

MEMORANDUM

Date:	April 4, 2024	TG:	1.22206.00
To:	Tony Leavitt and Thang Nguyen – City of Kirkland		
From:	Mike Swenson, PE, PTOE and Kassi Leingang, PE – Transpo Group		
cc:	Garett Buckingham & Carolyn Reeves – EvergreenHealth Molly Wolf & Kim Selby - NBBJ		
Subject:	EvergreenHealth Master Plan Parking Analysis		

This memorandum summarizes the parking analysis completed for the EvergreenHealth Master Plan. The current campus and proposed master plan elements and parking demand and utilization for the existing and future without-project and with-project conditions are reviewed below.

Current Campus and Proposed Master Plan Elements

The EvergreenHealth campus properties included in the master plan and the geographic references are shown in Figure 1. The campus is located adjacent to 120th Avenue NE, NE 130th Lane, NE 128th Street, and 124th Avenue NE.



Figure 1. EvergreenHealth Campus

The functions of the hospital are grouped in the following categories: hospital¹, outpatient², and hospice services. The square footage for the EvergreenHealth campus for the existing and future with the proposed master plan are summarized in Table 1. The Master Plan update includes four

¹ **Hospital** areas include all inpatient services provided within a building. This includes patient beds in addition to diagnostic and treatment services.

² **Outpatient** areas include all ambulatory care provided within a building occupancy facility with same day services such as clinics

primary projects; North Tower, DeYoung Pavilion II, new medical office space focused on outpatient services, and a parking garage expansion. These developments are shown in Attachment A and described in greater detail below.

1. **North Tower** – Located in area TL-3A and totaling 274,000 sf net increase of hospital space (including support space). No new access is planned with this project. It is anticipated this development would be constructed and occupied by 2029.
2. **DeYoung Pavilion II** – Located in area TL-3B and totaling 78,000 sf net increase of outpatient space. No new access is planned with this project. It is anticipated that parking with this project would result in a net loss of 40 stalls within the TL-3B area. It is anticipated this development would be constructed and occupied by 2033.
3. **New medical office space** – Located in area TL-3C and totaling 148,000 sf net increase of outpatient space and construct 429 parking stalls. One new access is planned with this project, located south of the 124th Avenue NE/NE 130th Street intersection. It is anticipated this development would be constructed and occupied by 2029.
4. **Parking Garage Expansion** – This project would result in a net gain of 622 stalls by expanding the existing garage located at the southeastern corner of the TL-3A area. No new access is planned with this project. It is anticipated this project would be completed by 2029.

Table 1. EvergreenHealth Development Summary

Area	Occupied				Subtotal	Shell/Vacant (excludes mech.)	Total	Parking Supply (Stalls)
	Hospital	Hospital Support	Outpatient	Hospice				
Existing								
TL-3A	381,828	242,752	247,328		871,908	70,717	942,625 sf	1,994
TL-3B	-	9,645	66,583		76,228	-	76,228 sf	666
TL-3C		-	-	20,500	20,500	-	20,500 sf	66
TL-3D	-	34,777	-		34,777	1,115	35,892 sf	208
TL-1B	-	-	-	-	0	-	-	68
Existing Total	381,828	287,174	313,911	20,500	1,003,413	71,832	1,075,245 sf	3,002
Master Plan Update (Proposed)								
TL-3A	+230,000 sf -50,000 sf	+94,000	-	-	+274,000 sf	-	+274,000 sf	622
TL-3B		-	+78,000 sf	-	+78,000 sf	-	+78,000 sf	-40
TL-3C		-	+148,000 sf	-	+148,000 sf	-	+148,000 sf	429
TL-3D		-	-	-	-	-	-	
TL-1B		-	-	-	-	-	-	
Proposed Subtotal	+180,000	+94,000	+226,000	0	+500,000	0	+500,000	1,011
Total (Proposed + Current Master Plan)	561,828	381,174	539,911	20,500	1,503,413	71,832	1,575,245	4,013

Table 1 shows the existing campus totals 1,075,245 gsf of area. With the proposed master plan, the development total would increase to 1,575,245 gsf, representing an increase of up to 500,000 gsf relative to existing development totals.

As noted above, it is anticipated that the development within the TL-3A and TL-3C areas totaling 422,000 sf (274,000 hospital and 148,000 sf outpatient space) would be constructed by the initial horizon year of 2029 with the full Master Plan development completed by the 2033 horizon year.

Table 1 also shows the current parking supply on campus is approximately 3,000 stalls. With the Master Plan, there is anticipated to be a net addition of 1,011 stalls on campus resulting in a future total of 4,013 stalls.

The Master Plan also notes an optional development site which would shift the location for the development of the 78,000 sf outpatient development currently planned for TL-3B to potentially TL-3D. It is anticipated that there would be no change in the overall campus parking supply with this shift. As such, it has not been specifically identified in the following analyses.

Parking Analysis

The parking review for the existing condition and future with-project and with-project conditions are summarized below.

Existing

The existing parking supply was inventoried and on-campus parking demands were counted in June 2022 over three mid-week days from 7am to 7pm. The existing campus contains 3,002 parking spaces. The stalls per subarea are listed below:

<u>Subarea</u>	<u>Supply</u>
TL-1B	68
TL-3A	1,994
TL-3B	666
TL-3C	66
<u>TL-3D</u>	<u>208</u>
Total	3,002

In addition to the review of parking by area, Table 2 below shows the stall allocations by user (e.g. employee, vanpool, general, etc.). The table shows approximately 45 percent of the existing 3,002 stalls are designated for EvergreenHealth staff with 2 percent designated for carpool, vanpool, etc. and the remaining 53 percent available for general use (e.g. patients and visitors). The existing supply for the campus is supplied at a rate of 2.79 stalls per 1,000 sf.

Table 2. Existing Parking Supply Allocation

Stall Designation	Total Parking Supply (stalls)	Allocation Percentage	Parking Supply Rate (stalls/1,000 sf)¹
Employee/Physician	1,354	45%	1.26
Medic One/Carpool/Vanpool/Volunteer	51	2%	0.05
<u>General</u>	<u>1,597</u>	<u>53%</u>	<u>1.49</u>
Total	3,002	-	2.79

1. Parking supply rates per the existing size of 1,075,245 sf.

The average parking demand observed on campus is illustrated in Figure 2. showing the peak occurring at 11am with a peak demand of 2,275 vehicles or approximately 76 percent utilization. The detailed parking observations are included in Attachment B.

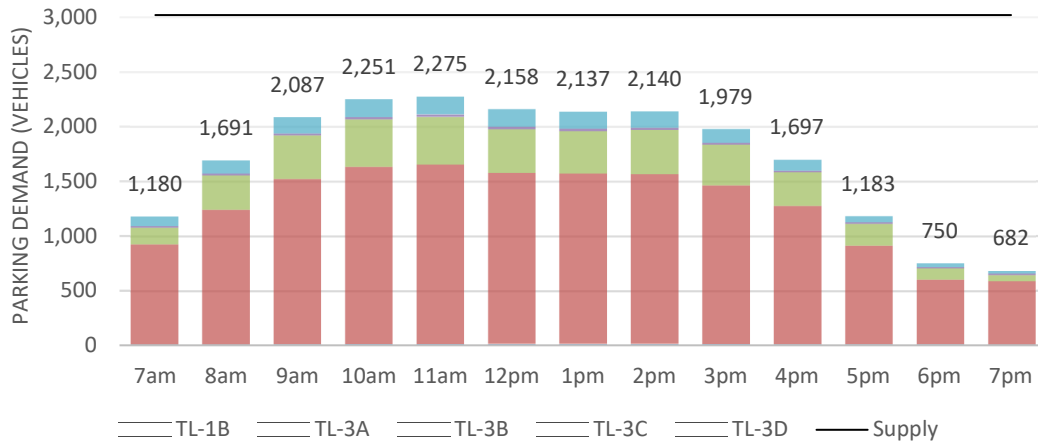


Figure 2. Existing Campus Parking Demand

Parking demand rates were calculated for the different hospital functions based on the observed parking demand and allocation of functions within the campus including hospital, outpatient, and hospice, similar to the estimate of trip generation. Parking for all hospital functions are shared with within the existing parking supply with the exception of the hospice function which is located on the far east side of the campus with an isolated driveway. In order to differentiate the trips associated with the hospital and outpatient use, similar to the methodology used in the trip generation analysis, the Institute of Transportation Engineers' (ITE) *Parking Generation*, (5th Edition) was reviewed for similar uses (Hospital Land Use 610 and Medical Clinic near a hospital campus Land Use 720). Based on the square footage for the hospital and outpatient uses, the peak parking demand observed for the campus was allocated to the campus uses. As the Hospice uses could be isolated from a parking perspective, the data presented for that use aligns directly with the observed data. The resulting parking demand rates for each use are summarized in Table 3. The detailed methodology to determine each use is provided in Attachment C.

Table 3. Existing Parking Demand Rates

	Peak Parking Demand Rate (vehicles/1,000 sf) per occupied areas			Total
	Hospital ¹	Outpatient	Hospice	
	669,002 sf	313,911 sf	20,500 sf	1,003,413 sf
%	59.14%	39.85%	1.01%	100%
Parking Demand (vehicles)	1345	907	23	2,275
Rate (vehicles/1,000 sf)	2.01	2.89	1.12	-

1. Size includes hospital and hospital support space.

Future Without-Project Conditions

The parking demand for the 71,832 sf of unoccupied space was estimated assuming it becomes occupied under the future (2029 and 2033) without Master Plan condition. The existing trip rates collected at the campus were assumed for the estimate of the occupancy of the existing shell space. The estimated trip generation is summarized in Table 3.

Table 4. Future Without-Project Parking Demand (Fully Occupied)

Existing Supply (Parking Stalls)	Existing			Existing Shell Space (occupied)		Total Existing		
	Size (sf)	Peak Demand (vehicles) ¹	Utilization	Size (sf)	Peak Demand (vehicles) ²	Size (sf)	Peak Demand (vehicles)	Utilization
3,002	1,003,413	2,275	76%	+71,832	208	1,075,245	2,483	83%

1. Peak demand consistent with 2022 observations.

2. Parking Demand estimated per estimated existing rate. Assumed to be consistent with outpatient space to provide a conservative estimate and consistent with the trip generation estimate.

The table shows with the occupancy of the full 1,075,245 sf existing campus, the campus is anticipated to have a peak parking demand of 2,483 vehicles or utilization of 83 percent.

Future With-Project Conditions

The future with-project peak parking demand and utilization are reviewed for both future 2029 and 2033 (Buildout of the Master Plan) conditions below.

2029 With-Project

By 2029, the development within the TL-3A and TL-3C areas totaling 422,000 sf (274,000 hospital and 148,000 sf outpatient space) would be constructed, including the addition of 1,011 parking stalls, increasing the on-site parking supply to 4,013 stalls. The future stall allocation is presented below showing the stall allocation consistent with the existing campus as well as the proposed modified allocation. The modified allocations reduces the employee allocation in general alignment with the TMP goal of employee SOV rate reducing from 85 percent to 70 percent.

Table 5. Future Parking Supply Allocation

Stall Designation	Existing	Future Existing Allocation ¹			Future Modified Allocation ² (Proposed)		
	Supply (stalls)	Allocation Percentage	Total Parking Supply (stalls)	Change in Parking Supply (Stalls) (Future - Existing)	Allocation Percentage	Total Parking Supply (stalls)	Change in Parking Supply (Stalls) (Future - Existing)
Employee/Physician	1,354	45%	1,810	456	37%	1,491	137
Medic One/Carpool/ Vanpool/Volunteer	51	2%	68	17	2%	78	27
General	<u>1,597</u>	<u>53%</u>	<u>2,135</u>	<u>538</u>	<u>63%</u>	<u>2,444</u>	<u>847</u>
Total	3,002	100%	4,013	1,011	100%	4,013	1,011

1. Existing allocation aligns with current employee SOV percentage of 85%.

2. Modified allocation assumes reduced employee SOV percentage 70%.

The weekday parking demand for the 2029 Master Plan development was estimated based on the existing parking demand rates collected at the campus and forecast based on the increased development. The parking demand for 2029 is summarized in Table 6.

Table 6. Future (2029) With-Project Parking Summary

Analysis Year	Size (sf)	Rate ¹	Peak Demand (vehicles)	Supply (stalls)	Utilization
<i>Existing Subtotal (fully occupied)</i>	1,075,245	-	2,483	3,002	83%
Proposed (2029)					
Hospital	274,000	2.01	551		
<u>Outpatient</u>	<u>148,000</u>	2.89	<u>428</u>		
<i>Proposed (2029) Subtotal</i>	422,000		979	1,011	
2029 Total Campus	1,497,245		3,462	4,013	86%

1. Peak demand consistent with 2022 observations.

By 2029, with the initial development of 422,000 sf of the Master Plan, the campus is anticipated to have a peak parking demand of 3,462 vehicles or utilization of 86 percent.

2033 With-Project (Buildout of the Master Plan)

With the buildout of the Master Plan totaling 500,000 sf an additional 1,011 parking stalls are proposed, increasing the overall on-site parking supply to 4,013 stalls. The parking supply and allocations are consistent with the 2029 With-Project condition reviewed above (see Table 5). The weekday parking demand for the Master Plan development was estimated based on the existing parking demand rates collected at the campus. The parking demand is summarized in Table 7.

Table 7. Future (2033) With-Project Parking Summary

Analysis Year	Size (sf)	Rate ¹	Peak Demand (vehicles)	Supply (stalls)	Utilization
<i>Existing Subtotal (fully occupied)</i>	1,075,245	-	2,483	3,002	83%
Total Proposed (2033)					
Hospital	274,000	2.01	551		
Outpatient	226,000	2.89	653		
<i>Total Master Plan Subtotal</i>	500,000		1,204	1,011	
Total Campus	1,575,245		3,687	4,013	92%

1. Peak demand consistent with 2022 observations.

The table shows with the buildout of the Master Plan, the campus is anticipated to have a peak parking demand of 3,687 vehicles or utilization of 92 percent.

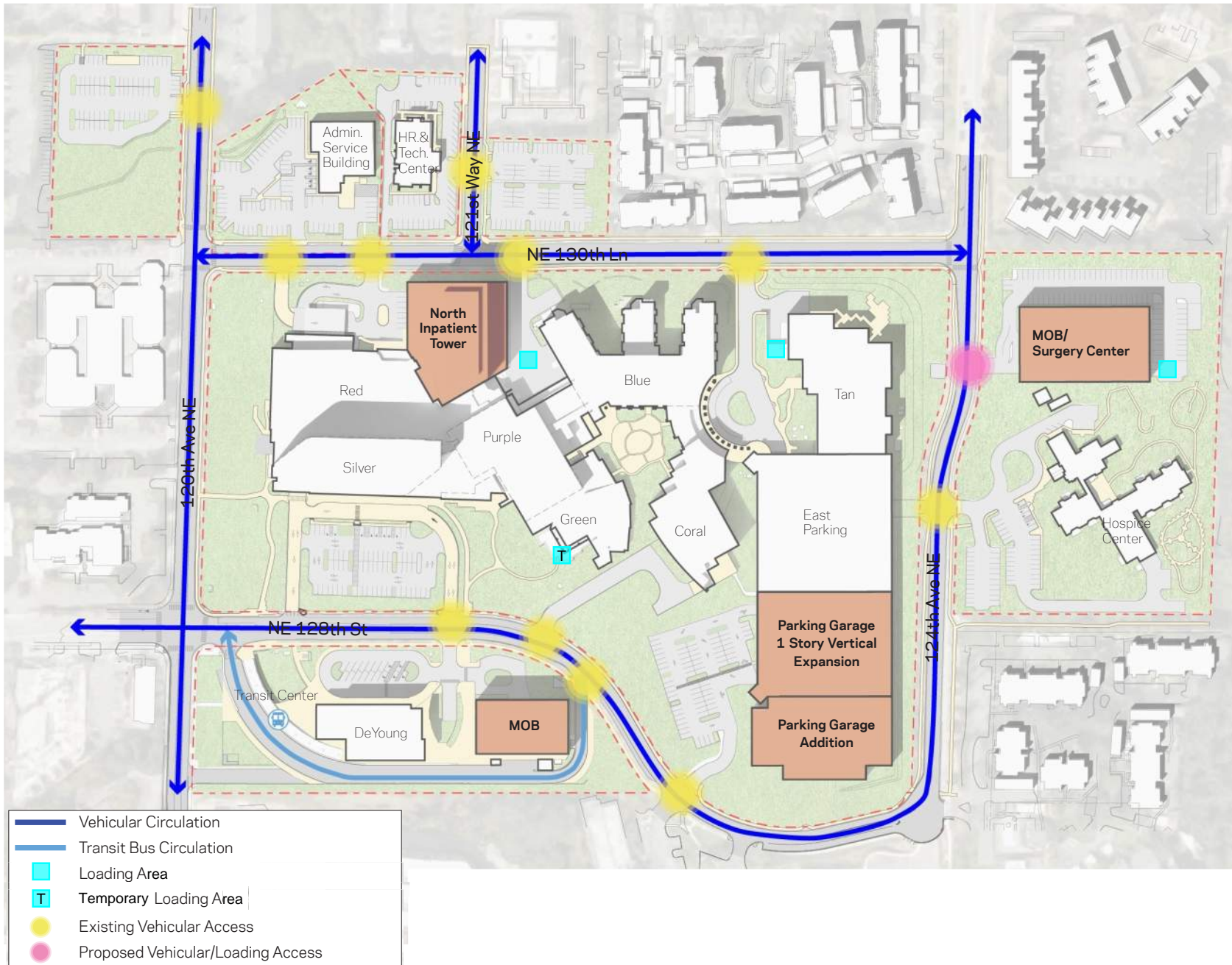
Summary

A summary of the campus parking demand and utilization for existing and future without and with-project conditions are summarized in Table 6 below. The table shows the existing campus parking utilization is 76 percent and with the buildout of the master plan, the campus parking utilization is forecast to increase to 92 percent.

Table 8. Parking Demand and Utilization Summary

Analysis Year	Occupied Size (sf)	Peak Demand (vehicles)	Supply (stalls)	Utilization
Existing	1,003,413	2,275	3,002	76%
Without Project <i>(Existing fully occupied)</i>	1,075,245	2,483	3,002	83%
Future (2029) With-Project	1,497,245	3,462	4,013	86%
Future (2033) With-Project <i>(Buildout of the Master Plan)</i>	1,575,245	3,687	4,013	92%

Attachment A: Proposed and Current Master Plan Development Area



Proposed and Current Master Plan Development Area

EvergreenHealth Master Plan

Attachment B: Parking Counts

Demand (veh)

Tuesday, June 7, 2022	Lot/Garage	Area	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm
	1 west of 120th	TL-1B	10	9	11	12	12	13	14	15	11	10	11	10	10
	2 admin	TL-3D	25	36	56	66	65	71	66	61	51	45	29	13	9
	3 HR and Tech	TL-3D	16	31	38	43	44	44	46	42	37	29	15	9	9
	4 east of 121st	TL-3D	44	45	44	48	47	45	37	33	22	10	3	0	1
	5 emergency/maternity	TL-3A	6	7	6	8	6	6	6	3	0	1	1	4	2
	6 west garage	TL-3A	282	260	301	352	369	374	377	372	350	321	291	261	315
	7 west surface	TL-3A	39	55	61	61	63	60	61	59	55	55	51	54	53
	8 deyoung	TL-3B	172	335	424	467	486	433	419	432	409	345	237	131	87
	9 east central	TL-3A	691	1,032	1,229	1,273	1,242	1,143	1,096	1,060	913	721	350	88	49
	10 hospice	TL-3C	16	16	18	18	22	27	24	20	18	19	17	14	18
			1,301	1,826	2,188	2,348	2,356	2,216	2,146	2,097	1,866	1,556	1,005	584	553

Wednesday, June 8, 2022	Lot/Garage	Area	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm
	1 west of 120th	TL-1B	7	8	11	12	17	17	19	18	17	16	15	13	12
	2 admin	TL-3D	22	43	68	71	70	64	67	65	60	52	35	21	18
	3 HR and Tech	TL-3D	21	35	42	45	47	43	44	44	40	36	15	8	6
	4 east of 121st	TL-3D	42	43	46	47	47	47	45	46	34	20	15	10	10
	5 emergency/maternity	TL-3A	8	8	9	12	13	12	12	11	10	12	13	13	14
	6 west garage	TL-3A	288	273	305	337	356	365	371	379	363	331	302	271	331
	7 west surface	TL-3A	55	66	68	70	66	65	57	57	58	52	45	39	51
	8 deyoung	TL-3B	142	305	370	413	411	370	363	393	359	291	182	81	45
	9 east central	TL-3A	600	906	1,161	1,235	1,246	1,150	1,199	1,202	1,123	1,031	706	424	372
	10 hospice	TL-3C	14	16	21	21	23	24	27	23	21	17	17	12	12
			1,198	1,702	2,100	2,262	2,295	2,156	2,203	2,237	2,084	1,857	1,344	891	870

Thursday, June 9, 2022	Lot/Garage	Area	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm
	1 west of 120th	TL-1B	6	8	12	15	16	17	17	17	17	12	11	11	0
	2 admin	TL-3D	29	43	57	69	67	64	66	67	58	43	25	10	0
	3 HR and Tech	TL-3D	23	39	48	52	49	49	48	49	44	34	21	16	14
	4 east of 121st	TL-3D	43	46	50	49	50	52	50	45	35	27	15	14	8
	5 emergency/maternity	TL-3A	6	4	5	4	5	3	7	13	12	14	18	18	14
	6 west garage	TL-3A	272	248	292	325	342	354	356	364	369	324	283	240	227
	7 west surface	TL-3A	34	51	64	65	67	72	71	69	68	64	59	54	62
	8 deyoung	TL-3B	144	300	397	419	415	387	376	395	352	292	183	95	44
	9 east central	TL-3A	469	793	1,031	1,118	1,140	1,085	1,048	1,053	1,027	862	580	307	249
	10 hospice	TL-3C	16	15	17	23	23	23	23	17	15	9	7	9	9
			1,041	1,546	1,972	2,138	2,173	2,105	2,061	2,088	1,991	1,679	1,201	771	626

Attachment C: Parking Calculations

<u>Area</u>	<u>9am</u>	<u>10am</u>	<u>11am</u>	<u>12pm</u>	<u>1pm</u>	<u>2pm</u>
TL-1B	11	13	15	16	17	17
TL-3A	1,510	1,620	1,638	1,562	1,553	1,547
TL-3B	397	433	437	396	386	406
TL-3C	19	21	23	25	25	20
TL-3D	150	164	162	159	156	150
Total	2,087	2,251	2,275	2,158	2,137	2,140
Supply	3,002	3,002	3,002	3,002	3,002	3,002
	70%	75%	76%	72%	71%	71%

<u>Peak</u>				
	Hospital (610)	Outpatient (720)	Hospice (620)	Total
Size	669,002	313,911	20,500	1,003,413
ITE Parking Demand Rate	2.25	3.23		
Demand	1505	1014	-	
Observed Trips	59.14%	39.85%	1.01%	100%
Rate	1345	907	23	2,275
	2.01	2.89	1.12 veh/1000 sf	
	hospice and overall per counts			