



MEMORANDUM

Date: December 11, 2013

To: Brian Silveira

From: Tamar Fuhrer, AICP and Anjum Bawa, AICP

Subject: *Transportation Assessment of 1414 Main Street*

LA13-2628.00

This memorandum presents a transportation assessment Fehr & Peers conducted for the proposed mixed-use residential/commercial project located at 1414 Main Street in the Venice community of Los Angeles, California. This memorandum is presented in seven sections. First, the project and land use is described. Next, the trip generation forecasts are presented, followed by a discussion on site access and trip distribution. The traffic assessment and impact analysis is then presented. After this, cut-through traffic on Toledo Court is discussed. Finally, the results of this analysis are summarized.

PROJECT DESCRIPTION

The proposed project is located at 1414 Main Street in the Venice community of Los Angeles, California. The project is situated at the corner of Horizon Avenue & Main Street. The project would replace two existing apartment buildings, totaling 10 units, and two existing single-family homes. The new project would be a combination of residential and retail land use as follows:

- 26 condominium units
- 1,184 square feet of retail use
- 4,567 square feet of restaurant use

Additionally, there are 861 square feet of space that will be held for community use. Activities taking place in this space will be held outside of peak hours. The parking proposed for this project will be composed of an automated parking facility with 242 spaces, which will be accessible from the adjacent alley. Figure 1 shows a conceptual site plan.

TRIP GENERATION

Trip generation rates adopted in the Coastal Transportation Corridor Specific Plan (City of Los Angeles) and rates recommended in *Trip Generation, 9th Edition* (Institute of Transportation Engineers [ITE], 2012), were used to estimate trips for the proposed residential component. Pass-by trip credit was applied to the commercial components of the project, per *Traffic Impact Study Guidelines* (City of Los Angeles, May 2012). Internal trip capture credit was also applied to the commercial uses to account for trips that are expected to occur within proposed new components, without external vehicle trips being generated.



As shown in Table 1, the project is expected to generate 421 net daily trips, including nine trips during the AM peak hour, and 40 trips during the PM peak hour.

SITE ACCESS

The project's proposed vehicular access is consistent with Section 10.F.5(a) of the Venice Coastal Specific Plan (adopted December 2, 2003), which states:

Driveways and vehicular access to the Venice Coastal Development Projects shall be provided from alleys, unless the Department of Transportation determines that it is not Feasible.

Vehicular access to the project will be from the alley adjacent to the project site, which runs parallel to Main Street. Motorists will be able to enter the alley via Horizon Avenue or Market Street depending on their direction of approach. Horizon Avenue is a one-way street with westbound access only, so motorists traveling on Main Street will likely use Market Street to access the project parking. During egress, motorists will be able to use both Horizon Avenue and Market Street to turn onto Main Street.

TRIP DISTRIBUTION ON ADJACENT STREETS AND INTERSECTIONS

Using the aforementioned information regarding available access from adjacent streets, trips associated with the project were distributed through the adjacent street network using the following sub-regional distribution:

- North – 30%
- South – 20%
- West – 10%
- East – 40%

Figure 2 shows distribution of project trips on adjacent streets. As shown, a maximum of 18 trips are expected to be added during the PM peak hour to the intersection of Main Street & Horizon Street. During the same peak hour, a total of 29 trips are expected to be added to the intersection of Main Street & Market Street.

TRAFFIC ASSESSMENT

Existing Conditions

In conjunction with LADOT staff, the following two signalized intersections were selected for the study:

1. Main Street & Horizon Avenue
2. Main Street & Abbot Kinney Boulevard

Weekday AM and PM peak hour turning movement counts were collected at two study intersections in November 2013. Traffic count sheets are contained in Attachment A.

A variety of standard methodologies are available to analyze LOS. According to *Traffic Study Policies and Procedures*, this study is required to use the Critical Movement Analysis (CMA) method of intersection capacity calculation (Transportation Research Board, 1980) to analyze signalized intersections. The CMA methodology determines the intersection V/C ratio. The V/C ratio is then used to find the corresponding



LOS based on the definitions in Table 2. Under the CMA methodology, a V/C ratio is generated for each study intersection based on factors such as the volume of traffic and the number of lanes providing for such vehicle movement and an LOS grade. LOS worksheets are included in Attachment B.

The City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system is a computer-based traffic signal control system that monitors traffic conditions and system performance to allow ATSAC-operations to manage signal timing to improve traffic flow conditions. The Adaptive Traffic Control System (ATCS) is an enhancement to ATSAC and provides fully traffic-adaptive signal control based on real-time traffic conditions. Both of the study intersections are assumed to be operating under ATSAC under existing conditions, but will be operating under both ATSAC and ATCS by year 2015. In accordance with City of Los Angeles procedures, a credit of 0.07 V/C reduction was applied at each intersection where ATSAC is implemented and an additional 0.03 V/C reduction was applied at each intersection where ATCS is implemented.

Existing Levels of Service

Existing traffic volumes were analyzed using the intersection capacity analysis methodology described above to determine the existing operating conditions at the two study intersections. Table 3 summarizes the results of the analysis of the Existing AM and PM peak hour V/C ratios and corresponding LOS. As indicated, both intersections operate at LOS A during both analyzed peak hours.

Existing plus Project Traffic Conditions

The project traffic presented in Figure 2 was added to existing traffic volumes to estimate Existing plus Project traffic volumes.

Existing plus Project Levels of Service

Existing plus Project traffic volumes were analyzed using the methodology described above to determine the operating conditions at the two study intersections with the addition of project traffic. Table 4 summarizes the results of the analysis of the Existing plus Project AM and PM peak hour V/C ratios and corresponding LOS. As indicated, both intersections operate at LOS A during both peak hours.

Future Base Traffic Conditions

To evaluate the potential impacts of the proposed project under future (Year 2015) conditions, it was necessary to develop estimates of future traffic conditions in the area both without and with project traffic. First, estimates of traffic growth were developed for the study area to forecast future conditions without the project. These projected traffic volumes, identified herein as the cumulative base conditions, represent the future year conditions without the proposed project.

Based on historic trends and at the direction of LADOT, it was established that a growth factor of 2% per year for a total of 4% for two year be applied to adjust the existing year traffic volumes to reflect the effects of local and regional growth in traffic by year 2015.

Additionally, per direction from LADOT, the full ATSAC/ATCS system installation will be complete in the area by year 2015; as such, a credit of 0.10 was applied to the study intersections under both future base and "plus project" conditions.



Future Base Levels of Service

Future base (Year 2015) traffic volumes were analyzed using the intersection capacity analysis methodology described above to determine the existing operating conditions at the two study intersections. Table 5 summarizes the results of the analysis of the Future Base AM and PM peak hour V/C ratios and corresponding LOS. As indicated, both intersections operate at LOS A during both peak hours.

Future plus Project Traffic Conditions

The project traffic presented in Figure 2 was added to future base traffic volumes to estimate future plus project conditions.

Future plus Project Levels of Service

Future plus Project traffic volumes were analyzed using the methodology described above to determine the existing operating conditions at the two study intersections. Table 6 summarizes the results of the analysis of the Future plus Project AM and PM peak hour V/C ratios and corresponding LOS. As indicated, both intersections operate at LOS A during both peak hours.

Impact Analysis

The traffic impact analysis compares the V/C ratios and LOS results at each study intersection under both existing and future conditions without and with the addition of project trips to estimate the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significance criteria established by LADOT.

Criteria for Determination of Significant Traffic Impact

The City of Los Angeles has established threshold criteria to determine significant traffic impact of a proposed Project in its jurisdiction. Under the LADOT guidelines, an intersection would be significantly impacted with an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, and equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of project traffic. Intersections operating at LOS A or B after the addition of the project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

LOS	Final V/C Ratio	Project Related Increase in V/C
C	>0.700 - 0.800	equal to or greater than 0.040
D	> 0.800 - 0.900	equal to or greater than 0.020
E or F	> 0.900	equal to or greater than 0.010



Existing plus Project Impact Analysis

As mentioned, all intersections operate at LOS A under both Existing and Existing plus Project conditions. As such, the project will not create any significant impacts at study intersections.

Future plus Project Impact Analysis

As mentioned, all intersections operate at LOS A under both Future and Future plus Project conditions. As such, the project will not create any significant impacts at study intersections.

NEIGHBORHOOD IMPACT ANALYSIS

In addition to Horizon Avenue and Market Place, the project site can be accessed using Toledo Court and turning onto the alley where the project driveway is located. Toledo Court functions as an alley providing access to garages and driveways for homes along this road. Toledo court is a narrow street with and intended for through traffic for land uses along the alley.

Traffic counts along Toledo Court were conducted during weekday evening peak period (4:00 to 6:00 PM) in December 2013. Vehicles using Toledo Court were counted to determine the number of "through" trips. Additionally, vehicles using the alley were counted to determine the number of "through" alley trips.

As shown in Table 7, Toledo Court and the adjacent alley have low peak hour traffic: 16 vehicles were observed using the two roadways over the course of two hours. Over that time, only one trip was a "through" trip on Toledo Court. As such, the project does not forecast that users will be accessing the site from Toledo Court, as users along this roadway were observed to solely be residents of Toledo Court.

SUMMARY

The 1414 Main Project plans to provide a mixed-use residential, restaurant, and retail development at the southeast corner of Horizon Avenue and Main Street. The project is estimated to generate a net total of 9 AM and 40 PM peak hour trips. The two closest signalized intersections operate at an acceptable LOS A during both peak hours and are forecasted to continue to operate at LOS A with the addition of project traffic under both Existing and Future Year (2015) conditions. Additionally, observations were held during the peak hour to determine whether Toledo Court would be a potential cut-through route. As observed, it is not anticipated that users would access the site via Toledo Court. As such, there are no significant impacts associated with the project.

TABLE 1
TRIP GENERATION

Land Use	Size	Daily Trip	Daily Trips	AM Trip Generation			PM Trip Generation			AM Trips			PM Trips		
				Rate	In%	Out%	Rate	In%	Out%	Total	In	Out	Total	In	Out
Proposed Land Use ^{1,2}															
Condominiums	26	5.81	151	0.44	17%	83%	0.7	67%	33%	11	2	9	18	12	6
Retail	1.184	42.7	51	0.96	62%	38%	14.6	48%	52%	1	1	0	17	8	9
Internal Capture ³			(5)							0	0	0	(2)	(1)	(1)
Pass-by ⁴			(23)							0	0	0	(7)	(3)	(4)
Net external retail			23							1	1	0	8	4	4
Restaurant	4.567	89.95	411	0.81	55%	45%	6.1	67%	33%	4	2	2	28	19	9
Internal Capture			(41)							0	0	0	(3)	(2)	(1)
Pass-by			(37)							0	0	0	(3)	(2)	(1)
Net external restaurant			333							4	2	2	22	15	7
Total			507							16	5	11	48	31	17
Existing Land Use															
Apartments	10	6.65	67	0.51	20%	80%	0.7	20%	80%	5	1	4	7	1	6
Single Family Residential	2	9.52	19	0.75	25%	75%	0.7	63%	37%	2	1	1	1	1	0
Total Existing Use Credit			86							7	2	5	8	2	6
Net New Trips			421							9	3	6	40	29	11

Notes:

¹ *Trip Generation (9th Ed.)*, Institute of Transportation Engineers (ITE), 2012 was used for AM and Daily rates. Rate 230 for condominiums; 220 for apartments; 210 for single family dwelling units, rate 820 for retail, and rate 931 for restaurants.

² The Trip Generation rate from the Coastal Transportation Corridor Specific Plan (City of Los Angeles), 2004 was used for the PM peak hour for the proposed land use. The specific rate used was “shopping center less than 30,000 square feet” for retail and “low turnover” for restaurant, and “multi-story apartments, condominiums, townhomes or single-family housing” for apartments, condos, and single family residential.

³Internal capture represents the percentage of trips between land uses that occur within the site. This percentage is informed by the Multi-Use Trip Generation Calculation methodology described in Chapter 7 of the ITE *Trip Generation Handbook*, 2nd Edition, 2004. Internalization percentages are derived from NCHRP Project 8-51 as described in “Improved Estimation for Internal Capture for Mixed-Use Developments,” *ITE Journal*, August 2010. For retail land use a 10% internal capture credit was applied.

⁴ Pass-by reduction of 50% per City of Los Angeles Traffic Study Guidelines (Los Angeles Department of Transportation, May 2012), Appendix H for Shopping Center less than 50,000 square feet for retail and 10% for restaurant.

TABLE 2
LEVEL OF SERVICE DEFINITIONS
FOR SIGNALIZED INTERSECTIONS

Level of Service	Intersection Capacity Utilization	Definition
A	0.000-0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	0.601-0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701-0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801-0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901-1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*,
Transportation Research Board, 1980.

TABLE 3
EXISTING (YEAR 2013) INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection	Peak Hour	Existing Base Year (Year 2013)	
		V/C	LOS
1. Main Street Horizon Avenue	AM	0.093	A
	PM	0.124	A
2. Main Street Abbot Kinney Blvd	AM	0.450	A
	PM	0.364	A

Notes:

Intersections analyzed using City of Los Angeles (CMA) methodology

Intersections are currently operating under ATSAC system.

TABLE 4
EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection	Peak Hour	Existing Base		Existing plus Project		Project Increase in V/C	Significant Project Impact
		V/C or Delay	LOS	V/C or Delay	LOS		
1. Main Street Horizon Avenue	AM	0.093	A	0.094	A	0.001	NO
	PM	0.124	A	0.130	A	0.006	NO
2. Main Street Abbot Kinney Blvd	AM	0.450	A	0.451	A	0.001	NO
	PM	0.364	A	0.367	A	0.003	NO

Notes:

Intersections analyzed using City of Los Angeles (CMA) methodology

Intersections are currently operating under ATSAC system.

TABLE 5
FUTURE YEAR (YEAR 2015) INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection	Peak Hour	Future Year (Year 2015)	
		V/C	LOS
1. Main Street Horizon Avenue	AM	0.074	A
	PM	0.099	A
2. Main Street Abbot Kinney Blvd	AM	0.441	A
	PM	0.351	A

Notes:

Intersections analyzed using City of Los Angeles (CMA) methodology

Intersections are planned to operate under ATSAC and ATCS systems by year 2015.

TABLE 6
FUTURE YEAR (2015) PLUS PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection	Peak Hour	Future Base		Future plus Project		Project Increase in V/C	Significant Project Impact
		V/C or Delay	LOS	V/C or Delay	LOS		
1. Main Street Horizon Avenue	AM	0.074	A	0.075	A	0.001	NO
	PM	0.099	A	0.107	A	0.008	NO
2. Main Street Abbot Kinney Blvd	AM	0.441	A	0.442	A	0.001	NO
	PM	0.351	A	0.354	A	0.003	NO

Notes:

Intersections analyzed using City of Los Angeles (CMA) methodology

Intersections are planned to operate under ATSAC and ATCS systems by year 2015.

TABLE 7
VEHICULAR TRAFFIC USING TOLEDO COURT
WEEKDAY EVENING PEAK HOURS (4:00-6:00 PM)

Origin	Destination	Used Toledo Court?	Used Alley?	Total Vehicles	Cut Through Trips	Local Trips
Toledo Court (Eastbound)	Riviera Avenue (Northbound)	Yes	No	1	0	1
Toledo Court (Eastbound)	Riviera Avenue (Southbound)	Yes	No	2	0	2
Toledo Court (Westbound)	Market Street (Eastbound)	Yes	Yes	1	0	1
Toledo Court (Westbound)	Horizon Avenue (Westbound)	Yes	Yes	3	0	3
Alley (Northbound)	Horizon Avenue (Westbound)	No	Yes	2	0	2
Alley (Southbound)	Market Street (Westbound)	No	Yes	1	0	1
Riviera Avenue (Southbound)	Toledo Court (Eastbound)	Yes	No	1	0	1
Riviera Avenue (Southbound)	Garage at "T" of Alley/Toledo Court	Yes	Yes	1	0	1
Horizon Avenue (Westbound)	Toledo Court (Eastbound)	Yes	Yes	1	0	1
Horizon Avenue (Westbound)	Market Street (Eastbound)	No	Yes	1	1	0
Market Street (Eastbound)	Toledo Court (Eastbound)	Yes	Yes	2	0	2
Total Vehicles Observed				16		
Total Trips Using Toledo Court				12		
Total Trips Using Alley				12		
Total Cut-Through Trips				1		
Total Local Trips				15		

**ATTACHMENT A:
TRAFFIC COUNTS**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-5586-001

Day: Tuesday

City: Venice

TOTALS

Date: 11/5/2013

AM

NS/EW Streets:		Main St			Main St			Abbott Kinney Blvd_Brooks Ct			Abbott Kinney Blvd_Brooks Ct			
NORTHBOUND						SOUTHBOUND			EASTBOUND			WESTBOUND		
LANES:		NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL
7:00 AM		4	66	4	20	18	2	3	14	1	4	23	85	244
7:15 AM		7	64	6	22	20	2	1	14	1	0	19	86	242
7:30 AM		1	108	9	13	22	1	7	18	6	5	32	125	347
7:45 AM		5	109	15	31	28	2	9	20	3	4	30	104	360
8:00 AM		2	93	18	39	34	2	8	35	3	7	25	113	379
8:15 AM		1	82	17	35	35	4	3	24	1	2	33	120	357
8:30 AM		1	95	3	33	34	2	5	26	2	4	38	133	376
8:45 AM		3	102	12	27	29	2	5	31	0	3	39	105	358
9:00 AM		1	94	5	42	42	4	2	28	3	5	26	105	357
9:15 AM		1	81	4	42	37	4	2	21	2	6	21	114	335
9:30 AM		3	71	11	42	49	3	4	24	3	3	27	94	334
9:45 AM		2	70	5	35	36	1	3	28	6	3	21	89	299
TOTAL VOLUMES :		31	1035	109	381	384	29	52	283	31	46	334	1273	3988
APPROACH %'s :		2.64%	88.09%	9.28%	47.98%	48.36%	3.65%	14.21%	77.32%	8.47%	2.78%	20.21%	77.01%	
PEAK HR START TIME :		745 AM												TOTAL
PEAK HR VOL :		9	379	53	138	131	10	25	105	9	17	126	470	1472
PEAK HR FACTOR :		0.855			0.930			0.755			0.876			0.971

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-5586-001

Day: Tuesday

City: Venice

TOTALS

Date: 11/5/2013

PM													
NS/EW Streets:	Main St			Main St			Abbott Kinney Blvd_Brooks Ct			Abbott Kinney Blvd_Brooks Ct			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL
3:00 PM	2	56	15	59	73	3	4	23	3	10	29	61	338
3:15 PM	3	58	9	71	64	3	6	20	8	3	21	64	330
3:30 PM	4	42	7	70	84	3	1	38	3	10	20	75	357
3:45 PM	2	57	6	63	112	2	3	37	6	10	26	66	390
4:00 PM	1	56	7	79	90	2	3	50	4	6	30	59	387
4:15 PM	1	45	8	82	105	5	3	43	4	11	24	58	389
4:30 PM	1	55	12	79	113	3	3	36	4	8	19	63	396
4:45 PM	1	42	7	66	92	5	2	43	2	4	25	64	353
5:00 PM	5	52	9	72	114	0	4	41	2	5	20	57	381
5:15 PM	2	52	9	78	114	4	6	48	7	8	22	62	412
5:30 PM	2	53	7	71	124	3	3	34	7	10	32	73	419
5:45 PM	0	53	5	73	121	1	6	38	6	12	17	56	388
TOTAL VOLUMES :	NL 24	NT 621	NR 101	SL 863	ST 1206	SR 34	EL 44	ET 451	ER 56	WL 97	WT 285	WR 758	TOTAL 4540
APPROACH %'s :	3.22%	83.24%	13.54%	41.04%	57.35%	1.62%	7.99%	81.85%	10.16%	8.51%	25.00%	66.49%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	9	210	30	294	473	8	19	161	22	35	91	248	1600
PEAK HR FACTOR :	0.943			0.979			0.828			0.813			0.955

CONTROL : Signalized

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-5586-001

N/S Street: Main St

E/W Street: Abbott Kinney Blvd_Brooks Ct

DATE: 11/5/2013

CITY: Venice

DAY: Tuesday

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	5	13	2	5	2	1
7:15 AM	1	0	5	4	1	3	1	0
7:30 AM	3	1	4	5	1	4	1	3
7:45 AM	0	0	6	9	4	7	2	0
8:00 AM	0	0	10	6	4	9	3	1
8:15 AM	1	0	6	11	4	9	3	2
8:30 AM	1	0	6	10	8	6	5	0
8:45 AM	0	0	6	4	4	3	1	3
9:00 AM	0	1	7	2	5	3	3	2
9:15 AM	0	1	2	9	5	6	1	1
9:30 AM	3	0	7	2	7	3	1	4
9:45 AM	0	0	7	7	10	6	1	2
TOTALS	9	3	71	82	55	64	24	19

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	0	0	0	0	0	2	0	0

P M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	1	2	11	9	1	9	1	4
3:15 PM	1	0	13	9	5	7	4	1
3:30 PM	0	0	14	3	8	7	4	6
3:45 PM	0	0	7	7	3	4	0	3
4:00 PM	0	1	16	9	11	2	1	5
4:15 PM	0	0	11	10	5	5	6	2
4:30 PM	2	0	7	6	6	4	3	3
4:45 PM	1	4	3	19	3	7	1	0
5:00 PM	2	0	20	13	4	4	1	10
5:15 PM	0	0	11	9	6	4	4	5
5:30 PM	0	1	7	6	3	7	0	0
5:45 PM	1	0	13	4	8	2	0	1
TOTALS	8	8	133	104	63	62	25	40

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	1	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	2	0	0	0	0	0	0
4:00 PM	0	0	0	2	0	0	0	0
4:15 PM	0	0	0	0	3	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	0	2	0	3	3	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-5586-001

Day: Tuesday

City: Venice

BIKES

Date: 11/5/2013

AM

NS/EW Streets:		Main St			Main St			Abbott Kinney Blvd_Brooks Ct			Abbott Kinney Blvd_Brooks Ct			
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:		NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL
7:00 AM		0	3	1	1	1	0	0	2	0	1	1	2	12
7:15 AM		0	5	1	0	0	0	0	0	0	1	2	4	13
7:30 AM		0	5	1	6	1	0	0	1	0	1	2	5	22
7:45 AM		0	12	1	2	3	1	0	3	0	0	2	5	29
8:00 AM		0	5	1	1	3	0	0	3	0	0	4	4	21
8:15 AM		0	6	0	1	4	3	0	3	0	1	3	6	27
8:30 AM		0	10	2	0	1	0	0	3	0	0	3	5	24
8:45 AM		0	15	1	1	7	0	0	0	0	2	1	4	31
9:00 AM		0	9	2	2	5	0	0	0	0	0	7	4	29
9:15 AM		0	8	0	1	2	0	1	4	0	1	0	2	19
9:30 AM		0	9	2	5	5	0	1	3	0	1	3	0	29
9:45 AM		0	25	0	3	2	0	0	1	0	0	3	5	39
TOTAL VOLUMES :		NL 0	NT 112	NR 12	SL 23	ST 34	SR 4	EL 2	ET 23	ER 0	WL 8	WT 31	WR 46	TOTAL 295
APPROACH %'s :		0.00%	90.32%	9.68%	37.70%	55.74%	6.56%	8.00%	92.00%	0.00%	9.41%	36.47%	54.12%	
PEAK HR START TIME :		745 AM												TOTAL
PEAK HR VOL :		0	33	4	4	11	4	0	12	0	1	12	20	101
PEAK HR FACTOR :		0.712			0.594			1.000			0.825			0.871

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-5586-001

Day: Tuesday

City: Venice

BIKES

Date: 11/5/2013

PM

NS/EW Streets:		Main St			Main St			Abbott Kinney Blvd_Brooks Ct			Abbott Kinney Blvd_Brooks Ct				
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:		NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 1	TOTAL	
3:00 PM		0	2	1	7	0	1	0	1	0	0	0	3	15	
3:15 PM		0	3	0	2	4	0	0	1	0	2	4	1	17	
3:30 PM		0	4	1	7	3	0	2	1	0	1	2	0	21	
3:45 PM		0	4	0	1	4	0	0	2	1	0	1	1	14	
4:00 PM		0	3	0	0	3	0	0	6	2	2	0	2	18	
4:15 PM		1	4	1	3	4	1	1	5	1	3	1	3	28	
4:30 PM		1	6	1	2	6	0	0	3	0	0	1	1	21	
4:45 PM		1	4	1	4	8	0	0	0	0	0	9	4	31	
5:00 PM		0	5	1	3	7	0	0	7	1	2	3	0	29	
5:15 PM		0	13	0	0	6	0	0	5	1	1	6	7	39	
5:30 PM		7	0	6	1	0	0	3	0	2	3	0	7	29	
5:45 PM		13	0	4	0	0	1	1	0	3	8	0	2	32	
TOTAL VOLUMES :		NL 23	NT 48	NR 16	SL 30	ST 45	SR 3	EL 7	ET 31	ER 11	WL 22	WT 27	WR 31	TOTAL 294	
APPROACH %'s :		26.44%	55.17%	18.39%	38.46%	57.69%	3.85%	14.29%	63.27%	22.45%	27.50%	33.75%	38.75%		
PEAK HR START TIME :		500 PM													TOTAL
PEAK HR VOL :		20	18	11	4	13	1	4	12	7	14	9	16	129	
PEAK HR FACTOR :		0.721			0.450			0.719			0.696			0.827	

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-5586-002

Day: Tuesday

City: Venice

TOTALS

Date: 11/5/2013

AM													
NS/EW Streets:	Main St			Main St			Horizon Ave			Horizon Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	1	62	0	0	21	1	0	0	0	0	0	2	87
7:15 AM	2	65	0	0	19	0	0	0	0	1	0	3	90
7:30 AM	0	98	0	0	25	3	0	0	0	1	1	3	131
7:45 AM	4	105	0	0	35	5	0	0	0	1	1	1	152
8:00 AM	0	75	0	0	37	4	0	0	0	1	0	7	124
8:15 AM	7	96	0	0	37	3	0	0	0	3	0	1	147
8:30 AM	6	93	0	0	42	4	0	0	0	3	1	4	153
8:45 AM	4	98	0	0	37	5	0	0	0	0	1	7	152
9:00 AM	1	84	0	0	47	3	0	0	0	1	1	7	144
9:15 AM	6	78	0	0	43	5	0	0	0	1	1	5	139
9:30 AM	2	79	0	0	57	8	0	0	0	3	0	7	156
9:45 AM	4	61	0	0	45	5	0	0	0	0	0	5	120
TOTAL VOLUMES :	NL 37	NT 994	NR 0	SL 0	ST 445	SR 46	EL 0	ET 0	ER 0	WL 15	WT 6	WR 52	TOTAL 1595
APPROACH %'s :	3.59%	96.41%	0.00%	0.00%	90.63%	9.37%	#DIV/0!	#DIV/0!	#DIV/0!	20.55%	8.22%	71.23%	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	18	371	0	0	163	15	0	0	0	7	3	19	596
PEAK HR FACTOR :	0.944			0.890			0.000			0.806			0.974

CONTROL : Signalized

Intersection Turning Movement

Prepared by:
National Data & Surveying Services

Project ID: 13-5586-002

Day: Tuesday

City: Venice

TOTALS

Date: 11/5/2013

PM														
NS/EW Streets:	Main St			Main St			Horizon Ave			Horizon Ave				
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL	
3:00 PM	6	63	0	0	93	4	0	0	0	0	0	1	167	
3:15 PM	3	50	0	0	81	3	0	0	0	2	0	2	141	
3:30 PM	3	43	0	0	91	4	0	0	0	0	1	2	144	
3:45 PM	2	57	0	0	117	2	0	0	0	1	0	1	180	
4:00 PM	4	49	0	0	98	5	0	0	0	0	0	1	157	
4:15 PM	1	50	0	0	119	2	0	0	0	0	0	2	174	
4:30 PM	1	48	0	0	126	5	0	0	0	2	3	1	186	
4:45 PM	2	48	0	0	102	4	0	0	0	1	1	1	159	
5:00 PM	1	62	0	0	119	3	0	0	0	2	0	2	189	
5:15 PM	3	42	0	0	123	3	0	0	0	1	1	0	173	
5:30 PM	3	47	0	0	138	2	0	0	0	0	2	3	195	
5:45 PM	5	49	0	0	135	1	0	0	0	1	0	1	192	
TOTAL VOLUMES :	NL 34	NT 608	NR 0	SL 0	ST 1342	SR 38	EL 0	ET 0	ER 0	WL 10	WT 8	WR 17	TOTAL 2057	
APPROACH %'s :	5.30%	94.70%	0.00%	0.00%	97.25%	2.75%	#DIV/0!	#DIV/0!	#DIV/0!	28.57%	22.86%	48.57%		
PEAK HR START TIME :	500 PM													TOTAL
PEAK HR VOL :	12	200	0	0	515	9	0	0	0	4	3	6	749	
PEAK HR FACTOR :	0.841			0.936			0.000			0.650			0.960	

CONTROL : Signalized

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 13-5586-002
 N/S Street: Main St
 E/W Street: Horizon Ave
 DATE: 11/5/2013
 CITY: Venice

DAY: Tuesday

A M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	2	0	2	3	1	0	2
7:15 AM	3	1	0	3	2	3	5	2
7:30 AM	1	1	0	1	3	0	1	1
7:45 AM	2	2	2	1	4	0	1	1
8:00 AM	1	2	0	0	4	1	1	4
8:15 AM	2	0	0	1	1	0	5	4
8:30 AM	2	3	0	1	2	1	3	3
8:45 AM	0	2	0	2	2	3	1	6
9:00 AM	0	1	2	3	0	1	2	4
9:15 AM	0	0	0	4	6	3	1	2
9:30 AM	1	0	2	3	4	3	2	2
9:45 AM	2	3	2	4	1	3	1	5
TOTALS	14	17	8	25	32	19	23	36

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	1	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTALS	1	0	0	0	0	0	1	0

P M

Adult Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	1	1	3	1	2	3	2	5
3:15 PM	1	3	0	2	3	3	6	2
3:30 PM	5	2	2	3	4	7	4	4
3:45 PM	4	2	1	0	2	7	3	6
4:00 PM	2	0	6	7	1	6	5	3
4:15 PM	2	1	0	2	13	1	4	5
4:30 PM	3	1	3	0	2	5	5	4
4:45 PM	4	5	1	3	1	1	7	7
5:00 PM	5	2	3	1	0	1	3	6
5:15 PM	5	3	9	2	5	7	7	9
5:30 PM	1	0	6	3	9	3	3	2
5:45 PM	3	2	20	0	3	2	5	2
TOTALS	36	22	54	24	45	46	54	55

School-Aged Pedestrians

T I M E	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
3:00 PM	0	0	0	0	0	1	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	4	0	4	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	1	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTALS	0	1	0	4	0	6	0	1

Intersection Turning Movement

Prepared by:
National Data & Surveying Services

Project ID: 13-5586-002

Day: Tuesday

City: Venice

BIKES

Date: 11/5/2013

AM													
NS/EW Streets:	Main St			Main St			Horizon Ave			Horizon Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	0	7	0	0	2	0	0	0	0	0	0	0	9
7:15 AM	0	3	0	0	1	0	0	0	0	0	0	0	4
7:30 AM	0	8	0	0	1	1	0	0	0	1	0	0	11
7:45 AM	0	12	0	0	3	2	1	0	0	0	0	0	18
8:00 AM	0	3	0	0	3	0	0	0	0	0	0	1	7
8:15 AM	0	7	0	0	3	0	0	1	0	0	2	0	13
8:30 AM	0	14	0	0	4	0	0	0	0	0	0	0	18
8:45 AM	0	12	0	1	9	1	0	0	0	0	0	0	23
9:00 AM	0	10	0	0	3	0	0	0	0	1	0	1	15
9:15 AM	0	10	0	0	3	1	0	0	0	0	0	0	14
9:30 AM	0	12	0	0	2	1	0	2	0	0	0	0	17
9:45 AM	1	26	0	0	4	2	0	0	0	0	0	0	33
TOTAL VOLUMES :	NL 1	NT 124	NR 0	SL 1	ST 38	SR 8	EL 1	ET 3	ER 0	WL 2	WT 2	WR 2	TOTAL 182
APPROACH %'s :	0.80%	99.20%	0.00%	2.13%	80.85%	17.02%	25.00%	75.00%	0.00%	33.33%	33.33%	33.33%	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	0	43	0	1	19	1	0	1	0	1	2	1	69
PEAK HR FACTOR :	0.768			0.477			0.250			0.500			0.750

CONTROL : Signalized

Intersection Turning Movement

Prepared by:
National Data & Surveying Services

Project ID: 13-5586-002

Day: Tuesday

City: Venice

BIKES

Date: 11/5/2013

PM													
NS/EW Streets:	Main St			Main St			Horizon Ave			Horizon Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 0	ER 0	WL 0	WT 1	WR 0	TOTAL
3:00 PM	0	3	2	0	2	0	0	0	0	0	0	0	7
3:15 PM	0	3	3	0	4	0	1	0	0	0	0	0	11
3:30 PM	0	2	1	0	5	0	0	1	0	1	3	0	13
3:45 PM	0	5	1	0	4	0	1	0	0	0	1	0	12
4:00 PM	0	3	0	0	4	0	0	0	0	0	0	0	7
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	0	8
4:30 PM	0	5	1	0	6	0	0	0	0	2	0	1	15
4:45 PM	0	7	0	0	8	3	0	0	1	0	0	0	19
5:00 PM	0	12	0	0	11	0	0	0	0	0	0	0	23
5:15 PM	0	10	1	0	7	0	0	0	0	0	1	1	20
5:30 PM	0	8	0	3	5	1	1	5	0	0	2	2	27
5:45 PM	0	6	1	5	4	0	2	3	1	0	1	1	24
TOTAL VOLUMES :	NL 0	NT 68	NR 10	SL 8	ST 64	SR 4	EL 5	ET 9	ER 2	WL 3	WT 8	WR 5	TOTAL 186
APPROACH %'s :	0.00%	87.18%	12.82%	10.53%	84.21%	5.26%	31.25%	56.25%	12.50%	18.75%	50.00%	31.25%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	36	2	8	27	1	3	8	1	0	4	4	94
PEAK HR FACTOR :	0.792			0.818			0.500			0.500			0.870

CONTROL : Signalized

ATTACHMENT B:
LOS WORKSHEETS

Level of Service Worksheet (Circular 212 Method)



I/S #:
1

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Horizon Ave

Scenario: EXISTING CONDITIONS

Count Date:

Analyst:

Date:

		AM			PM		
		No. of Phases			No. of Phases		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2			2
Right Turns: FREE-1, NRTOR-2 or OLA-3?				0			0
ATSAC-1 or ATSAC+ATCS-2?				0			0
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	18	1	18	12	1	12
	Left-Through		0			0	
	Through	371	1	186	200	1	100
	Through-Right		1			1	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
SOUTHBOUND	Left	0	0	0	0	0	0
	Left-Through		1			1	
	Through	163	0	89	515	0	262
	Through-Right		1			1	
	Right	15	0	89	9	0	262
	Left-Through-Right		0			0	
EASTBOUND	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
WESTBOUND	Left	7	0	7	4	0	4
	Left-Through		0			0	
	Through	3	0	29	3	0	13
	Through-Right		0			0	
	Right	19	0	0	6	0	0
	Left-Through-Right		1			1	
CRITICAL VOLUMES		North-South:		186	North-South:		274
		East-West:		29	East-West:		13
		SUM:		215	SUM:		287
VOLUME/CAPACITY (V/C) RATIO:				0.143			0.191
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.093			0.124
LEVEL OF SERVICE (LOS):				A			A

Level of Service Worksheet (Circular 212 Method)



I/S #:
2

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Abbot Kinney

Scenario: EXISTING CONDITIONS

Count Date:

Analyst:

Date:

		AM			PM		
		No. of Phases			No. of Phases		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2			2
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB--	0	0	NB--	0	0
ATSAC-1 or ATSAC+ATCS-2?		EB--	0	0	EB--	0	0
Override Capacity				1			1
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	9	1	9
	Left-Through		0			0	
	Through	379	1	216	210	1	120
	Through-Right		1			1	
	Right	53	0	53	30	0	30
	Left-Through-Right		0			0	
SOUTHBOUND	Left	138	1	138	294	1	294
	Left-Through		0			0	
	Through	131	1	71	473	1	241
	Through-Right		1			1	
	Right	10	0	10	8	0	8
	Left-Through-Right		0			0	
EASTBOUND	Left	25	0	25	19	0	19
	Left-Through		0			0	
	Through	105	0	139	161	0	202
	Through-Right		0			0	
	Right	9	0	0	22	0	0
	Left-Through-Right		1			1	
WESTBOUND	Left	17	0	17	35	0	35
	Left-Through		1			1	
	Through	126	0	143	91	0	126
	Through-Right		0			0	
	Right	470	1	401	248	1	101
	Left-Through-Right		0			0	
CRITICAL VOLUMES		North-South:		354	North-South:		414
		East-West:		426	East-West:		237
		SUM:		780	SUM:		651
VOLUME/CAPACITY (V/C) RATIO:				0.520			0.434
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.450			0.364
LEVEL OF SERVICE (LOS):				A			A

Level of Service Worksheet (Circular 212 Method)



I/S #:
1

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Horizon Ave

Scenario: EXISTING + PROJECT CONDITIONS

Count Date:

Analyst:

Date:

		AM			PM		
		No. of Phases			No. of Phases		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2			2
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				1			1
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	18	1	18	12	1	12
	Left-Through		0			0	
	Through	371	1	186	200	1	100
	Through-Right		1			1	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
SOUTHBOUND	Left	0	0	0	0	0	0
	Left-Through		1			1	
	Through	164	0	90	527	0	268
	Through-Right		1			1	
	Right	15	0	90	9	0	268
	Left-Through-Right		0			0	
EASTBOUND	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
WESTBOUND	Left	8	0	8	6	0	6
	Left-Through		0			0	
	Through	3	0	32	3	0	19
	Through-Right		0			0	
	Right	21	0	0	10	0	0
	Left-Through-Right		1			1	
CRITICAL VOLUMES		North-South:		186	North-South:		280
		East-West:		32	East-West:		19
		SUM:		218	SUM:		299
VOLUME/CAPACITY (V/C) RATIO:				0.145			0.199
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.094			0.130
LEVEL OF SERVICE (LOS):				A			A



Level of Service Worksheet (Circular 212 Method)



I/S #:
2

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Abbot Kinney

Scenario: EXISTING + PROJECT CONDITIONS

Count Date:

Analyst:

Date:

		AM			PM		
		No. of Phases			No. of Phases		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2			2
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				1			1
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	10	1	10
	Left-Through		0			0	
	Through	381	1	217	213	1	122
	Through-Right		1			1	
	Right	53	0	53	30	0	30
	Left-Through-Right		0			0	
SOUTHBOUND	Left	138	1	138	294	1	294
	Left-Through		0			0	
	Through	132	1	71	482	1	245
	Through-Right		1			1	
	Right	10	0	10	8	0	8
	Left-Through-Right		0			0	
EASTBOUND	Left	25	0	25	19	0	19
	Left-Through		0			0	
	Through	105	0	139	161	0	205
	Through-Right		0			0	
	Right	9	0	0	25	0	0
	Left-Through-Right		1			1	
WESTBOUND	Left	17	0	17	35	0	35
	Left-Through		1			1	
	Through	126	0	143	91	0	126
	Through-Right		0			0	
	Right	470	1	401	248	1	101
	Left-Through-Right		0			0	
CRITICAL VOLUMES		North-South:		355	North-South:		416
		East-West:		426	East-West:		240
		SUM:		781	SUM:		656
VOLUME/CAPACITY (V/C) RATIO:				0.521			0.437
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.451			0.367
LEVEL OF SERVICE (LOS):				A			A

Level of Service Worksheet (Circular 212 Method)



I/S #:
1

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Horizon Ave

Scenario: CUMULATIVE BASE

Count Date:

Analyst:

Date:

		AM			PM		
		No. of Phases			No. of Phases		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2			2
Right Turns: FREE-1, NRTOR-2 or OLA-3?				0			0
ATSAC-1 or ATSAC+ATCS-2?				0			0
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	19	1	19	12	1	12
	Left-Through		0			0	
	Through	386	1	193	208	1	104
	Through-Right		1			1	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
SOUTHBOUND	Left	0	0	0	0	0	0
	Left-Through		1			1	
	Through	170	0	93	536	0	273
	Through-Right		1			1	
	Right	16	0	93	9	0	273
	Left-Through-Right		0			0	
EASTBOUND	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
WESTBOUND	Left	7	0	7	4	0	4
	Left-Through		0			0	
	Through	3	0	30	3	0	13
	Through-Right		0			0	
	Right	20	0	0	6	0	0
	Left-Through-Right		1			1	
CRITICAL VOLUMES		North-South:		193	North-South:		285
		East-West:		30	East-West:		13
		SUM:		223	SUM:		298
VOLUME/CAPACITY (V/C) RATIO:				0.149			0.199
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.074			0.099
LEVEL OF SERVICE (LOS):				A			A

Level of Service Worksheet (Circular 212 Method)



I/S #:
2

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Abbot Kinney

Scenario: CUMULATIVE BASE

Count Date:

Analyst:

Date:

		AM			PM		
		No. of Phases			No. of Phases		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2			2
Right Turns: FREE-1, NRTOR-2 or OLA-3?				0			0
ATSAC-1 or ATSAC+ATCS-2?				0			0
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	9	1	9
	Left-Through		0			0	
	Through	394	1	225	218	1	125
	Through-Right		1			1	
	Right	55	0	55	31	0	31
	Left-Through-Right		0			0	
SOUTHBOUND	Left	144	1	144	306	1	306
	Left-Through		0			0	
	Through	136	1	73	492	1	250
	Through-Right		1			1	
	Right	10	0	10	8	0	8
	Left-Through-Right		0			0	
EASTBOUND	Left	26	0	26	20	0	20
	Left-Through		0			0	
	Through	109	0	144	167	0	210
	Through-Right		0			0	
	Right	9	0	0	23	0	0
	Left-Through-Right		1			1	
WESTBOUND	Left	18	0	18	36	0	36
	Left-Through		1			1	
	Through	131	0	149	95	0	131
	Through-Right		0			0	
	Right	489	1	417	258	1	105
	Left-Through-Right		0			0	
CRITICAL VOLUMES		North-South:		369	North-South:		431
		East-West:		443	East-West:		246
		SUM:		812	SUM:		677
VOLUME/CAPACITY (V/C) RATIO:				0.541			0.451
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.441			0.351
LEVEL OF SERVICE (LOS):				A			A

Level of Service Worksheet (Circular 212 Method)



I/S #:
1

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Horizon Ave

Scenario: CUMULATIVE + PROJECT CONDITIONS

Count Date:

Analyst:

Date:

		AM			PM		
		No. of Phases			No. of Phases		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2			2
Right Turns: FREE-1, NRTOR-2 or OLA-3?				0			0
ATSAC-1 or ATSAC+ATCS-2?				0			0
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	19	1	19	12	1	12
	Left-Through		0			0	
	Through	386	1	193	208	1	104
	Through-Right		1			1	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
SOUTHBOUND	Left	0	0	0	0	0	0
	Left-Through		1			1	
	Through	171	0	94	548	0	279
	Through-Right		1			1	
	Right	16	0	94	9	0	279
	Left-Through-Right		0			0	
EASTBOUND	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
WESTBOUND	Left	8	0	8	6	0	6
	Left-Through		0			0	
	Through	3	0	33	3	0	19
	Through-Right		0			0	
	Right	22	0	0	10	0	0
	Left-Through-Right		1			1	
CRITICAL VOLUMES		North-South:		193	North-South:		291
		East-West:		33	East-West:		19
		SUM:		226	SUM:		310
VOLUME/CAPACITY (V/C) RATIO:				0.151			0.207
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.075			0.107
LEVEL OF SERVICE (LOS):				A			A

Level of Service Worksheet (Circular 212 Method)



I/S #:
2

PROJECT TITLE:

North-South Street: Main Street

East-West Street: Abbot Kinney

Scenario: CUMULATIVE + PROJECT CONDITIONS

Count Date:

Analyst:

Date:

No. of Phases Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity		AM			PM		
		NB--	SB--		NB--	SB--	
		0	0	2	0	0	2
		0	0	0	0	0	0
		0	0	0	0	0	0
				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	9	1	9	10	1	10
	Left-Through		0			0	
	Through	396	1	226	221	1	126
	Through-Right		1			1	
	Right	55	0	55	31	0	31
	Left-Through-Right		0			0	
	Left-Right		0			0	
SOUTHBOUND	Left	144	1	144	306	1	306
	Left-Through		0			0	
	Through	137	1	74	501	1	255
	Through-Right		1			1	
	Right	10	0	10	8	0	8
	Left-Through-Right		0			0	
	Left-Right		0			0	
EASTBOUND	Left	26	0	26	20	0	20
	Left-Through		0			0	
	Through	109	0	144	167	0	213
	Through-Right		0			0	
	Right	9	0	0	26	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
WESTBOUND	Left	18	0	18	36	0	36
	Left-Through		1			1	
	Through	131	0	149	95	0	131
	Through-Right		0			0	
	Right	489	1	417	258	1	105
	Left-Through-Right		0			0	
	Left-Right		0			0	
CRITICAL VOLUMES		North-South:		370	North-South:		432
		East-West:		443	East-West:		249
		SUM:		813	SUM:		681
VOLUME/CAPACITY (V/C) RATIO:				0.542			0.454
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.442			0.354
LEVEL OF SERVICE (LOS):				A			A