Chapter 5

Transportation & Parking
V. TRANSPORTATION AND PARKING – PCC 33.820.070.G.

This section summarizes the transportation and parking findings found in the 2012 University of Portland Transportation Master Plan, attached as Exhibit 4.

The future parking and transportation needs associated with the campus were forecast for on-campus, full-time undergraduate levels up to 5,000 students. At this point, the University has no plans to grow to these enrollment levels but desires an upper maximum to begin planning for campus needs over the next twenty plus years.

Although enrollment growth has varied from year-to-year, an extrapolation of trends indicates that the enrollment could continue to grow at a rate of 2.6 – 3.2 percent per year over the next several years. This is shown in Figure 18 below.

![Figure 18 Future Enrollment Growth](image)

Using this extrapolation, a future enrollment of 5,000 full-time on-campus, undergraduate students could correspond to approximately twenty years or more of growth at UP. This enrollment level was used to forecast transportation and parking needs.
Weekday Traffic Operations

Traffic operations at the study intersections were forecast based on observed existing traffic conditions and patterns and anticipated growth rates.

Traffic counts recorded at the Main Entrance, Portsmouth, Kenna Hall Access, N Van Houten Avenue and N Monteith Avenue campus entry points were used to calculate an existing trip generation rate of 0.15 weekday p.m. peak hour trips per student. Past studies for UP have measured a trip generation rate of 0.23 weekday p.m. peak hour trips per student (the current ITE rate is 0.21 weekday p.m. peak hour trips per student rate as documented in Trip Generation, 8th Edition, published by the Institute Engineers). However, for conservative planning purposes, the existing rate of 0.23 was utilized.

This trip generation rate plus a one percent “background” growth in traffic on the adjacent streets was used to forecast intersection operations under a variety of enrollment scenarios. Assuming a total enrollment of up to 5,000 students, the study intersections are expected to operate acceptably at an enrollment of 5,000 students. The Main Entrance is expected to operate acceptably with an enrollment of 4,700 students. At an enrollment of 4,700 the main entrance may warrant the installation of a traffic signal, assuming no additional transportation demand management measures are in-place. The need for a signal should be re-evaluated in the fall term prior to when the enrollment trigger is anticipated. It will likely be decades, if ever, before enrollment levels reach 4,700 students so traffic volume trends along Willamette Boulevard will be monitored over time to ensure acceptable operations at this intersection. As such, no improvements at the study intersections or access points are anticipated to be needed as part of this Master Plan. If the University reaches an enrollment of 4,700 students and the Main Entrance is not relocated to Portsmouth Avenue, a traffic signal would be required at the Main Entrance to maintain an acceptable level of service. A condition of approval proposed below requires a renewed study of this intersection if and when fall enrollment is anticipated to reach 4,700 students.
As part of an ongoing campus study, modifications to the existing Kenna Hall Access/Willamette Boulevard campus access location are proposed as an elective measure. Specifically, the current right-out only access location would be modified to a restricted “right-in, right-out” configuration. Under the 5,000 student enrollment scenario assuming current lane configurations and allowable turning movements, the intersection is expected to operate with a v/c ratio of 0.13 and experience relatively low side-street demand during the p.m. peak hour. Given that this location is a low to moderately utilized campus access point, modifications of this location to “right-in, right-out” is not expected to adversely impact access to campus while maintaining acceptable operations.

**Parking Operations**

Per the data measured in 2011, the existing average weekday parking supply ratio on-campus is 0.47 parking spaces per full-time equivalent, on-campus undergraduate student, assuming that 85 percent of the parking spaces are full. If a 90 percent full standard were applied, this ratio would be reduced to 0.45 parking spaces per student.

To evaluate the parking needed to accommodate up to 5,000 students on-campus in the future, both the 85 and 90 percent full ratios were analyzed. The resultant parking supply needs for average weekday conditions are shown in Table 6 for varying enrollment levels. This table also shows the expected parking surplus/deficit on-campus based on the 1,690 parking spaces provided today.

<table>
<thead>
<tr>
<th>Student Enrollment</th>
<th>85 Percent Utilization (0.47 spaces/student)</th>
<th>Expected Surplus/Deficit</th>
<th>90 Percent Parking Utilization (0.45 spaces/student)</th>
<th>Expected Surplus/Deficit</th>
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<tbody>
<tr>
<td></td>
<td>Parking Supply Need</td>
<td></td>
<td>Parking Supply Need</td>
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<tr>
<td>3,200</td>
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<td>5,000</td>
<td>2,360</td>
<td>-670</td>
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<td>-540</td>
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</table>

1Based on existing on-campus capacity of 1,690 parking spaces

As shown, the current campus parking supply is expected to adequately serve the campus up to an approximate enrollment of 3,600 students, based on 85 percent utilization of available capacity. However, if parking utilization is increased to 90 percent, the existing supply is expected to serve campus demand until campus reaches an approximate enrollment of 3,800 students.
In the future, if no additional changes were made to transportation and parking demand management, UP could need up to 670 additional parking spaces on-campus to serve an enrollment of up to 5,000 students using 85% utilization. To ensure that the parking supply meets the demand of new student enrollment, UP has proposed several conditions of approval below that track Fall enrollment and parking supply as well as transportation demand management measures.

Special Event Considerations

Campus events result in unique challenges because the parking demand patterns can vary widely from one event to the next. For example, observed parking patterns differed between soccer and basketball games in location of demand on campus even though both events recorded a very similar attendance and associated parking demand increase. Other events, like graduation, could have even more variance in demand as a result of time of day, day of week, event size, and the familiarity of campus of those attending the event.

To review the special events parking conditions, the traffic consultants reviewed the transportation and parking conditions at two fall special events. The men’s basketball game versus WSU and the women’s soccer game versus Stanford. The attendance at the men’s game was 3,610 and the attendance at the women’s game was 3,410. The men’s basketball game represented the 95th percentile parking demand for on-campus supply. In other words, only 5% of special events on campus would present a higher attendance. Therefore, the findings from the men’s basketball game were used to forecast future parking demand. If the women’s soccer game trends were used, a lower parking supply would be shown in the future because the women’s game represents the 90th percentile event.

Table 7 Future 95th Percentile Special Event Parking Needs

<table>
<thead>
<tr>
<th>Student Enrollment</th>
<th>90 Percent Utilization (0.208 spaces/student)</th>
<th>95 Percent Parking Utilization (0.197 spaces/student)</th>
</tr>
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<tr>
<td></td>
<td>Parking Capacity Need</td>
<td>Expected Excess/Deficiency</td>
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<tr>
<td>5,000</td>
<td>1,905</td>
<td>-215</td>
</tr>
</tbody>
</table>

1Based on existing on-campus capacity of 1,690 parking spaces
Table 7 shows the future parking demand expected with a 95th percentile event based on 90 percent and 95 percent parking utilization. These parking utilizations are higher than was shown for the average weekday condition scenario because special event parking generally results in a higher utilization of parking supply due to parking attendants assisting patrons and a desire to contain as much of the parking demand on-campus as possible.

As shown, the existing parking supply is expected to serve 95th percentile event parking conditions up to an enrollment of approximately 4,000 students (assuming 90 percent utilization of on-campus parking spaces). As discussed earlier, the average weekday demand suggests that new parking supply may be needed when enrollment exceeds 3,600 full-time, on-campus undergraduate students. As such, average weekday conditions are expected to “control” when action is needed to address parking supply issues. However, it should be noted that event parking has unique characteristics that require special considerations and planning beyond available parking supply on campus to adequately accommodate the expected demand while minimizing impacts to the surrounding neighborhoods.

Accordingly, UP proposes additional strategies in the future to help mitigate off-campus impacts associated with parking and transportation during highly attended events. UP has a variety of Special Event Measures that are in-place today that provide for effective management of special events. Proposed additional strategies, particularly for 90th and 95th percentile events, in the future include:

- Re-institute compression parking (i.e., using event staff to direct parkers into compressed parking spaces thereby increasing the effective event parking supply on-campus) during events to increase the supply provided in the on-campus parking lots.
- Provide parking within the river campus and shuttle event patrons between these lots and the event venue.
- Increase access to transit for season ticket holders and other event VIPs by providing free transit passes for the day of event, and frequent, dedicated shuttle service to MAX for pre/post-event conditions.
- Evaluate partnerships with neighboring churches, schools and/or restaurants to provide off-campus parking locations during special events.
- Provide outreach and awareness as part of ticket sales related to appropriate parking locations as well as the availability of transit to access the campus.
- Provide additional and appropriately trained event staff on-campus to direct vehicles to under utilized parking locations on-campus and provide radio contact between event staff to locate parking on campus.
- Utilize technology to provide information about the modes of travel available for the event as well as for the location of available parking spaces on-campus.
The transportation analysis in Exhibit 4 demonstrates that during the 95th percentile special event, the on-campus parking supply experienced between 80% and 81% utilization. Based on an overall parking supply of approximately 1,200 parking spaces in close proximity to the larger event venues, an estimated two hundred spaces would have been available on-campus. Thus, when these additional parking measures result in higher utilization of campus lots, special event parking on the nearby streets in the neighborhood will be reduced.

It is also worth noting that 20 block faces experienced an increase of five or more parked vehicles during the 90th percentile event; of these, 2 block faces experienced an increase of 10 or more. In contrast, the last Master Plan update included an analysis of the University of Portland versus University of Tennessee women’s basketball game that was attended by 3,375 persons in 1997. At this game, 31 of these block faces experienced an increase of 5 or more vehicles, of which 19 block faces experienced an increase of 10 or more vehicles. For a similar sized event, UP had a much lesser impact on the neighborhood with the soccer game in fall 2011 than the basketball game in 1997. This is reflective of the University’s strong efforts to direct more event-related traffic onto the campus and out of the neighborhood east of Willamette Boulevard.

Existing and Proposed Transportation Demand Management Measures

To complement the University’s parking supply, the University has maintained a Transportation Demand Management Program (“TDMP”) with the following elements:

- **Zipcar**
  Since 2008, the University has provided Zipcars on-campus for use by faculty, staff, and students. Today, there are five vehicles located throughout the campus. In the 2010/2011 school year, there were approximately 150 registered faculty/staff members with the Zipcar program. Of these, one-third was considered “active” members. More than 6,300 miles were logged by members on-campus during the 2009/2010 and 2010/2011 school years. As discussed in Section 3 of the Transportation Report, the fall 2011 average weekday parking utilization study revealed that four of the five vehicles were in use the majority of the day that was surveyed. This information indicates that the Zipcar program is a key contributor to the University’s goals to be more sustainable and environmentally friendly and in reducing the overall auto trip rate.
• **Access to Transit**
The campus is served by a wide variety of transit options. There are two TriMet bus routes (#35 and #44) that serve the campus on regular headways throughout the week and on the weekends. These routes have stops on-campus and along Willamette and Portsmouth, providing convenient access to students, staff, faculty and visitors. UP also offers regular shuttle service (on 30 minute headways) between the campus and Rosa Parks Way Interstate MAX station Mondays through Saturdays. On Sunday afternoons, a shuttle is provided into the St. John’s neighborhood from the campus. During the past four school years, there were an average of 8,000 – 10,000 boardings of the shuttle to MAX per year; more than 90 percent of these were typically made by students. The Sunday shuttle had an average of 180 boardings per month, with a higher usage in the fall semester months.

• **Transit Passes**
UP offers its students, faculty and staff monthly TriMet passes at a discounted rate. The passes can be purchased through the Department of Public Safety. On average, approximately 120 passes are sold each month, approximately half of the passes as One or Two zone passes and half are “all zone.”

• **Parking Policies**
The Department of Public Safety administers a series of parking policies aimed to reduce transportation and parking impacts. Some of the key policies are summarized below.

**Vehicle Registration**
All vehicles used by the University community to travel to/from the campus must be registered with the Department of Public Safety. There is no charge for vehicle registration.

**No Parking Sanctuaries**
The University has established two “no parking” sanctuaries. This policy prohibits all employees and students from parking in the adjacent neighborhoods between 8:00 a.m. and 4:00 p.m., unless they live within these areas. The no parking sanctuaries are defined as those areas (1) north of Willamette Boulevard between N Olin Avenue and N Wall Avenue south of N. Princeton, and (2) from N Warren Street to N Willamette Lane between N Monteith Avenue and N Wall Avenue. Any vehicle found in violation of the no parking sanctuary is issued a citation.

**Parking Permit Program**
Faculty, staff and eligible students can obtain a parking permit for on-campus parking. Freshman and any student living in a University-owned home off-campus are prohibited from obtaining parking permits (unless a hardship exception is granted). Motorcycles and mopeds do not require a parking permit but are required to be registered with the Department of Public Safety.

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1 Any freshman who parks or operates their vehicle on-campus or within a one-mile radius thereof is fined $50 per day that they are found in violation.
In the fall 2011, approximately 950 parking permits were sold to students and 1,373 were issued to non-students (e.g., faculty and staff). Per this data, less than 30 percent of the students had parking permits in 2011. The number of permits sold in 2011 is consistent with past years.

**Transportation Options Resource Guide**

As a way of helping to reduce its carbon footprint, the University provides access to an on-line Transportation Options Resource Guide provided by the City of Portland. These resources make it quick and easy for users to access information about all modes of travel.

- **On-Campus Housing**
  
  Over the past several years, UP has significantly increased the percentage of students residing on-campus. Approximately 1,860 of the 3,190 full-time undergraduate students resided on-campus in fall 2011. The number of students living on-campus in fall 2011 represents 58 percent of the full-time undergraduate enrollment, which helps to reduce potential transportation and parking impacts.

- **Additional Employee Incentives**
  
  UP has an Employee Home Purchase Grant Program to assist faculty and staff in purchasing a home in north Portland neighborhoods. This program provides livability, economic growth, and stability benefits to the neighborhoods, strengthens the tie between UP and the neighborhoods, reduces UP-related parking and transportation impacts, and provides for healthier lifestyles for employees by encouraging active transportation options for work commutes. UP offers 5-year forgivable grants for homes purchased within the North Portland peninsula.

These current TDMP measures have been very successful. In 1996, the University had a staff single occupancy vehicle (“SOV”) rate of 86%. In 2009, that rate was 66%. Today, that rate is 61%, representing a 25 percentage point decline. The bike/walk percentage is at a high of 22% with 8% carpool, 5% compressed work week, 3% transit and 2% telecommute. This is the lowest SOV rate of any purely educational institution in the Metro area and, amongst institutions surveyed, second only to OHSU which is located next to a streetcar, tram and bus line. See Figure 19, below.
Parking and Transportation Summary

In summary, all study intersections will continue to operate at acceptable levels of service through the master plan period or through an enrollment of 5,000 students, with one exception. The Main Entrance will fall below an acceptable level of service when student enrollment reaches 4,700 students. At that time, if the entrance has not been relocated to Portsmouth Ave., a further study will be required to evaluate whether a traffic signal will need to be installed.

The current parking supply on UP campus is sufficient to accommodate the average weekday parking condition as well as the special events until the student enrollment reaches 3,600 students. At that time the University will be required to either add spaces to the on-campus inventory, up to 670 spaces if enrollment reaches 5,000 students, or adopt and implement additional transportation demand management measures that effectively reduce the predicted parking deficits. To further ensure that special event parking is appropriately managed, the University proposes to implement several conditions of approval aimed at directing visitors onto campus and off of the adjacent public streets.
The following is the proposed list of conditions of approval to manage the University's parking, transportation and special event impacts:

1. The University of Portland shall maintain a parking inventory of .47 spaces per (full-time undergraduate, on-campus) student based on a 85 percent parking utilization. Using the parking matrix below, the University shall ensure the following on-campus parking supply in each fall term prior to when the enrollment trigger is anticipated. The Parking Supply Report shall be submitted to the City of Portland and UPNA with the fall student enrollment and parking supply count.

<table>
<thead>
<tr>
<th>Student Enrollment</th>
<th>85 Percent Utilization (0.47 spaces/student)</th>
<th>Parking Supply Need</th>
<th>Expected Surplus/Deficit¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,200</td>
<td>1,510</td>
<td>1,510</td>
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<tr>
<td>5,000</td>
<td>2,360</td>
<td>2,360</td>
<td>-670</td>
</tr>
</tbody>
</table>

2. The City recognizes that the parking supply shown in Condition 1 is based in part on the Transportation Demand Management (TDM) measures that were in place at the time this Conditional Use Master Plan was approved in 2012. If the University opts to implement additional TDM measures, those measures may help to lessen and/or delay the need for new parking supply to be provided on-campus. If the University opts to or does provide less on-campus parking spaces than is otherwise required under Condition 1, the University shall submit a Parking Supply Report to the City of Portland and the University Park Neighborhood Association to justify any modifications from Condition 1 and must be approved by PBOT. The Parking Supply Report shall evaluate changes in mode-split, average weekday parking demand, and potential modifications to policies and programs that may further reduce/delay the need for new parking. This analysis should be conducted in the fall term prior to when the parking supply modification is needed or anticipated.

3. UP will conduct analyses of the following measures when enrollment levels begin to reach those levels associated with potential parking deficits:
   - Single occupancy vehicle rates per the ECO study conducted for TriMet and the Department of Environment Quality requirements;
   - Average weekday parking demand; and,
   - Potential modifications to policies and programs that may further delay/reduce the need for new parking.
UP will conduct this review in the fall term in the year prior to when anticipated enrollment could occur that triggers the need for additional parking (assuming a three percent annual growth in enrollment).

4. The University shall host a transportation workshop every four years, following the submittal of the first Parking Supply Report. The University Park Neighborhood Association shall be notified by mail of the transportation workshop at least 30 days prior to their next scheduled meeting. The purpose of these workshops will be to provide evaluation and discussion of the University’s parking inventory, transportation demand management plan and special events management plan.

5. Parking within public rights-of-way within the campus boundaries may not be assigned to specified individuals or departments.

6. The University shall implement the TDMP as proposed in the Transportation Master Plan, Exhibit 4.

7. The University shall implement the SEMP as proposed in the Transportation Master Plan document. A biennial inventory of significant special events and an analysis of the effectiveness of the SEMP shall be compiled by the University and submitted to the Bureau of Transportation starting two years from the date of this master plan approval. A significant special event is an event with an attendance of 1,500 persons or more. A copy of the most recent special events inventory and analysis shall be submitted to UPNA.

8. If the University schedules an event with a projected attendance of more than 1,500 persons, the University shall not schedule another concurring event where the projected attendance is to exceed 1,500 persons.

9. For all events that are expected to attract 3,500 or more attendees, the University shall: (a) re-institute compression parking (i.e., using event staff to direct parkers into compressed parking spaces thereby increasing the effective event parking supply on-campus) during events to increase the supply provided in the on-campus parking lots; (b) station trained flaggers on N. Willamette Blvd. and N. Portsmouth Avenue at identified cross streets to direct attendees to and from on-campus parking facilities; (c) station parking monitors at on-campus locations with radio contact to the neighborhood flaggers to maximize utility of on-campus lots; (d) provide outreach and awareness as part of ticket sales related to appropriate parking locations as well as the availability of transit to access the campus; and (e) station a parking crossing guard at the N. Willamette and N. Portsmouth intersection to facilitate safe pedestrian crossings pre- and post-game.

10. The University shall meet at least annually with UPNA to review the effectiveness of the TDMP and the SEMP and to provide a general opportunity for communication on any other issues involving the University and the neighborhood.

11. The University shall maintain appropriate sight triangles and landscaping to provide appropriate sight lines for approaching vehicles, bicyclists, and pedestrians.

12. When Fall enrollment is projected to reach 4,700 students, the University shall submit a traffic analysis of the Main Entrance operations. If that analysis demonstrates a traffic signal is warranted at that entrance, the University shall install the traffic signal.

13. Modify the Kenna Hall/Willamette Blvd. access to a “right-in, right-out” configuration.