

## MEMORANDUM

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**Date:** August 27, 2018 **TG:** 1.18241.00

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**To:** Stephen Starling – Schreiber Starling Whitehead Architects

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**From:** Stefanie Herzstein – Transpo Group

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**Subject:** Seattle Central College: Parking Demand Analysis Update  
(Response to Correction Notice 1) - Project #3030659-IR

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This memorandum provides a parking demand analysis for the Seattle Central College (SCC) as requested by the City of Seattle in Correction Notice #1 for Project #3030659-IR dated May 16, 2018. The parking analysis presented is an update to the evaluation shown in the memorandum subjected *Seattle Central College Site D and Campus Trip Generation and Parking* dated April 28, 2016 (herein referred to as the SCC April 2016 Parking Analysis). Transpo coordinated with City staff on the analysis method and response to the correction notice.

### Background

The Capitol Hill Link Station is adjacent to the SCC Campus and opened on March 19, 2016. In addition, King County Metro restructured bus service serving this area on March 26, 2016. These changes improved local and regional accessibility of the campus by public transportation making it quicker to travel to and from the campus via the existing Link line and providing more frequent transit connections to the Link Stations.

The SCC April 2016 Parking Analysis was conducted just as the Capitol Hill Link Station opened and no data was available on changes in SCC travel behavior as a result of the light rail. The parking analysis presented in the SCC April 2016 Parking Analysis was based on national research, which projected that peak parking demand on-campus would decrease by 13 percent as a result of the Capitol Hill Link Station. Since the completion of the SCC April 2016 Parking Analysis, the Link Station has opened and new mode split surveys for both employees and students have been conducted.

### Campus Data

The on-campus parking supply is 735 spaces. SCC provided the number of employees (faculty and staff) and campus student enrollment for the Fall 2017:

- 8,246 on-campus students
- 951 employees

In addition, travel mode data was obtained from the *2017 Student Transportation Survey* conducted by SCC and the *2017 Commute Trip Reduction* report. Table 1 provides a comparison between the Fall 2015 (used for the SCC April 2016 Parking Analysis) and the Fall 2017 mode splits for employees and students.

**Table 1. Comparison of 2015 and 2017 SCC Mode Splits**

Mode of Travel	Employees <sup>1</sup>			Students <sup>2,3</sup>		
	2015	2017		2015	2017	
Drive Alone/Motorcycle	34.4%	33.9%	-0.5%	19%	13.7%	-5.3%
Carpool/Vanpool	<u>12.8%</u>	<u>9.3%</u>	<u>-3.5%</u>	<u>4.9%</u>	<u>4.0%</u>	<u>-0.9%</u>
<b>Total Auto</b>	<b>47.2%</b>	<b>43.2%</b>	<b>-4.0%</b>	<b>23.9%</b>	<b>17.7%</b>	<b>-6.2%</b>
Multi-Modal (i.e., bus/bike, bike/rail, etc.)	NA	NA	NA	NA	36.0%	+36.0%
Bus	35.9%	31.6%	-4.3%	46.5%	13.7%	-32.8%
Rail	4.3%	12.3%	+8.0%	0.5%	19.8%	+19.3%
Bike	2.6%	1.9%	-0.7%	4.7%	2.0%	-2.7%
Walk	9.1%	7.2%	-1.9%	22.7%	8.9%	-13.8%
Telework	0.5%	1.0%	+0.5%	NA	NA	-
Ferry (car/van/bus)	0.0%	0.5%	+0.5%	NA	NA	-
Ferry (walk on)	0.0%	1.1%	+1.1%	1.2%	1.9%	+0.70%
Other	<u>0.4%</u>	<u>1.2%</u>	<u>+1.0%</u>	<u>0.5%</u>	<u>NA</u>	<u>-0.5%</u>
<b>Total Non-Auto</b>	<b>52.8%</b>	<b>56.8%</b>	<b>+4.0%</b>	<b>76.1%</b>	<b>82.3%</b>	<b>+6.2%</b>

NA = Not applicable, this category was not a choice in the survey.

1. 2015 and 2017 Seattle Central College Commute Trip Reduction Survey. 2015 numbers were rounded to total 100%.

2. The 2015 mode splits are from 2014 Puget Sound Colleges Survey conducted by the Puget Sound Regional Council and the 2017 data is from the 2017 Student Transportation Survey conducted by Seattle Central College.

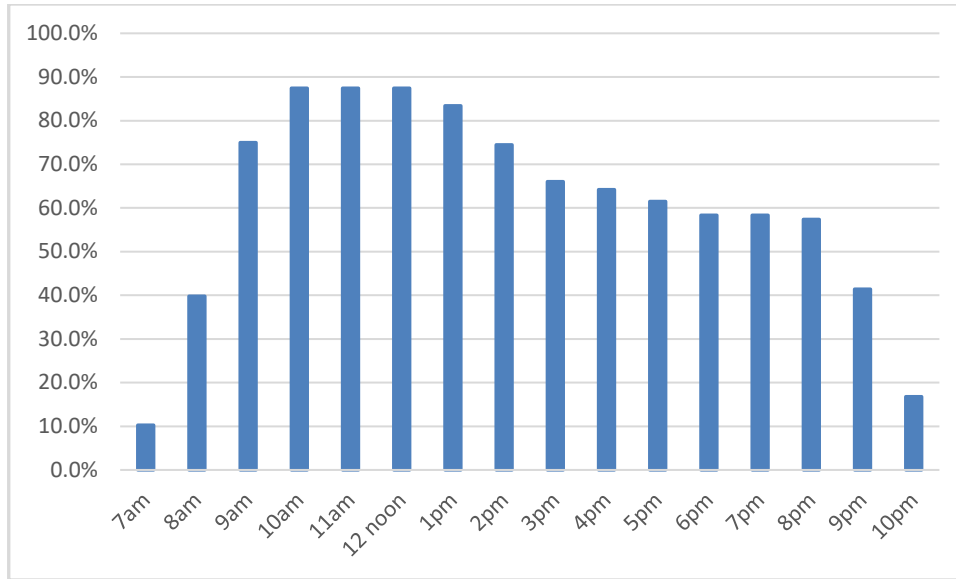
3. Student results do not include online only students as the student enrollment numbers being used are for on-campus students only.

As shown in the table, between 2015 and 2017 both employee and student travel by auto decreased and the travel by non-auto modes (bus, rail, bike, etc.) increased by approximately 4 to 6 percent.

## Parking Analysis

The SCC parking demand was calculated using the same methodology as presented in the SCC April 2016 Parking Analysis. The analysis was updated to reflect the current number of employees, student population and mode splits for 2017. Vehicle trip ends at SCC over a 24-hour period were calculated based on the 2017 employees, students and mode splits then hourly parking utilization calculated based on estimated vehicle arrivals and departures from campus. The arrival and departure patterns are assumed to be similar to 2015 conditions<sup>1</sup>. The resulting 2017 parking utilization by hour is shown in Figure 1 with more detail provided in Table 2.

<sup>1</sup> Updated data was not available for arrival and departure patterns for this analysis and could not be collected since summer class schedules and SCC operations are different from the typical fall/spring schedules. There have not been major changes in class schedule and SCC operations between 2015 and 2017; therefore, arrival and departure patterns are assumed to be the similar.



**Figure 1. SCC Hourly Weekday On-Campus Parking Utilization – Fall 2017**

**Table 2. Weekday Hourly Parking Utilization – Fall 2017**

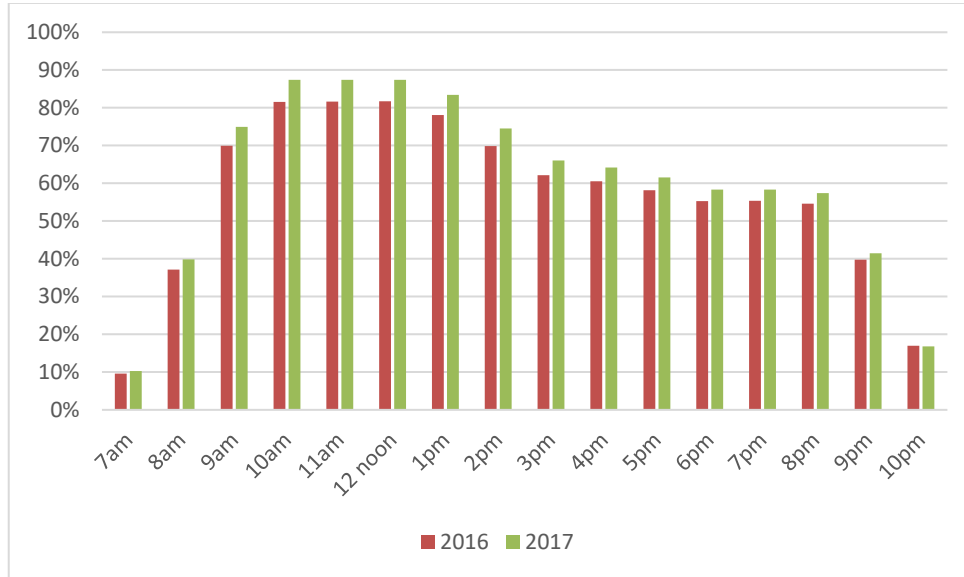
Time	Parked Vehicles	Capacity <sup>1</sup>	Spaces Available	Utilization
7 AM	76	735	659	10.3%
8 AM	293	735	442	39.8%
9 AM	551	735	184	75.0%
10 AM	643	735	92	87.4%
11 AM	643	735	92	87.4%
Noon	643	735	92	87.4%
1 PM	613	735	122	83.4%
2 PM	548	735	187	74.5%
3 PM	486	735	249	66.1%
4 PM	472	735	263	64.2%
5 PM	452	735	283	61.5%
6 PM	429	735	306	58.4%
7 PM	429	735	306	58.4%
8 PM	422	735	313	57.4%
9 PM	305	735	430	41.4%
10 PM	123	735	612	16.8%
<b>Peak Hour</b>	<b>643</b>	<b>735</b>	<b>92</b>	<b>87.4%</b>

1. Capacity refers to on-campus parking supply.

As demonstrated in the table and figure, the peak parking demand for SCC is 643 vehicles with a parking utilization of approximately 87 percent. This demand is accommodated within the 735 parking stalls on-campus.

## Comparison to Previous Analysis

The updated parking analysis presented above is compared to the SCC April 2016 Parking Analysis completed for the 2016 Post Link forecast on Figure 2 and in Table 3.



**Figure 2. SCC Hourly Weekday On-Campus Parking Utilization Comparison of Forecasted 2016 and Current 2017**

**Table 3. Comparison of Weekday Hourly Parking Utilization**

Time	2016 Post Link Forecast <sup>1</sup>			2017 Post Link		
	Parked Vehicles	Spaces Available	Utilization	Parked Vehicles	Spaces Available	Utilization
7 AM	71	664	9.6%	76	659	10.3%
8 AM	273	462	37.1%	293	442	39.8%
9 AM	514	221	69.9%	551	184	75.0%
10 AM	600	135	81.6%	643	92	87.4%
11 AM	600	135	81.7%	643	92	87.4%
Noon	601	134	81.7%	643	92	87.4%
1 PM	574	161	78.1%	613	122	83.4%
2 PM	513	222	69.9%	548	187	74.5%
3 PM	457	278	62.1%	486	249	66.1%
4 PM	445	290	60.5%	472	263	64.2%
5 PM	428	307	58.2%	452	283	61.5%
6 PM	407	328	55.3%	429	306	58.4%
7 PM	407	328	55.4%	429	306	58.4%
8 PM	401	334	54.6%	422	313	57.4%
9 PM	293	442	39.8%	305	430	41.4%
10 PM	125	610	17.0%	123	612	16.8%
<b>Peak Hour</b>	<b>601</b>	<b>134</b>	<b>81.7%</b>	<b>643</b>	<b>92</b>	<b>87.4%</b>

1. Memorandum subjected *Seattle Central College Site D and Campus Trip Generation and Parking* dated April 28, 2016

As shown on Figure 2 and Table 3, the current 2017 peak parking demand is slightly higher (roughly 40 vehicles) than projected for the post Link condition in the SCC April 2016 Parking Analysis.

## **Conclusion**

The mode split data showed as projected in the SCC April 2016 Parking Analysis; therefore, has been an increase in rail use and overall decrease in auto use for both employees and students with the opening of the Capitol Hill Link Station. This change in travel modes has resulted in a lower number of vehicle trips to campus and a lower parking demand than pre-Link conditions. The on-campus parking demand based on current data is anticipated to be 643 vehicles and would be fully accommodated on-campus in the existing 735 parking stalls. This parking demand is substantially less than the long-term parking demand disclosed in the 2002 FEIS (1,084 vehicles).