University of California of Los Angeles Student Chapter
Institute of Transportation Engineers

Trip Distribution for Urban Residential Developments

Abstract

The ITE Student Chapter at UCLA conducted this data collection project in order to analyze trip generation and parking demand patterns in urban residential developments. Since current data in the ITE *Trip Generation, Seventh Edition* is reflective of residential developments primarily in a suburban environment, the data may not accurately represent trip generation levels for urban areas.

Before the study, the UCLA Student Chapter hypothesized that fewer trips will be generated within an urban environment due to the presence of alternate modes of transportation (i.e. public transit, walking, etc.). Since fewer automobile trips are made, there should be less parking and perhaps even lower automobile ownership.

In order to evaluate the above hypothesis, the inbound and outbound trips of three residential development (two condos and one apartment complex) parking structures were counted during a weekday. The counts were recorded every fifteen minutes during the AM and PM peak hours of 7:00am – 9:00am and 4:00pm – 6:00pm. Daily inbound and outbound traffic counts were also taken, as well as hourly traffic parking occupancy counts for the entire day.

The three residential complexes chosen were relatively new (less than five years old) but successful developments in that they were fully occupied. Two of the projects were four-storey condo/town house developments located in Playa Vista, a new urban infill project with on-site amenities and a relatively dense collection of mid-rise residential buildings. Playa Vista is served by bus lines from Culver City and Santa Monica. It has a limited number of on-site restaurants and retail shops (with more planned) and an on-site club house/recreation center.

One large apartment project was selected in downtown Long Beach. This 538-unit project is well served by transit with light rail service located within one block and multiple regional bus lines located right in front of the project.

The results of the data collection are summarized in the attached table. The results were, in fact, consistent with the initial hypothesis of a lower rate within an urban environment. The three sites did have lower overall trip generation rates, with the morning peak hours slightly lower than the ITE *Trip Generation, Seventh Edition* average rates for both mid-rise apartments and high-rise condos.

The afternoon peak hour rates for condo Sites 2 & 3 were substantially lower than the national average. These sites were recounted with similar results, indicating that perhaps these residents returned later than the evening peak hour or they stopped off at one of the restaurants, health clubs, or retail shops within the development or nearby area.

Parking accumulation counts and average daily traffic counts will be obtained within the next two weeks and will be submitted as soon as they are available.

TRIP GENERATION RATES
URBAN MID-RISE APARTMENTS LU CODE 223
URBAN HIGH-RISE CONDO/TOWN HOUSES LU CODE 232

SITE	LAND USE CODE	DWELLING UNITS	PEAK HOUR OF ADJACENT STREET TRAFFIC				PEAK HOUR OF GENERATOR			
			AM		PM		AM		PM	
			TRIPS	RATE	TRIPS	RATE	TRIPS	RATE	TRIPS	RATE
APARTMENT **ITE TRIP GENERATION**	223			0.30		0.39		0.35		0.44
LONG BEACH	223	538	156	0.29	151	0.28	156	0.29	155	0.29
CONDO **ITE TRIP GENERATION**	232			0.34		0.38		0.34		0.38
PLAYA VISTA 1	232	135	32	0.24	22	0.16	37	0.27	22	0.16
PLAYA VISTA 2	232	129	27	0.21	21	0.16	31	0.24	21	0.16

Source: UCLA ITE Student Chapter
Field Data Collection Results
2-Jun-08

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Trip Generation Data Form (Part 1)

[SITE 1]

Land Use/Building Type:[1] MID - RISE APARTMENTS	ITE Land Use Code: 223
Source: FIELD OBSERVATIONS	Source No. (ITE version)
Name of Development: CAMDEN HARBOR VIEW APARTMENTS	Day of the Week: WEDNESDAY
City: LONG BEACH State/Province: CA Zip/Postal Code: 90802	Day: 26 Month: MARCH Year: 2008
Country: UNITED STATES	Metropolitan Area:

1. For fast-food land use, please specify if hamburger- or nonhamburger-based.

Location Within Area:

□ (1) CBD   □ (3) Suburban (Non-CBD)   □ (5) Rural

☒ (2) Urban (Non-CBD)   □ (4) Suburban CBD   □ (6) Freeway Interchange Area (Rural)

                                                             □ (7) Not Given

Detailed Description of Development:[3]

Independent Variable: (include data for as many as possible)[2]	Actual	Estimated		Actual	Estimated
____ (1) Employees (#)	□	□	____ (10) Parking Spaces (#)	□	□
____ (2) Persons (#)	□	□	____ (11) Occupied Beds (#)	□	□
538 (3) Units (#)	☒	□	____ (12) Seats (#)	□	□
____ (4) Occupied Units (#)	□	□	____ (13) Servicing Positions/Vehicle Fueling	□	□
____ (5) Gross Floor Area (gross sq. ft.)	□	□	Positions _____		
(% of development occupied _____)			____ (14) Shopping Center % Out-parcels/pads	□	□
____ (6) Net Rentable Area (sq. ft.)	□	□	____ (15) A.M. Peak Hour Volume of Adjacent Street Traffic	□	□
____ (7) Gross Leasable Area (sq. ft.)	□	□	____ (16) P.M. Peak Hour Volume of Adjacent Street Traffic	□	□
____ (8) Occupied Gross Leasable Area (sq. ft.)	□	□	____ (17) Other _____	□	□
____ (9) Acres	□	□	____ (18) Other _____	□	□

2. Definitions for several independent variables can be found in the *Trip Generation Handbook* Glossary.

3. Please provide all pertinent information that helps to describe the subject project. If necessary, attach a detailed report.

Other Data:

Vehicle Occupancy (#)

____ A.M. ____ P.M.   ____ 24-hour %

Percent by Transit:

____ A.M. % ____ P.M. %   ____ 24-hour %

Percent by Carpool/Vanpool:

____ A.M. % ____ P.M. %   ____ 24-hour %

Employees by Shift:

	Start	End	
First Shift:	Time ____	Time ____	Employees (#) ____
Second Shift:	Start Time ____	End Time ____	Employees (#) ____
Third Shift:	Start Time ____	End Time ____	Employees (#) ____

Parking Cost on Site: Hourly ____   Daily ____

Transportation Demand Management (TDM) Information:

At the time of this study, was there a TDM program (that may have impacted the trip generation characteristics of this site) underway?

☒ No

□ Yes (If yes, please check appropriate box/boxes, describe the nature of the TDM program(s) and provide a source for any studies that may help quantify this impact. Attach additional sheets if necessary)

□ (1) Transit Service   □ (5) Employer Support Measures   □ (9) Tolls and Congestion Pricing

□ (2) Carpool Programs   □ (6) Preferential HOV Treatments   □ (10) Variable Work Hours/Compressed Work Weeks

□ (3) Vanpool Programs   □ (7) Transit and Ridesharing Incentives □ (11) Telecommuting

□ (4) Bicycle/Pedestrian   □ (8) Parking Supply and Pricing   □ (12) Other _____
Facilities and Site   Management
Improvements

Please Complete Form on Other Side

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Trip Generation Data Form (Part 2)

Summary of Driveway Volumes   (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)   [DRIVEWAY 1]

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume																		
A.M. Peak Hour of Adjacent[1] Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):																		
P.M. Peak Hour of Adjacent[1] Street Traffic (4 – 6) Time:																		
A.M. Peak Hour Generator[2] Time: 7:30 - 8:30	11		41		52													
P.M. Peak Hour Generator[2] Time: 4:45 - 5:45	46		8		54													
Peak Hour Generator[3] Time (Weekend):																		

[1]. Highest hourly volume between 7 AM and 9 AM (4 PM and 6 PM).
[2]. Highest hourly volume during the AM or PM period.
[3]. Highest hourly volume during the entire day.
Please refer to the *Trip Generation User's Guide* for full definition of the terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00							3:00-4:00						
6:15-7:15							11:15-12:15							3:15-4:15						
6:30-7:30							11:30-12:30							3:30-4:30						
6:45-7:45							11:45-12:45							3:45-4:45						
7:00-8:00	6		41		47		12:00-1:00							4:00-5:00	24		8		32	
7:15-8:15	10		40		50		12:15-1:15							4:15-5:15	33		7		40	
7:30-8:30	11		41		52		12:30-1:30							4:30-5:30	42		8		50	
7:45-8:45	12		33		45		12:45-1:45							4:45-5:45	46		8		54	
8:00-9:00	16		31		47		1:00-2:00							5:00-6:00	40		8		48	

☒ Check if Part 3 and/or additional information is attached.

Survey conducted by: Name: AUDREY NAVAL
     Organization: ITE @ UCLA
     Address:
     City/State/Zip:
     Telephone #: _____ Fax #: _____ E-mail: _____

itc= Institute of Transportation Engineers
# Trip Generation Data Form (Part 3)

Name/Organization: AUDREY NAVAL / ITE @ UCLA

Telephone Number: 562.547.8630

City/State: LOS ANGELES, CA

[DRIVEWAY 1]

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: WEDNESDAY

(All = All Vehicles Counted, Except Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15						
12:15-12:30							12:15-12:30						
12:30-12:45							12:30-12:45						
12:45-1:00							12:45-1:00						
1:00-1:15							1:00-1:15						
1:15-1:30							1:15-1:30						
1:30-1:45							1:30-1:45						
1:45-2:00							1:45-2:00						
2:00-2:15							2:00-2:15						
2:15-2:30							2:15-2:30						
2:30-2:45							2:30-2:45						
2:45-3:00							2:45-3:00						
3:00-3:15							3:00-3:15						
3:15-3:30							3:15-3:30						
3:30-3:45							3:30-3:45						
3:45-4:00							3:45-4:00						
4:00-4:15							4:00-4:15	5		4		9	
4:15-4:30							4:15-4:30	4		2		6	
4:30-4:45							4:30-4:45	5		1		6	
4:45-5:00							4:45-5:00	10		1		11	
5:00-5:15							5:00-5:15	14		3		17	
5:15-5:30							5:15-5:30	13		3		16	
5:30-5:45							5:30-5:45	9		1		10	
5:45-6:00							5:45-6:00	4		1		5	
6:00-6:15							6:00-6:15						
6:15-6:30							6:15-6:30						
6:30-6:45							6:30-6:45						
6:45-7:00							6:45-7:00						
7:00-7:15	0		12		12		7:00-7:15						
7:15-7:30	2		8		10		7:15-7:30						
7:30-7:45	3		13		16		7:30-7:45						
7:45-8:00	1		8		9		7:45-8:00						
8:00-8:15	4		11		15		8:00-8:15						
8:15-8:30	3		9		12		8:15-8:30						
8:30-8:45	4		5		9		8:30-8:45						
8:45-9:00	5		6		11		8:45-9:00						
9:00-9:15							9:00-9:15						
9:15-9:30							9:15-9:30						
9:30-9:45							9:30-9:45						
9:45-10:00							9:45-10:00						
10:00-10:15							10:00-10:15						
10:15-10:30							10:15-10:30						
10:30-10:45							10:30-10:45						
10:45-11:00							10:45-11:00						
11:00-11:15							11:00-11:15						
11:15-11:30							11:15-11:30						
11:30-11:45							11:30-11:45						
11:45-12:00							11:45-12:00						

ITE Institute of Transportation Engineers
Trip Generation Data Form (Part 2)

Summary of Driveway Volumes   (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)   [DRIVEWAY 2]

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume																		
A.M. Peak Hour of Adjacent[1] Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):																		
P.M. Peak Hour of Adjacent[1] Street Traffic (4 – 6) Time:																		
A.M. Peak Hour Generator[2] Time: 7:15 - 8:15	0		17		17													
P.M. Peak Hour Generator[2] Time: 4:15 - 5:15	11		4		15													
Peak Hour Generator[3] Time (Weekend):																		

1. Highest hourly volume between 7 AM and 9 AM (4 PM and 6 PM).
2. Highest hourly volume during the AM or PM period.
3. Highest hourly volume during the entire day.
Please refer to the *Trip Generation User's Guide* for full definition of the terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00							3:00-4:00						
6:15-7:15							11:15-12:15							3:15-4:15						
6:30-7:30							11:30-12:30							3:30-4:30						
6:45-7:45							11:45-12:45							3:45-4:45						
7:00-8:00	0		15		15		12:00-1:00							4:00-5:00	8		3		11	
7:15-8:15	0		17		17		12:15-1:15							4:15-5:15	11		4		15	
7:30-8:30	0		12		12		12:30-1:30							4:30-5:30	11		3		14	
7:45-8:45	2		14		16		12:45-1:45							4:45-5:45	9		2		11	
8:00-9:00	2		15		17		1:00-2:00							5:00-6:00	5		1		6	

☒ Check if Part 3 and/or additional information is attached.

Survey conducted by: Name: ADRIAN KEITH
Organization: ITE @ UCLA
Address:
City/State/Zip:
Telephone #: _____ Fax #: _____ E-mail: _____

Institute of Transportation Engineers
Trip Generation Data Form (Part 3)

Name/Organization: ADRIAN KEITH / ITE @ UCLA   City/State: Los Angeles, CA

Telephone Number: 562.857.3288

[DRIVEWAY 2]

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: WEDNESDAY   (All = All Vehicles Counted, Except Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15						
12:15-12:30							12:15-12:30						
12:30-12:45							12:30-12:45						
12:45-1:00							12:45-1:00						
1:00-1:15							1:00-1:15						
1:15-1:30							1:15-1:30						
1:30-1:45							1:30-1:45						
1:45-2:00							1:45-2:00						
2:00-2:15							2:00-2:15						
2:15-2:30							2:15-2:30						
2:30-2:45							2:30-2:45						
2:45-3:00							2:45-3:00						
3:00-3:15							3:00-3:15						
3:15-3:30							3:15-3:30						
3:30-3:45							3:30-3:45						
3:45-4:00							3:45-4:00						
4:00-4:15							4:00-4:15	1		0		1	
4:15-4:30							4:15-4:30	1		1		2	
4:30-4:45							4:30-4:45	2		1		3	
4:45-5:00							4:45-5:00	4		1		5	
5:00-5:15							5:00-5:15	4		1		5	
5:15-5:30							5:15-5:30	1		0		1	
5:30-5:45							5:30-5:45	0		0		0	
5:45-6:00							5:45-6:00	0		0		0	
6:00-6:15							6:00-6:15						
6:15-6:30							6:15-6:30						
6:30-6:45							6:30-6:45						
6:45-7:00							6:45-7:00						
7:00-7:15	0		3		3		7:00-7:15						
7:15-7:30	0		7		7		7:15-7:30						
7:30-7:45	0		4		4		7:30-7:45						
7:45-8:00	0		1		1		7:45-8:00						
8:00-8:15	0		5		5		8:00-8:15						
8:15-8:30	0		2		2		8:15-8:30						
8:30-8:45	2		6		8		8:30-8:45						
8:45-9:00	0		2		2		8:45-9:00						
9:00-9:15							9:00-9:15						
9:15-9:30							9:15-9:30						
9:30-9:45							9:30-9:45						
9:45-10:00							9:45-10:00						
10:00-10:15							10:00-10:15						
10:15-10:30							10:15-10:30						
10:30-10:45							10:30-10:45						
10:45-11:00							10:45-11:00						
11:00-11:15							11:00-11:15						
11:15-11:30							11:15-11:30						
11:30-11:45							11:30-11:45						
11:45-12:00							11:45-12:00						

ITE Institute of Transportation Engineers
Trip Generation Data Form (Part 2)

Summary of Driveway Volumes   (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)   [DRIVEWAY 3]

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume																		
A.M. Peak Hour of Adjacent[1] Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):																		
P.M. Peak Hour of Adjacent[1] Street Traffic (4 – 6) Time:																		
A.M. Peak Hour Generator[2] Time: 7:45 - 8:45	8		86		94													
P.M. Peak Hour Generator[2] Time: 5:00 - 6:00	75		22		97													
Peak Hour Generator[3] Time (Weekend):																		

1. Highest hourly volume between 7 AM and 9 AM (4 PM and 6 PM).
2. Highest hourly volume during the AM or PM period.
3. Highest hourly volume during the entire day.
Please refer to the *Trip Generation User's Guide* for full definition of the terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00							3:00-4:00						
6:15-7:15							11:15-12:15							3:15-4:15						
6:30-7:30							11:30-12:30							3:30-4:30						
6:45-7:45							11:45-12:45							3:45-4:45						
7:00-8:00	7		81		88		12:00-1:00							4:00-5:00	49		17		66	
7:15-8:15	8		77		85		12:15-1:15							4:15-5:15	58		19		77	
7:30-8:30	8		84		92		12:30-1:30							4:30-5:30	68		19		87	
7:45-8:45	8		86		94		12:45-1:45							4:45-5:45	71		19		90	
8:00-9:00	9		78		87		1:00-2:00							5:00-6:00	75		22		97	

☒ Check if Part 3 and/or additional information is attached.

Survey conducted by: Name: MITESH PATEL / JONATHAN TID
Organization: ITE @ UCLA
Address: _____
City/State/Zip: _____
Telephone #: _____ Fax #: _____ E-mail: _____

ite= Institute of Transportation Engineers
Trip Generation Data Form (Part 3)

Name/Organization: MITESH PATEL / JONATHAN TIO / ITE @ UCLA   City/State: LOS ANGELES, CA

Telephone Number: 714.552.7619 / 714.488.0649

[DRIVEWAY 3]

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: WEDNESDAY   (All = All Vehicles Counted, Except Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15						
12:15-12:30							12:15-12:30						
12:30-12:45							12:30-12:45						
12:45-1:00							12:45-1:00						
1:00-1:15							1:00-1:15						
1:15-1:30							1:15-1:30						
1:30-1:45							1:30-1:45						
1:45-2:00							1:45-2:00						
2:00-2:15							2:00-2:15						
2:15-2:30							2:15-2:30						
2:30-2:45							2:30-2:45						
2:45-3:00							2:45-3:00						
3:00-3:15							3:00-3:15						
3:15-3:30							3:15-3:30						
3:30-3:45							3:30-3:45						
3:45-4:00							3:45-4:00						
4:00-4:15							4:00-4:15	10		5		15	
4:15-4:30							4:15-4:30	13		4		17	
4:30-4:45							4:30-4:45	12		5		17	
4:45-5:00							4:45-5:00	14		3		17	
5:00-5:15							5:00-5:15	19		7		26	
5:15-5:30							5:15-5:30	23		4		27	
5:30-5:45							5:30-5:45	15		5		20	
5:45-6:00							5:45-6:00	18		6		24	
6:00-6:15							6:00-6:15						
6:15-6:30							6:15-6:30						
6:30-6:45							6:30-6:45						
6:45-7:00							6:45-7:00						
7:00-7:15	2		21		23		7:00-7:15						
7:15-7:30	1		18		19		7:15-7:30						
7:30-7:45	2		18		20		7:30-7:45						
7:45-8:00	2		24		26		7:45-8:00						
8:00-8:15	3		17		20		8:00-8:15						
8:15-8:30	1		25		26		8:15-8:30						
8:30-8:45	2		20		22		8:30-8:45						
8:45-9:00	3		16		19		8:45-9:00						
9:00-9:15							9:00-9:15						
9:15-9:30							9:15-9:30						
9:30-9:45							9:30-9:45						
9:45-10:00							9:45-10:00						
10:00-10:15							10:00-10:15						
10:15-10:30							10:15-10:30						
10:30-10:45							10:30-10:45						
10:45-11:00							10:45-11:00						
11:00-11:15							11:00-11:15						
11:15-11:30							11:15-11:30						
11:30-11:45							11:30-11:45						
11:45-12:00							11:45-12:00						

ITE Institute of Transportation Engineers

Trip Generation Data Form (Part 1)

[PLAYA VISTA 1]

Land Use/Building Type:[1] HIGH - RISE CONDOS	ITE Land Use Code: 232
Source: FIELD OBSERVATIONS	Source No. (ITE use only)
Name of Development: WATER STONE CONDOS	Day of the Week: THURSDAY / FRIDAY
City: PLAYA VISTA State/Province: CA Zip/Postal Code: 90094	Day: 27 / 30 Month: MAR / MAY Year: 2008
Country: UNITED STATES	Metropolitan Area:

1. For fast-food land use, please specify if hamburger- or nonhamburger-based.

Location Within Area:

- ☐ (1) CBD
- ☒ (2) Urban (Non-CBD)
- ☐ (3) Suburban (Non-CBD)
- ☐ (4) Suburban CBD
- ☐ (5) Rural
- ☐ (6) Freeway Interchange Area (Rural)
- ☐ (7) Not Given

Detailed Description of Development:[3]

Independent Variable: (include data for as many as possible)[2]	Actual	Estimated		Actual	Estimated
_____ (1) Employees (#)	☐	☐	_____ (10) Parking Spaces (#)	☐	☐
_____ (2) Persons (#)	☐	☐	_____ (11) Occupied Beds (#)	☐	☐
135 (3) Units (#)	☒	☐	_____ (12) Seats (#)	☐	☐
_____ (4) Occupied Units (#)	☐	☐	_____ (13) Servicing Positions/Vehicle Fueling	☐	☐
_____ (5) Gross Floor Area (gross sq. ft.)	☐	☐	Positions _____		
(% of development occupied _____)			_____ (14) Shopping Center % Out-parcels/pads	☐	☐
_____ (6) Net Rentable Area (sq. ft.)	☐	☐	_____ (15) A.M. Peak Hour Volume of Adjacent Street Traffic	☐	☐
_____ (7) Gross Leasable Area (sq. ft.)	☐	☐	_____ (16) P.M. Peak Hour Volume of Adjacent Street Traffic	☐	☐
_____ (8) Occupied Gross Leasable Area (sq. ft.)	☐	☐	_____ (17) Other _____	☐	☐
_____ (9) Acres	☐	☐	_____ (18) Other _____	☐	☐

2. Definitions for several independent variables can be found in the *Trip Generation Handbook* Glossary.

3. Please provide all pertinent information that helps to describe the subject project. If necessary, attach a detailed report.

Other Data:

Vehicle Occupancy (#)
_____ A.M. _____ P.M.   _____ 24-hour %
Percent by Transit:
_____ A.M. % _____ P.M. %   _____ 24-hour %
Percent by Carpool/Vanpool:
_____ A.M. % _____ P.M. %   _____ 24-hour %

Employees by Shift:

	Start	End	
First Shift:	Time _____	Time _____	Employees (#) _____
Second Shift:	Time _____	Time _____	Employees (#) _____
Third Shift:	Time _____	Time _____	Employees (#) _____

Parking Cost on Site: Hourly _____ Daily _____

Transportation Demand Management (TDM) Information:

At the time of this study, was there a TDM program (that may have impacted the trip generation characteristics of this site) underway?

☒ No

☐ Yes (If yes, please check appropriate box/boxes, describe the nature of the TDM program(s) and provide a source for any studies that may help quantify this impact. Attach additional sheets if necessary)

- ☐ (1) Transit Service
- ☐ (2) Carpool Programs
- ☐ (3) Vanpool Programs
- ☐ (4) Bicycle/Pedestrian Facilities and Site Improvements
- ☐ (5) Employer Support Measures
- ☐ (6) Preferential HOV Treatments
- ☐ (7) Transit and Ridesharing Incentives
- ☐ (8) Parking Supply and Pricing Management
- ☐ (9) Tolls and Congestion Pricing
- ☐ (10) Variable Work Hours/Compressed Work Weeks
- ☐ (11) Telecommuting
- ☐ (12) Other _____

Please Complete Form on Other Side

ite Institute of Transportation Engineers

Trip Generation Data Form (Part 2)

Summary of Driveway Volumes   (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume																		
A.M. Peak Hour of Adjacent[1] Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):																		
P.M. Peak Hour of Adjacent[1] Street Traffic (4 – 6) Time:																		
A.M. Peak Hour Generator[2] Time: 7:45 - 8:45	1		36		37													
P.M. Peak Hour Generator[2] Time: 4:45 - 5:45	17		3		20													
Peak Hour Generator[3] Time (Weekend):																		

[1.] Highest hourly volume between 7 AM and 9 AM (4 PM and 6 PM).
[2.] Highest hourly volume during the AM or PM period.
[3.] Highest hourly volume during the entire day.
Please refer to the *Trip Generation User's Guide* for full definition of the terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00							3:00-4:00						
6:15-7:15							11:15-12:15							3:15-4:15						
6:30-7:30							11:30-12:30							3:30-4:30						
6:45-7:45							11:45-12:45							3:45-4:45						
7:00-8:00	2		20		22		12:00-1:00							4:00-5:00	4		3		7	
7:15-8:15	3		26		29		12:15-1:15							4:15-5:15	7		2		9	
7:30-8:30	3		29		32		12:30-1:30							4:30-5:30	9		2		11	
7:45-8:45	1		36		37		12:45-1:45							4:45-5:45	10	(17)	2	(3)	12	(20)
8:00-9:00	1		34		35		1:00-2:00							5:00-6:00	9	(12)	3	(4)	12	(16)

☐ Check if Part 3 and/or additional information is attached.

Survey conducted by: Name: JEFF LI / KEVIN CSUPAK
Organization: ITE @ UCLA
Address:
City/State/Zip:
Telephone #:   Fax #:   E-mail:

Trip Generation Data Form (Part 3)

Name/Organization: JEFF LII /KEVIN CSUPAK/ ITE @ UCLA   City/State: LOS ANGELES, CA

WATERSTONE

Telephone Number: 909.720.2121 | 805.708.1116

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

Day of the week: THURSDAY | FRIDAY   (All = All Vehicles Counted, Except Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15						
12:15-12:30							12:15-12:30						
12:30-12:45							12:30-12:45						
12:45-1:00							12:45-1:00						
1:00-1:15							1:00-1:15						
1:15-1:30							1:15-1:30						
1:30-1:45							1:30-1:45						
1:45-2:00							1:45-2:00						
2:00-2:15							2:00-2:15						
2:15-2:30							2:15-2:30						
2:30-2:45							2:30-2:45						
2:45-3:00							2:45-3:00						
3:00-3:15							3:00-3:15						
3:15-3:30							3:15-3:30						
3:30-3:45							3:30-3:45						
3:45-4:00							3:45-4:00						
4:00-4:15							4:00-4:15	1		1		2	
4:15-4:30							4:15-4:30	0		2		2	
4:30-4:45							4:30-4:45	1		0		1	
4:45-5:00							4:45-5:00	2 (3)		0 (0)		2 (3)	
5:00-5:15							5:00-5:15	4 (3)		0 (1)		4 (4)	
5:15-5:30							5:15-5:30	2 (3)		2 (1)		4 (4)	
5:30-5:45							5:30-5:45	2 (3)		0 (1)		2 (9)	
5:45-6:00							5:45-6:00	1 (4)		1 (1)		2 (5)	
6:00-6:15							6:00-6:15						
6:15-6:30							6:15-6:30						
6:30-6:45							6:30-6:45						
6:45-7:00							6:45-7:00						
7:00-7:15	0		3		3		7:00-7:15						
7:15-7:30	0		7		7		7:15-7:30						
7:30-7:45	2		3		5		7:30-7:45						
7:45-8:00	0		7		7		7:45-8:00						
8:00-8:15	1		9		10		8:00-8:15						
8:15-8:30	0		10		10		8:15-8:30						
8:30-8:45	0		10		10		8:30-8:45						
8:45-9:00	0		5		5		8:45-9:00						
9:00-9:15							9:00-9:15						
9:15-9:30							9:15-9:30						
9:30-9:45							9:30-9:45						
9:45-10:00							9:45-10:00						
10:00-10:15							10:00-10:15						
10:15-10:30							10:15-10:30						
10:30-10:45							10:30-10:45						
10:45-11:00							10:45-11:00						
11:00-11:15							11:00-11:15						
11:15-11:30							11:15-11:30						
11:30-11:45							11:30-11:45						
11:45-12:00							11:45-12:00						

ITE Institute of Transportation Engineers

Trip Generation Data Form (Part 1)

[PLAYA VISTA 2]

Land Use/Building Type:[1] HIGH RISE CONDOS	ITE Land Use Code: 232
Source: FIELD OBSERVATIONS	Source No. (ITE use only)
Name of Development: CRESCENT WALK CONDOS	Day of the Week: THURSDAY / FRIDAY
City: PLAYA VISTA State/Province: CA Zip/Postal Code: 90094	Day: 27 / 30 Month: MAR / MAY Year: 2008
Country: UNITED STATES	Metropolitan Area:

1. For fast-food land use, please specify if hamburger- or nonhamburger-based.

Location Within Area:

- ☐ (1) CBD
- ☒ (2) Urban (Non-CBD)
- ☐ (3) Suburban (Non-CBD)
- ☐ (4) Suburban CBD
- ☐ (5) Rural
- ☐ (6) Freeway Interchange Area (Rural)
- ☐ (7) Not Given

Detailed Description of Development:[3]

Independent Variable: (include data for as many as possible)[2]	Actual	Estimated		Actual	Estimated
_____ (1) Employees (#)	☐	☐	_____ (10) Parking Spaces (#)	☐	☐
_____ (2) Persons (#)	☐	☐	_____ (11) Occupied Beds (#)	☐	☐
129 (3) Units (#)	☒	☐	_____ (12) Seats (#)	☐	☐
_____ (4) Occupied Units (#)	☐	☐	_____ (13) Servicing Positions/Vehicle Fueling	☐	☐
_____ (5) Gross Floor Area (gross sq. ft.)	☐	☐	Positions _____		
(% of development occupied _____)			_____ (14) Shopping Center % Out-parcels/pads	☐	☐
_____ (6) Net Rentable Area (sq. ft.)	☐	☐	_____ (15) A.M. Peak Hour Volume of Adjacent Street Traffic	☐	☐
_____ (7) Gross Leasable Area (sq. ft.)	☐	☐	_____ (16) P.M. Peak Hour Volume of Adjacent Street Traffic	☐	☐
_____ (8) Occupied Gross Leasable Area (sq. ft.)	☐	☐	_____ (17) Other _____	☐	☐
_____ (9) Acres	☐	☐	_____ (18) Other _____	☐	☐

2. Definitions for several independent variables can be found in the *Trip Generation Handbook* Glossary.

3. Please provide all pertinent information that helps to describe the subject project. If necessary, attach a detailed report.

Other Data:

Vehicle Occupancy (#)
_____ A.M. _____ P.M.   _____ 24-hour %
Percent by Transit:
_____ A.M. % _____ P.M. %   _____ 24-hour %
Percent by Carpool/Vanpool:
_____ A.M. % _____ P.M. %   _____ 24-hour %

Employees by Shift:

	Start	End	
First Shift:	Time _____	Time _____	Employees (#) _____
Second Shift:	Time _____	Time _____	Employees (#) _____
Third Shift:	Time _____	Time _____	Employees (#) _____

Parking Cost on Site: Hourly _____   Daily _____

Transportation Demand Management (TDM) Information:

At the time of this study, was there a TDM program (that may have impacted the trip generation characteristics of this site) underway?

☒ No

☐ Yes (If yes, please check appropriate box/boxes, describe the nature of the TDM program(s) and provide a source for any studies that may help quantify this impact. Attach additional sheets if necessary)

- ☐ (1) Transit Service
- ☐ (2) Carpool Programs
- ☐ (3) Vanpool Programs
- ☐ (4) Bicycle/Pedestrian Facilities and Site Improvements
- ☐ (5) Employer Support Measures
- ☐ (6) Preferential HOV Treatments
- ☐ (7) Transit and Ridesharing Incentives
- ☐ (8) Parking Supply and Pricing Management
- ☐ (9) Tolls and Congestion Pricing
- ☐ (10) Variable Work Hours/Compressed Work Weeks
- ☐ (11) Telecommuting
- ☐ (12) Other _____

Please Complete Form on Other Side

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Trip Generation Data Form (Part 2)

Summary of Driveway Volumes   (All = All Vehicles Counted, Including Trucks; Trucks = Heavy Duty Trucks and Buses)

	Average Weekday (M-F)						Saturday						Sunday					
	Enter		Exit		Total		Enter		Exit		Total		Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks	All	Trucks
24-Hour Volume																		
A.M. Peak Hour of Adjacent[1] Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):																		
P.M. Peak Hour of Adjacent[1] Street Traffic (4 – 6) Time:																		
A.M. Peak Hour Generator[2] Time: 8:00 - 9:00	1		30		31													
P.M. Peak Hour Generator[2] Time: 4:45 - 5:45	15		6		21													
Peak Hour Generator[3] Time (Weekend):																		

1. Highest hourly volume between 7 AM and 9 AM (4 PM and 6 PM).
2. Highest hourly volume during the AM or PM period.
3. Highest hourly volume during the entire day.
Please refer to the *Trip Generation User's Guide* for full definition of the terms.

Hourly Driveway Volumes- Average Weekday (M-F)

A.M. Period	Enter		Exit		Total		Mid-Day Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
6:00-7:00							11:00-12:00							3:00-4:00						
6:15-7:15							11:15-12:15							3:15-4:15						
6:30-7:30							11:30-12:30							3:30-4:30						
6:45-7:45							11:45-12:45							3:45-4:45						
7:00-8:00	1		26		27		12:00-1:00							4:00-5:00	15		3		18	
7:15-8:15	0		25		25		12:15-1:15							4:15-5:15	14		2		14	
7:30-8:30	0		27		27		12:30-1:30							4:30-5:30	12		1		13	
7:45-8:45	0		27		27		12:45-1:45							4:45-5:45	8	(15)	1	(6)	9	(21)
8:00-9:00	1		30		31		1:00-2:00							5:00-6:00	9	(15)	2	(4)	11	(19)

☒ Check if Part 3 and/or additional information is attached.

Survey conducted by: Name: SHARON LIU / MITESH PATEL

Organization: ITE @ UCLA

Address: _____

City/State/Zip: _____

Telephone #:_____ Fax #:_____ E-mail:_____

Please return to:
Institute of Transportation Engineers
Technical Projects Division
1099 14th Street, NW, Suite 300 West
Washington, DC 20005-3438 USA
Telephone: +1 202-289-0222
FAX: +1 202-289-7722
ITE on the Web: www.ite.org

itε Institute of Transportation Engineers
Trip Generation Data Form (Part 3)

Name/Organization: SHARON LIU / MITESH PATEL / ITE @ UCLA   City/State: LOS ANGELES, CA

Telephone Number: 714.872.3645 / 714.552.7649

Detailed Driveway Volumes: Attach this sheet to Parts 1 and 2 if you are providing additional information.

CRESCENT WALK

Day of the week: THURSDAY / FRIDAY   (All = All Vehicles Counted, Except Trucks; Trucks = Heavy Duty Trucks and Buses)

A.M. Period	Enter		Exit		Total		P.M. Period	Enter		Exit		Total	
	All	Trucks	All	Trucks	All	Trucks		All	Trucks	All	Trucks	All	Trucks
12:00-12:15							12:00-12:15						
12:15-12:30							12:15-12:30						
12:30-12:45							12:30-12:45						
12:45-1:00							12:45-1:00						
1:00-1:15							1:00-1:15						
1:15-1:30							1:15-1:30						
1:30-1:45							1:30-1:45						
1:45-2:00							1:45-2:00						
2:00-2:15							2:00-2:15						
2:15-2:30							2:15-2:30						
2:30-2:45							2:30-2:45						
2:45-3:00							2:45-3:00						
3:00-3:15							3:00-3:15						
3:15-3:30							3:15-3:30						
3:30-3:45							3:30-3:45						
3:45-4:00							3:45-4:00						
4:00-4:15							4:00-4:15	4		1		5	
4:15-4:30							4:15-4:30	3		2		5	
4:30-4:45							4:30-4:45	6		0		6	
4:45-5:00							4:45-5:00	2 (2)		0 (2)		2 (4)	
5:00-5:15							5:00-5:15	3 (5)		0 (2)		3 (7)	
5:15-5:30							5:15-5:30	1 (5)		1 (1)		2 (6)	
5:30-5:45							5:30-5:45	2 (3)		0 (1)		2 (4)	
5:45-6:00							5:45-6:00	3 (2)		1 (0)		4 (2)	
6:00-6:15							6:00-6:15						
6:15-6:30							6:15-6:30						
6:30-6:45							6:30-6:45						
6:45-7:00							6:45-7:00						
7:00-7:15	1		7		8		7:00-7:15						
7:15-7:30	0		2		2		7:15-7:30						
7:30-7:45	0		8		8		7:30-7:45						
7:45-8:00	0		9		9		7:45-8:00						
8:00-8:15	0		6		6		8:00-8:15						
8:15-8:30	0		4		4		8:15-8:30						
8:30-8:45	0		8		8		8:30-8:45						
8:45-9:00	1		12		13		8:45-9:00						
9:00-9:15							9:00-9:15						
9:15-9:30							9:15-9:30						
9:30-9:45							9:30-9:45						
9:45-10:00							9:45-10:00						
10:00-10:15							10:00-10:15						
10:15-10:30							10:15-10:30						
10:30-10:45							10:30-10:45						
10:45-11:00							10:45-11:00						
11:00-11:15							11:00-11:15						
11:15-11:30							11:15-11:30						
11:30-11:45							11:30-11:45						
11:45-12:00							11:45-12:00						