# Trip Generation and Parking Utilization Data Collection at Mini-Mart with Gas Station

# Final Report

ite at the W UNIVERSITY of WASHINGTON

2013 ITE District 6 - Data Collection Project

Institute of Transportation Engineers Student Chapter at the University of Washington

The University of Washington ITE Student Chapter (ITEUW) performed a data collection effort for trip generation and parking utilization analysis at a mini-mart (K's Deli & Grocery) with Shell gas station in the Fremont neighborhood in Seattle, Washington. The data collection study was carried out on February 5th, 6th, and 7th (Tuesday through Thursday), 2013, with 12 consecutive hours of traffic observations from 7 AM to 7 PM each day and a 15-minute reporting interval. A total of 23 students from the student chapter and the *CEE 410 Traffic Engineering Fundamentals* class gained hands-on traffic data collection experience through the participation of this project.

As shown in Figure 1, the study site is at 3950 Leary Way Northwest, Seattle, Washington. The land use is a mixture of a mini-mart convenience store (main) and a gas station (secondary) with a small parking lot. It is located in the Fremont residential neighborhood on a principal arterial with four driveways to access the site; No. 1 and 2 on Leary Way NW while No. 3 and 4 on 3rd Ave NW (as shown in the aerial map below). There is a bus stop at the site (as marked in the map).The total site area takes 23,000 square feet. The min-mart is approximately 3,750 square feet with 3 employees, operating 6:00 am to 11:00 pm. There are eight self-service gas fueling stations with eight pumps in total. The total floor area of the gas station is 1,570 square feet. One bus stop is also located adjacent to the site, right on the Leary Way NW. A services area (self-service car wash) stands on the west of the study site.

For trip generation, separate counts for passenger cars, trucks and motorcycles and bicycles were collected. The number of pedestrians accessing the site was recorded, as well as the count of pedestrians who enter/exit the site via transit. All the counts were collected every 15 minutes.

Figure 2 shows the daily profile of the total motor vehicle trips aggregated hourly across all modes (passenger cars, trucks, and motor cycles). The morning peak hour (detailed in Table 1) demonstrates similar pattern that occurred between 8:00 AM to 9:00 AM for Tuesday and Wednesday, and between 7:45 am to 8:45 am on Thursday. The average trip rate was 18.9 trips per 1,000 square feet of gross floor area. The afternoon peak hour (detailed in Table 2) varied within the 5:00 PM to 7:00 PM time window with an average trip rate of 27.7 trips per 1,000 square feet of gross floor area. The *Land Use 853 Convenience Market with Gasoline Pumps* in the *Trip Generation, 8th Edition: An ITE Informational Report* is used as a reference to compare

with this data collection project. The detailed information is provided in Table 1 and Table 2 with average trip rates referred followed by the range of rates.

Pedestrian trips were collected in the project, as well as the bus trips (the number of pedestrians that access the site via transit). We do, however, observe a significant volume of pedestrians visiting the site within walking distance from the nearby residential neighborhood. Figure 3 illustrates the daily profile of total number of pedestrians by hour. Note that the pedestrian travel pattern varied slightly from the vehicle trips with the morning and afternoon peak hours shifting towards the noon. The morning peak hour on average was between 9:30 AM to 10:30 AM and afternoon peak hour on average occurred between 5:30 PM to 6:30 PM.

Figure 4 shows the mode split of daily trips while Figure 5 illustrates the average mode share across all three days. It is noted that majority of the trips to the site were made by passenger cars (66%), but a significant number of trips (17%) were made by pedestrians walking to the site. As well, the truck volumes collected include pick-up trucks (i.e. light trucks) in addition to heavy trucks.

The land use has 10 parking spots in the dedicated parking lot. A surveyor dedicated to watching the parking space continuously and recorded the maximum parking spaces occupied every 15 minutes, counting towards the highest observed 15-minute parking demand.

The maximum parking demand (3-day average) occurred between 11:15 AM to 12:15 PM, as shown in Figure 6. Individually, the study site experienced higher parking demand on Tuesday afternoon (2:00 PM to 3:00 PM) than other time periods. The highest observed hourly parking demand is 11, which corresponds to **2.93 vehicles per 1,000 square feet**. It is **not** within **the reference range of 4.88 – 11.67** given by *Parking Generation, 4th Edition: An ITE Informational Report* for Land Use 853.

Compared to the reference values, the land use in the project does **not** demonstrate consistent pattern as the Land Use 853: Convenience Market with Gasoline Pumps, where the primary business is the selling of convenience items, not the fueling of motor vehicles. In this project, maximum queue length as the gas station was also recorded. However, due to the secondary role of the gas station, not much queuing phenomenon was observed during the data collection period.

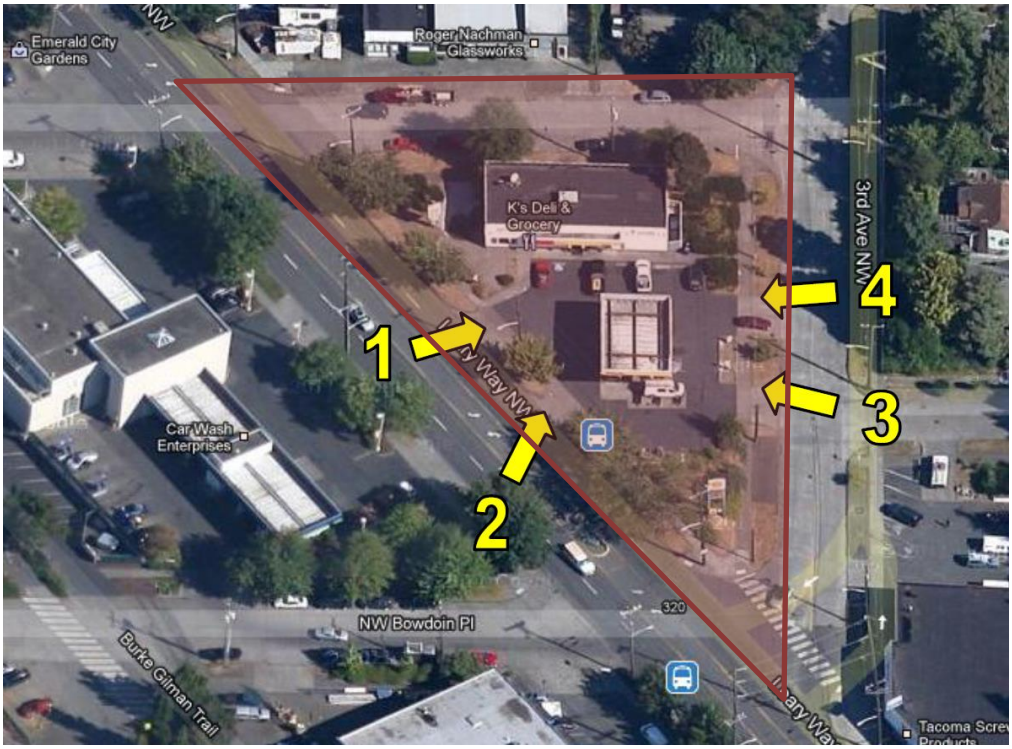



**Figure 1: Aerial Photo of Study Site**

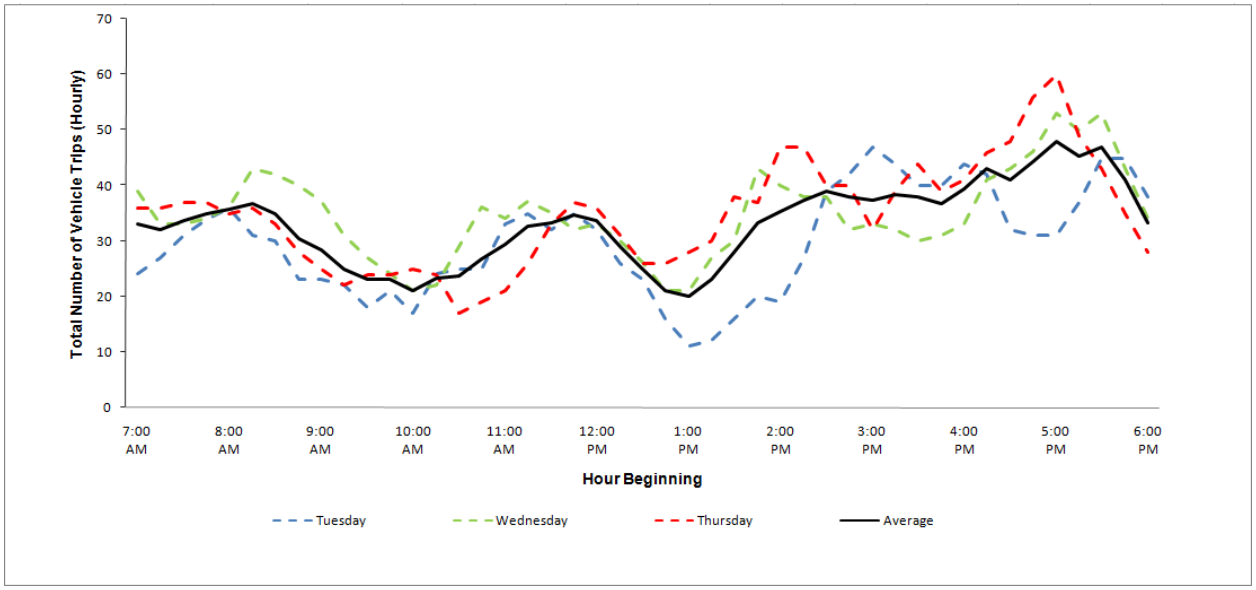



**Figure 2: Total Number of Vehicle Trips (Hourly)**

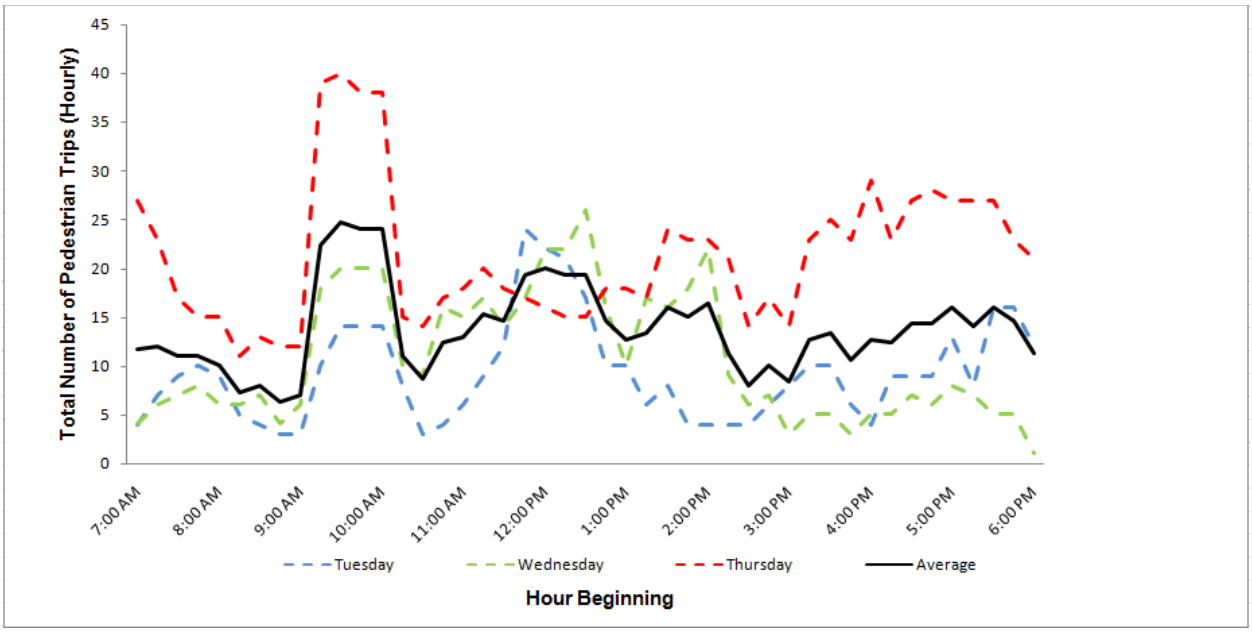
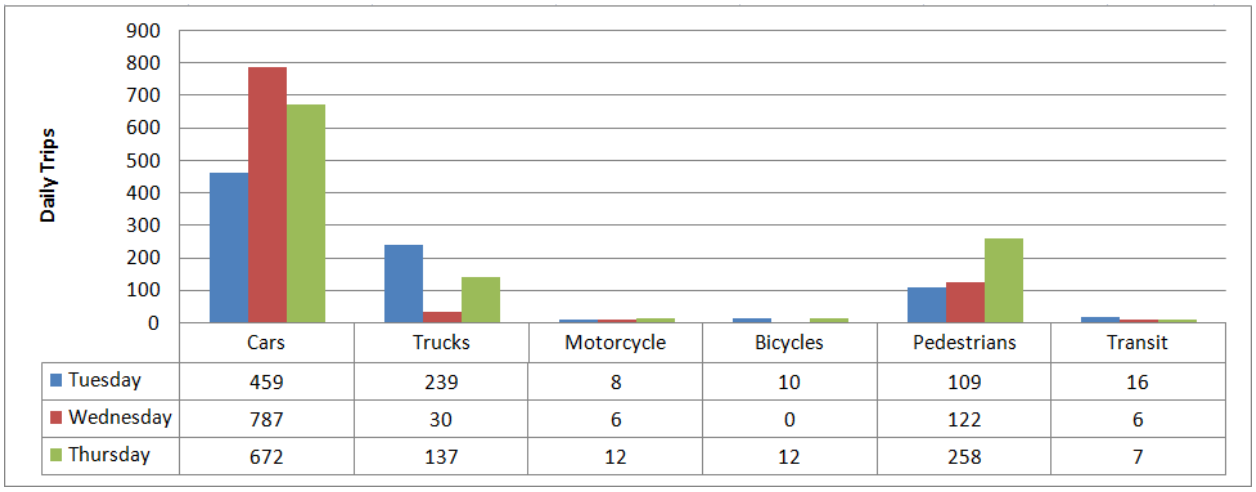
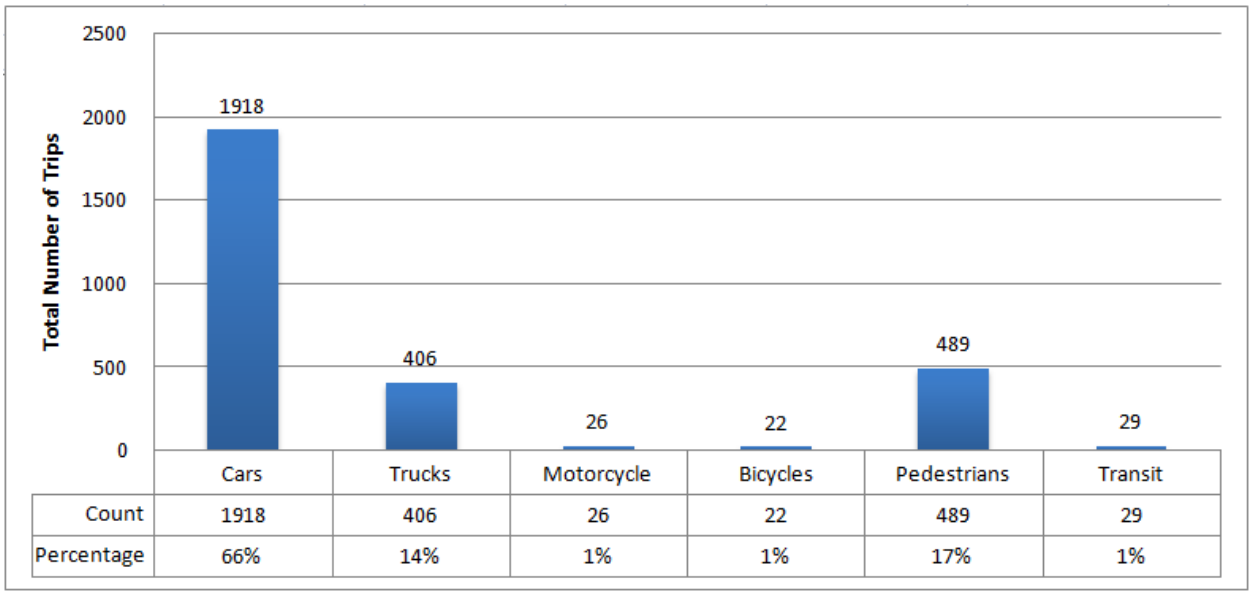



**Figure 3: Total Number of Pedestrian Trips (Hourly)**




| | Cars | Trucks | Motorcycle | Bicycles | Pedestrians | Transit |
|---|---|---|---|---|---|---|
| Tuesday | 459 | 239 | 8 | 10 | 109 | 16 |
| Wednesday | 787 | 30 | 6 | 0 | 122 | 6 |
| Thursday | 672 | 137 | 12 | 12 | 258 | 7 |

**Figure 4: Mode Split of Daily Trips (From 7AM to 6PM)**




| | Cars | Trucks | Motorcycle | Bicycles | Pedestrians | Transit |
|---|---|---|---|---|---|---|
| Count | 1918 | 406 | 26 | 22 | 489 | 29 |
| Percentage | 66% | 14% | 1% | 1% | 17% | 1% |

**Figure 5: Mode Split Across All Three Days (From 7AM to 6PM)**

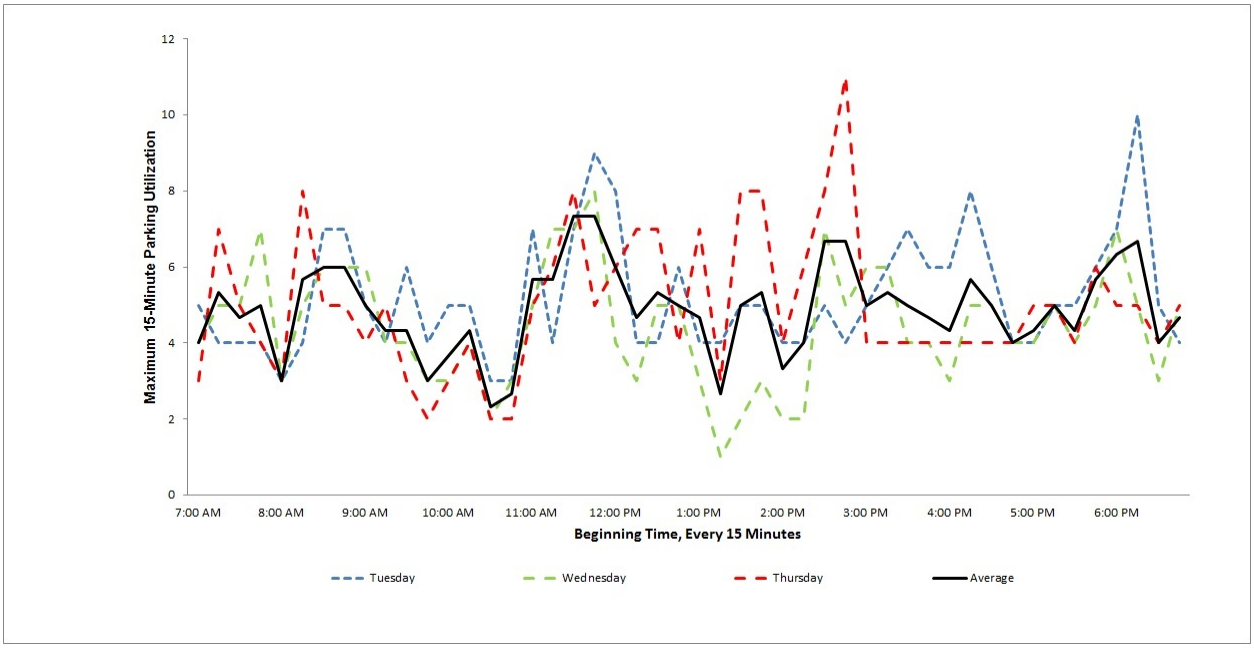



**Figure 6: Maximum 15-Minute Parking Utilization**

**Table 1: Trip Generation Data for the AM Peak Hour (7 AM to 9 AM)**

| Variable | Tuesday | Wednesday | Thursday | 3-Day Average | Reference Values |
|---|---|---|---|---|---|
| | Feb 5,2013 | Feb 6,2013 | Feb 7,2013 | | LU 853 |
| Peak Hour | 8:00 - 9:00 AM | 8:00 - 9:00 AM | 7:45 - 8:45 AM | N/A | |
| All Motor Vehicles | 69 | 70 | 76 | 72 | |
| Trucks | 4 | 3 | 6 | 4 | |
| Trip Rates per 1,000 GSF | 18.40 | 18.67 | 19.73 | 18.93 | 16.57 |
| | | | | | 5.40 - 47.00 |
| % Entering | 52% | 51% | 49% | 51% | |
| % Exiting | 48% | 49% | 51% | 49% | |

**Table 2: Trip Generation Data for the PM Peak Hour (5 PM to 7 PM)**

| Variable | Tuesday | Wednesday | Thursday | 3-Day Average | Reference Values |
|---|---|---|---|---|---|
| | Feb 5,2013 | Feb 6,2013 | Feb 7,2013 | | LU 853 |
| Peak Hour | 5:45 - 6:45 PM | 5:30 - 6:30 PM | 5:00 - 6:00 PM | N/A | |
| All Motor Vehicles | 85 | 106 | 119 | 104 | |
| Trucks | 29 | 2 | 20 | 17 | |
| Trip Rates per 1,000 GSF | 22.67 | 28.27 | 32.27 | 27.73 | 19.07 |
| | | | | | 5.53 - 75.50 |
| % Entering | 56% | 51% | 50% | 52% | |
| % Exiting | 44% | 49% | 50% | 48% | |

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# *Trip Generation Data Form (Part 1)*

| | |
|---|---|
| *Land Use/Building Type:*[1] Mini-Mart with Gas Station | ITE Land Use Code: 853 |
| Source: | Source No. (*ITE use only*): |
| Name of Development: K's Deli & Grocery with Shell Gas Station | Day of the Week: Tuesday |
| City: Seattle State/Province: WA Zip/Postal Code: 98107 | Day: 5 Month: February Year: 2013 |
| Country: USA | Metropolitan Area: Seattle, Washington |

**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 |
|---|---|---|---|---|---|
| 3 (1) Employees (#) | ☒ | ☐ | 10 (9) Parking Spaces (% occupied: _____) | ☒ | ☐ |
| _____ (2) Persons (#) | ☐ | ☐ | _____ (10) Beds (% occupied: _____) | ☐ | ☐ |
| _____ (3) Total Units (#) (indicate unit:_____) | ☐ | ☐ | _____ (11) Seats (#) | ☐ | ☐ |
| _____ (4) Occupied Units (#) (indicate unit:_____) | ☐ | ☐ | _____ (12) Servicing Positions/Vehicle Fueling Positions | ☐ | ☐ |
| 3750 (5) Gross Floor Area (gross sq. ft.) (% of development occupied _____) | ☐ | ☒ | _____ (13) Shopping Center % Out-parcels/pads | ☐ | ☐ |
| _____ (6) Net Rentable Area (sq. ft.) | ☐ | ☐ | _____ (14) A.M. Peak Hour Volume of Adjacent Street Traffic | ☐ | ☐ |
| _____ (7) Gross Leasable Area (sq. ft.) (% of development occupied _____) | ☐ | ☐ | _____ (15) P.M. Peak Hour Volume of Adjacent Street Traffic | ☐ | ☐ |
| | | | _____ (16) Other _____ | ☐ | ☐ |
| _____ (8) Total Acres (% developed: _____) | ☐ | ☐ | _____ (17) Other _____ | ☐ | ☐ |

**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. _____ 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 Time | End Time | Employees (#) |
|---|---|---|---|
| First Shift: | _____ | _____ | _____ |
| Second Shift: | _____ | _____ | _____ |
| Third Shift: | _____ | _____ | _____ |

Parking Cost on Site: Hourly 0 Daily 0

*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)*

| | | |
|---|---|---|
| Survey conducted by: | Name: | Tom Le |
| | Organization: | University of Washington ITE Student Chapter |
| | Address: | Box 352700, University of Washington |
| | City/State/Zip: | Seattle, WA 98195 |
| | Telephone #: | 425-314-1556 |
| | Fax: | 206-543-1543 |
| | Email: | ite@uw.edu |

| Summary of Driveway Volumes | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tuesday - February 5, 2013 | | Average Weekday (M-F) | | | | | |
| | | Enter | | Exit | | Total | |
| | | All | Trucks | All | Trucks | All | Trucks |
| AM Peak Hour Generator Time: | 8:00 - 9:00 | 36 | 2 | 33 | 2 | 69 | 4 |
| PM Peak Hour Generator Time: | 5:45 - 6:45 | 45 | 14 | 40 | 15 | 85 | 29 |

| Hourly Driveway Volumes – Average Weekday (M-F) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hour | Enter | | | Exit | | | Total | | |
| | All | Trucks | Pedestrians | All | Trucks | Pedestrians | All | Trucks | Pedestrians |
| 7:00 - 8:00 | 24 | 0 | 1 | 22 | 0 | 3 | 46 | 0 | 4 |
| 7:15 - 8:15 | 27 | 0 | 3 | 26 | 0 | 4 | 53 | 0 | 7 |
| 7:30 - 8:30 | 31 | 0 | 4 | 28 | 0 | 5 | 59 | 0 | 9 |
| 7:45 - 8:45 | 34 | 1 | 4 | 28 | 1 | 6 | 62 | 2 | 10 |
| 8:00 - 9:00 | 36 | 2 | 4 | 33 | 2 | 5 | 69 | 4 | 9 |
| 8:15 - 9:15 | 31 | 2 | 2 | 35 | 2 | 3 | 66 | 4 | 5 |
| 8:30 - 9:30 | 29 | 6 | 3 | 30 | 2 | 1 | 59 | 8 | 4 |
| 8:45 - 9:45 | 22 | 5 | 3 | 31 | 3 | 0 | 53 | 8 | 3 |
| 9:00 - 10:00 | 22 | 6 | 3 | 27 | 3 | 0 | 49 | 9 | 3 |
| 9:15 - 10:15 | 21 | 6 | 7 | 25 | 4 | 3 | 46 | 10 | 10 |
| 9:30 - 10:30 | 18 | 2 | 8 | 25 | 4 | 6 | 43 | 6 | 14 |
| 9:45 - 10:45 | 21 | 3 | 8 | 25 | 2 | 6 | 46 | 5 | 14 |
| 10:00 - 11:00 | 17 | 2 | 8 | 20 | 1 | 6 | 37 | 3 | 14 |
| 10:15 - 11:15 | 24 | 5 | 4 | 23 | 5 | 4 | 47 | 10 | 8 |
| 10:30 - 11:30 | 25 | 6 | 2 | 23 | 6 | 1 | 48 | 12 | 3 |
| 10:45 - 11:45 | 25 | 6 | 2 | 22 | 7 | 2 | 47 | 13 | 4 |
| 11:00 - 12:00 | 33 | 8 | 4 | 33 | 12 | 2 | 66 | 20 | 6 |
| 11:15 - 12:15 | 34 | 8 | 5 | 32 | 10 | 4 | 66 | 18 | 9 |
| 11:30 - 12:30 | 31 | 9 | 5 | 32 | 11 | 7 | 63 | 20 | 12 |
| 11:45 - 12:45 | 34 | 12 | 12 | 32 | 13 | 12 | 66 | 25 | 24 |
| 12:00 - 1:00 | 31 | 12 | 10 | 31 | 12 | 12 | 62 | 24 | 22 |
| 12:15 - 1:15 | 26 | 10 | 10 | 26 | 10 | 11 | 52 | 20 | 21 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12:30 - 1:30 | 23 | 8 | 9 | 25 | 8 | 8 | 48 | 16 | 17 |
| 12:45 - 1:45 | 16 | 5 | 5 | 21 | 6 | 5 | 37 | 11 | 10 |
| 1:00 - 2:00 | 11 | 3 | 5 | 14 | 3 | 5 | 25 | 6 | 10 |
| 1:15 - 2:15 | 11 | 3 | 3 | 14 | 3 | 3 | 25 | 6 | 6 |
| 1:30 - 2:30 | 15 | 5 | 4 | 15 | 5 | 4 | 30 | 10 | 8 |
| 1:45 - 2:45 | 19 | 6 | 2 | 19 | 6 | 2 | 38 | 12 | 4 |
| 2:00 - 3:00 | 18 | 7 | 2 | 18 | 7 | 2 | 36 | 14 | 4 |
| 2:15 - 3:15 | 26 | 10 | 2 | 25 | 10 | 2 | 51 | 20 | 4 |
| 2:30 - 3:30 | 38 | 23 | 2 | 34 | 19 | 2 | 72 | 42 | 4 |
| 2:45 - 3:45 | 41 | 27 | 3 | 37 | 24 | 3 | 78 | 51 | 6 |
| 3:00 - 4:00 | 46 | 30 | 4 | 41 | 28 | 4 | 87 | 58 | 8 |
| 3:15 - 4:15 | 44 | 32 | 5 | 37 | 29 | 5 | 81 | 61 | 10 |
| 3:30 - 4:30 | 40 | 26 | 5 | 36 | 26 | 5 | 76 | 52 | 10 |
| 3:45 - 4:45 | 40 | 24 | 3 | 35 | 23 | 3 | 75 | 47 | 6 |
| 4:00 - 5:00 | 44 | 26 | 2 | 42 | 24 | 2 | 86 | 50 | 4 |
| 4:15 - 5:15 | 42 | 24 | 5 | 47 | 23 | 4 | 89 | 47 | 9 |
| 4:30 - 5:30 | 32 | 15 | 5 | 40 | 19 | 4 | 72 | 34 | 9 |
| 4:45 - 5:45 | 31 | 15 | 5 | 36 | 16 | 4 | 67 | 31 | 9 |
| 5:00 - 6:00 | 31 | 12 | 8 | 32 | 14 | 5 | 63 | 26 | 13 |
| 5:15 - 6:15 | 37 | 11 | 4 | 30 | 13 | 4 | 67 | 24 | 8 |
| 5:30 - 6:30 | 45 | 15 | 8 | 35 | 11 | 8 | 80 | 26 | 16 |
| 5:45 - 6:45 | 45 | 14 | 8 | 40 | 15 | 8 | 85 | 29 | 16 |
| 6:00 - 7:00 | 38 | 12 | 5 | 34 | 13 | 7 | 72 | 25 | 12 |

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# *Trip Generation Data Form (Part 3)*

| Detailed Driveway Volumes | | | | | | |
|---|---|---|---|---|---|---|
| | Enter | | Exit | | Total | |
| | All | Truck | All | Truck | All | Truck |
| **7:00 - 8:00** | 4 | 0 | 3 | 0 | 7 | 0 |
| **7:15 - 8:15** | 7 | 0 | 8 | 0 | 15 | 0 |
| **7:30 - 8:30** | 7 | 0 | 6 | 0 | 13 | 0 |
| **7:45 - 8:45** | 6 | 0 | 5 | 0 | 11 | 0 |
| **8:00 - 9:00** | 7 | 0 | 7 | 0 | 14 | 0 |
| **8:15 - 9:15** | 11 | 0 | 10 | 0 | 21 | 0 |
| **8:30 - 9:30** | 9 | 1 | 5 | 1 | 14 | 2 |
| **8:45 - 9:45** | 7 | 1 | 9 | 1 | 16 | 2 |
| **9:00 - 10:00** | 2 | 0 | 9 | 0 | 11 | 0 |
| **9:15 - 10:15** | 5 | 4 | 5 | 0 | 10 | 4 |
| **9:30 - 10:30** | 3 | 0 | 5 | 2 | 8 | 2 |
| **9:45 - 10:45** | 6 | 2 | 5 | 1 | 11 | 3 |
| **10:00 - 11:00** | 1 | 0 | 6 | 1 | 7 | 1 |
| **10:15 - 11:15** | 6 | 0 | 5 | 0 | 11 | 0 |
| **10:30 - 11:30** | 5 | 1 | 7 | 0 | 12 | 1 |
| **10:45 - 11:45** | 3 | 1 | 1 | 0 | 4 | 1 |
| **11:00 - 12:00** | 5 | 3 | 5 | 5 | 10 | 8 |
| **11:15 - 12:15** | 6 | 1 | 4 | 1 | 10 | 2 |
| **11:30 - 12:30** | 5 | 1 | 5 | 1 | 10 | 2 |
| **11:45 - 12:45** | 9 | 3 | 7 | 5 | 16 | 8 |
| **12:00 - 1:00** | 6 | 3 | 6 | 3 | 12 | 6 |
| **12:15 - 1:15** | 2 | 2 | 3 | 2 | 5 | 4 |
| **12:30 - 1:30** | 5 | 4 | 3 | 3 | 8 | 7 |
| **12:45 - 1:45** | 6 | 3 | 7 | 4 | 13 | 7 |
| **1:00 - 2:00** | 3 | 1 | 3 | 1 | 6 | 2 |
| **1:15 - 2:15** | 1 | 0 | 4 | 0 | 5 | 0 |
| **1:30 - 2:30** | 1 | 1 | 1 | 1 | 2 | 2 |
| **1:45 - 2:45** | 3 | 1 | 3 | 1 | 6 | 2 |
| **2:00 - 3:00** | 3 | 1 | 3 | 1 | 6 | 2 |
| **2:15 - 3:15** | 3 | 2 | 3 | 2 | 6 | 4 |
| **2:30 - 3:30** | 4 | 2 | 4 | 2 | 8 | 4 |
| **2:45 - 3:45** | 1 | 2 | 1 | 2 | 2 | 4 |
| **3:00 - 4:00** | 8 | 4 | 7 | 4 | 15 | 8 |
| **3:15 - 4:15** | 2 | 15 | 3 | 11 | 5 | 26 |
| **3:30 - 4:30** | 3 | 6 | 2 | 7 | 5 | 13 |
| **3:45 - 4:45** | 3 | 5 | 1 | 6 | 4 | 11 |
| **4:00 - 5:00** | 4 | 6 | 2 | 5 | 6 | 11 |
| **4:15 - 5:15** | 4 | 9 | 5 | 8 | 9 | 17 |
| **4:30 - 5:30** | 5 | 4 | 4 | 4 | 9 | 8 |
| **4:45 - 5:45** | 5 | 7 | 7 | 7 | 12 | 14 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **5:00 - 6:00** | 4 | 4 | 8 | 4 | 12 | 8 |
| **5:15 - 6:15** | 3 | 0 | 2 | 4 | 5 | 4 |
| **5:30 - 6:30** | 4 | 4 | 3 | 1 | 7 | 5 |
| **5:45 - 6:45** | 8 | 4 | 5 | 5 | 13 | 9 |
| **6:00 - 7:00** | 11 | 3 | 7 | 3 | 18 | 6 |

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# *Trip Generation Data Form (Part 4)*

| | | |
|---|---|---|
| Survey conducted by: | Name: | Tom Le |
| | Organization: | University of Washington ITE Student Chapter |
| | Address: | Box 352700, University of Washingon |
| | City/State/Zip: | Seattle, WA 98195 |
| | Telephone #: | 425-314-1556 |
| | Fax: | 206-543-1543 |
| | Email: | ite@uw.edu |

| Summary of Bicycle Volumes | | | | |
|---|---|---|---|---|
| Tuesday - February 5, 2013 | | Average Weekday (M-F) | | |
| | | Enter | Exit | Total |
| AM Peak Hour Generator Time: | 7:30-8:30 | 2 | 2 | 4 |
| PM Peak Hour Generator Time: | 5:15-6:15 | 1 | 1 | 2 |

| Summary of Pedestrians Volumes | | | | |
|---|---|---|---|---|
| Tuesday - February 5, 2013 | | Average Weekday (M-F) | | |
| | | Enter | Exit | Total |
| AM Peak Hour Generator Time: | 10:00 - 11:00 | 8 | 6 | 14 |
| PM Peak Hour Generator Time: | 5:30 - 6:30 | 8 | 8 | 16 |

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# *Trip Generation Data Form (Part 1)*

| | |
|---|---|
| *Land Use/Building Type:*[1] Mini-Mart with Gas Station | ITE Land Use Code: 853 |
| Source: | Source No. (*ITE use only*): |
| Name of Development: K's Deli & Grocery with Shell Gas Station | Day of the Week: Wednesday |
| City: Seattle State/Province: WA Zip/Postal Code: 98107 | Day: 6 Month: February Year: 2013 |
| Country: USA | Metropolitan Area: Seattle, Washington |

**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 |
|---|---|---|---|---|---|
| 3 (1) Employees (#) | ☒ | ☐ | 10 (9) Parking Spaces (% occupied: _____) | ☒ | ☐ |
| _____ (2) Persons (#) | ☐ | ☐ | _____ (10) Beds (% occupied: _____) | ☐ | ☐ |
| _____ (3) Total Units (#) (indicate unit:_____) | ☐ | ☐ | _____ (11) Seats (#) | ☐ | ☐ |
| _____ (4) Occupied Units (#) (indicate unit:_____) | ☐ | ☐ | _____ (12) Servicing Positions/Vehicle Fueling Positions | ☐ | ☐ |
| 3750 (5) Gross Floor Area (gross sq. ft.) (% of development occupied _____) | ☐ | ☒ | _____ (13) Shopping Center % Out-parcels/pads | ☐ | ☐ |
| _____ (6) Net Rentable Area (sq. ft.) | ☐ | ☐ | _____ (14) A.M. Peak Hour Volume of Adjacent Street Traffic | ☐ | ☐ |
| _____ (7) Gross Leasable Area (sq. ft.) (% of development occupied _____) | ☐ | ☐ | _____ (15) P.M. Peak Hour Volume of Adjacent Street Traffic | ☐ | ☐ |
| | | | _____ (16) Other _____ | ☐ | ☐ |
| _____ (8) Total Acres (% developed: _____) | ☐ | ☐ | _____ (17) Other _____ | ☐ | ☐ |

**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. _____ 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 Time | End Time | Employees (#) |
|---|---|---|---|
| First Shift: | _____ | _____ | _____ |
| Second Shift: | _____ | _____ | _____ |
| Third Shift: | _____ | _____ | _____ |

Parking Cost on Site: Hourly 0 Daily 0

*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**

Institute of Transportation Engineers

# *Trip Generation Data Form (Part 2)*

| Survey conducted by: | Name: | Tom Le |
|---|---|---|
| | Organization: | University of Washington ITE Student Chapter |
| | Address: | Box 352700, University of Washington |
| | City/State/Zip: | Seattle, WA 98195 |
| | Telephone #: | 425-314-1556 |
| | Fax: | 206-543-1543 |
| | Email: | ite@uw.edu |

| Summary of Driveway Volumes | | | | | | | |
|---|---|---|---|---|---|---|---|
| Wednesday - February 6, 2013 | | Average Weekday (M-F) | | | | | |
| | | Enter | | Exit | | Total | |
| | | All | Trucks | All | Trucks | All | Trucks |
| AM Peak Hour Generator Time: | 8:00 - 9:00 | 36 | 1 | 34 | 2 | 70 | 3 |
| PM Peak Hour Generator Time: | 5:30 - 6:30 | 53 | 1 | 53 | 1 | 106 | 2 |

| Hourly Driveway Volumes – Average Weekday (M-F) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hour | Enter | | | Exit | | | Total | | |
| | All | Trucks | Pedestrians | All | Trucks | Pedestrians | All | Trucks | Pedestrians |
| 7:00 - 8:00 | 37 | 2 | 2 | 38 | 1 | 2 | 75 | 3 | 4 |
| 7:15 - 8:15 | 31 | 2 | 3 | 34 | 2 | 3 | 65 | 4 | 6 |
| 7:30 - 8:30 | 32 | 2 | 4 | 30 | 2 | 3 | 62 | 4 | 7 |
| 7:45 - 8:45 | 33 | 2 | 4 | 31 | 2 | 4 | 64 | 4 | 8 |
| 8:00 - 9:00 | 36 | 1 | 3 | 34 | 2 | 3 | 70 | 3 | 6 |
| 8:15 - 9:15 | 43 | 3 | 3 | 42 | 2 | 3 | 85 | 5 | 6 |
| 8:30 - 9:30 | 42 | 4 | 3 | 47 | 5 | 4 | 89 | 9 | 7 |
| 8:45 - 9:45 | 40 | 5 | 2 | 43 | 5 | 2 | 83 | 10 | 4 |
| 9:00 - 10:00 | 37 | 5 | 3 | 35 | 5 | 3 | 72 | 10 | 6 |
| 9:15 - 10:15 | 31 | 2 | 9 | 32 | 4 | 9 | 63 | 6 | 18 |
| 9:30 - 10:30 | 27 | 1 | 10 | 26 | 1 | 10 | 53 | 2 | 20 |
| 9:45 - 10:45 | 24 | 0 | 10 | 24 | 0 | 10 | 48 | 0 | 20 |
| 10:00 - 11:00 | 21 | 0 | 10 | 20 | 0 | 10 | 41 | 0 | 20 |
| 10:15 - 11:15 | 22 | 0 | 5 | 17 | 0 | 5 | 39 | 0 | 10 |
| 10:30 - 11:30 | 29 | 1 | 5 | 24 | 0 | 4 | 53 | 1 | 9 |
| 10:45 - 11:45 | 36 | 1 | 9 | 31 | 0 | 7 | 67 | 1 | 16 |
| 11:00 - 12:00 | 34 | 1 | 9 | 33 | 0 | 6 | 67 | 1 | 15 |
| 11:15 - 12:15 | 37 | 1 | 9 | 37 | 1 | 8 | 74 | 2 | 17 |
| 11:30 - 12:30 | 35 | 0 | 7 | 35 | 1 | 7 | 70 | 1 | 14 |
| 11:45 - 12:45 | 32 | 1 | 9 | 32 | 1 | 8 | 64 | 2 | 17 |
| 12:00 - 1:00 | 33 | 2 | 9 | 30 | 1 | 13 | 63 | 3 | 22 |
| 12:15 - 1:15 | 30 | 2 | 10 | 28 | 2 | 12 | 58 | 4 | 22 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12:30 - 1:30 | 26 | 2 | 12 | 25 | 2 | 14 | 51 | 4 | 26 |
| 12:45 - 1:45 | 21 | 1 | 6 | 19 | 2 | 10 | 40 | 3 | 16 |
| 1:00 - 2:00 | 21 | 0 | 5 | 24 | 2 | 5 | 45 | 2 | 10 |
| 1:15 - 2:15 | 27 | 0 | 9 | 27 | 0 | 8 | 54 | 0 | 17 |
| 1:30 - 2:30 | 30 | 1 | 8 | 31 | 0 | 8 | 61 | 1 | 16 |
| 1:45 - 2:45 | 43 | 1 | 9 | 44 | 1 | 9 | 87 | 2 | 18 |
| 2:00 - 3:00 | 40 | 1 | 11 | 36 | 1 | 11 | 76 | 2 | 22 |
| 2:15 - 3:15 | 38 | 2 | 4 | 37 | 2 | 5 | 75 | 4 | 9 |
| 2:30 - 3:30 | 38 | 1 | 3 | 39 | 2 | 3 | 77 | 3 | 6 |
| 2:45 - 3:45 | 31 | 1 | 5 | 34 | 1 | 2 | 65 | 2 | 7 |
| 3:00 - 4:00 | 32 | 1 | 3 | 41 | 1 | 0 | 73 | 2 | 3 |
| 3:15 - 4:15 | 31 | 0 | 4 | 34 | 0 | 1 | 65 | 0 | 5 |
| 3:30 - 4:30 | 29 | 1 | 4 | 29 | 1 | 1 | 58 | 2 | 5 |
| 3:45 - 4:45 | 31 | 1 | 2 | 27 | 1 | 1 | 58 | 2 | 3 |
| 4:00 - 5:00 | 33 | 1 | 3 | 28 | 1 | 2 | 61 | 2 | 5 |
| 4:15 - 5:15 | 41 | 1 | 3 | 39 | 1 | 2 | 80 | 2 | 5 |
| 4:30 - 5:30 | 43 | 0 | 4 | 43 | 0 | 3 | 86 | 0 | 7 |
| 4:45 - 5:45 | 46 | 0 | 3 | 45 | 0 | 3 | 91 | 0 | 6 |
| 5:00 - 6:00 | 53 | 1 | 3 | 50 | 0 | 5 | 103 | 1 | 8 |
| 5:15 - 6:15 | 50 | 1 | 3 | 51 | 1 | 4 | 101 | 2 | 7 |
| 5:30 - 6:30 | 53 | 1 | 2 | 53 | 1 | 3 | 106 | 2 | 5 |
| 5:45 - 6:45 | 43 | 1 | 2 | 49 | 1 | 3 | 92 | 2 | 5 |
| 6:00 - 7:00 | 34 | 0 | 1 | 37 | 1 | 0 | 71 | 1 | 1 |

Institute of Transportation Engineers

# *Trip Generation Data Form (Part 3)*

| Detailed Driveway Volumes | | | | | | |
|---|---|---|---|---|---|---|
| | Enter | | Exit | | Total | |
| | All | Truck | All | Truck | All | Truck |
| **7:00 - 8:00** | 8 | 1 | 7 | 0 | 15 | 1 |
| **7:15 - 8:15** | 9 | 0 | 9 | 0 | 18 | 0 |
| **7:30 - 8:30** | 8 | 0 | 8 | 1 | 16 | 1 |
| **7:45 - 8:45** | 10 | 1 | 13 | 0 | 23 | 1 |
| **8:00 - 9:00** | 2 | 1 | 2 | 1 | 4 | 2 |
| **8:15 - 9:15** | 10 | 0 | 5 | 0 | 15 | 0 |
| **8:30 - 9:30** | 9 | 0 | 9 | 1 | 18 | 1 |
| **8:45 - 9:45** | 14 | 0 | 16 | 0 | 30 | 0 |
| **9:00 - 10:00** | 7 | 3 | 10 | 1 | 17 | 4 |
| **9:15 - 10:15** | 8 | 1 | 7 | 3 | 15 | 4 |
| **9:30 - 10:30** | 6 | 1 | 5 | 1 | 11 | 2 |
| **9:45 - 10:45** | 11 | 0 | 8 | 0 | 19 | 0 |
| **10:00 - 11:00** | 4 | 0 | 8 | 0 | 12 | 0 |
| **10:15 - 11:15** | 5 | 0 | 4 | 0 | 9 | 0 |
| **10:30 - 11:30** | 4 | 0 | 4 | 0 | 8 | 0 |
| **10:45 - 11:45** | 8 | 0 | 4 | 0 | 12 | 0 |
| **11:00 - 12:00** | 5 | 0 | 5 | 0 | 10 | 0 |
| **11:15 - 12:15** | 11 | 1 | 11 | 0 | 22 | 1 |
| **11:30 - 12:30** | 11 | 0 | 11 | 0 | 22 | 0 |
| **11:45 - 12:45** | 6 | 0 | 6 | 0 | 12 | 0 |
| **12:00 - 1:00** | 8 | 0 | 8 | 1 | 16 | 1 |
| **12:15 - 1:15** | 10 | 0 | 9 | 0 | 19 | 0 |
| **12:30 - 1:30** | 7 | 1 | 8 | 0 | 15 | 1 |
| **12:45 - 1:45** | 6 | 1 | 4 | 0 | 10 | 1 |
| **1:00 - 2:00** | 5 | 0 | 5 | 2 | 10 | 2 |
| **1:15 - 2:15** | 6 | 0 | 6 | 0 | 12 | 0 |
| **1:30 - 2:30** | 3 | 0 | 2 | 0 | 5 | 0 |
| **1:45 - 2:45** | 7 | 0 | 9 | 0 | 16 | 0 |
| **2:00 - 3:00** | 11 | 0 | 10 | 0 | 21 | 0 |
| **2:15 - 3:15** | 8 | 1 | 10 | 0 | 18 | 1 |
| **2:30 - 3:30** | 16 | 0 | 14 | 1 | 30 | 1 |
| **2:45 - 3:45** | 4 | 0 | 1 | 0 | 5 | 0 |
| **3:00 - 4:00** | 8 | 1 | 10 | 1 | 18 | 2 |
| **3:15 - 4:15** | 9 | 0 | 12 | 0 | 21 | 0 |
| **3:30 - 4:30** | 9 | 0 | 10 | 0 | 19 | 0 |
| **3:45 - 4:45** | 5 | 0 | 8 | 0 | 13 | 0 |
| **4:00 - 5:00** | 8 | 0 | 4 | 0 | 12 | 0 |
| **4:15 - 5:15** | 6 | 1 | 6 | 1 | 12 | 2 |
| **4:30 - 5:30** | 11 | 0 | 8 | 0 | 19 | 0 |
| **4:45 - 5:45** | 7 | 0 | 9 | 0 | 16 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **5:00 - 6:00** | 16 | 0 | 15 | 0 | 31 | 0 |
| **5:15 - 6:15** | 9 | 0 | 11 | 0 | 20 | 0 |
| **5:30 - 6:30** | 14 | 0 | 10 | 0 | 24 | 0 |
| **5:45 - 6:45** | 13 | 1 | 14 | 0 | 27 | 1 |
| **6:00 - 7:00** | 13 | 0 | 15 | 1 | 28 | 1 |

Institute of Transportation Engineers

# *Trip Generation Data Form (Part 4)*

| | | |
|---|---|---|
| Survey conducted by: | Name: | Tom Le |
| | Organization: | University of Washington ITE Student Chapter |
| | Address: | Box 352700, University of Washingon |
| | City/State/Zip: | Seattle, WA 98195 |
| | Telephone #: | 425-314-1556 |
| | Fax: | 206-543-1543 |
| | Email: | ite@uw.edu |

| Summary of Bicycle Volumes | | | | |
|---|---|---|---|---|
| Wednesday - February 6, 2013 | | Average Weekday (M-F) | | |
| | | Enter | Exit | Total |
| AM Peak Hour Generator Time: | N/A | N/A | N/A | N/A |
| PM Peak Hour Generator Time: | N/A | N/A | N/A | N/A |

| Summary of Pedestrians Volumes | | | | |
|---|---|---|---|---|
| Wednesday - February 6, 2013 | | Average Weekday (M-F) | | |
| | | Enter | Exit | Total |
| AM Peak Hour Generator Time: | 10:00 - 11:00 | 10 | 10 | 20 |
| PM Peak Hour Generator Time: | 2:00 - 3:00 | 11 | 11 | 22 |

Institute of Transportation Engineers

# *Trip Generation Data Form (Part 1)*

| | |
|---|---|
| *Land Use/Building Type:*[1] Mini-Mart with Gas Station | ITE Land Use Code: 853 |
| Source: | Source No. (*ITE use only*): |
| Name of Development: K's Deli & Grocery with Shell Gas Station | Day of the Week: Thursday |
| City: Seattle State/Province: WA Zip/Postal Code: 98107 | Day: 7 Month: February Year: 2013 |
| Country: USA | Metropolitan Area: Seattle, Washington |

**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 |
|---|---|---|---|---|---|
| 3 (1) Employees (#) | ☒ | ☐ | 10 (9) Parking Spaces (% occupied: _____) | ☒ | ☐ |
| _____ (2) Persons (#) | ☐ | ☐ | _____ (10) Beds (% occupied: _____) | ☐ | ☐ |
| _____ (3) Total Units (#) (indicate unit:_____) | ☐ | ☐ | _____ (11) Seats (#) | ☐ | ☐ |
| _____ (4) Occupied Units (#) (indicate unit:_____) | ☐ | ☐ | _____ (12) Servicing Positions/Vehicle Fueling Positions | ☐ | ☐ |
| 3750 (5) Gross Floor Area (gross sq. ft.) (% of development occupied _____) | ☐ | ☒ | _____ (13) Shopping Center % Out-parcels/pads | ☐ | ☐ |
| _____ (6) Net Rentable Area (sq. ft.) | ☐ | ☐ | _____ (14) A.M. Peak Hour Volume of Adjacent Street Traffic | ☐ | ☐ |
| _____ (7) Gross Leasable Area (sq. ft.) (% of development occupied _____) | ☐ | ☐ | _____ (15) P.M. Peak Hour Volume of Adjacent Street Traffic | ☐ | ☐ |
| | | | _____ (16) Other _____ | ☐ | ☐ |
| _____ (8) Total Acres (% developed: _____) | ☐ | ☐ | _____ (17) Other _____ | ☐ | ☐ |

**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. _____ 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 Time | End Time | Employees (#) |
|---|---|---|---|
| First Shift: | _____ | _____ | _____ |
| Second Shift: | _____ | _____ | _____ |
| Third Shift: | _____ | _____ | _____ |

Parking Cost on Site: Hourly 0 Daily 0

*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**

Institute of Transportation Engineers

# *Trip Generation Data Form (Part 2)*

| | | |
|---|---|---|
| Survey conducted by: | Name: | Tom Le |
| | Organization: | University of Washington ITE Student Chapter |
| | Address: | Box 352700, University of Washington |
| | City/State/Zip: | Seattle, WA 98195 |
| | Telephone #: | 425-314-1556 |
| | Fax: | 206-543-1543 |
| | Email: | ite@uw.edu |

| Summary of Driveway Volumes | | | | | | | |
|---|---|---|---|---|---|---|---|
| Thursday - February 7, 2013 | | Average Weekday (M-F) | | | | | |
| | | Enter | | Exit | | Total | |
| | | All | Trucks | All | Trucks | All | Trucks |
| AM Peak Hour Generator Time: | 7:45 - 8:45 | 37 | 3 | 39 | 3 | 76 | 6 |
| PM Peak Hour Generator Time: | 5:00 - 6:00 | 59 | 9 | 60 | 11 | 119 | 20 |

| Hourly Driveway Volumes – Average Weekday (M-F) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hour | Enter | | | Exit | | | Total | | |
| | All | Trucks | Pedestrians | All | Trucks | Pedestrians | All | Trucks | Pedestrians |
| 7:00 - 8:00 | 35 | 3 | 15 | 30 | 2 | 12 | 65 | 5 | 27 |
| 7:15 - 8:15 | 36 | 3 | 13 | 33 | 3 | 10 | 69 | 6 | 23 |
| 7:30 - 8:30 | 37 | 3 | 10 | 34 | 3 | 7 | 71 | 6 | 17 |
| 7:45 - 8:45 | 37 | 3 | 8 | 39 | 3 | 7 | 76 | 6 | 15 |
| 8:00 - 9:00 | 35 | 1 | 9 | 34 | 2 | 6 | 69 | 3 | 15 |
| 8:15 - 9:15 | 36 | 3 | 7 | 32 | 1 | 4 | 68 | 4 | 11 |
| 8:30 - 9:30 | 33 | 3 | 8 | 36 | 1 | 5 | 69 | 4 | 13 |
| 8:45 - 9:45 | 28 | 4 | 7 | 27 | 3 | 5 | 55 | 7 | 12 |
| 9:00 - 10:00 | 24 | 4 | 6 | 26 | 3 | 6 | 50 | 7 | 12 |
| 9:15 - 10:15 | 20 | 5 | 21 | 23 | 5 | 18 | 43 | 10 | 39 |
| 9:30 - 10:30 | 22 | 6 | 20 | 19 | 6 | 20 | 41 | 12 | 40 |
| 9:45 - 10:45 | 22 | 6 | 19 | 20 | 5 | 19 | 42 | 11 | 38 |
| 10:00 - 11:00 | 24 | 8 | 19 | 23 | 7 | 19 | 47 | 15 | 38 |
| 10:15 - 11:15 | 24 | 7 | 6 | 23 | 6 | 9 | 47 | 13 | 15 |
| 10:30 - 11:30 | 17 | 7 | 7 | 18 | 6 | 7 | 35 | 13 | 14 |
| 10:45 - 11:45 | 19 | 6 | 9 | 17 | 5 | 8 | 36 | 11 | 17 |
| 11:00 - 12:00 | 21 | 5 | 9 | 18 | 4 | 9 | 39 | 9 | 18 |
| 11:15 - 12:15 | 26 | 3 | 10 | 24 | 3 | 10 | 50 | 6 | 20 |
| 11:30 - 12:30 | 33 | 2 | 9 | 29 | 2 | 9 | 62 | 4 | 18 |
| 11:45 - 12:45 | 37 | 5 | 8 | 36 | 4 | 9 | 73 | 9 | 17 |
| 12:00 - 1:00 | 36 | 5 | 9 | 36 | 5 | 7 | 72 | 10 | 16 |
| 12:15 - 1:15 | 31 | 5 | 8 | 33 | 5 | 7 | 64 | 10 | 15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12:30 - 1:30 | 26 | 5 | 8 | 28 | 4 | 7 | 54 | 9 | 15 |
| 12:45 - 1:45 | 26 | 5 | 10 | 25 | 6 | 8 | 51 | 11 | 18 |
| 1:00 - 2:00 | 28 | 5 | 8 | 29 | 5 | 10 | 57 | 10 | 18 |
| 1:15 - 2:15 | 30 | 6 | 8 | 29 | 6 | 9 | 59 | 12 | 17 |
| 1:30 - 2:30 | 38 | 10 | 12 | 37 | 10 | 12 | 75 | 20 | 24 |
| 1:45 - 2:45 | 37 | 11 | 11 | 38 | 10 | 12 | 75 | 21 | 23 |
| 2:00 - 3:00 | 45 | 12 | 12 | 38 | 11 | 11 | 83 | 23 | 23 |
| 2:15 - 3:15 | 45 | 12 | 10 | 41 | 13 | 11 | 86 | 25 | 21 |
| 2:30 - 3:30 | 38 | 7 | 6 | 38 | 10 | 8 | 76 | 17 | 14 |
| 2:45 - 3:45 | 38 | 8 | 8 | 36 | 9 | 9 | 74 | 17 | 17 |
| 3:00 - 4:00 | 32 | 8 | 6 | 37 | 9 | 8 | 69 | 17 | 14 |
| 3:15 - 4:15 | 39 | 9 | 12 | 42 | 8 | 11 | 81 | 17 | 23 |
| 3:30 - 4:30 | 44 | 12 | 13 | 46 | 11 | 12 | 90 | 23 | 25 |
| 3:45 - 4:45 | 39 | 8 | 12 | 46 | 9 | 11 | 85 | 17 | 23 |
| 4:00 - 5:00 | 40 | 7 | 15 | 40 | 8 | 14 | 80 | 15 | 29 |
| 4:15 - 5:15 | 45 | 9 | 11 | 42 | 10 | 12 | 87 | 19 | 23 |
| 4:30 - 5:30 | 46 | 9 | 13 | 48 | 9 | 14 | 94 | 18 | 27 |
| 4:45 - 5:45 | 54 | 9 | 13 | 50 | 10 | 15 | 104 | 19 | 28 |
| 5:00 - 6:00 | 59 | 9 | 13 | 60 | 11 | 14 | 119 | 20 | 27 |
| 5:15 - 6:15 | 48 | 6 | 14 | 57 | 8 | 13 | 105 | 14 | 27 |
| 5:30 - 6:30 | 43 | 3 | 14 | 44 | 5 | 13 | 87 | 8 | 27 |
| 5:45 - 6:45 | 35 | 2 | 12 | 41 | 3 | 11 | 76 | 5 | 23 |
| 6:00 - 7:00 | 28 | 2 | 11 | 31 | 1 | 10 | 59 | 3 | 21 |

Institute of Transportation Engineers

# *Trip Generation Data Form (Part 3)*

| Detailed Driveway Volumes | | | | | | |
|---|---|---|---|---|---|---|
| | Enter | | Exit | | Total | |
| | All | Truck | All | Truck | All | Truck |
| **7:00 - 8:00** | 7 | 0 | 5 | 0 | 12 | 0 |
| **7:15 - 8:15** | 10 | 1 | 7 | 1 | 17 | 2 |
| **7:30 - 8:30** | 10 | 0 | 9 | 0 | 19 | 0 |
| **7:45 - 8:45** | 5 | 2 | 7 | 1 | 12 | 3 |
| **8:00 - 9:00** | 8 | 0 | 7 | 1 | 15 | 1 |
| **8:15 - 9:15** | 11 | 1 | 8 | 1 | 19 | 2 |
| **8:30 - 9:30** | 10 | 0 | 14 | 0 | 24 | 0 |
| **8:45 - 9:45** | 5 | 0 | 3 | 0 | 8 | 0 |
| **9:00 - 10:00** | 7 | 2 | 6 | 0 | 13 | 2 |
| **9:15 - 10:15** | 8 | 1 | 12 | 1 | 20 | 2 |
| **9:30 - 10:30** | 4 | 1 | 3 | 2 | 7 | 3 |
| **9:45 - 10:45** | 1 | 0 | 2 | 0 | 3 | 0 |
| **10:00 - 11:00** | 2 | 3 | 1 | 2 | 3 | 5 |
| **10:15 - 11:15** | 9 | 2 | 7 | 2 | 16 | 4 |
| **10:30 - 11:30** | 4 | 1 | 5 | 1 | 9 | 2 |
| **10:45 - 11:45** | 1 | 2 | 3 | 2 | 4 | 4 |
| **11:00 - 12:00** | 3 | 2 | 2 | 1 | 5 | 3 |
| **11:15 - 12:15** | 2 | 2 | 2 | 2 | 4 | 4 |
| **11:30 - 12:30** | 7 | 0 | 5 | 0 | 12 | 0 |
| **11:45 - 12:45** | 4 | 1 | 5 | 1 | 9 | 2 |
| **12:00 - 1:00** | 10 | 0 | 9 | 0 | 19 | 0 |
| **12:15 - 1:15** | 10 | 1 | 8 | 1 | 18 | 2 |
| **12:30 - 1:30** | 8 | 3 | 10 | 2 | 18 | 5 |
| **12:45 - 1:45** | 3 | 1 | 4 | 2 | 7 | 3 |
| **1:00 - 2:00** | 5 | 0 | 6 | 0 | 11 | 0 |
| **1:15 - 2:15** | 5 | 1 | 4 | 0 | 9 | 1 |
| **1:30 - 2:30** | 8 | 3 | 5 | 4 | 13 | 7 |
| **1:45 - 2:45** | 5 | 1 | 9 | 1 | 14 | 2 |
| **2:00 - 3:00** | 6 | 1 | 5 | 1 | 11 | 2 |
| **2:15 - 3:15** | 9 | 5 | 8 | 4 | 17 | 9 |
| **2:30 - 3:30** | 6 | 4 | 6 | 4 | 12 | 8 |
| **2:45 - 3:45** | 12 | 2 | 8 | 2 | 20 | 4 |
| **3:00 - 4:00** | 6 | 1 | 6 | 3 | 12 | 4 |
| **3:15 - 4:15** | 7 | 0 | 8 | 1 | 15 | 1 |
| **3:30 - 4:30** | 5 | 5 | 5 | 3 | 10 | 8 |
| **3:45 - 4:45** | 6 | 2 | 9 | 2 | 15 | 4 |
| **4:00 - 5:00** | 12 | 2 | 12 | 2 | 24 | 4 |
| **4:15 - 5:15** | 9 | 3 | 9 | 4 | 18 | 7 |
| **4:30 - 5:30** | 4 | 1 | 7 | 1 | 11 | 2 |
| **4:45 - 5:45** | 8 | 1 | 4 | 1 | 12 | 2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **5:00 - 6:00** | 15 | 4 | 12 | 4 | 27 | 8 |
| **5:15 - 6:15** | 10 | 3 | 16 | 3 | 26 | 6 |
| **5:30 - 6:30** | 12 | 1 | 8 | 2 | 20 | 3 |
| **5:45 - 6:45** | 13 | 1 | 13 | 2 | 26 | 3 |
| **6:00 - 7:00** | 7 | 1 | 12 | 1 | 19 | 2 |

Institute of Transportation Engineers

# *Trip Generation Data Form (Part 4)*

| | | |
|---|---|---|
| Survey conducted by: | Name: | Tom Le |
| | Organization: | University of Washington ITE Student Chapter |
| | Address: | Box 352700, University of Washingon |
| | City/State/Zip: | Seattle, WA 98195 |
| | Telephone #: | 425-314-1556 |
| | Fax: | 206-543-1543 |
| | Email: | ite@uw.edu |

| Summary of Bicycle Volumes | | | | |
|---|---|---|---|---|
| Thursday - February 7, 2013 | | Average Weekday (M-F) | | |
| | | Enter | Exit | Total |
| AM Peak Hour Generator Time: | 7:30 - 8:30 | 3 | 3 | 6 |
| PM Peak Hour Generator Time: | 4:45 - 5:45 | 1 | 1 | 2 |

| Summary of Pedestrians Volumes | | | | |
|---|---|---|---|---|
| Thursday - February 7, 2013 | | Average Weekday (M-F) | | |
| | | Enter | Exit | Total |
| AM Peak Hour Generator Time: | 9:30 - 10:30 | 20 | 20 | 40 |
| PM Peak Hour Generator Time: | 4:00 - 5:00 | 15 | 14 | 29 |

# Parking Demand Survey Form

Institute of Transportation Engineers

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

| | | | | | |
|---|---|---|---|---|---|
| **Land Use Code*** | 853 | | | | |
| **Name of Site** | K's Deli & Grocery Store with Shell Gas Station | | | | |
| **Brief Description of Site** | Mini-Mart and Grocery Store with Gas Station | | | | |
| **Transit*** | Yes | **City** | Seattle | | |
| **Area*** | Urban Non-CBD | **State** | WA | **Country** | USA |
| **TMP*** | No | | | | |
| **Parking Price*** | $0 Daily Rate | | $0 Hourly Rate | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Site Size*** | **4,500** | **Units*** | sq. ft | **Occupancy*** | 100% | **Land Use** |
| **Site Size** | | **Units** | | **Occupancy** | | |
| **Site Size** | | **Units** | | **Occupancy** | | |
| **Site Size** | | **Units** | | **Occupancy** | | |

**Number of Parking Spaces Provided at Site** 10

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

| **Date** | 2/5/2013 | 2/6/2013 | 2/7/2013 | | | | |
|---|---|---|---|---|---|---|---|
| **Day** | Tuesday | Wednesday | Thursday | | | | |
| 12 Mid | | | | | | | |
| 1:00 AM | | | | | | | |
| 2:00 AM | | | | | | | |
| 3:00 AM | | | | | | | |
| 4:00 AM | | | | | | | |
| 5:00 AM | | | | | | | |
| 6:00 AM | | | | | | | |
| 7:00 AM | 5 | 7 | 7 | | | | |
| 8:00 AM | 7 | 6 | 8 | | | | |
| 9:00 AM | 6 | 6 | 5 | | | | |
| 10:00 AM | 5 | 4 | 4 | | | | |
| 11:00 AM | 9 | 8 | 8 | | | | |
| 12 Noon | 8 | 5 | 7 | | | | |
| 1:00 PM | 5 | 3 | 8 | | | | |
| 2:00 PM | 5 | 7 | 11 | | | | |
| 3:00 PM | 7 | 6 | 4 | | | | |
| 4:00 PM | 8 | 5 | 4 | | | | |
| 5:00 PM | 6 | 5 | 6 | | | | |
| 6:00 PM | 10 | 7 | 5 | | | | |
| 7:00 PM | | | | | | | |
| 8:00 PM | | | | | | | |
| 9:00 PM | | | | | | | |
| 10:00 PM | | | | | | | |
| 11:00 PM | | | | | | | |


| | | | |
|---|---|---|---|
| **Person** | Tom Le | **Organization** | UW ITE Student Chapter |
| **Phone** | 425-314-1556 | | |
| **Fax** | 206-543-1543 | | |
| **Email** | ite@uw.edu | | |
| **Notes** | | | |


Enter data on the web at www.ite.org

Comments to: ite_staff@ite.org

IF not entered on web site, please mail to:

Institute of Transportation Engineers, 1627 Eye Street, NW Suite 600; Washington, DC 20006

Form version 1.4