University District Parking Study (Spokane, WA) – Existing Conditions

In any area endeavoring to provide safe, convenient and cost effective access the issue of parking is central as stakeholders plan for an area's growth. The need to understand both the perception *and* reality of parking is essential if a comprehensive, effective and successful parking management strategy is to be developed and implemented. This report focuses on establishment of a clear understanding of the reality of current parking dynamics within Spokane's University District. The University District is home to both Gonzaga University and the Riverpoint Campus.

Our goal is to present data for the University District study area as a precursor to discussions with stakeholders on potential programs and strategies to maximize the parking supply and plan for the future. Stakeholders in this study process include:

- City of Spokane
- Downtown Spokane Partnership
- Gonzaga University
- Riverpoint Campus – including Washington State University and Eastern Washington University

I. PURPOSE OF THE PARKING INVENTORY ANALYSIS

The purpose of a parking utilization study is to derive a comprehensive and detailed understanding of actual use dynamics and access characteristics associated with parking in the University District. Important elements of this section include:

(1) Development of a data template for all City and University owned/controlled parking in the study area, denoting all parking stalls, by time stay type, for on and off-street facilities in public and University control.

(2) A complete survey of parking use on a "typical day" – in this case two Wednesdays (April 25 and May 2, 2007).[1]

(3) Analysis of parking utilization and turnover that included:

   a. Quantification of total study area parking inventory.
   b. Hourly occupancy counts (9 a.m. – 6 p.m.) for on and off-street inventory.
   c. Parking turnover analysis (on-street).
   d. Parking duration of stay analysis (on-street).
   e. Derivation of built parking supply to total built square footage (i.e., true parking demand ratio).

(4) Identification of parking surpluses and constraints in the parking supply.

[1] These dates were chosen in consultation with the City of Spokane, the Downtown Spokane Partnership and representatives of Gonzaga University and the Riverpoint Campus.

In short, the purpose of the parking utilization study was to produce an objective analysis of existing parking dynamics within the University District area that can be employed over time to support and inform decision-making related to growth associated with the universities.

II. STUDY AREA

The parking inventory study area was determined in the initial project scoping process and in consultation with the City of Spokane, Gonzaga University, Riverpoint Campus and the Downtown Spokane Partnership. The south study zone includes the area east of Division Street (western boundary), south to East Riverside Avenue and north to E Olive Avenue and as far east as where E Trent meets N Riverpoint Boulevard (closest to Spokane River). The north study zone is bounded by N Ruby Street on the west and N Hamilton on the east E Desmet on the south and E Sharp Avenue on the North.

The study zone is reflective of the City and stakeholders' understanding of current parking activity and land use densities in the area defined as "the University District." Quantifying parking activity within this zone allows for a more comprehensive look at parking patterns, trends and surpluses/deficits in the area.

Figure A, on the following page illustrates the entire study area examined in the data collection.

III. METHODOLOGY

Rick Williams Consulting (RWC) conducted the capacity/utilization and turnover inventory on Wednesday, May 2, 2007. Robinson Research assisted in the off-street data collection effort on Wednesday, April 25, 2007. Every effort was made to assure that parking activity was not influenced by atypical events and, as such, off-street parking data was gathered over two separate days (April 25 and May 2) to control for final exams taking place on the campuses.

The parking inventories were conducted between 9:00 a.m. and 6:00 p.m. each day.

The project team's methodological approach to gathering parking utilization/capacity/turnover data began with a physical compilation of all parking assets (on and off-street) within the study area. This physical assessment was conducted in advance of the survey day and documented all parking in City or campus control/ownership by location and type. This was used to create a data template necessary to conduct the utilization assessment.

Actual data collection was structured using a sampling technique designed to assure that data gathered could be extrapolated to represent both on and off-street parking activity impacted by university demand for the entire study area, as well as for each unique campus area.

On Wednesday, April 25, 2007 hourly off-street capacity counts were conducted at four Riverpoint Campus facilities and at the Gonzaga School of Law and McCarthey Athletic Center lots. This was done in an attempt to avoid the timing of students' final exams, which are indicative of 'non-typical' parking behavior.

The May 2, 2007 survey involved an hourly count of every on-street parking stall in the Riverpoint Campus area (174 total stalls) and a sample of 47% of all on-street parking (414 of 872 stalls) within the Gonzaga campus area. Vehicles were monitored by recording the last four digits of the parked vehicle's license plate. Surveyors collected license plate data at each on-

street parking stall (metered, un-metered and by permit only) located in the study area for every hour over a nine-hour period (9:00 a.m. – 6:00 p.m.). For the Gonzaga off-street system, hourly capacity counts were taken over the same time frame at selected off-street facilities within the study zone.

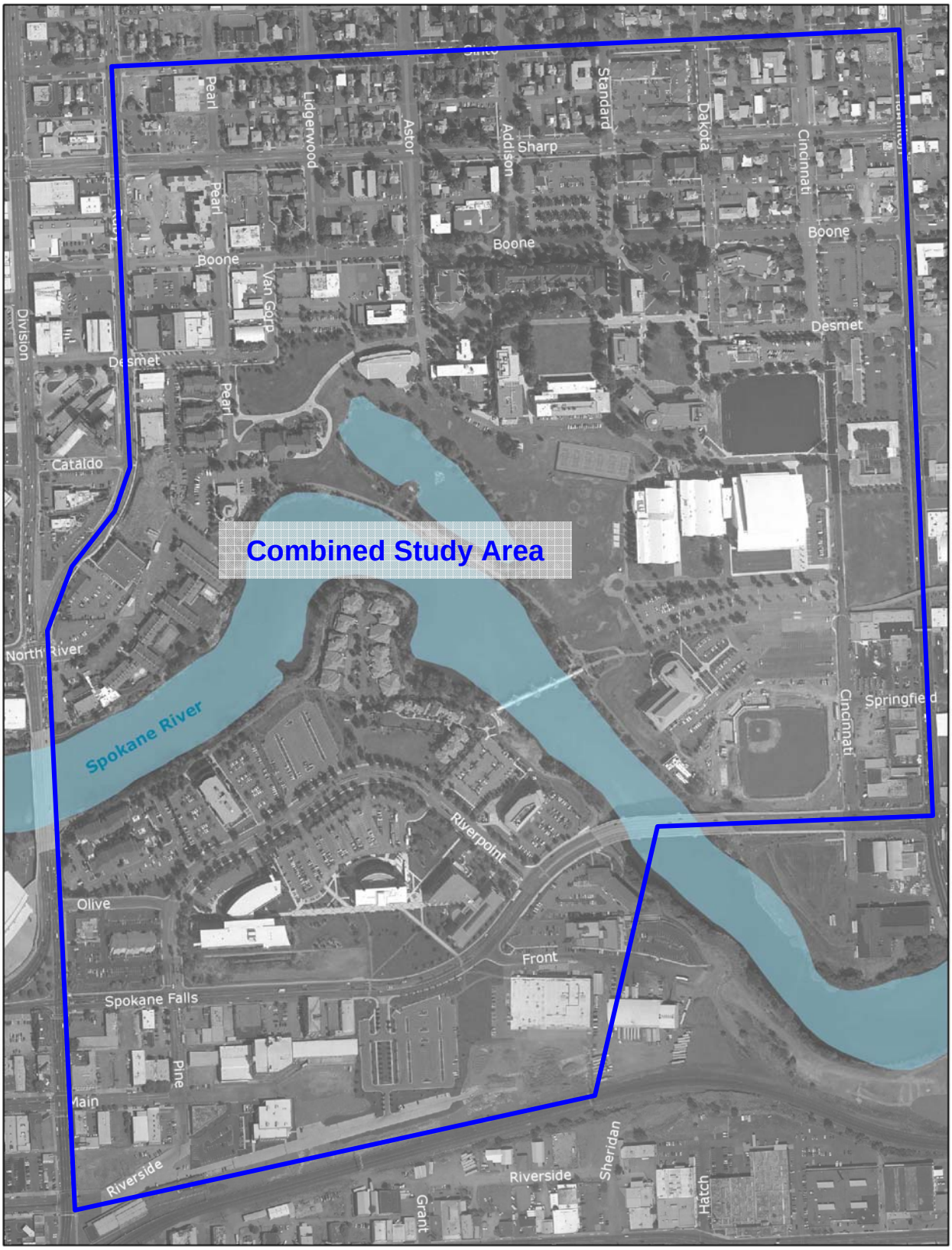
Data was sorted to provide summaries of:

- Combined parking activity for the two campus study zone (**Section IV**)
- On and off-street parking activity specific to the Gonzaga University Campus (**Section V, A)**
- On and off-street parking activity specific to the Riverpoint Campus (**Section V, B**)
- Analysis of parking demand for each campus area (**Section VI, B & C**)

Gonzaga University Campus

Riverpoint Campus

Figure A
Combined Parking Study Zone



IV. GENERAL CHARACTERISTICS OF THE INVENTORY

A. Total Supply

A total of **5,363** parking stalls were documented within the study area boundaries. Parking controlled/owned by the two university campuses totaled **4,317** spaces, all off-street. The remaining parking in the study zone was comprised of 1,046 on-street stalls. All on-street parking in the study zone is provided at no charge, within a range of time stay allowances (ranging from 30-minutes to all day). Parking in the university controlled supply ranges from paid permits (generally students, faculty and staff) to free parking for visitors and guests.

Table 1 presents a breakout of the parking supply in the combined University District Study Zone.

Table 1
University District Parking Inventory
Combined Area – Gonzaga & Riverpoint Campuses

University Study Area Parking Stall Breakout		
On-Street Stalls by Type	**Number of Stalls**	**% of Total On-Street Stalls**
30 minutes	12	1%
1 hour	100	10%
3 hours	42	4%
Permit Only	12	1%
No Limit	880	84%
Public: On-Street Parking Stalls	1,046	100%
Public: Off-Street Parking Stalls	0	
Sub-Total Public Supply	1,046	
University Owned: Off-Street Parking Stalls	4,317	
Total Parking Inventory	***5,363***	

As **Table 1** indicates, the University District Study Zone maintains a high percentage of No Limit parking stalls, with over three quarters of the on-street supply (84%) made up of this type of stall. One-hour time zones comprise 11% of the on-street supply (mostly associated with the Riverpoint Campus area). Three-hour stalls comprise another 4%, with the remainder of the on-street supply made up of a limited number of 30 minute and permit only parking spaces. The majority of parking is located in off-street facilities, totaling 4,317 stalls.

B. Sampled Supply (Combined Area)

A total of **3,136** of the total 5,363 parking stalls (58% of the supply) were physically surveyed within the study area boundaries on the survey days. Of that total, **588** spaces were publicly controlled on-street spaces and **2,548** off-street stalls located on the Riverpoint and Gonzaga campuses.

The surveyed off-street supply included eleven Gonzaga owned lots and 4 facilities owned by the Riverpoint Campus. The most significant of these off-street parking resources were the Gonzaga Administration (255 stalls), the Law School (450 stalls) and McCarthey Athletic (358 stalls) lots and the 312 stall Riverpoint Green 1 lot.

Table 2 presents a breakout of all the sampled parking supply in the study zone**.**

Table 2
Sampled University District Parking Inventory – Stalls Surveyed
Combined Area – Gonzaga & Riverpoint Campuses

University Study Area Parking Stall Breakout		
On-Street Stalls by Type	**Number of Stalls**	**% of Total On-Street Stalls**
30 minutes	12	2%
1 hour	94	16%
3 hours	42	7%
Permit Only	0	0%
No Limit	440	75%
Public: On-Street Parking Stalls	588	100%
Public: Off-Street Parking Stalls	0	
Sub-Total Public Supply	588	
University Owned: Off-Street Stalls	2,548	
Total Surveyed Supply	***3,136***	

As **Table 2** indicates, the 3,136 stalls of sampled parking are fairly reflective of the distribution of parking formatted within the entire 5,363 stall supply (see **Table 1**). This was important to assure that data and information derived from the sample can be accurately extrapolated to the entire study zone.

C. Peak Hour and General Occupancies (Combined Area)

Peak hour occupancy for the entire area is the period during the day when the campuses experience the highest utilization of parking stalls. Peaks may vary between the on and off-street parking systems. This analysis attempts to determine that point in the day at which the greatest

numbers of vehicles are parked in the study zone. In the analysis that follows occupancies for all stalls in on street and off-street locations are summarized.

As stated earlier, analyses of occupancy associated with the specific campuses are summarized in **Section V, A & B** below.

1. On-street Parking Summary - Combined Study Area

The peak hour for the on-street public inventory is between 1:00 p.m. and 2:00 p.m. for the combined on-street system (i.e. all sampled stalls, all use types). At this hour, 80.8% of the 588 sampled parking stalls in the study area were occupied. **Table 3,** below summarizes occupancies by type of stall, peak hour by stall type and average length of stay. **Figure B,** below, illustrates occupancies for each hour of the nine-hour survey day.

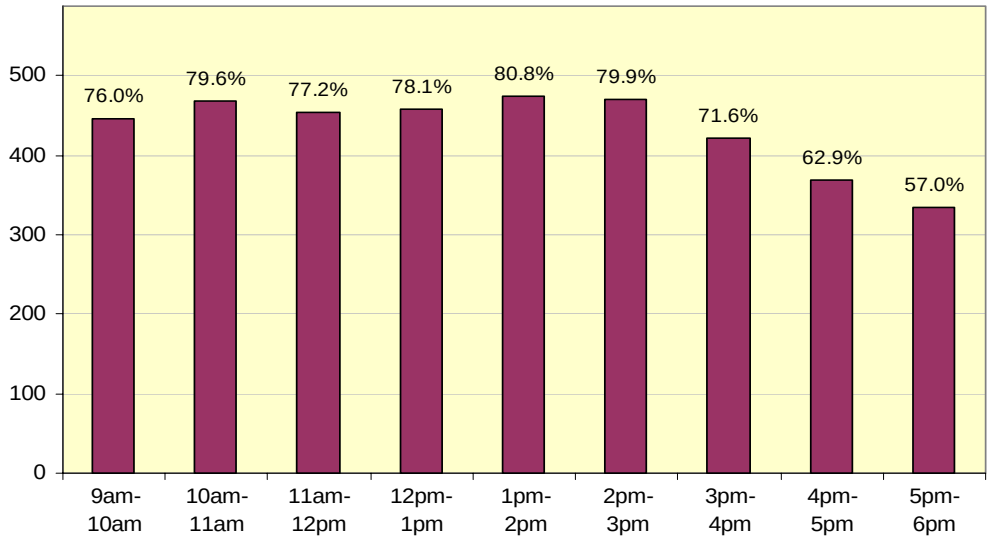
Table 3
On-Street Parking Summary
Combined Area

Entire Study Area – All On-street Stalls					
Type of Stall	**# of Stalls**	**Peak Hour**	**Peak Occupancy**	**Stalls Available (empty)**	**Average Length of Stay**
All Stalls	***588***	***1 – 2 pm***	***80.8%***	***113***	***3 hr/21 min.***
Usage by Time Stay					
30 minutes	12	11 – 12 pm	66.7%	4	N/A
1 hour	94	2 – 3 pm	17.0%	78	1 hr/26 min.
3 hours	42	1 – 2 pm	78.6%	9	1 hr/55 min.
No limit	440	10 – 11 am	96.4%	16	3 hr/43 min.

From **Table 3**, the following conclusions can be derived:

- During the 1:00 p.m. – 2:00 p.m. peak hour, 475 stalls are occupied leaving 113 empty on-street stalls available within the sampled study area.
- 1-hour stalls do not provide sufficient time for a desired stay, averaging stays of 1-hour/26 minutes. They are also the least used by visitors to the area (17% peak occupancy).
- 3-hour stalls provide more time than is necessary, with average stays of 1-hour/55 minutes.
- 2-hour time stays may be more appropriate in stalls that are currently designated 1 or 3 hour limits.
- The highest area of use is within stalls designated as no limit, which achieve peak hour occupancy of 96.4% between 10 a.m. and 11 a.m.
- The average duration of stay in an on street-parking stall is 3 hours and 21 minutes, regardless of the time stay designation.

Figure B
Spokane University District Parking Occupancies
On-Street System (588 stalls)



2. Off-street system- Combined Study Area

While the combined on-street system operates at approximately 80.8% peak occupancy, it is important to evaluate how the off-street system operates in relation. This is particularly important to understand, as potential access constraints within the on-street system (now or in the future) will need to be directed into off-street locations. As such, understanding available capacity for absorption of on-street demand growth will be important.

Table 4 below provides a summary of the combined peak hour demand for the off-street supply in university ownership/control sampled on the survey day(s). It also provides a facility-by-facility summary of occupancy and parking availability. This allows comparison between facilities and between unique campuses. As the table demonstrates, significant variation occurs between lots and between campuses.

Table 4
Off-street Occupancies – Combined Facilities

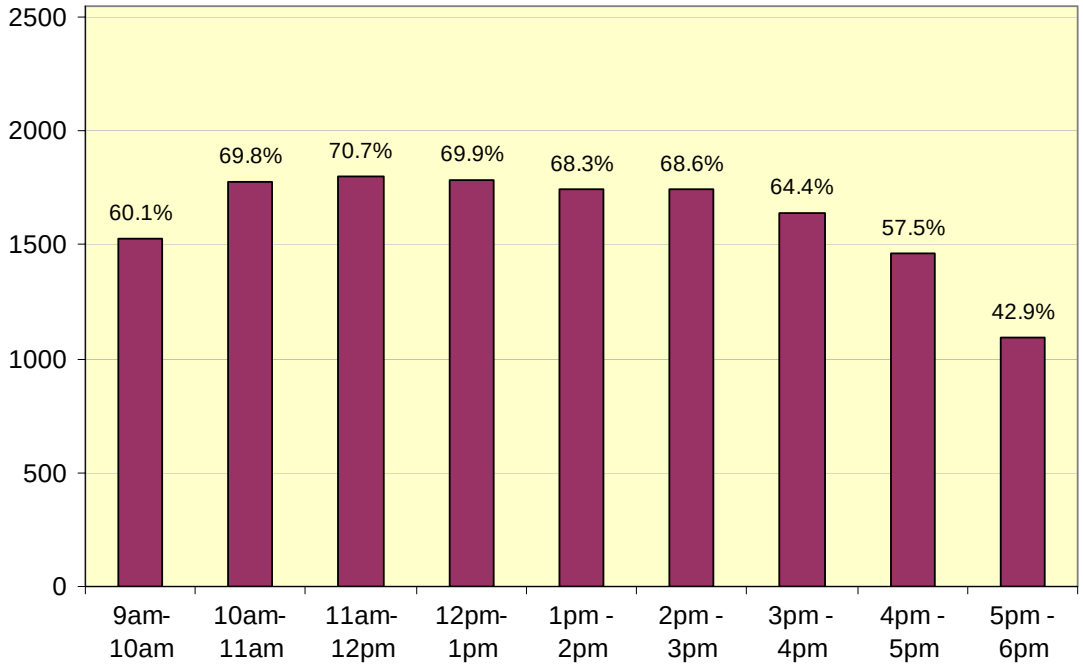
All Off-Street Stalls Surveyed				
Garage/Lot	**# of Stalls**	**Peak Hour (stalls occupied)**	**Peak Occupancy**	**Stalls Available (empty)**
All	***2,548***	***11 – 12 pm***	***70.7%***	***746***
Individual Lot Occupancies (at peak hour)				
GONZAGA LOTS				
Schoenberg Center	130	90	69.2%	40
Dussault Apts. (west)	50	43	86.0%	7
Dussault Apts. (east)	41	30	73.2%	9

Music Annex	116	92	79.3%	24
Administration Bldg.	255	254	99.6%	1
Corkery Apts.	88	70	79.5%	18
Boone/Cincinnati/ Hamilton	157	133	84.7%	24
COG Bookstore	85	84	98.8%	1
Madonna Residence Hall	94	90	95.7%	4
McCarthey Athletic Center	358*	214	59.8%	144
Law School	450*	216	47.6%	236
GONAZAGA SUB-TOTAL	*1,824*	*1,316*	*72.1%*	*508*
RIVERPOINT CAMPUS LOTS				
Riverpoint Green 1	312*	255	81.7%	57
Riverpoint Green 2	123*	35	28.5%	88
Riverpoint Green 3	97*	80	82.5%	17
Riverpoint Yellow 5	192*	116	60.4%	76
RIVERPOINT CAMPUS SUB-TOTAL	*724*	*486*	*67.1%*	*238*

As **Table 4** illustrates, peak hour occupancy for all sampled off-street facilities (totaling 2,548 stalls) is between 11:00 a.m. and noon. At this hour occupancies reach 70.7%. This contrasts with the on-street occupancy peak, which occurs one hour later and reaches 80.8%. Within the combined *off-street* supply, there are 746 empty stalls at the peak hour (508 in the Gonzaga lots and 238 in the Riverpoint Campus lots). **Figure C** provides a graphic breakout of occupancies for each hour of the nine-hour survey day.

* These lots were surveyed on Wednesday, April 25 one week before the larger on-street study. Both the Riverpoint Campus and the Gonzaga Law School were either in the midst or preparing for finals, which could have artificially skewed the parking occupancy survey results. Therefore, this date was chosen to get a more accurate "typical" day for campus off-street parking behavior.

Figure C
Spokane University District Parking Occupancies
Off-Street System (2,548 stalls)



From data derived for the off-street system, the following conclusions can be derived:

- The overall combined occupancy of the off-street system is 70.7% at the peak hour of 11:00 a.m. – noon.
- Gonzaga lots peak at 72.1% and the Riverpoint Campus lots peak at 67.1%.
- The combined off-street system has parking availability, but it is not uniformly distributed and confined to specific facilities on the individual campuses.
- The Gonzaga Administration Building lot has the highest occupancy of any of the large off-street facilities reaching 99.6% at the peak hour. On the Riverpoint Campus, the Riverpoint Green 3 lot reaches 82.5%.

D. Usage Characteristics (Turnover, Duration of Stay, Volume and Exceeding Time Stays)

The University District on-street parking supply is a system designed to accommodate users of the university campuses. Several usage characteristics derived from the data underscore this conclusion. A summary of these findings are included in **Table 5**, below:

Duration of Stay

The on-street supply is used at a high rate, particularly at the Gonzaga campus, indicating the critical role that such parking plays in accommodating parking access and demand to the district and the universities. As stated earlier, over 80% of the supply is occupied during the peak hour in

the *combined* zone, leaving just 113 stalls available in the peak hour to serve the two campuses.

- The average stay in the University District for all parking stalls is 3 hours and 21 minutes.
- The longest duration of stay is at "No Limit" stalls, averaging 3 hours and 43 minutes.
- Of all No Limit stalls sampled, a total of 945 unique vehicles were recorded. Of that total, 436 (or 46.1%) were vehicles that stayed longer than 4 hours, indicating that such stalls are supportive of an area that serves the unique time stay requirements of a university campus.
- Existing 1 and 3 hour stalls could be reformatted to 2-hour stalls to better calibrate actual time stays with posted time limits. [2]

Turnover: Efficiency of the Parking System

Given the average stay of 3 hours/21 minutes (or 3.35 hours), an on-street stall in the University District will turnover 2.67 times over the course of a typical day (9 hour day/3.35 hours duration = 2.67 turns per stall). Coupled with high peak hour occupancies, the University District is operating at a level that is supportive of campus related uses. However, as on-street occupancies become more constrained, it will be important that the respective campuses recognize that increasing levels of growth and parking demand will need to be accommodated off-street, as there is limited capacity to absorb new demand into on-street supply.[3]

Volume

On the survey day, 1,142 unique license plate numbers were recorded parking in the sampled supply of 588 on-street spaces between the hours of 9:00 a.m. and 6:00 p.m.[4]

Table 5
General Characteristics of Use – On-Street Parking Stalls

USE CHARACTERISTIC	DATA FINDING
Average duration of stay per unique vehicle	3 hr. 21 minutes
Actual number of unique vehicles (9:00 a.m. – 6:00 p.m.)	1,142
Actual turnover rate (# of cars using a single occupied stall over a 9 hour period)	2.67

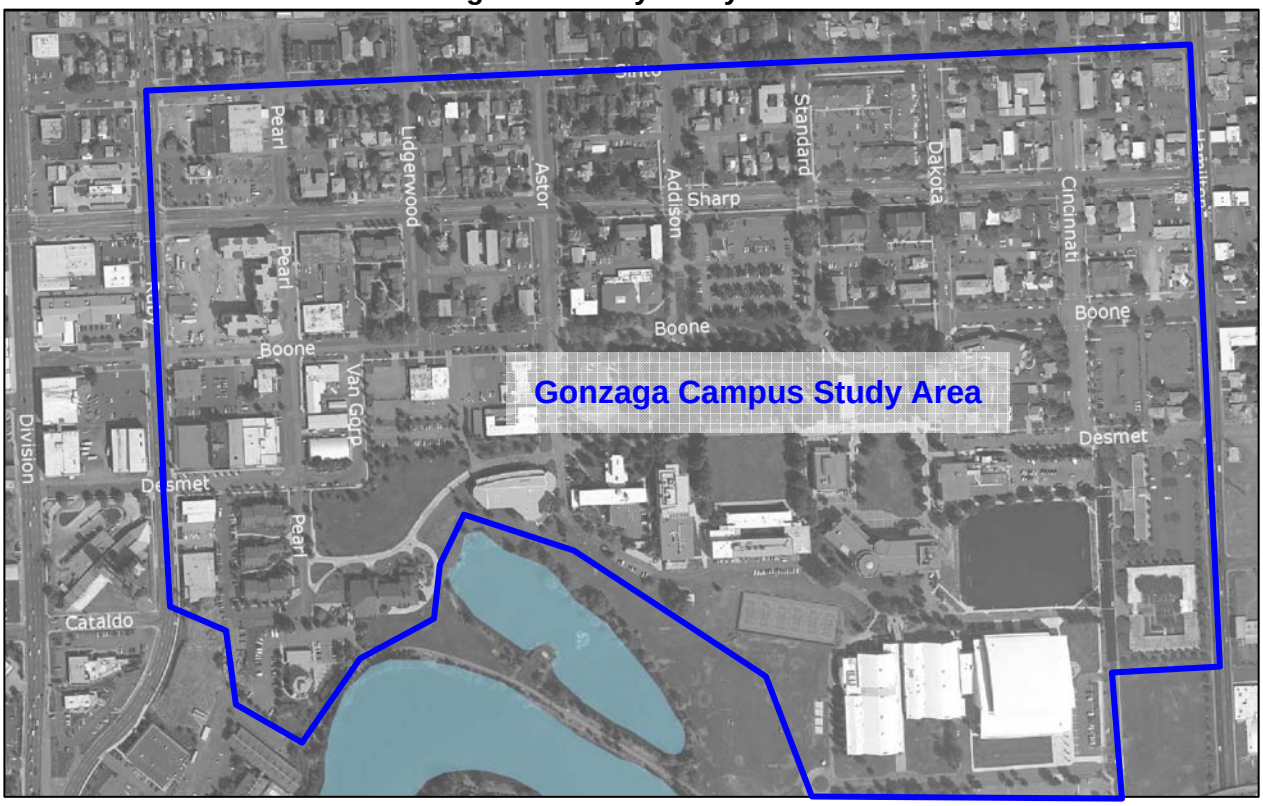
[2] This is particularly relevant to the 1 hour stalls as the average duration of stay is significantly higher than the posted limit.
[3] The only way to increase on-street parking availability is to (a) increase rates of turnover through shorter time stay limits, (b) add parking in on-street areas currently signed no parking and/or (c) add angled parking in areas currently using parallel parking. Items (b) and (c) would need input from the City's Traffic Engineer.
[4] It is important to note that this does not represent all vehicles in the district on May 2, 2007, as license plate numbers were not recorded in off-street facilities. The unique vehicle total allows us to calculate turnover.

V. SPECIAL ANALYSES - DATA BY ZONE AND LOCATION

A. Gonzaga Campus Area

The Consultant was asked to conduct a "nodal analysis" of the parking supply most specifically related to uses and demand for the Gonzaga University campus. To this end, a "Gonzaga node" was evaluated for the on and off-street parking in the area bounded by N Ruby Street on the west and N Hamilton on the east E Desmet on the south and E Sharp Avenue on the North. **Figure D** provides a map of this nodal zone.

Figure D
Gonzaga University Study Area Node



Within the Gonzaga node, there are a total of 872 on-street parking stalls and 2,368 off-street spaces under Gonzaga's control/ownership. For the purposes of this study, a total of 2,238 stalls were sampled within this node, 414 were on-street (representing 40% of the total) and 1,824 were located in eleven off-street facilities (representing 77% of all off-street stalls).

As **Table 6** indicates, the Gonzaga area maintains a high percentage of No Limit parking stalls, with 406 of the on-street supply (98%) made up of this type of stall. The remainder of the on-street supply is made up of eight 30-minute spaces, or 2% of the total supply.[5] The majority of parking is located in off-street facilities. **Table 6** below provides a breakout of the sampled supply.

[5] The consultant team believes that the on-street sample is reflective of the format of parking throughout the entire 872-stall supply within the Gonzaga study area node.

Table 6
Sampled District Parking Inventory – Stalls Surveyed
Gonzaga University Campus

Gonzaga Node Parking Stall Breakout		
On-Street Stalls by Type	**Number of Stalls**	**% of Total On-Street Stalls**
30 minutes	8	1.9%
No Limit	406	98.1%
Public: On-Street Parking Stalls	414	100%
Gonzaga: Off-Street Parking Stalls	1,824	
TOTAL: Parking Stalls Surveyed	2,238	

As **Table 7** below indicates, use of the parking supply in the Gonzaga node is brisk on street and moderate off-street, reaching a combined on/off-street occupancy of 76.7% at the peak hour (11:00 a.m. - noon). More importantly, the on-street system is nearly 100% occupied between 10:00 a.m. – 11:00 a.m. (at 97.3%), leaving just 11 available spaces within the on-street supply in the areas most proximate to campus uses.

The off-street system reaches 72.2% at peak hour, though many lots are well in excess of 95% occupied at the peak hour. This includes the Administration Building (99.6%), COG Bookstore (98.8%) and Madonna Residence Hall (95.7%) lots. Overall, there were 525 empty off-street parking stalls available to users at the peak of the campus-parking day within the sampled supply. The largest concentrations of available parking supply are located in the Law School lot on the southeast side of campus (48.0%/234 empty stalls) and the adjacent McCarthey Athletic Center lot (59.8%/144 empty stalls). **Figures E & F** below provide a summary of occupancies by hour over the nine-hour survey period for both on and off-street supply.

Table 7
Nodal Analysis – Gonzaga Campus Parking System

Nodal Analysis – Gonzaga Campus Area					
Type of Stall	**# of Stalls Sampled**	**Peak Hour**	**Peak Occupancy**	**Stalls Available (empty)**	**Average Length of Stay**
All Stalls (on & off-street)	***2,238***	***11 – 12 pm***	***76.7%***	***525***	***N/A***
Individual Lot Occupancies (at peak hour)					
On-Street Only	414	10 – 11 am	97.3%	11	3hr. / 32min.
Off-Street Only	1,824	11 – 12 pm	72.2%	508	N/A

Other considerations resulting from this analysis include:

- Parking in residential lots (i.e., Corkery, Dussault and Madonna) appears adequate to meet residential demand, though on-street supply immediately adjacent to these facilities likely provides an additional resource for residential parking.

- The on-street parking system is operating at capacity and will not provide additional capacity to absorb future demand growth generated by the university. Occupancies exceed 90% for a six-hour period that begins at 9:00 a.m. and runs to 3:00 p.m.

- This node most likely appears very constrained to users, with very few empty on-street stalls available at the peak hour.

Several blocks surrounding the Gonzaga campus have generous parking setbacks from the corners, which could allow for some additional on-street parking to be added back to the system.

- Options to add on-street parking in areas currently designated "no parking" or converting existing parallel parking stalls to angled stalls should be examined. This could provide for minor increases in on-street supply in areas appropriate for such parking. Areas along Sharp may be feasible, though traffic flow and street configuration issues would need to be addressed. Adding angled parking would require discussions and partnership with the City Traffic Engineer.

- The University may want to consider transitioning some permit parkers in the Administration Building lot to off-street facilities that are less constrained. This could free up the availability of parking in this popular facility for visitors to the University. As stated above, it is doubtful the on-street system can be expected to provide for visitor growth to the area.

- The 85% peak occupancy standard is a parking industry measure used to ascertain an optimum usage point within a parking supply. At 85% occupied, it is assumed that a parking system is effectively "full," leaving a cushion or buffer of 15% empty stalls to accommodate unexpected peaks and general growth within the supply. It also allows for a certain level of user convenience (i.e. "float") to find available parking stalls and to absorb growth.

Current parallel parking along Sharp could be considered for "back-in" angled parking as a means of increasing the number of on-street stalls in the area.

- If the "85% Rule" is used as an optimum occupancy standard, the *on-street* inventory within the sampled supply maintains a *"deficit" of 51 spaces* in the peak hour. If this standard were extrapolated to the entire on-street area (872 stalls) the deficit would increase to 107 stalls. In other words, if on-street parking were the only resource available for parking, an additional 107 stalls would be needed to bring the inventory back to the optimum occupancy standard necessary to assure maximum user convenience (i.e., 85%).[6]

[6] The 85% Rule (or Standard) is an industry benchmark used to ascertain constraints within a supply of parking.

- Though not a hard and fast standard, use of the 85% operating standard provides insight into the level of constraint currently in place in the Gonzaga node.
- Because of the constraint within the on-street system, future University growth at current levels of demand will push more demand into the University's off-street supplies.

Figure E
Gonzaga University Parking District Occupancies
Gonzaga Area On-Street System (414 stalls)

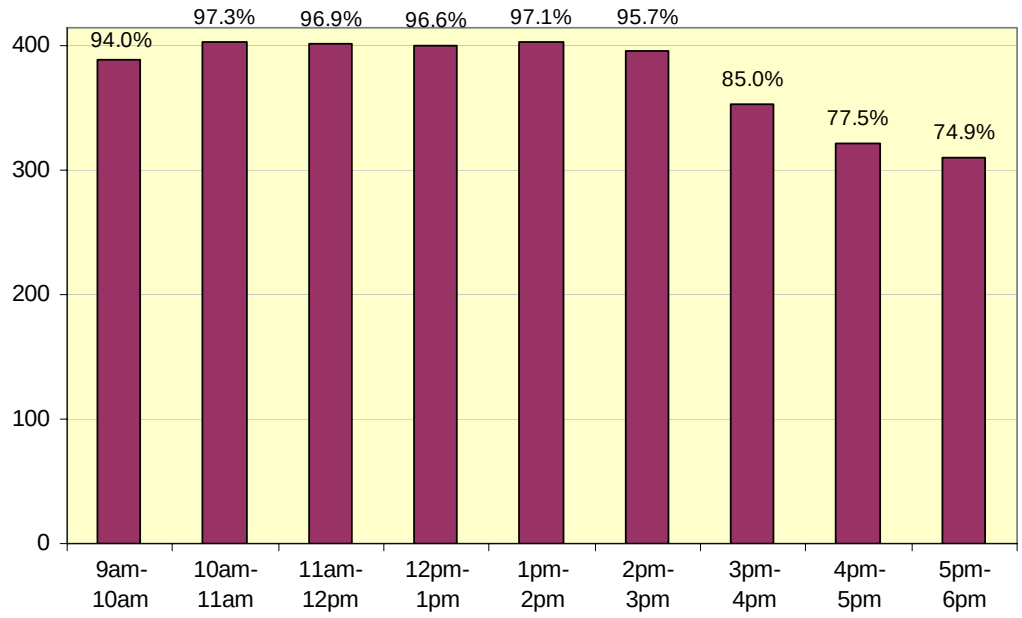
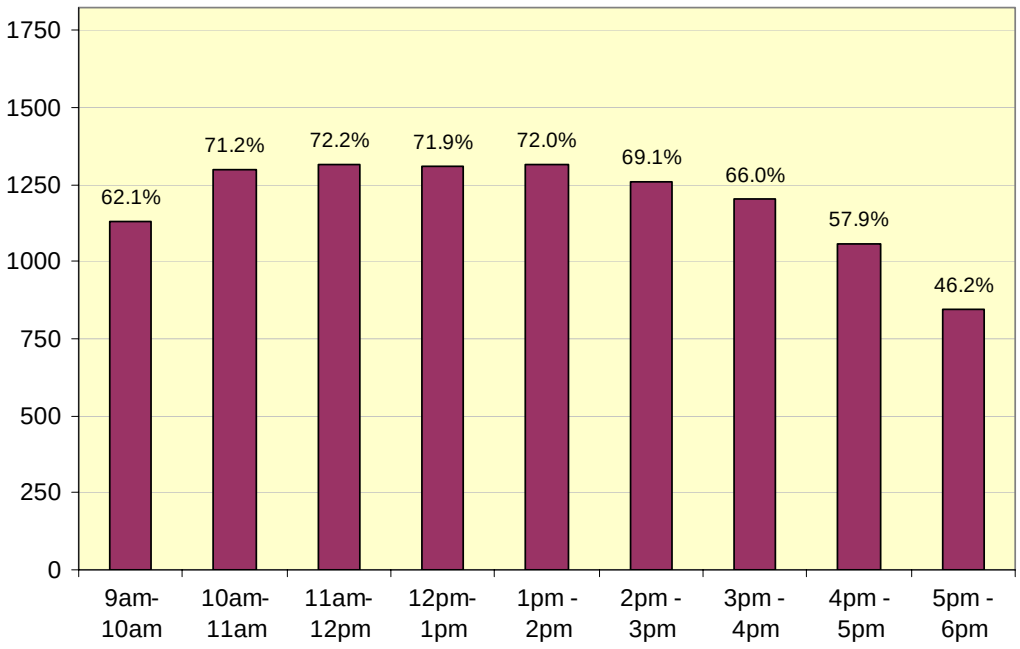


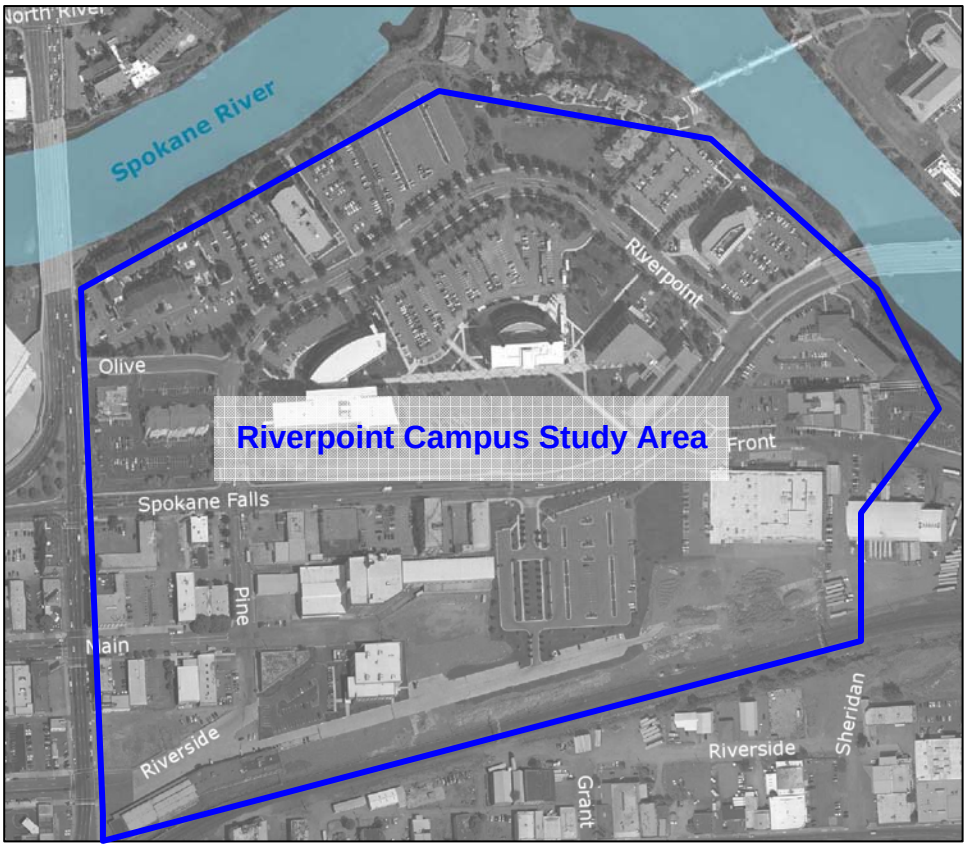
Figure F
Gonzaga Parking District Occupancies
Off-Street System Only (1,824 stalls)



B. Riverpoint Campus Area

The Consultant was asked to conduct a "nodal analysis" of the parking supply most specifically related to uses and demand for the Riverpoint Campus. To this end, a "Riverpoint Campus node" was evaluated for the on and off-street parking in the area bounded by the area east of Division Street (western boundary), south to East Riverside Avenue and north to E Olive Avenue and as far east as where E Trent meets N Riverpoint Boulevard (closest to Spokane River). **Figure G** provides a map of this nodal zone.

Figure G
Riverpoint Campus Study Area Node



Within the Riverpoint Campus node, there were a total of 174 on-street parking stalls and 1,949 off-street spaces under Riverpoint's control/ownership. For the purposes of this study, a total of 898 stalls were sampled within this node, 174 were on street (representing 100% of the total) and 724 were located in four off-street facilities (representing 37% of all off-street stalls).

As **Table 8** indicates, the Riverpoint Campus area maintains a high percentage of 1-hour parking stalls, with 94 spaces of the on-street supply (54%) made up of this type of stall. Three-hour stalls comprise another 24%, with the remainder of the on-street supply made up of a small number of 30 minute and "no limit" spaces. The majority of parking is located in off-street facilities.

Table 8
Sampled District Parking Inventory – Stalls Surveyed
Riverpoint Campus

Riverpoint Campus Node Parking Stall Breakout		
On-Street Stalls by Type	**Number of Stalls**	**% of Total On-Street Stalls**
30 minutes	4	2.3%
1 hour	94	54.0%
3 hours	42	24.1%
No Limit	34	19.5%
Public: On-Street Parking Stalls	174	100%
Riverpoint: Off-Street Parking Stalls	724	
TOTAL: Parking Stalls Surveyed	898	

As **Table 9** below indicates, use of the parking supply in the Riverpoint Campus node is moderate, reaching a combined on and off-street occupancy of 62.4% at the peak hour (2:00 p.m. – 3:00 p.m.). The on-street system reached a peak hour occupancy of 42.5%, meaning 100 stalls were empty and available at the peak hour. Discussions with representatives of the Riverpoint Campus lead us to believe that the on-street occupancies may be understated given that school was not in session during the May 2, 2007 on-street survey. According to Riverpoint Campus representatives, additional occupancy work may be necessary in the fall (i.e., October 2007) to assure the accuracy of the on-street findings.

The off-street system reached 67.1% at peak hour,[7] leaving 238 stalls empty and available. The Riverpoint Green 1 and 3 lots do, however, exceed 80% at the peak (81.7% and 82.5%, respectively) but the Riverpoint Green 2 and Yellow 5 lots are very underutilized at 28.5% and 60.4%, respectively. Discussions with representatives of the Riverpoint Campus indicate that peak hour occupancies in the off-street system may be higher in the evening hours (i.e. after 6:00 p.m.) to accommodate evening classes. As with the on-street survey, additional occupancy work may be necessary in the fall (i.e., October 2007) to identify whether daytime or evening peak hour occupancies are most reflective of "peak use" of the off-street supply.

Figures H and I below provide a summary of occupancies by hour over the nine-hour survey period derived from the two survey days for the on and off-street parking systems.

[7] Off-street data was collected on April 25, 2007 when classes were in session.

Table 9
Nodal Analysis – Riverpoint Campus Parking System

Nodal Analysis – Riverpoint Campus Area					
Type of Stall	**# of Stalls**	**Peak Hour**	**Peak Occupancy**	**Stalls Available (empty)**	**Average Length of Stay**
All Stalls (on & off-street)	***898***	***2 – 3 pm***	***62.4%***	***338***	***N/A***
Individual Lot Occupancies (at peak hour)					
On-Street Only	174	2 – 3 pm	42.5%	100	1 hr. 52 min.
Off-Street Only	724	2 – 3 pm	67.1%	238	N/A

Other considerations resulting from this analysis include:

- The average duration of stay at on-street spaces is 1 hr/52 minutes, which would indicate that existing 1-hour stalls should be increased to 2-hours to assure that users are given an appropriate amount of time for area uses while maintaining a time stay that accommodates turnover. To provide a more consistent format, it may also be appropriate to reduce 3-hour stalls to 2-hours as well.
- Occupancies in this area are moderate. This may be due to (a) the fact that the on-street system survey was not correlated to students in session and (b) the off-street "daytime" peak hour may not be reflective of potentially higher peaks in the evening hours.
- Weekday occupancies in the off-street system are moderate, though use of the Riverpoint Green 1 and 3 lots are strong. If the average peak occupancy in the sampled off-street facilities (67.1%) is extrapolated to the greater Riverpoint Campus supply (1,949 stalls), there are approximately 641 stalls empty and available.[8]
- Capacity for growth is available in the Riverpoint Green 2 lot (88 empty stalls) and the Riverpoint Yellow 5 lot (76 empty stalls).
- Additional data collection for on-street use and evening use of the off-street supply may be necessary when school is back in session in the Fall of 2007 to accurate ascertain peak hour uses and demand.
- Additional on-street parking should be added back to the system along Spokane Falls Boulevard (E Trent Ave) between the Riverpoint Boulevard entrances in areas now marked

Curb space along Spokane Falls Blvd. presents an opportunity to add back at least an additional 55 parking stalls.

[8] Adding parking to the on-street system represents an opportunity to add overall parking capacity to an area at a very low cost.

"no parking." It is estimated that an additional 53-65 stalls could be added. This would cost effectively add new capacity; create a friendlier pedestrian environment along Spokane Falls Blvd. and calm traffic speeds through the same corridor.

Figure H
Riverpoint Campus Parking District Occupancies
Riverpoint Area On-Street System (174 stalls)

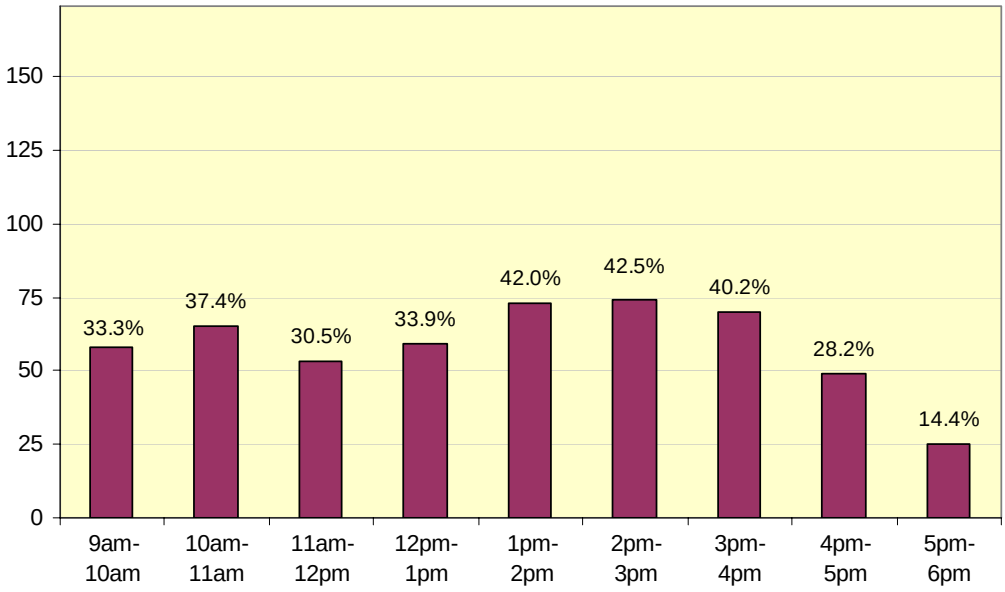
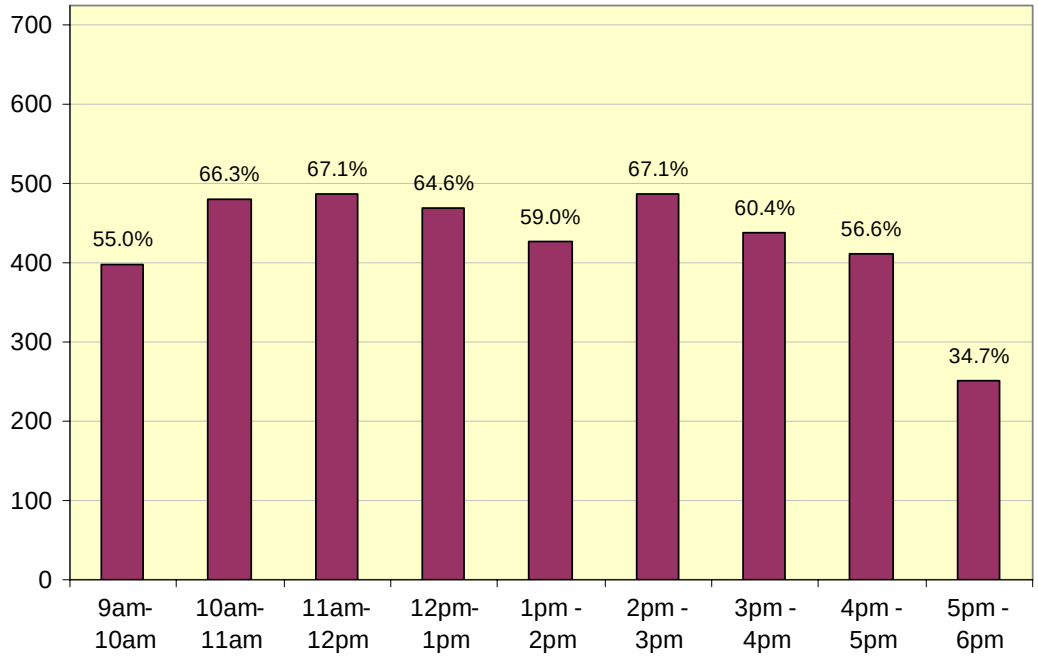


Figure I
Riverpoint Campus Parking District Occupancies
Off-Street System Only (724 stalls)



VI. PARKING RATIOS – BUILT SUPPLY AND ACTUAL DEMAND

Parking development ratios express the number of parking spaces local jurisdictions may require a development to build to assure an appropriate level of access to new land uses. The number of stalls represented by a required parking development ratio may exceed actual demand for parking or fall short of that demand. Demand ratios, on the other hand, are generally expressed in the context of peak hour use of a specific built supply of parking. In other words, demand ratios represent an estimate of the actual number of stalls occupied at the peak hour relative to occupied land uses. Effectively managing the relationship between land uses, built and occupied parking supply is a fundamental challenge of parking management.

Understanding the difference between the ratios of required built supply and the ratio of actual demand is an important element for parking management. Parking ratios based on actual demand allow cities and developers the ability to plan for parking at a rate consistent with actual use, thereby reducing overall parking development costs over time. An understanding of actual demand also allows a city or developer to estimate the impact of planned development on an existing supply of parking.

The exercise represented in this section is an attempt to develop a better understanding of parking supply and demand for the University District. To that end, the consultant team derived two "ratios" from the data analysis and applied that to each campus area.

- The actual *Built Ratio* of available parking stalls in relation to total built land uses.
- The actual current *Demand Ratio* for parking stalls per total built land use based on actual usage data from the "typical day" survey.

A. Methodology

The consultant team developed a comprehensive list of all university related land uses within the study area using information supplied by Gonzaga and Riverpoint Campus. Gross square footages (GSF) were derived for academic/institutional uses and number of beds was derived as the base measure for residential use.[9] The resultant *built ratio* of parking to land use then is reflective of the total availability of parking serving a specific use type. The *demand ratio* reflects the demand for parking stalls associated with that land use using actual peak occupancy data from the parking survey. The consultant team was then able to express actual demand ratios per 1,000 square feet of academic/institution use and stalls per number of beds for residential uses.

B. Analysis: Gonzaga University Campus

In order to derive a parking demand number for academic/administration versus residential land uses, the overall supply of off-street parking was distributed between the different land uses. Analysis of the total parking supply provided by Gonzaga indicates that of the total off-street supply of 2,368, the University designates 623 as residential and 1,745 as academic/administrative. **Table 10** summarizes this distribution.

[9] Residential was conducted for Gonzaga only, as there are no residential facilities currently available for the Riverpoint Campus.

Table 10
Distribution of On-Campus Parking Supply

Total Supply of Off-street Parking	Designated Residential	Designated Academic/Administration
2,368	623	1,745
100%	26%	74%

1. Academic/Administrative Land Uses

Uses on the Gonzaga campus that can be correlated to parking demand generation include all buildings associated with academic uses and residential living. To compile data in this regard, Gonzaga provided a master list of all buildings within the study area. The consultants then pared the list downward to those that served academic/administrative uses. Uses for warehouse, storage and physical plant purposes were eliminated as were all square footages related to parking and sports facilities and fields. The final list was determined to be representative of uses that generate typical weekday parking demand. These uses totaled 40 buildings and 1,035,856 GSF. A detailed table of academic/administrative land uses is provided at the end of this document as **Attachment A.**

a. Parking Ratios

As regards parking for Academic/Administrative Land Uses, two formats are provided. One that calculates parking supply using only on-campus resources and another that combines on-campus resources with on-street supply in the area proximate to the university.

- Built Parking to Land Use - Academic/Administration (on campus supply)

This represents the total number of existing parking stalls correlated to total existing land use square footage for academic/administrative uses within the study area. As stated above, there is approximately 1,035,856 gross square feet of these uses in the study zone. On campus, there are 1,745 parking stalls designated to accommodate demand generated through this land use type. As such, about 1.68 parking stalls per 1,000 GSF of academic/administrative land uses are provided for within the on-campus parking supply. That translates into 1 parking stall for every 594 GSF. **Table 11** summarizes this calculation.

Table 11
Built Parking Supply to Built Land Use on Campus

Buildings in Study Zone	Gross Square Footage (Built)	Total Stalls Designated in On-Campus Supply	Built Ratio of Parking per 1,000 GSF	Built Ratio of Parking as stalls per 100 GSF
40	1,035,856	1,745	1.68 stalls per 1,000 GSF	1 stall per 594 GSF of use

- Built Parking to Land Use Academic/Administration (on street and on campus)

This calculation assumes that the majority of parking available on-street within the Gonzaga node serves parking demand associated with the operation of the overall campus. To this end, the consultants assigned 80% of the on-street supply total to Gonzaga related uses during a “typical

day." This would then add 698 stalls to supply serving academic/administrative uses on-street within the study zone. As such, about 2.36 parking stalls per 1,000 square feet of academic/administrative land uses are provided for within the campus area parking supply. That translates into 1 parking stall for every 424 GSF. **Table 12** summarizes this calculation.

Table 12
Built Parking Supply to Built Land Use (Combined w/ on-street Supply)

Buildings in Study Zone	Gross Square Footage (Built)	Total Stalls Designated in On-Campus Supply (1,745) + 80% of proximate on-street (698)	Built Ratio of Parking per 1,000 GSF	Built Ratio of Parking as stalls per 100 GSF
40	1,035,856	2,443	2.36 stalls per 1,000 GSF	1 stall per 424 GSF of use

b. Actual Demand to Built Land Use

To determine "actual demand" for Gonzaga's academic/administrative uses, an area peak occupancy number was derived from the nodal analysis as a means to establish an occupancy factor that could be extrapolated to the total supply of parking associated only with academic/administrative uses (as summarized in **Table 12).**

Table 13 summarizes the peak occupancy calculation that combines on and off-street utilization to reach a combined peak of 75.6%. Again, the extrapolated number uses peaks associated only with supply assumed to provide access to users of academic and administrative land uses.[10]

Table 13
Extrapolated Peak Occupancy
Parking Related to Academic/Administrative Uses Only

Supply	# of Stalls	Peak Occupancy	Stalls Occupied	Stalls Available (empty)
Sampled off-street (dedicated to Academic/Admin.)	1,551	69.8%	1,083	468
Sampled On-street	414	97.3%	403	11
Combined Sampled Supply	1,965	75.6%	1,486	479
Extrapolated to Total Supply	***2,443***	***75.6%***	***1,847***	***596***

From this perspective, "actual" or "true demand" for parking for these uses totals 1.78 stalls per 1,000 GSF or 1 stall for every 560 GSF of land use. **Table 14** summarizes this calculation.

[10] Summary tables detailing how peak occupancies for residential and non-residential uses were derived are provided in **Attachment C** at the end of this document.

Table 14
Actual Parking Demand/ Academic/Administrative Uses

Buildings	Gross Square Footage (Built)	Total Applicable Stalls in Study Zone	*Built Ratio of Parking* (GSF)/Stalls per 100 GSF	Total Stalls Parked in Peak Hour	Ratio of Parking to Actual Demand per 1,000 GSF/Stalls per 100 GSF
40	1,035,856	2,443	2.36/1,000 GSF 1 stall per 424 GSF	1,847	1.78/1,000 GSF 1 stall per 560 GSF

Conclusions related to demand for academic/administrative uses are as follows:

- On campus parking supply designated to academic/administrative uses totals 1,745 spaces. This translates into a built supply ratio of 1 stall per each 594 GSF of this land use type (or 1.68 stalls per 1,000 GSF).
- If portions of on-street parking in the Gonzaga node are assumed to serve campus demand, the built supply ratio increases from 1 stall per 594 GSF to 1 stall per 424 GSF of use.
- Actual demand for parking for academic/administrative uses is 1 stall per 560 GSF of use (or 1.78 stalls per 1,000 GSF).
- There is capacity within the existing off-street supply (596 stalls) to absorb growth, but loss of surface parking to new development could create constraints over time.
- Gonzaga should consider building or acquiring parking associated with future growth of academic/administrative GSF at a minimum rate of 1 stall per 560 GSF. Given the high levels of constraint within the on-street supply, Gonzaga's existing off-street system will likely be unable to accommodate significant new growth at the current *on campus* built rate of 1 stall per 594 GSF of use.

2. Residential Uses

Parking associated with residential uses on the Gonzaga campus is expressed as a relationship between parking stalls and number of beds.

To this end, an inventory was conducted for residential uses on campus and correlated to the number of beds associated with each residential facility. According to Gonzaga, there are a total of 2,496 residential beds associated with campus owned/controlled housing. From this total, the consultant team derived 2,176 beds that were in operation on the study

A vacant piece of land on the east side of Hamilton between Desmet and Cataldo could present a future parking opportunity for Gonzaga's impacted off-street parking supply.

day and within the study zone.[11] As expressed in **Table 10** above**,** 623 stalls of on-campus parking have been designated by Gonzaga for residential parking. Using occupancy data from the survey, calculations can be made to determine parking as a function of both built supply and actual or true demand as a relationship to residential beds.

b. Parking Ratios

- Built Parking to Land Use - Residential

This represents the total number of existing parking stalls correlated to total residential beds within the study area. As stated above, there are approximately 623 parking stalls designated to serve 2,176 beds. As a ratio of *built parking* to beds, the on-campus supply of residential parking is provided at a rate of 1 parking stall for every 3.49 beds. This is in excess of the City's general requirement of 1 stall for every 4.0 beds. That Gonzaga exceeds the City standard is likely reflective of the mix of parking for apartment versus dorm uses, whereby apartments tend to have a higher demand standard. **Table 15** summarizes the calculation of built supply to actual beds.

Table 15
Ratio of Residential Parking (Built) to Number of Beds Served

Stalls Dedicated to Residential Use	Actual Number of Residential Beds (Study Area)	Built Ratio of Parking	General City Standard
623	2,176	1 stall for every 3.49 beds	1 stall for every 4.0 beds

c. Actual Demand to Built Land Use.

To determine "actual demand" for residential parking, an area peak occupancy number was derived from the nodal analysis as a means to establish an occupancy factor that could be extrapolated to the total supply of parking associated only with residential parking (as summarized in **Table 15).**

Table 16 provides a summary of the peak occupancy calculation that uses data from the parking utilization sample to reach a residential parking peak of 84.2%.[12] Again, the extrapolated number uses peaks associated only with supply assumed to provide access to users of residential facilities. As illustrated, 525 of 623 residential stalls are occupied at peak occupancy of 84.2%.

Table 16
Actual Residential Parking Demand

Stalls Dedicated to Residential Use/Stalls Occupied	Actual Number of Residential Beds (Study Area)	Actual Demand for Parking (using nodal peak occupancies of 84.2%)	General City Standard
623/525	2,176	1 stall for every 4.14 beds	1 stall for every 4.0 beds

[11] Marion Hall was not included as it falls east of Hamilton and not in the study zone. Beds associated with the Kennedy Apartments were also removed from the supply as the building was still under construction on the study day.

[12] Summary tables detailing how peak occupancies for residential and non-residential uses were derived are provided in **Attachment C** at the end of this document.

To this end, the actual demand for residential parking is in the range of one stall for every 4.14 beds. Conclusions related to demand for residential uses are as follows:

- Gonzaga is currently providing residential parking at a built ratio of approximately 1 stall for every 3.49 beds, which exceeds the general City standard of 1 stall per 4.0 beds. This is likely due to the fact that residential apartment units/beds require a somewhat higher rate of parking than do dorm beds.[13]
- Actual demand for residential parking is approximately 1 stall for every 4.14 beds when total occupied residential parking supply is correlated to total beds in use in the study area on a "typical day." As such, demand for residential parking is somewhat less than the 1:4.0 ratio covered by the general City minimum standard.[14]
- It appears that Gonzaga's current provision of parking for residential uses is appropriate with some room for absorption available in the existing supply.

C. Analysis: Riverpoint Campus

For purposes of this analysis, demand will be assumed to represent only a weekday ratio given that there is a question as to whether evening peaks might actually be higher than the weekday peak. As stated earlier in this report, conversations with Riverpoint Campus indicated that this analysis will be updated in September/October 2007 to provide more clarity to a final demand calculation.

1. Academic/Administrative Land Uses

Uses on the Riverpoint Campus that can be correlated to parking demand generation include all buildings associated with academic and administrative functions. To compile data in this regard, the Riverpoint Campus provided a summary total of all existing gross square footages (GSF) of occupied buildings of this type on campus. This total was determined to be representative of uses that generate typical parking demand. These uses totaled 494,898 (GSF).

a. Parking Ratios

- Built Parking to Land Use - Academic/Administration (on campus)

This represents the total number of existing parking stalls correlated to total existing land use square footage for academic/administrative uses within the study area. As stated above, there is approximately 494,898 GSF of these uses in the study zone. On campus, there are 1,949 parking stalls designated to accommodate demand generated through this land use type. As such, about 3.93 parking stalls per 1,000 GSF of academic/administrative land uses are provided for within the on-campus parking supply. That translates into 1 parking stall for every 254 GSF. **Table 17** summarizes this calculation.

[13] Of the three apartment complex lots surveyed, the highest peak hour occupancy was at the Corkery Apartments (at 84.1%). The lots serving the Dussault Apartments were about 75% occupied. The Madonna dorm lot maintained the highest occupancy at 93.6%.

[14] Even though the demand number actually appears higher (i.e., 4.14 vs. 4.0 required by the City), the actual physical "demand" for parking is less. In other words, as the demand ratio increases, demand for stalls per bed decreases. Demand at 1 stall per 2 beds is twice as great as 1 stall per 4.0 beds.

Table 17
Built Parking Supply to Built Land Use on Campus

Gross Square Footage (Built)	Total Stalls Designated in On-Campus Supply	Built Ratio of Parking per 1,000 GSF	Built Ratio of Parking as stalls per 100 GSF
494,898	1,949	3.93 stalls per 1,000 GSF	1 stall per 254 GSF of use

- Built Parking to Land Use Academic/Administration (on street and on campus)

This calculation assumes that the majority of parking available on-street within the Riverpoint Campus node serves parking demand associated with the operation of the overall campus. To this end, the consultants assigned 80% of the on-street supply total to Riverpoint related uses during a "typical day." This would then add 139 stalls to supply serving academic/administrative uses on-street within the study zone (i.e. 174 total on-street stalls X .80). As such, the built supply of on and off-street parking provides approximately 4.22 parking stalls per 1,000 square feet of academic/administrative land uses. That translates into 1 parking stall for every 503 GSF.

Table 18 summarizes this calculation.

Table 18
Built Parking Supply to Built Land Use (Combined w/ on-street Supply)

Gross Square Footage (Built)	Total Stalls Designated in On-Campus Supply (1,949) + 80% of proximate on-street (139)	Built Ratio of Parking per 1,000 GSF	Built Ratio of Parking as stalls per 100 GSF
494,898	2,088	4.22 stalls per 1,000 GSF	1 stall per 238 GSF of use

b. Actual Demand to Built Land Use.

To determine "actual demand" for the Riverpoint Campus academic/administrative uses, an area peak occupancy number was derived from the nodal analysis as a means to establish an occupancy factor that could be extrapolated to the total supply of parking associated only with academic/administrative uses (as summarized in **Table 18).**

Table 19 provides a summary of the peak occupancy calculation that combines on and off-street utilization to reach a combined peak of 62.4%. Again, the extrapolated number uses peaks associated only with supply assumed to provide access to users of academic and administrative land uses.[15]

[15] Summary tables detailing how peak occupancies academic/administrative uses were derived are provided in **Attachment D** at the end of this document.

Table 19
Extrapolated Peak Occupancy
Parking Related to Academic/Administrative Uses Only

Supply	# of Stalls	Peak Occupancy	Stalls Occupied	Stalls Available (empty)
Sampled off-street (dedicated to Academic/Admin.)	724	67.1%	486	238
Sampled On-street	174	42.5%	74	100
Combined Sampled Supply	898	62.4%	560	338
Extrapolated to Total Supply	***2,088***	***62.4%***	***1,303***	***785***

From this perspective, "actual" or "true demand" for parking for these uses totals 2.63 stalls per 1,000 GSF or 1 stall for every 380 GSF of land use. **Table 20** summarizes this calculation.

Table 20
Actual Parking Demand/ Academic/Administrative Uses

Gross Square Footage (Built)	Total Applicable Stalls in Study Zone	*Built Ratio of Parking* (GSF)/Stalls per 100 GSF	Total Stalls Parked in Peak Hour	Ratio of Parking to Actual Demand per 1,000 GSF/Stalls per 100 GSF
494,898	2,088	4.22/1,000 GSF 1 stall per 238 GSF	1,303	2.63/1,000 GSF 1 stall per 380 GSF

Conclusions related to demand for academic/administrative uses are as follows:

- On campus parking supply designated to academic/administrative uses total 1,949 spaces. This translates into a built supply ratio of 1 stall per each 254 GSF of this land use type (or 3.93 stalls per 1,000 GSF).
- If portions of on-street parking in the Riverpoint Campus node are assumed to serve campus demand, the built supply ratio increases from 1 stall per 254 GSF to 1 stall per 238 GSF of use (or 4.22 stalls/1,000 GSF).
- Actual demand for parking for academic/administrative uses is 1 stall per 380 GSF of use (or 2.63 stalls per 1,000 GSF).
- At the peak hour, approximately 641 of Riverpoint Campus' 1,949 total off-street parking stalls are empty. This underutilized supply provides opportunity for absorption of near-term student, faculty and staff growth.
- As new academic/administrative buildings are constructed, the Riverpoint Campus should plan for new parking to (a) absorb current underutilized supply and (b) net out over time at the rate of actual demand. This should result in a more efficient land use and lower overall parking development costs to the Riverpoint Campus.
- If an update of the on-street parking supply occurs in the Fall of 2007, demand numbers can be refined.

VII. SUMMARY

It is hoped that the data presented in this report provides a clearer picture of the dynamics of parking in the University District. A desired outcome would be that each university is better able to plan for future growth in a manner that provides adequate parking for users in a format that is land efficient and cost effective. The demand calculations provided in the report can be refined over time and through further discussions with each campus. Nonetheless, we believe the information contained in this report establishes an objective foundation for future parking planning.

ATTACHMENT A
GONZAGA – ACADEMIC AND ADMININSTRATION LAND USE

Building	Function	Gross Sq Ft
Ad Building	Academic/Admin.	122,853
Art Studio (Vachon)	Academic	1,500
Campus House (Campus Ministry)	Student Residence	1,089
Cataldo Dining	Campus Dining	17,080
CCASL II (Student Life)	Student Life	958
CCASL I - (Student Life)	Student Life	2,587
COG Dining Hall	Campus Dining	33,911
Crosby Alumni House	Administration	1,312
Crosby Student Ctr / US Bank	Student Life	29,186
Dean of Student Services	Student Life/Admin	860
Debate House	Academic	1,232
English Language Center (ISP)	Academic	1,016
Exercise Science 9-15-2006	Administration	4,840
Foley Center	Academic	135,162
Health Center/O'Leary Hall	Health Center	4,738
Herak Center	Academic	78,240
Honors Program (Hopkins House)	Academic	1,745
Hughes Hall	Academic	80,433
Human Resources	Administration	1,247
ISP Office	Administration	1,285
Jepson Center	Academic	65,157
Journalism-Broadcast Center	Academic	15,200
Jundt Art Center	Academic	47,572
Law School (New 5/00)	Academic	103,990
Martin Centre	Athletic	156,122
Mater Dei/Ministry Institute	Campus Ministry	2,189
Modern Languages Offices	Administration	2,240
Music Annex (Leased)	Academic	5,348
Music Bldg	Academic	6,981
OPPEN House	Student Life	840
Plant – Offices	Administration	13,349
Rebmann Hall (Philosophy Dept)	Administration	7,478

Robinson House	Administration	14,016
Rosauer (School of Ed)	Academic	34,923
Russell Theatre	Academic	7,656
Safety/Benefits	Administration	1,292
Schoenberg Center	Academic/Admin.	26,265
St. Gregory Choral Hall	Academic	3,515
Studies Abroad	Administration	1,132
Unity House-Student Life	Student Life	1,506
TOTAL		**1,035,856**

ATTACHMENT B
GONZAGA – RESIDENTIAL LAND USE

Building	Residential Beds	Function	Residential Gross Sq Ft
Dorm - Alliance	43	Residence Hall	7,945
Dorm - Apts.	15	Residence Hall	5,304
Dorm - Burch Apts.	114	Residence Hall	29,218
Dorm - Campion	35	Residence Hall	7,478
Dorm - Catherine/Monica	360	Residence Hall	56,818
Dorm - Chardin	52	Residence Hall	9,192
Dorm - Corkery Apts	153	Residence Hall	65,736
Dorm - Crimont	96	Residence Hall	17,848
Dorm - Cushing	52	Residence Hall	9,274
Dorm - DeSmet	155	Residence Hall	25,742
Dorm - Dillon 7/02	94	Residence Hall	22,083
Dorm - Dooley	103	Residence Hall	20,787
Dorm - Dussault Apts.	205	Residence Hall	59,311
Dorm - Goller	91	Residence Hall	22,203
Dorm - Lincoln	43	Residence Hall	7,945
Dorm - Madonna	154	Residence Hall	31,519
Dorm - Roncalli	42	Residence Hall	11,593
Dorm - Sharp Apts.	34	Residence Hall	7,200
Dorm - Sharp House	14	Residence Hall	4,320
Dorm - Twohy	59	Residence Hall	22,090
Dorm - Welch	159	Residence Hall	28,480
Rental Apts 21 Unit-Campus Svcs	40	Residence Hall	28,080
Rental House	5	Student Residence	1,504
Rental House	5	Student Residence	1,143
Rental Hse (was Wenham 2-26-07)	5	Student Residence	1,433
Rental Hse (was Wenham 2-26-07)	6	Student Residence	1,540
Rental Hse (was Wenham 2-26-07)	5	Student Residence	1,060
Rental House	6	Student Residence	1,232
Rental House - Campus Min	2	Student Residence	975
Rental House - Campus Svcs	3	Student Residence	992
Rental House - Campus Svcs	4	Student Residence	1,049

Rental House - Campus Svcs	6	Student Residence	1,204
Rental House - Mrs. Gasperino	1		882
Rental House - Sister Marie	2		1,333
Rental House – 511 Sharp	0	Student Residence	1,319
Rental House - Student Life	3	Student Residence	2,504
Rental House-Stdnt Life/Colestock	5	Staff Residence	904
Rental House -Pres Guest House	5	Guest Residence	1,469
TOTAL	**2,176**		**520,709**

ATTACHMENT C
Gonzaga University Campus
Peak Occupancy Calculations by Parking Type
Off-Street Occupancies – Academic/Administration Supply Only

Stalls Sampled				
Garage/Lot	**# of Stalls**	**Peak Hour**	**Peak Occupancy**	**Stalls Available (empty)**
All	***1,551***	***11 – 12 pm***	***69.8%***	***468***
Individual Lot Occupancies (at nodal peak hour)				
Schoenberg Center	130	90	69.2%	40
Music Annex	116	92	79.3%	24
Administration Bldg.	255	254	99.6%	1
Boone/Cincinnati/ Hamilton	157	133	84.7%	24
COG Bookstore	85	84	98.8%	1
McCarthey Athletic Center	358	214	59.8%	144
Law School	450	216	48.0%	234
Total Academic/Admin. Parking ***Actual Extrapolated Use***	***1,745***	***1,218***	***69.8%***	***527***

Off-Street Occupancies – Gonzaga Residential Facilities Only

Stalls Sampled				
Garage/Lot	**# of Stalls**	**Peak Hour**	**Peak Occupancy**	**Stalls Available (empty)**
All	***273***	***12 – 1 pm***	***84.2%***	***43***
Individual Lot Occupancies (at nodal peak hour)				
Dussault Apts. (west)	50	37	74.0%	13
Dussault Apts. (east)	41	31	75.6%	10
Corkery Apts.	88	74	84.1%	14
Madonna Residence Hall	94	88	93.6%	6
Total Residential Parking ***Actual Extrapolated Use***	***623***	***525***	***84.2%***	***98***

ATTACHMENT D

Riverpoint Campus
Peak Occupancy Calculations by Parking Type
Off-Street Occupancies – Academic/Administration Supply Only

All Off-Street Riverpoint Institutional Stalls Surveyed				
Garage/Lot	**# of Stalls**	**Peak Hour**	**Peak Occupancy**	**Stalls Available (empty)**
All	***724***	***2 – 3 pm***	***67.1%***	***238***
Individual Lot Occupancies (at nodal peak hour)				
Riverpoint Green 1	312	254	81.4%	58
Riverpoint Green 2	123	35	28.5%	88
Riverpoint Green 3	97	81	83.5%	16
Riverpoint Yellow 5	192	116	60.4%	76
Total Academic/Admin. Parking Actual Extrapolated Use	***1,949***	***1,308***	***67.1%***	***641***