



TRIP AND PARKING GENERATION STUDY:  
PORTLAND IKEA

Summary Abstract of Findings

The Portland State University (PSU) Institute of Transportation Engineers (ITE) student chapter, also known as STEP (Students in Transportation Engineering and Planning) conducted a parking and trip generation study at the Portland IKEA for ITE. The IKEA is located north of Portland, OR in the Portland/Vancouver metropolitan area. IKEA is an international, home products retailer with stores in many countries. The 280,000 square foot store is located in a relatively new commercial shopping area. It has its own parking lot with 1200 spaces and 90 bicycle parking spaces. A light rail stop is located within 500 feet of the store giving it pedestrian and bicycle access, therefore all pedestrian, bicycle and vehicular movements were collected. However, due to internal shopping, there was quite a bit of pedestrian flow between stores so it is difficult to distinguish between transit and those using another store's parking lot and walking to IKEA.

Data collection took place on three Saturdays; February 21<sup>st</sup>, February 28<sup>th</sup> and March 7<sup>th</sup>, 2009, from 10AM to 9PM. 36 students from STEP and the PSU Transportation Operation class collected 33 hours of data. There was a data collector at each entrance as well as one counting parked vehicles and bicycles, as shown in Figure 1. Delivery trucks have their own entrance and were not included in this survey. It should be noted that February is the lowest retailing month of the year so the trip activity (as compared to Christmas time frame) is substantially less due to time of year. Saturday was chosen as the collection day because it is presumed to be the peak day of traffic activity.

Figure 2 shows all hourly trips and the three day average number of trips. Figure 3 shows the mode split for the three collection days. Vehicular trips made up more than 95% of all trips for all days so the peak hours for all trips are the same as the peak hours for vehicles

Because the store is not open during normal AM peak hour times, no AM peaks were found. The PM peak hour varied each day. The peak hour for the first collection day was 2:45-3:45PM, for the second collection day was 3:15-4:15PM, and for the third collection day was 2:00-3:00PM. The average peak hour was 2:40-3:40PM. The average peak hour trip is 4.78 trips per 1,000 square feet. Breakdowns of peak hour volumes, vehicle occupancies and other characteristics are given in Figure 5.

There is no ITE land use code for IKEA. Figure 6 gives codes and trip generation rates for comparable businesses. It should be noted that February is the lowest retailing month of the year so the trip activity (as compared to Christmas time frame) is substantially less due to time of year. The trip generation rate for the Portland IKEA is not comparable to any of the similar businesses. Similar business considered include furniture store, discount superstore, discount store, and discount club. IKEA is not a traditional furniture store as described in ITE's *Trip Generation*. IKEA could also be described as a discount store since it is able to sell items at cheaper costs because they spend considerably less on shipping. However, while IKEA may be similar to other stores, it cannot be directly compared to those stores in terms of trip generation.



Figure 1 - Aerial photo of IKEA store and parking lot

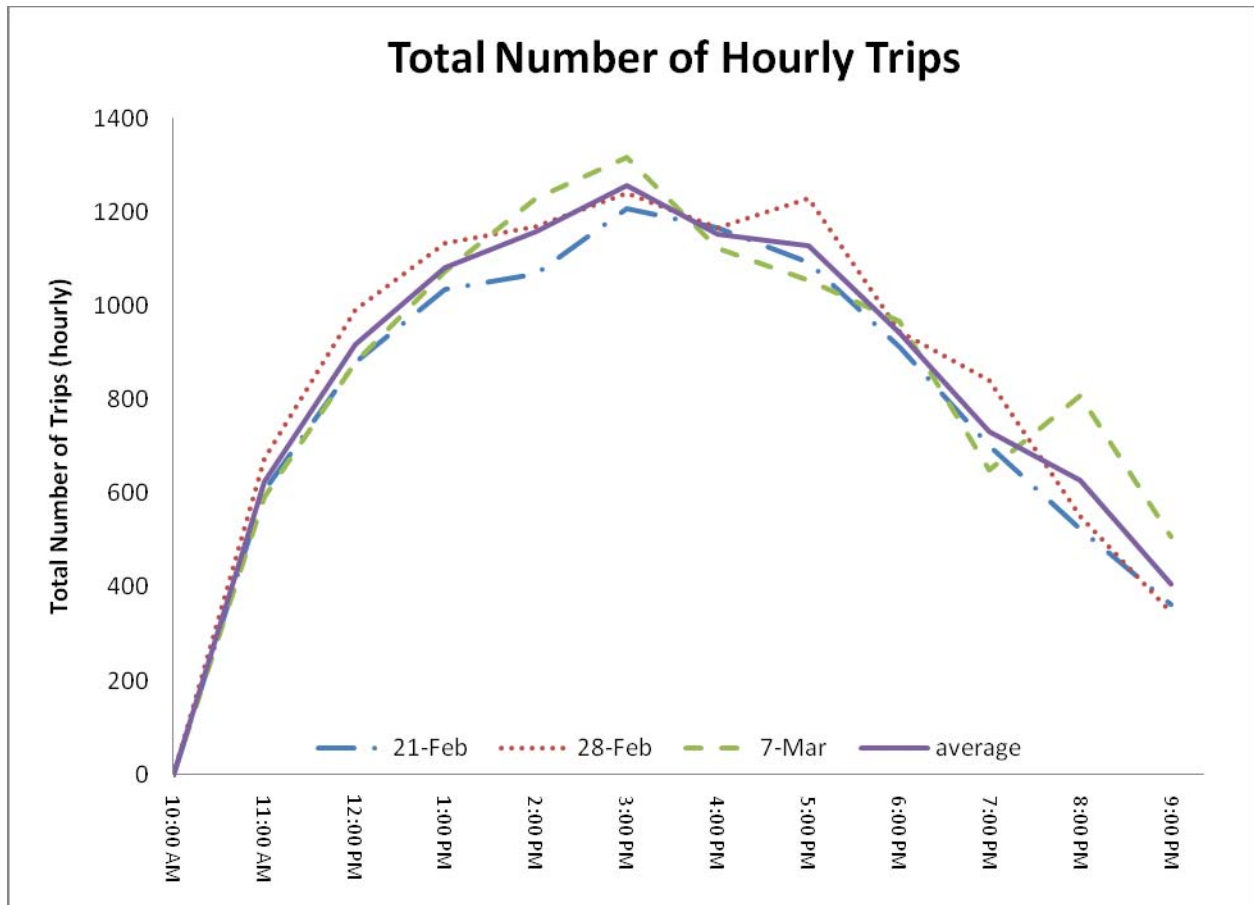


Figure 2 - Hourly trips

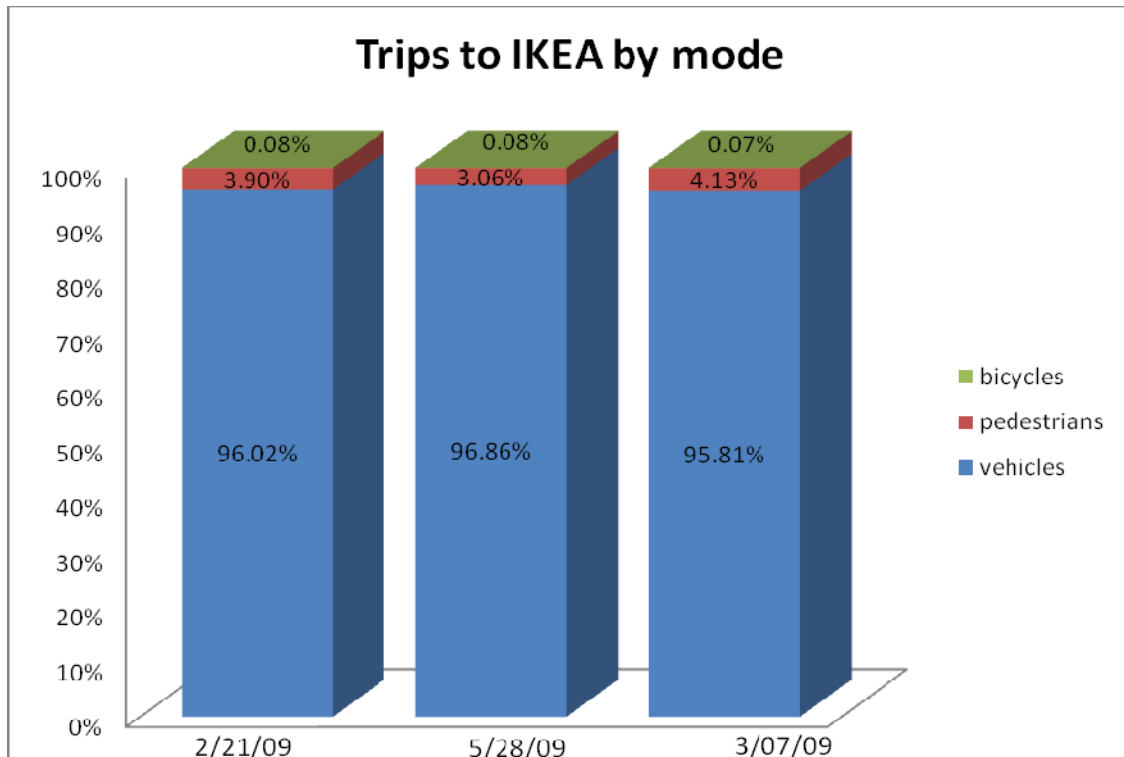


Figure 3 - mode split for IKEA

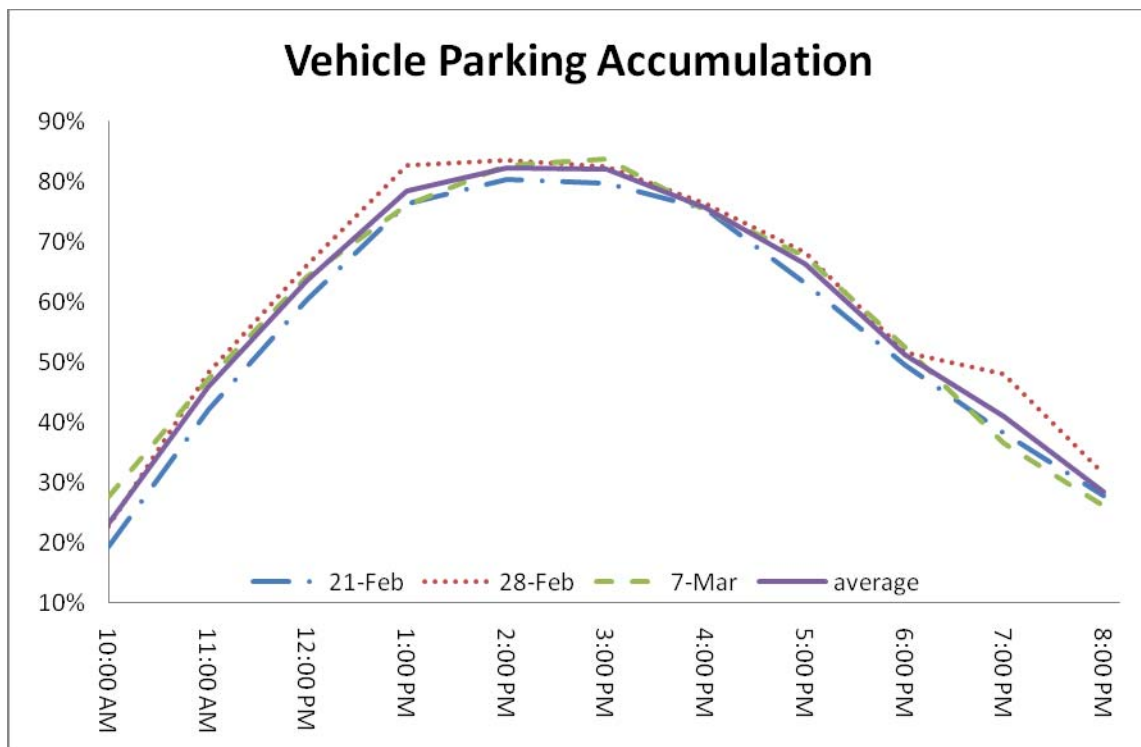


Figure 4 - Parking Accumulation

Variable	February 21	February 28	March 7
Peak Hour	2:45 - 3:45 PM	3:15 - 4:15 PM	12:00 - 1:00 PM
Vehicles	1235	1256	1318
Occupants	2286	2224	2780
Average Occupancy	1.85	1.77	2.11
Pedestrians	26	50	72
Bicycles	1	2	1
Total Trips	1313	1308	1391
All Trips Trip Rate	4.69	4.67	4.97
Vehicle Trip Rate	4.41	4.49	4.71
% entering	46.5%	44.7%	52.2%
% exiting	53.5%	55.3%	47.8%

**Figure 5 - Peak Hour Trip Data**

Land Use (Code)	Saturday Trip Rate Peak Hour of Generator
Free-Standing Discount Superstore (813)	5.64*
Free-Standing Discount Store (815)	7.39*
Furniture Store (890)	0.95*
Discount Club (857)	6.85*
Portland IKEA (--)	4.47

\*trip generation per 1000 Sq. Feet Gross Floor Area, source: ITE *Trip Generation*, 8th Edition

**Figure 6 - Trip Generation Rates for Similar Land Uses**



# Parking Demand Survey Form

Institute of Transportation Engineers

(fill in all highlighted cells - \* are required data)

Land Use Code\*

Name of Site

Brief Description of Site

Transit\*

Area\*

TMP\*

City

State  Country

Parking Price\*  Daily Rate  Hourly Rate

Site Size\*

Units\*

Occupancy\*

Land Use

Site Size

Units

Occupancy

Site Size

Units

Occupancy

Site Size

Units

Occupancy

Number of Parking Spaces Provided at Site

### Highest Observed Parking Demand for the following hours of the day (hour beginning)\*

Date	2/21/2009	2/28/2009	3/7/2009				
Day	Saturday	Saturday	Saturday				
12 Mid							
1:00 AM							
2:00 AM							
3:00 AM							
4:00 AM							
5:00 AM							
6:00 AM							
7:00 AM							
8:00 AM							
9:00 AM							
10:00 AM	230 (1)	272 (0)	331 (2)				
11:00 AM	504 (1)	579 (1)	565 (2)				
12 Noon	724 (2)	794 (1)	770 (3)				
1:00 PM	917 (5)	992 (1)	913 (4)				
2:00 PM	965 (5)	1003 (2)	992 (5)				
3:00 PM	957 (6)	989 (1)	1004 (5)				
4:00 PM	906 (7)	916 (1)	903 (5)				
5:00 PM	758 (6)	818 (0)	810 (0)				
6:00 PM	593 (5)	620 (0)	630 (0)				
7:00 PM	458 (4)	577 (0)	437 (0)				
8:00 PM	332 (4)	378 (0)	313 (0)				
9:00 PM							
10:00 PM							
11:00 PM							

Person

Organization

Phone

Students in Transportation Engineering and Planning

Fax

Email

Notes

Enter data on the web at [www.ite.org](http://www.ite.org)

Comments to: [ite\\_staff@ite.org](mailto:ite_staff@ite.org)

IF not entered on web site, please mail to:

Institute of Transportation Engineers, 1099 14th Street, NW Suite 300 West; Washington, DC 20005-3438

**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							4722	0	4840	0	9562	0							
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time (ex.: 7:15 - 8:15):																			
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time:																			
A.M. Peak Hour Generator <sup>2</sup> Time:																			
P.M. Peak Hour Generator Time:																			
Peak Hour Generator Time (Weekend): 7:45-3:45							584	0	651	0	1235	0							

<sup>1</sup> Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.). Please specify the peak hour.

<sup>2</sup> Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

<sup>3</sup> Highest hourly volume during the entire day. Please specify the peak hour.

Please refer to the *Trip Generation User's Guide* for full definition of 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							12:00-1:00							4:00-5:00						
7:15-8:15							12:15-1:15							4:15-5:15						
7:30-8:30							12:30-1:30							4:30-5:30						
7:45-8:45							12:45-1:45							4:45-5:45						
8:00-9:00							1:00-2:00							5:00-6:00						

Check if Part 3, 4 and/or additional information is attached.

Survey conducted by: Name: Various individuals  
 Organization: STEP-Students in Transportation Engineering and Planning  
 Address: PO Box 751  
 City/State/Zip: Portland, Oregon 97201  
 Telephone #: 503-725-4285 Fax #: \_\_\_\_\_ E-mail: stepinfo@pdx.edu

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

# Trip Generation Data Form (Part 3)

Name/Organization: Students in Transportation Engr. & Planning City/State: Portland, OR  
 Telephone Number: 503-725-4285

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

Day of the week: Saturday (2/21/09) (All = All Vehicles Counted, Including 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	136		129		265	
12:15-12:30							12:15-12:30	129		110		239	
12:30-12:45							12:30-12:45	138		109		243	
12:45-1:00							12:45-1:00	148		141		289	
1:00-1:15							1:00-1:15	156		121		277	
1:15-1:30							1:15-1:30	121		122		243	
1:30-1:45							1:30-1:45	141		112		253	
1:45-2:00							1:45-2:00	145		151		296	
2:00-2:15							2:00-2:15	179		141		320	
2:15-2:30							2:15-2:30	158		154		312	
2:30-2:45							2:30-2:45	145		136		281	
2:45-3:00							2:45-3:00	137		158		295	
3:00-3:15							3:00-3:15	144		174		318	
3:15-3:30							3:15-3:30	149		164		313	
3:30-3:45							3:30-3:45	154		155		309	
3:45-4:00							3:45-4:00	103		123		226	
4:00-4:15							4:00-4:15	138		155		293	
4:15-4:30							4:15-4:30	113		148		261	
4:30-4:45							4:30-4:45	121		167		288	
4:45-5:00							4:45-5:00	112		138		250	
5:00-5:15							5:00-5:15	123		161		284	
5:15-5:30							5:15-5:30	95		119		214	
5:30-5:45							5:30-5:45	79		133		212	
5:45-6:00							5:45-6:00	94		110		204	
6:00-6:15							6:00-6:15	75		117		192	
6:15-6:30							6:15-6:30	77		97		174	
6:30-6:45							6:30-6:45	78		104		182	
6:45-7:00							6:45-7:00	70		84		154	
7:00-7:15							7:00-7:15	100		77		137	
7:15-7:30							7:15-7:30	69		73		142	
7:30-7:45							7:30-7:45	43		93		136	
7:45-8:00							7:45-8:00	39		71		110	
8:00-8:15							8:00-8:15	35		69		104	
8:15-8:30							8:15-8:30	14		77		91	
8:30-8:45							8:30-8:45	13		83		96	
8:45-9:00							8:45-9:00	7		66		73	
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	93		11		104		10:00-10:15						
10:15-10:30	120		34		154		10:15-10:30						
10:30-10:45	120		51		171		10:30-10:45						
10:45-11:00	113		65		178		10:45-11:00						
11:00-11:15	133		71		204		11:00-11:15						
11:15-11:30	127		80		207		11:15-11:30						
11:30-11:45	138		91		229		11:30-11:45						
11:45-12:00	140		99		239		11:45-12:00						

# Trip Generation Data Form (Part 4)

## Summary of Bicycle Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume				7	1	8			
A.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):									
P.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (4 – 6) Time:									
A.M. Peak Hour Generator <sup>2</sup> Time:									
P.M. Peak Hour Generator <sup>2</sup> Time:									
Peak Hour Generator <sup>3</sup> Time (Weekend):									

<sup>1</sup> Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.) as defined in Trip Generation Data Form (Part 2). Please specify the peak hour.

<sup>2</sup> Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

<sup>3</sup> Highest hourly volume during the entire day. Please specify the peak hour. Please attach supplemental hourly volumes.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

## Summary of Pedestrian Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume				174	214	388			
A.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):									
P.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (4 – 6) Time:									
A.M. Peak Hour Generator <sup>2</sup> Time:									
P.M. Peak Hour Generator <sup>2</sup> Time:									
Peak Hour Generator <sup>3</sup> Time (Weekend): 2:45-3:45				26	50	76			

Survey conducted by: Name: various individuals  
 Organization: STEP- Students in Transportation Engineering and Planning  
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 Telephone: +1 202-289-0222  
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# Trip Generation Data Form (Part 1)

Land Use/Building Type: <sup>1</sup> <u>IKEA or Wal-Mart</u>	ITE Land Use Code: <u>None Specified</u>	
Source: <u>ITE District 6 2009 Data Collection RFP</u>	Source No. (ITE use only):	
Name of Development: <u>IKEA</u>	Day of the Week: <u>Saturday</u>	
City: <u>Portland</u> State/Province: <u>Oregon</u> Zip/Postal Code: <u>97220</u>	Day: <u>28</u> Month: <u>February</u> Year: <u>2009</u>	
Country: <u>USA</u>	Metropolitan Area: <u>Portland/Vancouver Metro Area</u>	

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

Location Within Area: <input type="checkbox"/> (1) CBD <input type="checkbox"/> (3) Suburban (Non-CBD) <input type="checkbox"/> (5) Rural <input checked="" type="checkbox"/> (2) Urban (Non-CBD) <input type="checkbox"/> (4) Suburban CBD <input type="checkbox"/> (6) Freeway Interchange Area (Rural) <input type="checkbox"/> (7) Not Given				Detailed Description of Development: <sup>3</sup>	
Independent Variable: (include data for as many as possible) <sup>2</sup>	Actual	Estimated	Actual	Estimated	
_____ (1) Employees (#)	<input type="checkbox"/>	<input type="checkbox"/>	<u>1200</u> (9) Parking Spaces (% occupied: _____)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
_____ (2) Persons (#)	<input type="checkbox"/>	<input type="checkbox"/>	_____ (10) Beds (% occupied: _____)	<input type="checkbox"/>	<input type="checkbox"/>
_____ (3) Total Units (#) (indicate unit: _____)	<input type="checkbox"/>	<input type="checkbox"/>	_____ (11) Seats (#)	<input type="checkbox"/>	<input type="checkbox"/>
_____ (4) Occupied Units (#) (indicate unit: _____)	<input type="checkbox"/>	<input type="checkbox"/>	_____ (12) Servicing Positions/Vehicle Fueling Positions	<input type="checkbox"/>	<input type="checkbox"/>
<u>280,000</u> (5) Gross Floor Area (gross sq. ft.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____ (13) Shopping Center % Out-parcels/pads	<input type="checkbox"/>	<input type="checkbox"/>
_____ (% of development occupied _____)			_____ (14) A.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>
_____ (6) Net Rentable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	_____ (15) P.M. Peak Hour Volume of Adjacent Street Traffic	<input type="checkbox"/>	<input type="checkbox"/>
_____ (7) Gross Leasable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	_____ (16) Other <u>bicycle parking spaces</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
_____ (% of development occupied _____)			_____ (17) Other _____	<input type="checkbox"/>	<input type="checkbox"/>
_____ (8) Total Acres (% developed: _____)	<input type="checkbox"/>	<input type="checkbox"/>			

2. Definitions for several independent variables can be found in the Trip Generation, Second Edition, User's Guide Glossary.

3. Please provide all pertinent information to describe the subject project, including the presence of bicycle/pedestrian facilities. To report bicycle/pedestrian volumes, please refer to Part 4 of this data form.

Other Data: Vehicle Occupancy (#): _____ A.M. <u>1.92</u> 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: First Shift: Start Time _____ End 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? <input checked="" type="checkbox"/> No <input type="checkbox"/> 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)  <input type="checkbox"/> (1) Transit Service <input type="checkbox"/> (5) Employer Support Measures <input type="checkbox"/> (9) Tolls and Congestion Pricing <input type="checkbox"/> (2) Carpool Programs <input type="checkbox"/> (6) Preferential HOV Treatments <input type="checkbox"/> (10) Variable Work Hours/Compressed Work Weeks <input type="checkbox"/> (3) Vanpool Programs <input type="checkbox"/> (7) Transit and Ridesharing Incentives <input type="checkbox"/> (11) Telecommuting <input type="checkbox"/> (4) Bicycle/Pedestrian Facilities and Site Improvements <input type="checkbox"/> (8) Parking Supply and Pricing Management <input type="checkbox"/> (12) Other _____
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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							5013	0	5287	0	10300	0							
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time (ex.: 7:15 - 8:15):																			
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time:																			
A.M. Peak Hour Generator <sup>2</sup> Time:																			
P.M. Peak Hour Generator <sup>2</sup> Time:																			
Peak Hour Generator <sup>3</sup> Time (Weekend): 3:15-4:15pm							566	0	690	0	1256	0							

- <sup>1</sup> Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.). Please specify the peak hour.
  - <sup>2</sup> Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.
  - <sup>3</sup> Highest hourly volume during the entire day. Please specify the peak hour.
- Please refer to the Trip Generation User's Guide for full definition of 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							12:00-1:00							4:00-5:00						
7:15-8:15							12:15-1:15							4:15-5:15						
7:30-8:30							12:30-1:30							4:30-5:30						
7:45-8:45							12:45-1:45							4:45-5:45						
8:00-9:00							1:00-2:00							5:00-6:00						

Check if Part 3, 4 and/or additional information is attached.

Survey conducted by: Name: Various individuals  
 Organization: STEP-Students in Transportation Engineering and Planning  
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# Trip Generation Data Form (Part 3)

Name/Organization: Students in Transportation Engr. & Planning City/State: Portland, OR  
 Telephone Number: 503-725-4285

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

Day of the week: Saturday (2/28/09) (All = All Vehicles Counted, Including 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	162		122		284	
12:15-12:30							12:15-12:30	141		128		269	
12:30-12:45							12:30-12:45	167		134		301	
12:45-1:00							12:45-1:00	172		109		281	
1:00-1:15							1:00-1:15	156		131		287	
1:15-1:30							1:15-1:30	170		150		320	
1:30-1:45							1:30-1:45	140		124		264	
1:45-2:00							1:45-2:00	44		156		300	
2:00-2:15							2:00-2:15	36		151		287	
2:15-2:30							2:15-2:30	65		173		338	
2:30-2:45							2:30-2:45	144		159		303	
2:45-3:00							2:45-3:00	169		144		313	
3:00-3:15							3:00-3:15	149		137		286	
3:15-3:30							3:15-3:30	144		186		330	
3:30-3:45							3:30-3:45	126		130		256	
3:45-4:00							3:45-4:00	34		160		294	
4:00-4:15							4:00-4:15	162		214		376	
4:15-4:30							4:15-4:30	137		178		315	
4:30-4:45							4:30-4:45	119		158		297	
4:45-5:00							4:45-5:00	110		153		263	
5:00-5:15							5:00-5:15	102		133		235	
5:15-5:30							5:15-5:30	78		126		204	
5:30-5:45							5:30-5:45	97		150		247	
5:45-6:00							5:45-6:00	102		159		261	
6:00-6:15							6:00-6:15	93		136		229	
6:15-6:30							6:15-6:30	91		142		233	
6:30-6:45							6:30-6:45	69		127		196	
6:45-7:00							6:45-7:00	62		122		184	
7:00-7:15							7:00-7:15	61		83		144	
7:15-7:30							7:15-7:30	54		95		149	
7:30-7:45							7:30-7:45	62		90		152	
7:45-8:00							7:45-8:00	28		80		108	
8:00-8:15							8:00-8:15	24		59		83	
8:15-8:30							8:15-8:30	29		60		89	
8:30-8:45							8:30-8:45	11		94		105	
8:45-9:00							8:45-9:00	10		61		71	
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	115		18		133		10:00-10:15						
10:15-10:30	115		28		143		10:15-10:30						
10:30-10:45	140		52		192		10:30-10:45						
10:45-11:00	139		68		207		10:45-11:00						
11:00-11:15	135		44		229		11:00-11:15						
11:15-11:30	143		108		251		11:15-11:30						
11:30-11:45	155		101		256		11:30-11:45						
11:45-12:00	151		104		255		11:45-12:00						

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**Trip Generation Data Form (Part 4)**

**Summary of Bicycle Volumes**

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume				4	5	9			
A.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):									
P.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (4 – 6) Time:									
A.M. Peak Hour Generator <sup>2</sup> Time:									
P.M. Peak Hour Generator <sup>2</sup> Time:									
Peak Hour Generator <sup>3</sup> Time (Weekend):									

- <sup>1</sup> Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.) as defined in Trip Generation Data Form (Part 2). Please specify the peak hour.
  - <sup>2</sup> Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.
  - <sup>3</sup> Highest hourly volume during the entire day. Please specify the peak hour. Please attach supplemental hourly volumes.
- Please refer to the *Trip Generation User's Guide* for full definition of terms.

**Summary of Pedestrian Volumes**

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume				163	162	325			
A.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (7 – 9) Time (ex.: 7:15 - 8:15):									
P.M. Peak Hour of Adjacent <sup>1</sup> Street Traffic (4 – 6) Time:									
A.M. Peak Hour Generator <sup>2</sup> Time:									
P.M. Peak Hour Generator <sup>2</sup> Time:									
Peak Hour Generator <sup>3</sup> Time (Weekend): 3:15 - 4:15 pm				17	33	50			

Survey conducted by: Name: various individuals  
 Organization: STEP - Students in Transportation Engineering and Planning  
 Address: PO Box 751  
 City/State/Zip: Portland, Oregon 97201  
 Telephone #: 503-725-4285 Fax #: \_\_\_\_\_ E-mail: stepinfo@pdx.edu

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

# Trip Generation Data Form (Part 1)

Land Use/Building Type: <sup>1</sup> <u>IKEA or Wal-Mart</u>	ITE Land Use Code: <u>None Specified</u>	
Source: <u>ITE District 6 2009 Data Collection RFP</u>	Source No. (ITE use only):	
Name of Development: <u>IKEA</u>	Day of the Week: <u>Saturday</u>	
City: <u>Portland</u> State/Province: <u>Oregon</u> Zip/Postal Code: <u>97220</u>	Day: <u>7</u> Month: <u>March</u> Year: <u>2009</u>	
Country: <u>USA</u>	Metropolitan Area: <u>Portland/Vancouver Metro Area</u>	

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

Location Within Area: <input type="checkbox"/> (1) CBD <input type="checkbox"/> (3) Suburban (Non-CBD) <input type="checkbox"/> (5) Rural <input checked="" type="checkbox"/> (2) Urban (Non-CBD) <input type="checkbox"/> (4) Suburban CBD <input type="checkbox"/> (6) Freeway Interchange Area (Rural) <input type="checkbox"/> (7) Not Given				Detailed Description of Development: <sup>3</sup>	
Independent Variable: (include data for as many as possible) <sup>2</sup>	Actual	Estimated	Actual	Estimated	
_____ (1) Employees (#)	<input type="checkbox"/>	<input type="checkbox"/>	<u>1200</u>	<input checked="" type="checkbox"/>	(9) Parking Spaces (% occupied: _____)
_____ (2) Persons (#)	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	(10) Beds (% occupied: _____)
_____ (3) Total Units (#) (indicate unit: _____)	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	(11) Seats (#)
_____ (4) Occupied Units (#) (indicate unit: _____)	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	(12) Servicing Positions/Vehicle Fueling Positions
<u>780,000</u> (5) Gross Floor Area (gross sq. ft.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	(13) Shopping Center % Out-parcels/pads
(% of development occupied _____)			_____	<input type="checkbox"/>	(14) A.M. Peak Hour Volume of Adjacent Street Traffic
_____ (6) Net Rentable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	(15) P.M. Peak Hour Volume of Adjacent Street Traffic
_____ (7) Gross Leasable Area (sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	(16) Other <u>bicycle parking spaces</u>
(% of development occupied _____)			<u>90</u>	<input checked="" type="checkbox"/>	(17) Other _____
_____ (8) Total Acres (% developed: _____)	<input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	

2. Definitions for several independent variables can be found in the Trip Generation, Second Edition, User's Guide Glossary.

3. Please provide all pertinent information to describe the subject project, including the presence of bicycle/pedestrian facilities. To report bicycle/pedestrian volumes, please refer to Part 4 of this data form.

Other Data: Vehicle Occupancy (#): A.M. <u>1.84</u> P.M. <u>all day</u> _____ 24-hour % Percent by Transit: A.M. % _____ P.M. % _____ 24-hour % Percent by Carpool/Vanpool: A.M. % _____ P.M. % _____ 24-hour % Employees by Shift: First Shift: Start Time _____ End 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? <input checked="" type="checkbox"/> No <input type="checkbox"/> 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) <input type="checkbox"/> (1) Transit Service <input type="checkbox"/> (5) Employer Support Measures <input type="checkbox"/> (9) Tolls and Congestion Pricing <input type="checkbox"/> (2) Carpool Programs <input type="checkbox"/> (6) Preferential HOV Treatments <input type="checkbox"/> (10) Variable Work Hours/Compressed Work Weeks <input type="checkbox"/> (3) Vanpool Programs <input type="checkbox"/> (7) Transit and Ridesharing Incentives <input type="checkbox"/> (11) Telecommuting <input type="checkbox"/> (4) Bicycle/Pedestrian Facilities and Site Improvements <input type="checkbox"/> (8) Parking Supply and Pricing Management <input type="checkbox"/> (12) Other _____
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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							4204	0	4329	0	8593	0							
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time (ex.: 7:15 - 8:15):																			
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time:																			
A.M. Peak Hour Generator <sup>1</sup> Time:																			
P.M. Peak Hour Generator <sup>2</sup> Time:																			
Peak Hour Generator <sup>3</sup> Time (Weekend): 12-1 pm							591	0	483	0	1074	0							

- <sup>1</sup> Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.). Please specify the peak hour.
  - <sup>2</sup> Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.
  - <sup>3</sup> Highest hourly volume during the entire day. Please specify the peak hour.
- Please refer to the Trip Generation User's Guide for full definition of 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							12:00-1:00							4:00-5:00						
7:15-8:15							12:15-1:15							4:15-5:15						
7:30-8:30							12:30-1:30							4:30-5:30						
7:45-8:45							12:45-1:45							4:45-5:45						
8:00-9:00							1:00-2:00							5:00-6:00						

Check if Part 3, 4 and/or additional information is attached.

Survey conducted by: Name: Various Individuals  
 Organization: STEP - Students in Transportation Engineering and Planning  
 Address: PO Box 751  
 City/State/Zip: Portland, OR 97201  
 Telephone #: 503-725-4285 Fax #: \_\_\_\_\_ E-mail: stepinfo@px.edu

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

## Trip Generation Data Form (Part 3)

Name/Organization: Students in Transportation Engr. & Planning City/State: Portland, OR  
 Telephone Number: 503-725-4285

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

Day of the week: Saturday (All = All Vehicles Counted, Including 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	150		132		282	
12:15-12:30							12:15-12:30	149		111		260	
12:30-12:45							12:30-12:45	50		113		263	
12:45-1:00							12:45-1:00	142		127		269	
1:00-1:15							1:00-1:15	172		145		317	
1:15-1:30							1:15-1:30	166		152		318	
1:30-1:45							1:30-1:45	155		139		294	
1:45-2:00							1:45-2:00	145		156		301	
2:00-2:15							2:00-2:15	152		165		317	
2:15-2:30							2:15-2:30	182		147		329	
2:30-2:45							2:30-2:45	175		166		341	
2:45-3:00							2:45-3:00	170		161		331	
3:00-3:15							3:00-3:15	115		142		257	
3:15-3:30							3:15-3:30	24		191		315	
3:30-3:45							3:30-3:45	31		147		278	
3:45-4:00							3:45-4:00	137		137		274	
4:00-4:15							4:00-4:15	119		137		256	
4:15-4:30							4:15-4:30	28		130		258	
4:30-4:45							4:30-4:45	126		140		266	
4:45-5:00							4:45-5:00	17		159		276	
5:00-5:15							5:00-5:15	103		170		273	
5:15-5:30							5:15-5:30	103		120		229	
5:30-5:45							5:30-5:45	102		140		242	
5:45-6:00							5:45-6:00	100		124		224	
6:00-6:15							6:00-6:15	74		123		197	
6:15-6:30							6:15-6:30	67		101		168	
6:30-6:45							6:30-6:45	50		93		143	
6:45-7:00							6:45-7:00	57		87		144	
7:00-7:15							7:00-7:15	116		107		223	
7:15-7:30							7:15-7:30	117		94		211	
7:30-7:45							7:30-7:45	64		106		170	
7:45-8:00							7:45-8:00	68		137		205	
8:00-8:15							8:00-8:15	39		123		162	
8:15-8:30							8:15-8:30	34		84		118	
8:30-8:45							8:30-8:45	19		76		95	
8:45-9:00							8:45-9:00	10		123		133	
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	114		11		131		10:00-10:15						
10:15-10:30	94		35		129		10:15-10:30						
10:30-10:45	114		38		152		10:30-10:45						
10:45-11:00	124		57		181		10:45-11:00						
11:00-11:15	101		82		183		11:00-11:15						
11:15-11:30	134		73		207		11:15-11:30						
11:30-11:45	159		77		236		11:30-11:45						
11:45-12:00	153		102		255		11:45-12:00						

# Trip Generation Data Form (Part 4)

## Summary of Bicycle Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume				4	2	6			
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time (ex.: 7:15 - 8:15):									
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time:									
A.M. Peak Hour Generator <sup>2</sup> Time:									
P.M. Peak Hour Generator <sup>2</sup> Time:									
Peak Hour Generator <sup>2</sup> Time (Weekend):									

<sup>1</sup> Highest hourly volume between 7 a.m. and 9 a.m. (4 p.m. and 6 p.m.) as defined in Trip Generation Data Form (Part 2). Please specify the peak hour.

<sup>2</sup> Highest hourly volume during the a.m. or p.m. period. Please specify the peak hour.

<sup>3</sup> Highest hourly volume during the entire day. Please specify the peak hour. Please attach supplemental hourly volumes.

Please refer to the *Trip Generation User's Guide* for full definition of terms.

## Summary of Pedestrian Volumes

	Average Weekday (M-F)			Saturday			Sunday		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
24-Hour Volume				198	172	370			
A.M. Peak Hour of Adjacent Street Traffic (7 - 9) Time (ex.: 7:15 - 8:15):									
P.M. Peak Hour of Adjacent Street Traffic (4 - 6) Time:									
A.M. Peak Hour Generator <sup>2</sup> Time:									
P.M. Peak Hour Generator <sup>2</sup> Time:									
Peak Hour Generator <sup>2</sup> Time (Weekend): 1:45-2:45 pm				35	45	80			

Survey conducted by: Name: various individuals  
 Organization: ITEP-Students in Transportation Engineering and Planning  
 Address: PO Box 751  
 City/State/Zip: Portland, Oregon 97201  
 Telephone #: 503-725-4285 Fax #: \_\_\_\_\_ E-mail: stepinfo@pdx.edu

Please return to: Institute of Transportation Engineers  
 Technical Projects Division  
 1099 14th Street, NW, Suite 300 West  
 Washington, DC 20005-3438 USA  
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