

APPENDIX B

Supplemental Traffic Analysis



DRAFT

MEMORANDUM

TO: Milena Zasadzien, City Planner
Los Angeles Department of City Planning

FROM: Patrick A. Gibson, P.E., T.E., PTOE
Richard Gibson, LEED Green Associate
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DATE: March 12, 2019

RE: Supplemental Traffic Analysis for the
Santa Monica & Barrington Mixed-Use Project
Response to Comment A5-2
Los Angeles, California

Ref: J1329

Gibson Transportation Consulting, Inc. (GTC) was asked to conduct a supplemental traffic analysis in response to Comment A5-2, received from the Los Angeles County Department of Public Works (LACDPW), on the Draft Environmental Impact Report (EIR) for the Santa Monica & Barrington Mixed-Use Project (Project). This memorandum summarizes the findings of our analysis.

BACKGROUND

Comment A5-2 asked that the Project, currently in the environmental review process, provide additional analysis of the intersection of San Vicente Boulevard/Federal Avenue & Wilshire Boulevard, which shares jurisdiction with the City of Los Angeles and LACDPW. In *Transportation Study for the Santa Monica & Barrington Apartment/Supermarket Project, Los Angeles, California* (GTC, April 2016) (Approved Traffic Study), which was approved by the Los Angeles Department of Transportation (LADOT) in *Traffic Impact Assessment for the Proposed Mixed-Use Project at 11660 Santa Monica Boulevard* (April 22, 2016) (LADOT Assessment Letter), the intersection was analyzed using the significant impact criteria and methodology detailed in LADOT guidelines.

In response to Comment A5-2, GTC assessed the traffic impacts of the Project at the specified intersection using the same trip generation assumptions presented in the Approved Traffic Study, but using the methodologies outlined in *Draft Traffic Impact Report Guidelines* (LACDPW, December, 2013) (County TIA Guidelines).

COUNTY TIA GUIDELINES

Intersection Level of Service (LOS) Methodology

Similar to LADOT guidelines, the County TIA Guidelines also use LOS as the qualitative measure to describe the condition of traffic flow on the street system based on the definitions provided in Table 1. Intersection capacity calculations were conducted to measure the LOS of the intersection using an overall intersection capacity of 1,600 vehicles per hour per lane (vphpl) and adding a factor of 0.10 to account for the yellow interval clearance. The existing or projected volumes through an intersection were compared to the capacity of the intersection to calculate a volume-to-capacity (V/C) ratio used to determine the LOS at the intersection.

In accordance with County TIA Guidelines, the LOS analysis was conducted using the Intersection Capacity Utilization (ICU) methodology to obtain the corresponding ICU value for signalized intersections.

Impact Criteria and Significance Thresholds

The significance of the potential impacts of Project-generated traffic at the study intersection was determined using criteria identified in the County TIA Guidelines, which indicate that a project is considered to have a significant traffic impact on a signalized intersection if the increase in the V/C ratio attributable to a project exceeds a specific threshold depending on the pre-project intersection LOS. The County has developed a sliding scale methodology in which the minimum allowable increase in the V/C ratio attributable to a project decreases as the V/C ratio of the intersection increases:

Intersection Conditions with Pre-Project Traffic		Significant Impact Threshold for Project-related and Cumulative Increase in V/C Ratio
LOS	V/C	
C	0.701 – 0.800	Equal to or greater than 0.04
D	0.801 – 0.900	Equal to or greater than 0.02
E, F	> 0.900	Equal to or greater than 0.01

Source: County of Los Angeles.

The relative impact of the added traffic volumes to be generated by the Project and cumulative projects was evaluated based on analysis of Existing and Cumulative Conditions at the study intersection, with and without the Project. A project is not considered to have a significant impact if the intersection is projected to operate at LOS A or B after the addition of project traffic, regardless of the volume of traffic added to the intersection or the incremental change in the V/C ratio.

TRAFFIC ANALYSIS

Table 2 summarizes the impact of Project traffic during the weekday morning and afternoon peak hours under Existing and Cumulative Conditions with consideration of the additional related project outlined in the Draft EIR. As shown in Table 2, the Project would not result in a significant impact at the intersection of San Vicente Boulevard/Federal Avenue & Wilshire Boulevard under either Existing or Cumulative Conditions with Project.

SUMMARY AND CONCLUSION

As described above, a supplemental analysis of the intersection of San Vicente Boulevard/Federal Avenue & Wilshire Boulevard, conducted per County TIA Guidelines, resulted in no significant impacts under all scenarios.

Thus, no mitigation is required.

TABLE 1
LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

Level of Service	Signalized Intersection Capacity Utilization	Definition
A	≤ 0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	> 0.600 and ≤ 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	> 0.700 and ≤ 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	> 0.800 and ≤ 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	> 0.900 and ≤ 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

**TABLE 2
EXISTING AND CUMULATIVE CONDITIONS (YEAR 2018)
INTERSECTION PEAK HOUR LEVELS OF SERVICE**

No.	Signalized Intersection	Peak Hour	Existing Conditions (Year 2015)		Existing with Project Conditions (Year 2015)				Cumulative with Project Conditions (Year 2018)			
			V/C Ratio	LOS	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact? [a]	V/C Ratio	LOS	Change in V/C Ratio	Significant Impact? [a]
2.	San Vicente Blvd/Federal Ave & Wilshire Blvd	AM	0.671	B	0.673	B	0.002	NO	0.687	B	0.016	NO
		PM	1.217	F	1.220	F	0.003	NO	1.221	F	0.004	NO

Notes

[a] Significance thresholds based on *Draft Traffic Impact Analysis Report Guidelines* (County of Los Angeles Department of Public Works, December, 2013).

Intersections		
Pre-Project		Project V/C Increase
LOS	V/C	
C	0.71 to 0.80	0.04 or more
D	0.81 to 0.90	0.02 or more
E/F	0.91 or more	0.01 or more

Attachment
Analysis Worksheets

EXISTING CONDITIONS (YEAR 2015)

SANTA MONICA & BARRINGTON MIXED-USE PROJECT

Intersection Capacity Utilization Analysis

2. SAN VICENTE BLVD/FEDERAL AVE & WILSHIRE BLVD

Through Lane Capacity:	1600 vph	North/South Split Phase:	Y
Left-Turn Lane Capacity:	1600 vph	East/West Split Phase:	N
Double-Left Penalty:	10 %	Loss Time % per Cycle:	10%
Right-Turn on Red:	50 %	ITS Percentage:	10%
Overlapping Right Turn:			

WEEKDAY MORNING PEAK HOUR

Approach	Movement	Lanes	Capacity	Volume	V/C	ICU Analysis
Southbound	Right	0.50	0	34	0.000	N/S 1: 0.317 *
	Through	1.00	1,954	384	0.214	N/S 2: 0.000
	Left	2.50	4,001	951	0.238 *	E/W 1: 0.354 *
Westbound	Right [a]	1.00	1,600	0	0.000	E/W 2: 0.347
	Through	3.00	4,800	1,653	0.344	V/C Ratio: 0.671
	Left	1.00	1,600	44	0.028 *	Loss Time: 0.100
Northbound	Right	1.00	1,600	148	0.079 *	ITS: -0.100
	Through	2.00	3,200	172	0.054	ICU: 0.671
	Left	1.00	1,600	75	0.047	LOS: B
Eastbound	Right	0.50	0	11	0.000	
	Through	2.50	4,800	1,555	0.326 *	
	Left	1.00	1,600	4	0.003	

WEEKDAY AFTERNOON PEAK HOUR

Approach	Movement	Lanes	Capacity	Volume	V/C	ICU Analysis
Southbound	Right	0.50	0	28	0.000	N/S 1: 0.669 *
	Through	1.00	1,600	395	0.264	N/S 2: 0.000
	Left	2.50	4,320	1,537	0.356 *	E/W 1: 0.544
Westbound	Right [a]	1.00	1,600	0	0.000	E/W 2: 0.548 *
	Through	3.00	4,800	2,584	0.538 *	V/C Ratio: 1.217
	Left	1.00	1,600	137	0.086	Loss Time: 0.100
Northbound	Right	1.00	1,600	570	0.313 *	ITS: -0.100
	Through	2.00	3,200	410	0.128	ICU: 1.217
	Left	1.00	1,600	68	0.043	LOS: F
Eastbound	Right	0.50	0	15	0.000	
	Through	2.50	4,800	2,185	0.458	
	Left	1.00	1,600	16	0.010 *	

* Critical Movement [a] Free Right-Turn

EXISTING WITH PROJECT CONDITIONS (YEAR 2015)

SANTA MONICA & BARRINGTON MIXED-USE PROJECT

Intersection Capacity Utilization Analysis

2. SAN VICENTE BLVD/FEDERAL AVE & WILSHIRE BLVD

Through Lane Capacity:	1600 vph	North/South Split Phase:	Y
Left-Turn Lane Capacity:	1600 vph	East/West Split Phase:	N
Double-Left Penalty:	10 %	Loss Time % per Cycle:	10%
Right-Turn on Red:	50 %	ITS Percentage:	10%
Overlapping Right Turn:			

WEEKDAY MORNING PEAK HOUR

Approach	Movement	Lanes	Capacity	Volume	V/C	ICU Analysis
Southbound	Right	0.50	0	35	0.000	N/S 1: 0.318 *
	Through	1.00	1,961	385	0.214	N/S 2: 0.000
	Left	2.50	3,995	951	0.238 *	E/W 1: 0.355 *
Westbound	Right [a]	1.00	1,600	0	0.000	E/W 2: 0.348
	Through	3.00	4,800	1,655	0.345	V/C Ratio: 0.673
	Left	1.00	1,600	45	0.028 *	Loss Time: 0.100
Northbound	Right	1.00	1,600	151	0.080 *	ITS: -0.100
	Through	2.00	3,200	173	0.054	
	Left	1.00	1,600	75	0.047	
Eastbound	Right	0.50	0	11	0.000	ICU: 0.673
	Through	2.50	4,800	1,559	0.327 *	
	Left	1.00	1,600	5	0.003	LOS: B

WEEKDAY AFTERNOON PEAK HOUR

Approach	Movement	Lanes	Capacity	Volume	V/C	ICU Analysis
Southbound	Right	0.50	0	29	0.000	N/S 1: 0.670 *
	Through	1.00	1,600	396	0.266	N/S 2: 0.000
	Left	2.50	4,320	1,537	0.356 *	E/W 1: 0.546
Westbound	Right [a]	1.00	1,600	0	0.000	E/W 2: 0.550 *
	Through	3.00	4,800	2,588	0.539 *	V/C Ratio: 1.220
	Left	1.00	1,600	139	0.087	Loss Time: 0.100
Northbound	Right	1.00	1,600	572	0.314 *	ITS: -0.100
	Through	2.00	3,200	411	0.128	
	Left	1.00	1,600	68	0.043	
Eastbound	Right	0.50	0	15	0.000	ICU: 1.220
	Through	2.50	4,800	2,188	0.459	
	Left	1.00	1,600	17	0.011 *	LOS: F

* Critical Movement [a] Free Right-Turn

CUMULATIVE WITH PROJECT CONDITIONS (YEAR 2018)

SANTA MONICA & BARRINGTON MIXED-USE PROJECT

Intersection Capacity Utilization Analysis

2. SAN VICENTE BLVD/FEDERAL AVE & WILSHIRE BLVD

Through Lane Capacity:	1600 vph	North/South Split Phase:	Y
Left-Turn Lane Capacity:	1600 vph	East/West Split Phase:	N
Double-Left Penalty:	10 %	Loss Time % per Cycle:	10%
Right-Turn on Red:	50 %	ITS Percentage:	10%
Overlapping Right Turn:			

WEEKDAY MORNING PEAK HOUR

Approach	Movement	Lanes	Capacity	Volume	V/C	ICU Analysis
Southbound	Right	0.50	0	32	0.000	N/S 1: 0.320 *
	Through	1.00	2,005	402	0.216	N/S 2: 0.000
	Left	2.50	3,955	951	0.240 *	E/W 1: 0.367 *
Westbound	Right [a]	1.00	1,600	0	0.000	E/W 2: 0.363
	Through	3.00	4,800	1,684	0.351	V/C Ratio: 0.687
	Left	1.00	1,600	45	0.028 *	Loss Time: 0.100
Northbound	Right	1.00	1,600	151	0.080 *	ITS: -0.100
	Through	2.00	3,200	187	0.058	
	Left	1.00	1,600	73	0.046	
Eastbound	Right	0.50	0	18	0.000	ICU: 0.687
	Through	2.50	4,800	1,608	0.339 *	
	Left	1.00	1,600	19	0.012	LOS: B

WEEKDAY AFTERNOON PEAK HOUR

Approach	Movement	Lanes	Capacity	Volume	V/C	ICU Analysis
Southbound	Right	0.50	0	31	0.000	N/S 1: 0.670 *
	Through	1.00	1,600	408	0.274	N/S 2: 0.000
	Left	2.50	4,320	1,537	0.356 *	E/W 1: 0.548
Westbound	Right [a]	1.00	1,600	0	0.000	E/W 2: 0.551 *
	Through	3.00	4,800	2,614	0.545 *	V/C Ratio: 1.221
	Left	1.00	1,600	139	0.087	Loss Time: 0.100
Northbound	Right	1.00	1,600	572	0.314 *	ITS: -0.100
	Through	2.00	3,200	423	0.132	
	Left	1.00	1,600	69	0.043	
Eastbound	Right	0.50	0	12	0.000	ICU: 1.221
	Through	2.50	4,800	2,201	0.461	
	Left	1.00	1,600	10	0.006 *	LOS: F

* Critical Movement [a] Free Right-Turn