123	330	43
Future Volume (vph)	84	209	48	207	346	232	6	113	13	123	330	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3297	0	0	3202	0	1652	1707	0	1652	1705	0
Flt Permitted		0.664			0.743		0.358			0.672		
Satd. Flow (perm)	0	2214	0	0	2408	0	619	1707	0	1160	1705	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			119			8			9	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		890			463			343			321	
Travel Time (s)		24.3			12.6			9.4			8.8	
Confl. Peds. (#/hr)	8		7	7		8	12		10	10		12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	359	0	0	826	0	6	133	0	129	392	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effect Green (s)		41.5			41.5		29.5	29.5		29.5	29.5	
Actuated g/C Ratio		0.52			0.52		0.37	0.37		0.37	0.37	
v/c Ratio		0.31			0.63		0.03	0.21		0.30	0.62	
Control Delay		10.7			16.1		16.7	17.3		20.4	25.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		10.7			16.1		16.7	17.3		20.4	25.3	
LOS		B			B		B	B		C	C	
Approach Delay		10.7			16.1			17.3			24.1	
Approach LOS		B			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 17.4

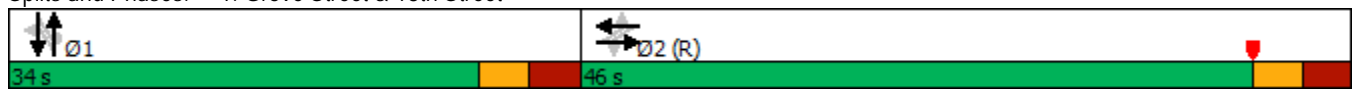
Intersection LOS: B

Intersection Capacity Utilization 128.3%

ICU Level of Service H



















Analysis Period (min) 15

Splits and Phases: 1: Grove Street & 18th Street



2: Marin Blvd & 18th Street NADC Traffic Impact Study

2019 Existing Condition
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	261	20	100	668	321	62	541	90	222	295	54
Future Volume (vph)	64	261	20	100	668	321	62	541	90	222	295	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	9	12	11	13	13	13
Storage Length (ft)	0		0	0		0	0		180	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3351	0	0	3184	0	1593	1863	1531	0	1853	0
Flt Permitted		0.536			0.836		0.437				0.299	
Satd. Flow (perm)	0	1810	0	0	2671	0	711	1863	1488	0	564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			86				95		11	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		463			388			460			306	
Travel Time (s)		12.6			10.6			12.5			8.3	
Confl. Peds. (#/hr)	36		19	19		36	85		20	20		85
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	363	0	0	1146	0	65	569	95	0	602	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		3			3			2		1	1 2	
Permitted Phases	3			3			2		2	2		
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0	34.0	15.0		
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5			
Act Effect Green (s)		26.5			26.5		29.5	29.5	29.5		46.0	
Actuated g/C Ratio		0.33			0.33		0.37	0.37	0.37		0.58	
v/c Ratio		0.60			1.22		0.25	0.83	0.16		1.10	
Control Delay		23.7			132.7		20.8	35.5	4.7		85.2	
Queue Delay		0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay		23.7			132.7		20.8	35.5	4.7		85.2	
LOS		C			F		C	D	A		F	
Approach Delay		23.7			132.7			30.2			85.2	
Approach LOS		C			F			C			F	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.22
 Intersection Signal Delay: 82.4
 Intersection Capacity Utilization 128.1%
 Analysis Period (min) 15


Intersection LOS: F
 ICU Level of Service H

Splits and Phases: 2: Marin Blvd & 18th Street



1: Grove Street & 18th Street
NADC Traffic Impact Study

2026 No Build Condition
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔		↔	↔	
Traffic Volume (vph)	103	370	75	63	145	58	5	53	13	241	471	25
Future Volume (vph)	103	370	75	63	145	58	5	53	13	241	471	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	150		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3213	0	0	3159	0	1604	1632	0	1604	1674	0
Flt Permitted		0.817			0.751		0.195			0.710		
Satd. Flow (perm)	0	2648	0	0	2400	0	328	1632	0	1185	1674	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			63			14			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		890			463			343			321	
Travel Time (s)		24.3			12.6			9.4			8.8	
Confl. Peds. (#/hr)	3		5	5		3	12		16	16		12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	596	0	0	289	0	5	72	0	262	539	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effect Green (s)		41.5			41.5		29.5	29.5		29.5	29.5	
Actuated g/C Ratio		0.52			0.52		0.37	0.37		0.37	0.37	
v/c Ratio		0.43			0.23		0.04	0.12		0.60	0.87	
Control Delay		12.4			10.4		17.6	14.7		27.5	40.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		12.4			10.4		17.6	14.7		27.5	40.5	
LOS		B			B		B	B		C	D	
Approach Delay		12.4			10.4			14.9			36.2	
Approach LOS		B			B			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 23.0

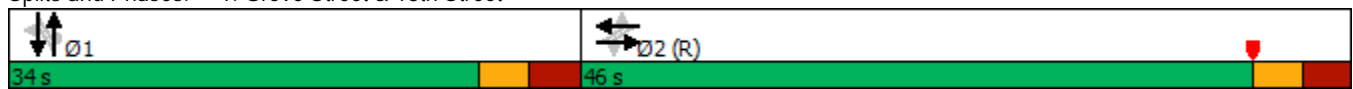
Intersection LOS: C

Intersection Capacity Utilization 104.3%

ICU Level of Service G



















Analysis Period (min) 15

Splits and Phases: 1: Grove Street & 18th Street



2: Marin Blvd & 18th Street NADC Traffic Impact Study

2026 No Build Condition
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	447	46	33	197	243	22	299	145	336	344	47
Future Volume (vph)	131	447	46	33	197	243	22	299	145	336	344	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	9	12	11	13	13	13
Storage Length (ft)	0		0	0		0	0		180	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3234	0	0	2955	0	1547	1810	1487	0	1806	0
Flt Permitted		0.672			0.847		0.407				0.546	
Satd. Flow (perm)	0	2186	0	0	2507	0	654	1810	1401	0	1000	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			264				158		7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		463			388			460			306	
Travel Time (s)		12.6			10.6			12.5			8.3	
Confl. Peds. (#/hr)	31		43	43		31	54		57	57		54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	678	0	0	514	0	24	325	158	0	790	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		3			3			2		1	1 2	
Permitted Phases	3			3			2		2	2		
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0	34.0	15.0		
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5			
Act Effect Green (s)		26.5			26.5		29.5	29.5	29.5		46.0	
Actuated g/C Ratio		0.33			0.33		0.37	0.37	0.37		0.58	
v/c Ratio		0.93			0.51		0.10	0.49	0.26		1.11	
Control Delay		43.9			12.0		18.0	22.5	4.3		84.6	
Queue Delay		0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay		43.9			12.0		18.0	22.5	4.3		84.6	
LOS		D			B		B	C	A		F	
Approach Delay		43.9			12.0			16.6			84.6	
Approach LOS		D			B			B			F	

Intersection Summary

Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 44.7	Intersection LOS: D
Intersection Capacity Utilization 119.4%	ICU Level of Service H
Analysis Period (min) 15	


Splits and Phases: 2: Marin Blvd & 18th Street



1: Grove Street & 18th Street
NADC Traffic Impact Study

2026 No Build Condition

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↘		↗	↘	
Traffic Volume (vph)	86	213	53	211	355	236	7	115	13	125	336	44
Future Volume (vph)	86	213	53	211	355	236	7	115	13	125	336	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	150		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3288	0	0	3200	0	1652	1707	0	1652	1704	0
Flt Permitted		0.654			0.738		0.349			0.671		
Satd. Flow (perm)	0	2175	0	0	2390	0	603	1707	0	1156	1704	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			118			8			9	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		890			463			343			321	
Travel Time (s)		24.3			12.6			9.4			8.8	
Confl. Peds. (#/hr)	10		9	9		10	15		13	13		15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	371	0	0	844	0	7	135	0	132	400	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effect Green (s)		41.5			41.5		29.5	29.5		29.5	29.5	
Actuated g/C Ratio		0.52			0.52		0.37	0.37		0.37	0.37	
v/c Ratio		0.32			0.65		0.03	0.21		0.31	0.63	
Control Delay		10.8			16.3		16.9	17.4		20.6	25.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		10.8			16.3		16.9	17.4		20.6	25.7	
LOS		B			B		B	B		C	C	
Approach Delay		10.8			16.3			17.3			24.4	
Approach LOS		B			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 17.6

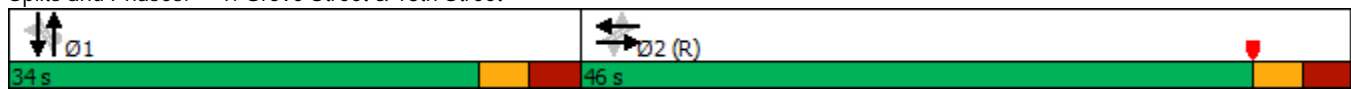
Intersection LOS: B

Intersection Capacity Utilization 128.3%

ICU Level of Service H



















Analysis Period (min) 15

Splits and Phases: 1: Grove Street & 18th Street



2: Marin Blvd & 18th Street NADC Traffic Impact Study

2026 No Build Condition
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	266	21	114	680	334	66	550	111	237	300	56
Future Volume (vph)	65	266	21	114	680	334	66	550	111	237	300	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	9	12	11	13	13	13
Storage Length (ft)	0		0	0		0	0		180	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3349	0	0	3179	0	1593	1863	1531	0	1851	0
Flt Permitted		0.526			0.816		0.428				0.272	
Satd. Flow (perm)	0	1776	0	0	2602	0	696	1863	1484	0	513	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			87				117			11
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		463			388			460			306	
Travel Time (s)		12.6			10.6			12.5			8.3	
Confl. Peds. (#/hr)	39		22	22		39	89		23	23		89
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	370	0	0	1188	0	69	579	117	0	624	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		3			3			2		1	1 2	
Permitted Phases	3			3			2		2	2		
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0	34.0	15.0		
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5			
Act Effect Green (s)		26.5			26.5		29.5	29.5	29.5		46.0	
Actuated g/C Ratio		0.33			0.33		0.37	0.37	0.37		0.58	
v/c Ratio		0.62			1.29		0.27	0.84	0.19		1.19	
Control Delay		24.2			164.3		21.3	36.7	4.5		119.7	
Queue Delay		0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay		24.2			164.3		21.3	36.7	4.5		119.7	
LOS		C			F		C	D	A		F	
Approach Delay		24.2			164.3			30.4			119.7	
Approach LOS		C			F			C			F	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 102.5
 Intersection Capacity Utilization 131.0%
 Analysis Period (min) 15



















Intersection LOS: F
 ICU Level of Service H

Splits and Phases: 2: Marin Blvd & 18th Street



1: Grove Street & 18th Street
NADC Traffic Impact Study

2026 Build Condition
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	378	75	69	147	58	5	53	14	242	471	25
Future Volume (vph)	103	378	75	69	147	58	5	53	14	242	471	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	150		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3216	0	0	3161	0	1604	1628	0	1604	1673	0
Flt Permitted		0.816			0.734		0.195			0.709		
Satd. Flow (perm)	0	2646	0	0	2347	0	328	1628	0	1182	1673	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			63			15			4	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		198			243			343			321	
Travel Time (s)		5.4			6.6			9.4			8.8	
Confl. Peds. (#/hr)	6		8	8		6	15		18	18		15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	605	0	0	298	0	5	73	0	263	539	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effect Green (s)		41.5			41.5		29.5	29.5		29.5	29.5	
Actuated g/C Ratio		0.52			0.52		0.37	0.37		0.37	0.37	
v/c Ratio		0.44			0.24		0.04	0.12		0.60	0.87	
Control Delay		12.5			10.4		17.6	14.6		27.6	40.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		12.5			10.4		17.6	14.6		27.6	40.5	
LOS		B			B		B	B		C	D	
Approach Delay		12.5			10.4			14.7			36.3	
Approach LOS		B			B			B			D	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 22.9

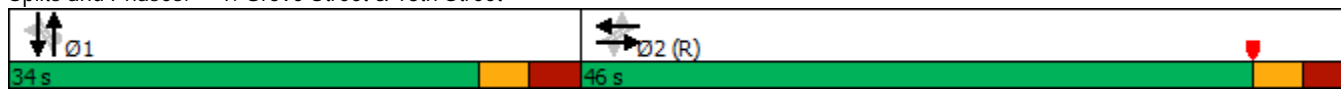
Intersection LOS: C

Intersection Capacity Utilization 104.3%

ICU Level of Service G



















Analysis Period (min) 15

Splits and Phases: 1: Grove Street & 18th Street



2: Marin Blvd & 18th Street NADC Traffic Impact Study

2026 Build Condition
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	447	47	33	198	243	25	299	145	336	344	48
Future Volume (vph)	131	447	47	33	198	243	25	299	145	336	344	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	9	12	11	13	13	13
Storage Length (ft)	0		0	0		0	0		180	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3233	0	0	2948	0	1547	1810	1487	0	1805	0
Flt Permitted		0.671			0.846		0.407				0.546	
Satd. Flow (perm)	0	2181	0	0	2498	0	653	1810	1398	0	1000	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			264				158		7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		220			388			460			306	
Travel Time (s)		6.0			10.6			12.5			8.3	
Confl. Peds. (#/hr)	34		45	45		34	56		60	60		56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	679	0	0	515	0	27	325	158	0	791	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		3			3			2		1	1 2	
Permitted Phases	3			3			2		2	2		
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0	34.0	15.0		
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5			
Act Effect Green (s)		26.5			26.5		29.5	29.5	29.5		46.0	
Actuated g/C Ratio		0.33			0.33		0.37	0.37	0.37		0.58	
v/c Ratio		0.93			0.51		0.11	0.49	0.26		1.11	
Control Delay		44.6			12.1		18.3	22.5	4.3		85.2	
Queue Delay		0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay		44.6			12.1		18.3	22.5	4.3		85.2	
LOS		D			B		B	C	A		F	
Approach Delay		44.6			12.1			16.6			85.2	
Approach LOS		D			B			B			F	

Intersection Summary

Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 45.0	Intersection LOS: D
Intersection Capacity Utilization 119.5%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Marin Blvd & 18th Street



4: 650 Grove Driveway & 18th Street
NADC Traffic Impact Study

2026 Build Condition
AM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	624	10	4	267	8	1
Future Vol, veh/h	624	10	4	267	8	1
Conflicting Peds, #/hr	0	99	99	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	678	11	4	290	9	1








Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	788	0	936	444
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	808	-	258	553
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	732	-	232	501
Mov Cap-2 Maneuver	-	-	-	-	232	-
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	844	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	20.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	247	-	-	732	-
HCM Lane V/C Ratio	0.04	-	-	0.006	-
HCM Control Delay (s)	20.2	-	-	9.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

1: Grove Street & 18th Street
NADC Traffic Impact Study

2026 Build Condition
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	218	53	218	357	236	7	115	14	126	336	44
Future Volume (vph)	86	218	53	218	357	236	7	115	14	126	336	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	10	10	10	10	10	10
Storage Length (ft)	0		0	0		0	150		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3290	0	0	3198	0	1652	1704	0	1652	1704	0
Flt Permitted		0.653			0.734		0.349			0.670		
Satd. Flow (perm)	0	2173	0	0	2374	0	603	1704	0	1153	1704	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			115			9			9	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		198			243			343			321	
Travel Time (s)		5.4			6.6			9.4			8.8	
Confl. Peds. (#/hr)	13		12	12		13	18		15	15		18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	376	0	0	853	0	7	136	0	133	400	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			1			1	
Permitted Phases	2			2			1			1		
Total Split (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Act Effect Green (s)		41.5			41.5		29.5	29.5		29.5	29.5	
Actuated g/C Ratio		0.52			0.52		0.37	0.37		0.37	0.37	
v/c Ratio		0.33			0.66		0.03	0.21		0.31	0.63	
Control Delay		10.9			16.5		16.9	17.3		20.6	25.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		10.9			16.5		16.9	17.3		20.6	25.7	
LOS		B			B		B	B		C	C	
Approach Delay		10.9			16.5			17.2			24.4	
Approach LOS		B			B			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 17.7

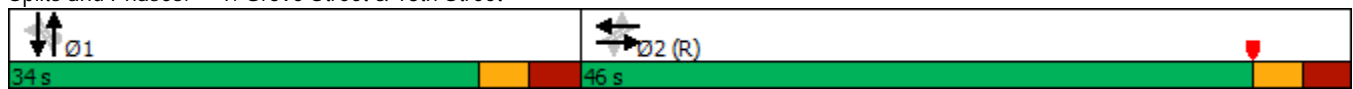
Intersection LOS: B

Intersection Capacity Utilization 128.3%

ICU Level of Service H



















Analysis Period (min) 15

Splits and Phases: 1: Grove Street & 18th Street



2: Marin Blvd & 18th Street NADC Traffic Impact Study

2026 Build Condition
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	267	22	114	681	334	67	550	111	237	300	56
Future Volume (vph)	65	267	22	114	681	334	67	550	111	237	300	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	9	12	11	13	13	13
Storage Length (ft)	0		0	0		0	0		180	0		0
Storage Lanes	0		0	0		0	1		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3348	0	0	3175	0	1593	1863	1531	0	1851	0
Flt Permitted		0.526			0.815		0.428				0.272	
Satd. Flow (perm)	0	1775	0	0	2595	0	695	1863	1480	0	513	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			86				117			11
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		220			388			460			306	
Travel Time (s)		6.0			10.6			12.5			8.3	
Confl. Peds. (#/hr)	42		25	25		42	92		26	26		92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	372	0	0	1189	0	71	579	117	0	624	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		3			3			2		1	1 2	
Permitted Phases	3			3			2		2	2		
Total Split (s)	31.0	31.0		31.0	31.0		34.0	34.0	34.0	15.0		
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5			
Act Effect Green (s)		26.5			26.5		29.5	29.5	29.5		46.0	
Actuated g/C Ratio		0.33			0.33		0.37	0.37	0.37		0.58	
v/c Ratio		0.63			1.30		0.28	0.84	0.19		1.19	
Control Delay		24.4			166.6		21.5	36.7	4.5		119.7	
Queue Delay		0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay		24.4			166.6		21.5	36.7	4.5		119.7	
LOS		C			F		C	D	A		F	
Approach Delay		24.4			166.6			30.4			119.7	
Approach LOS		C			F			C			F	

Intersection Summary

Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 103.4	Intersection LOS: F
Intersection Capacity Utilization 131.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 2: Marin Blvd & 18th Street



4: 650 Grove Driveway & 18th Street
NADC Traffic Impact Study

2026 Build Condition
PM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑	
Traffic Vol, veh/h	352	5	3	801	9	2
Future Vol, veh/h	352	5	3	801	9	2
Conflicting Peds, #/hr	0	72	72	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	371	5	3	843	9	2

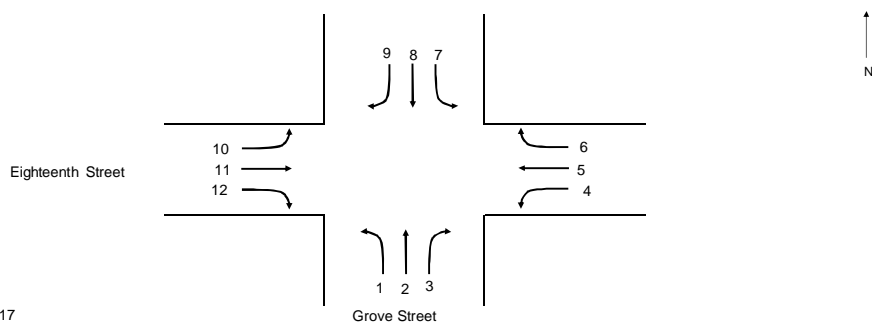
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	448	0	874	260
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	428	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1109	-	289	739
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	625	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1033	-	268	688
Mov Cap-2 Maneuver	-	-	-	-	268	-
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	301	-	-	1033	-
HCM Lane V/C Ratio	0.038	-	-	0.003	-
HCM Control Delay (s)	17.4	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

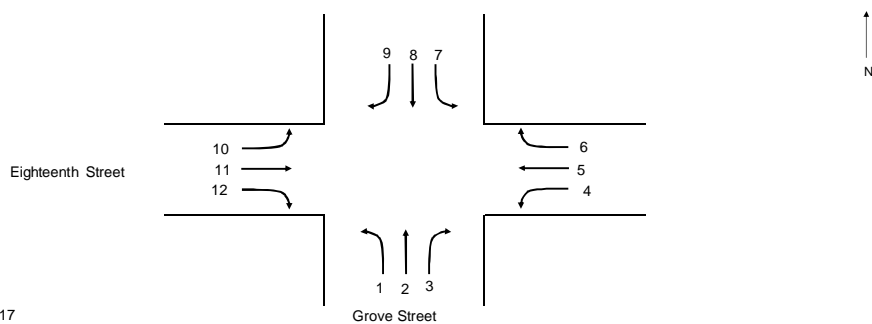
APPENDIX B

Turning Movement Counts



Date & Day: Wednesday, 2/22/2017
Loc# 2: Grove Street & Eighteenth Street

Time	Class	Movements												
		1	2	3	4	5	6	7	8	9	10	11	12	
7:00 AM to 7:15 AM	Autos	0	13	3	6	21	11	25	99	2	12	64	16	
	Truck	0	0	0	0	2	1	0	2	0	0	4	0	
	Buses	0	0	0	0	0	0	1	0	0	1	2	0	
7:15 AM to 7:30 AM	Autos	0	7	1	12	22	10	34	107	2	20	58	16	
	Truck	0	0	0	0	3	2	1	0	0	0	2	0	
	Buses	0	0	0	0	2	3	0	3	0	0	1	0	
7:30 AM to 7:45 AM	Autos	0	8	0	12	20	12	23	125	7	25	71	12	
	Truck	0	0	0	0	3	1	1	2	0	0	9	0	
	Buses	0	0	0	1	1	0	0	3	0	2	1	0	
7:45 AM to 8:00 AM	Autos	0	15	2	15	16	7	29	126	6	31	80	15	
	Truck	0	0	0	0	2	0	0	1	0	0	2	1	
	Buses	0	2	0	3	0	1	0	0	0	1	1	0	
8:00 AM to 8:15 AM	Autos	2	10	6	18	21	14	40	131	6	25	86	18	
	Truck	0	1	0	1	4	0	1	0	0	0	3	3	
	Buses	0	0	0	3	0	1	2	0	1	1	1	0	
8:15 AM to 8:30 AM	Autos	0	7	4	10	30	4	46	126	3	17	67	17	
	Truck	0	0	0	1	0	3	1	1	0	1	3	0	
	Buses	0	0	0	1	1	2	0	0	0	0	1	0	
8:30 AM to 8:45 AM	Autos	0	10	0	8	31	10	62	83	4	26	66	8	
	Truck	0	1	0	1	4	0	0	2	2	0	3	1	
	Buses	0	0	0	1	0	0	0	0	0	1	2	0	
8:45 AM to 9:00 AM	Autos	2	18	1	10	32	14	56	76	6	18	87	13	
	Truck	0	0	0	0	2	2	0	0	0	1	0	1	
	Buses	0	0	0	1	0	0	0	0	0	1	0	1	



Date & Day: Wednesday, 2/22/2017
Loc# 2: Grove Street & Eighteenth Street

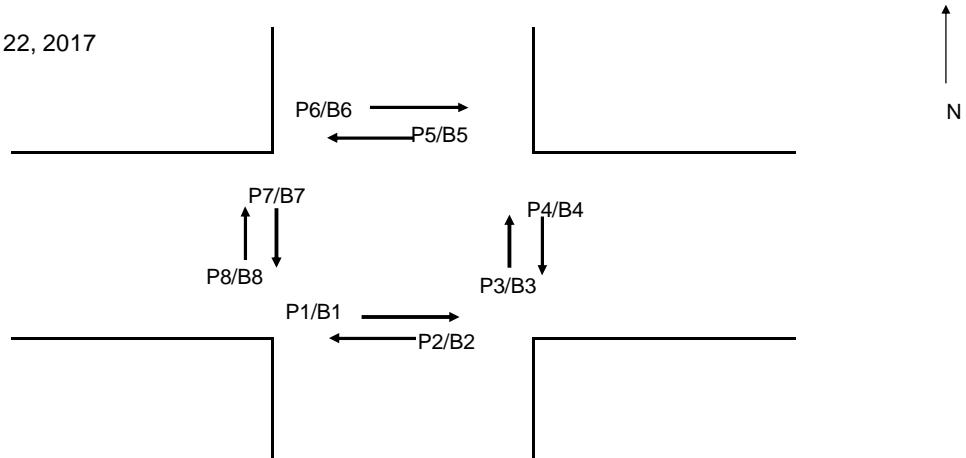
4:00 PM to 4:15 PM	Autos	1	18	1	54	64	27	23	60	8	20	45	7	
	Truck	0	0	0	0	0	1	0	1	0	0	2	0	
	Buses	0	1	0	1	1	0	0	3	1	0	1	0	
4:15 PM to 4:30 PM	Autos	1	19	1	41	68	31	18	73	11	24	41	9	
	Truck	0	0	0	0	2	1	0	0	0	0	2	0	
	Buses	0	0	0	0	0	0	1	0	0	2	1	0	
4:30 PM to 4:45 PM	Autos	2	15	3	44	69	24	31	65	5	32	59	5	
	Truck	0	0	0	0	1	0	1	1	0	2	2	0	
	Buses	0	0	0	0	0	0	0	3	1	1	0	0	
4:45 PM to 5:00 PM	Autos	1	16	4	48	56	34	22	71	7	22	43	8	
	Truck	0	0	1	0	1	1	0	0	0	1	1	1	
	Buses	0	0	0	1	0	0	1	2	0	1	1	0	
5:00 PM to 5:15 PM	Autos	1	21	2	48	63	31	27	68	4	14	53	11	
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	
	Buses	0	0	0	0	1	1	0	0	0	1	1	2	
5:15 PM to 5:30 PM	Autos	2	20	7	61	81	47	30	69	10	18	33	13	
	Truck	0	0	0	0	0	0	0	0	1	0	1	1	
	Buses	0	0	0	0	0	0	0	0	0	1	1	0	
5:30 PM to 5:45 PM	Autos	1	27	2	46	68	56	23	61	12	21	50	5	
	Truck	0	0	0	0	2	0	0	1	0	0	0	0	
	Buses	0	1	0	0	1	0	0	0	1	0	1	0	
5:45 PM to 6:00 PM	Autos	1	30	0	24	82	66	25	90	10	18	37	10	
	Truck	0	1	0	0	2	0	0	1	0	0	0	0	
	Buses	0	0	0	1	0	0	0	1	0	1	1	0	

InfoTran Engineers, PC

Turning Movements/Pedestrian Counts

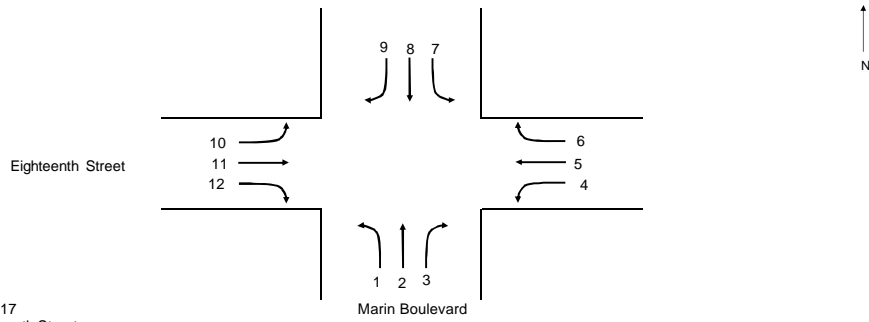
Project: Jersey city

Day & Date: Wednesday 22, 2017



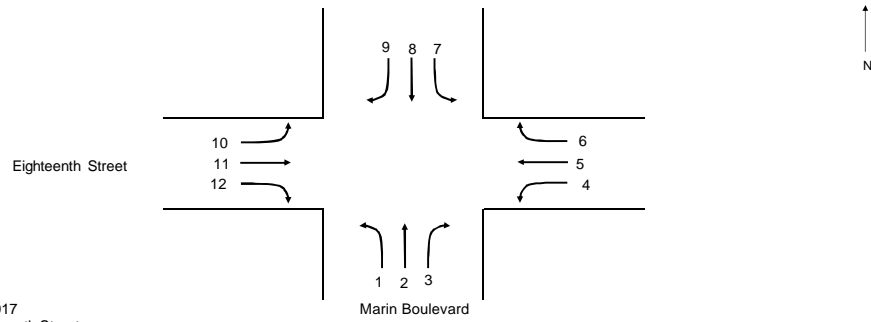
Loc #2: Grove Street & Eighteenth Street

Time		Pedestrian							
		P1	P2	P3	P4	P5	P6	P7	P8
7:00 AM	7:15 AM	0	0	0	0	0	0	2	1
7:15 AM	7:30 AM	0	0	1	0	0	1	0	1
7:30 AM	7:45 AM	0	0	0	0	0	2	0	0
7:45 AM	8:00 AM	0	0	2	1	0	0	0	0
8:00 AM	8:15 AM	1	0	2	4	0	0	1	1
8:15 AM	8:30 AM	0	0	0	0	0	0	0	2
8:30 AM	8:45 AM	0	0	3	3	1	0	1	3
8:45 AM	9:00 AM	0	2	0	0	0	0	0	1
4:00 PM	4:15 PM	1	0	0	4	0	6	0	1
4:15 PM	4:30 PM	1	0	3	0	0	1	0	2
4:30 PM	4:45 PM	0	0	1	0	0	0	1	4
4:45 PM	5:00 PM	1	0	1	2	0	0	0	0
5:00 PM	5:15 PM	2	0	2	1	0	0	0	0
5:15 PM	5:30 PM	2	1	1	0	0	1	0	2
5:30 PM	5:45 PM	0	0	0	3	2	3	2	6
5:45 PM	6:00 PM	1	0	2	0	0	1	0	1



Date & Day: Wednesday, 2/22/2017
Loc# 2: Marin Boulevard & Eighteenth Street

Time	Class	Movements												
		1	2	3	4	5	6	7	8	9	10	11	12	
7:00 AM to 7:15 AM	Autos	6	22	20	2	20	41	40	96	10	25	75	2	
	Truck	1	4	1	0	3	5	0	0	1	0	3	1	
	Buses	0	2	1	0	1	5	0	0	0	2	1	0	
7:15 AM to 7:30 AM	Autos	9	34	26	2	25	41	42	102	12	31	68	1	
	Truck	0	1	0	1	4	2	0	0	0	0	3	0	
	Buses	0	0	1	0	3	2	0	0	0	1	0	0	
7:30 AM to 7:45 AM	Autos	3	34	9	2	20	40	51	87	15	31	55	2	
	Truck	2	1	2	0	1	2	1	2	0	0	7	0	
	Buses	1	4	0	0	1	3	0	0	0	1	0	0	
7:45 AM to 8:00 AM	Autos	4	41	20	3	21	42	47	90	16	42	67	7	
	Truck	0	1	2	0	2	1	0	0	0	0	2	0	
	Buses	0	1	0	0	3	2	1	2	0	1	0	0	
8:00 AM to 8:15 AM	Autos	6	32	27	2	31	41	72	80	14	42	92	13	
	Truck	1	1	2	0	4	0	1	1	1	1	1	0	
	Buses	0	1	2	0	3	2	0	0	0	1	0	1	
8:15 AM to 8:30 AM	Autos	3	79	26	2	35	44	76	81	6	26	80	7	
	Truck	0	1	1	1	5	1	0	2	0	0	3	0	
	Buses	0	1	2	0	5	4	0	0	0	1	0	0	
8:30 AM to 8:45 AM	Autos	1	66	30	1	39	55	73	65	12	16	108	7	
	Truck	1	3	1	2	4	0	0	2	0	0	4	0	
	Buses	0	1	1	0	1	4	0	1	0	1	0	0	
8:45 AM to 9:00 AM	Autos	6	76	27	2	41	47	72	73	9	28	109	13	
	Truck	1	1	3	0	4	2	0	1	0	0	0	0	
	Buses	0	4	0	0	3	5	0	0	0	0	0	0	



Date & Day: Wednesday, 2/22/2017
Loc# 2: Marin Boulevard & Eighteenth Street

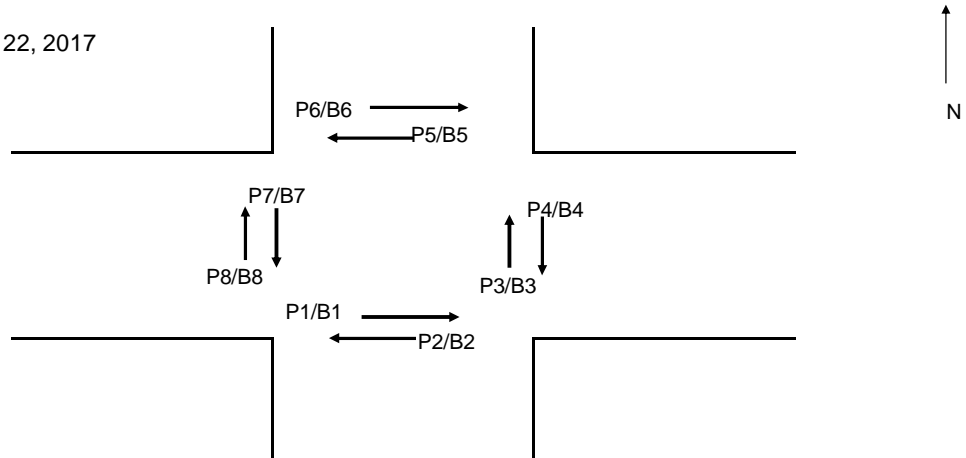
4:00 PM to 4:15 PM	Autos	16	79	13	7	114	54	50	90	31	18	49	4	
	Truck	1	0	0	0	0	0	0	0	0	0	1	0	
	Buses	1	2	0	0	0	0	4	2	1	0	1	0	
4:15 PM to 4:30 PM	Autos	13	83	20	9	116	71	62	81	23	16	40	3	
	Truck	0	1	0	0	0	1	0	1	0	1	1	0	
	Buses	0	0	1	1	0	0	0	0	1	1	1	0	
4:30 PM to 4:45 PM	Autos	13	106	23	10	111	66	56	65	12	19	64	7	
	Truck	0	1	0	0	0	0	0	0	0	0	3	0	
	Buses	0	3	0	0	0	0	0	0	0	0	0	0	
4:45 PM to 5:00 PM	Autos	14	111	27	17	123	57	51	60	10	17	51	7	
	Truck	0	2	0	0	2	0	1	2	0	0	2	0	
	Buses	0	0	1	0	1	1	0	0	0	1	0	0	
5:00 PM to 5:15 PM	Autos	15	128	20	28	130	75	48	57	11	18	66	6	
	Truck	0	3	0	0	1	0	0	2	0	0	0	0	
	Buses	1	4	0	0	1	0	1	0	0	1	0	0	
5:15 PM to 5:30 PM	Autos	17	103	17	23	160	69	47	67	13	12	50	4	
	Truck	0	0	0	0	1	1	2	1	0	0	1	0	
	Buses	0	0	1	0	0	0	0	2	1	1	0	0	
5:30 PM to 5:45 PM	Autos	14	122	21	17	150	71	53	70	9	14	64	3	
	Truck	1	1	0	0	1	0	0	1	2	0	0	0	
	Buses	0	2	1	0	0	2	3	2	0	1	0	0	
5:45 PM to 6:00 PM	Autos	7	114	18	19	145	64	41	56	10	9	49	4	
	Truck	0	0	1	0	0	0	1	1	0	0	0	1	
	Buses	0	0	0	1	0	1	0	1	2	0	0	0	

InfoTran Engineers, PC

Turning Movements/Pedestrian Counts

Project: Jersey city

Day & Date: Wednesday 22, 2017



Loc #3: Marin Boulevard & Eighteenth Street

Time		Pedestrian							
		P1	P2	P3	P4	P5	P6	P7	P8
7:00 AM	7:15 AM	0	0	0	1	0	0	0	0
7:15 AM	7:30 AM	1	2	4	3	0	0	1	1
7:30 AM	7:45 AM	1	0	2	4	0	0	1	0
7:45 AM	8:00 AM	3	0	2	1	1	0	3	0
8:00 AM	8:15 AM	4	3	6	8	3	2	2	3
8:15 AM	8:30 AM	8	6	5	11	6	3	4	3
8:30 AM	8:45 AM	2	2	3	2	4	3	11	2
8:45 AM	9:00 AM	5	6	6	8	3	2	12	9
4:00 PM	4:15 PM	3	1	1	2	0	1	3	1
4:15 PM	4:30 PM	2	3	3	2	0	0	5	0
4:30 PM	4:45 PM	1	2	0	1	2	0	1	3
4:45 PM	5:00 PM	0	0	1	2	0	1	2	1
5:00 PM	5:15 PM	2	3	4	2	4	5	8	9
5:15 PM	5:30 PM	1	4	5	3	2	3	10	11
5:30 PM	5:45 PM	0	5	1	0	4	6	13	12
5:45 PM	6:00 PM	0	2	0	3	3	5	5	7