MEMORANDUM

To: Erin Venard – City of Naperville

From: Rory Fancler-Splitt, AICP, PTP – Kimley-Horn

Date: November 1, 2022

RE: Parking Review for Proposed Medical Office Redevelopment
10 Martin Avenue, Naperville

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by Ryan Companies to evaluate the parking supply proposed for the medical office building redevelopment at 10 Martin Avenue in Naperville, Illinois. The parking supply was reviewed relative to City of Naperville requirements and projected demand. Per City of Naperville direction, this memorandum serves as an update to the *Edward Hospital Parking Supply/Demand Study Update* prepared by Walker Parking Consultants in August 2017 (referred to as *2017 Parking Study*). A copy of the *2017 Parking Study* is provided as **Attachment 2**.

Proposed Development

The proposed redevelopment is a single medical office building totaling approximately 96,430 square feet. In order to accommodate the development, the existing medical office building and approximately 175-space surface parking lot would be removed. As part of the redevelopment, Pam Davis Drive east of Brom Court to Washington Street would be removed.

The proposed redevelopment would include a total of 227 parking spaces, including 177 surface parking spaces and 50 spaces in a basement-level parking garage. The parking garage would be available to employees only; patients and visitors would park in the surface parking lot. The surface parking lot would be located west and south of the proposed medical office building.

Access to the development would be provided via two driveways along Martin Avenue; two existing driveways (i.e., Driveway 2 and Driveway 3) would be removed. Driveway 1, located near the western boundary of the site, would provide full-access to the surface parking lot. Driveway 1 would also provide connectivity to Pam Davis Drive. Driveway 4 would provide limited right-in/right-out access to the employee-only parking garage. A conceptual site plan is provided as **Attachment 1**.

City of Naperville Requirements

Per Section 6-9-3 (Schedule of Off Street Parking Requirements) of the Naperville Municipal Code, medical office buildings are required to provide a total of 5 parking spaces per each 1,000 square feet of gross floor area. According to the Code, a total of 482 parking spaces would be required for the approximately 96,430 square-foot medical office building. A total of 227 parking spaces are proposed. Therefore, approval of a variance or deviation from Section 6-9-3 (Schedule of Off Street Parking Requirements) would be required.

Edward Hospital Campus

The overall Edward Hospital parking system provides flexibility for employees and patients/visitors. The proposed medical office redevelopment would provide for shared parking with Edward Hospital. In order to evaluate parking conditions for the hospital campus, data was obtained from the *Edward Hospital Parking Supply/Demand Study Update* prepared by Walker Parking Consultants in August 2017. This data reflects pre-COVID conditions for the hospital campus and was used as the baseline for this analysis.

Parking Supply

According to the *2017 Parking Study*, a total of 3,740 parking spaces are provided on the overall Edward Hospital. The parking supply detailed in the *2017 Parking Study* did not include the medical office building at 10 Martin Avenue. Therefore, for purposes of this review the existing 175 parking spaces were added to establish an existing parking supply of 3,915 spaces. The existing parking lot at 10 Martin Avenue does not provide designated parking spaces for patient/visitors or employees. This allows for shared parking between user groups. For purposes of this review, 56 parking spaces were assumed to be for employees; the remaining 119 spaces were assumed for patients/visitors. A summary of the overall Edward Hospital parking system, inclusive of the existing parking at 10 Martin Avenue, is provided in **Table 1**.

Table 1. Edward Hospital Parking Supply - Existing

User	Parking Supply	% Total	Effective Capacity
Physicians (Hospital)	206	5.4%	206
Physicians (Linden Oaks)	15	0.4%	14
Employees	1,105	29.1%	1,033
Employees (MOB 1)	120	3.2%	114
Employees (MOB 2)	120	3.2%	114
Patients/Visitors (ED)	12	0.3%	10
Ambulance (Employees)	4	0.1%	4
Public Safety/Charging/Valet	38	1.0%	36
Patients/Visitors	1,567	41.3%	1,358
Patients/Visitors (Fitness)	247	6.5%	210
Accessible (Patients/Visitors)	98	2.6%	98
Valet (Patients/Visitors)	156	4.1%	156
Outpatient (Patients/Visitors)	28	0.7%	24
Healy Pharmacy (Visitors)	2	0.1%	2
Contractors	6	0.2%	6
Service Vehicles	11	0.3%	11
Clergy (Visitors)	5	0.1%	5
10 Martin Avenue (Employees)	56	1.5%	53
10 Martin Avenue (Patients/Visitors)	119	3.1%	101
Existing Parking Supply	3,915	100%	3,555

When planning for an appropriate number of parking spaces, it is important to consider effective capacity. This factor incorporates a buffer to account for user convenience in terms of access and circulation (so that parkers are not looking for the last few available spaces) and temporary losses of parking spaces resulting from instances such as maintenance, inefficient parking with vehicles encroaching into adjacent spaces, and snow storage. For patients/visitors, an effective parking capacity factor of 85 percent was assumed. For staff/employees, an effective parking capacity of 95 percent was assumed. Valet, pharmacy, clergy, ambulance, and accessible parking was not adjusted (effective parking capacity 100 percent) as these spaces are designated for specific end users. Based on these adjustments, the effective parking capacity for the overall Edward Hospital campus, including 10 Martin Avenue, is 3,555 spaces as summarized in Table 1.

Parking Demand (Design Day)

Based on data presented in the *2017 Parking Study*, parking demand ratios were determined for each user group. The parking demand ratios were based on parking occupancy counts conducted at the Edward Hospital campus in July 2017. Per City of Naperville direction, the July 2017 parking occupancy counts reflect typical pre-COVID conditions. There have been no material changes to the Hospital campus since July 2017; and therefore, the parking occupancy counts were assumed for this analysis.

Per the *2017 Parking Study,* the parking occupancy data was adjusted to account for peak patient and/or visitor parking demand (i.e., peak inpatient, outpatient, and emergency department activity). Parking demand ratios representing "design day" or 95th percentile activity levels are presented in **Table 2**. The number of employees and patients/visitors was not readily available for 10 Martin Avenue. The acknowledged source for national-level parking demand data is the Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th Edition. The ITE Parking Generation Manual provides average peak parking demand rates for a variety of land use categories, including Land Use Code 720, Medical-Dental Office Building. For purposes of a conservative analysis, ITE data was used to estimate parking demand for the existing 10 Martin Avenue.

Table 2. Parking Demand Ratios – Design Day (95th Percentile)

User	Design Statistic[2]	Ratio[3]	Demand
Physicians	1,369 physicians	0.15 spaces / physician	205
Employees/Staff[1]	5,091 employees	0.18 spaces / employee	916
Patients/Visitors	1,866 patients-visitors	1.06 spaces / patients-visitors	1,978
10 Martin Avenue	46,200 sq. ft.[4]	4.59 spaces / 1,000 sq. ft.[5]	212
		Estimated Total Demand	3,311
		Effective Parking Capacity	3,555
		Surplus / Deficit	+244

[1]Includes students, volunteers, and contract employees.

[2]Reflects 95th percentile of daily census data for FY 2016-2017 and MOB surveys provided by Edward Hospital as detailed in the *2017 Parking Study.*

[3]Peak-hour demand ratio for each user group is based on parking occupancy counts conducted on typical weekdays in July 2017 as detailed in the *2017 Parking Study*. Per City of Naperville direction, the parking occupancy counts reflect typical pre-COVID conditions; and therefore, were assumed for this analysis.

[4]Existing medical office building estimated size 46,200 SF based on aerial imagery.

[5]The July 2017 parking occupancy counts did not include 10 Martin Avenue. For purposes of this analysis, data from the ITE Parking Generation Manual, 5th Edition was assumed. For purposes of a conservative analysis, the 85th percentile parking demand rate for Land Use Code 720, Medical-Dental Office Building was used. For comparison, the average peak parking demand rate is 3.23 spaces per 1,000 square feet.

As shown in Table 2, the effective parking capacity for the overall Edward Hospital campus, including 10 Martin Avenue, exceeds estimated demand under typical peak or "design day" conditions.

Future (Year 2024) Conditions

The proposed medical office building is approximately 96,430 square feet. The redevelopment would include a total of 227 parking spaces, including 177 surface parking spaces and 50 spaces in a basement-level parking garage. The parking garage would be available to employees only; patients and visitors would park in the surface parking lot. With the proposed parking supply, the effective capacity for the overall Edward Hospital campus would increase to 3,599 spaces. This reflects an effective parking capacity factor of 85 percent for the 177 patient/visitor spaces in the surface parking lot (150 spaces), and an effective parking capacity factor of 95 percent for the 50 staff/employee spaces in the parking garage (48 spaces).

In order to project peak parking demand for the proposed 96,430 square-foot medical office building, data from the ITE Parking Generation Manual, 5th Edition was assumed. A summary of the projected peak parking demand for the Edward Hospital campus, including redevelopment of 10 Martin Avenue is presented in **Table 3**.

Table 3. Parking Demand Ratios – Future Conditions

User	Design Statistic[2]	Ratio	Demand
Physicians	1,369 physicians	0.15 spaces / physician	205
Employees/Staff[1]	5,091 employees	0.18 spaces / employee	916
Patients/Visitors	1,866 patients-visitors	1.06 spaces / patients-visitors	1,978
10 Martin Avenue	96,430 sq. ft.	4.59 spaces / 1,000 sq. ft.[4]	443
		Estimated Total Demand	3,542
		Effective Parking Supply	3,599
		Surplus / Deficit	+57

[1]Includes students, volunteers, and contract employees.

[2]For existing Edward Hospital, reflects 95th percentile of daily census data for FY 2016-2017 and MOB surveys provided by Edward Hospital as detailed in the *2017 Parking Study.*

[3]Peak-hour demand ratio for each user group is based on parking occupancy counts conducted on typical weekdays in July 2017 as detailed in the *2017 Parking Study*. Per City of Naperville direction, the parking occupancy counts reflect typical pre-COVID conditions; and therefore, were assumed for this analysis.

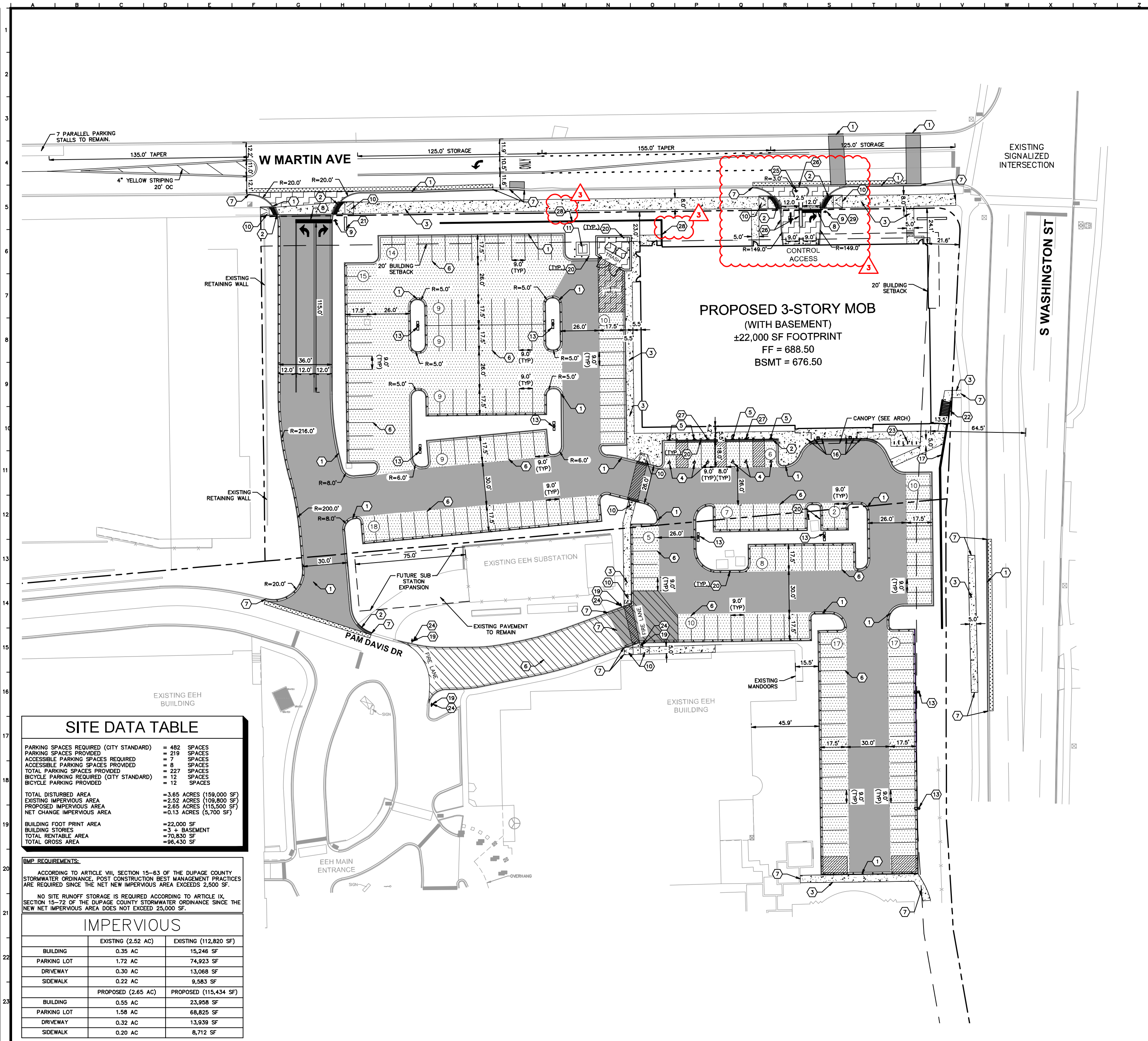
[4]The July 2017 parking occupancy counts did not include 10 Martin Avenue. For purposes of this analysis, data from the ITE Parking Generation Manual, 5th Edition was assumed. For purposes of a conservative analysis, the 85th percentile parking demand rate for Land Use Code 720, Medical-Dental Office Building (4.59 spaces per 1,000 square feet) was used. For comparison, the average peak parking demand rate is 3.23 spaces per 1,000 square feet.

As shown in Table 3, the proposed parking supply is expected to accommodate peak "design day" demand. This analysis assumes peak "design day" conditions which reflects peak level of inpatient, outpatient, and emergency room visits. Under peak "design day" conditions, a surplus of 57 parking spaces is projected. Based on a review of the parking occupancy counts conducted in July 2017, typical parking demand would likely be lower; and therefore, additional surplus is anticipated under typical conditions.

Summary

The proposed medical office redevelopment includes a 96,430 square-foot building and a total of 227 parking spaces, including 50 spaces in a basement level parking deck and 177 surface parking spaces. The proposed parking supply reflects a parking ratio of 2.35 spaces per 1,000 square feet, which is lower than the City's requirement of 5.0 spaces per 1,000 square feet. Therefore, approval of a variance/deviation from Section 6-9-3 (Schedule of Off Street Parking Requirements) will be required.

The proposed shared parking with Edward Hospital provides flexibility for employees, patients, and visitors. Based on a comparison of the projected parking demand and overall Edward Hospital campus parking supply, including redevelopment of 10 Martin Avenue, the proposed parking supply is expected to support peak or "design day" conditions. Under peak conditions, a parking surplus is projected; parking demand spillover to the adjacent street network is not anticipated.



SITE DATA TABLE

PARKING SPACES REQUIRED (CITY STANDARD)	= 482 SPACES
PARKING SPACES PROVIDED	= 219 SPACES
ACCESSIBLE PARKING SPACES REQUIRED	= 7 SPACES
ACCESSIBLE PARKING SPACES PROVIDED	= 8 SPACES
TOTAL PARKING SPACES PROVIDED	= 227 SPACES
BICYCLE PARKING REQUIRED (CITY STANDARD)	= 12 SPACES
BICYCLE PARKING PROVIDED	= 12 SPACES
TOTAL DISTURBED AREA	=3.65 ACRES (159,000 SF)
EXISTING IMPERVIOUS AREA	=2.52 ACRES (109,800 SF)
PROPOSED IMPERVIOUS AREA	=2.65 ACRES (115,500 SF)
NET CHANGE IMPERVIOUS AREA	=0.13 ACRES (5,700 SF)
BUILDING FOOT PRINT AREA	=22,000 SF
BUILDING STORIES	=3 + BASEMENT
TOTAL RENTABLE AREA	=70,830 SF
TOTAL GROSS AREA	=96,430 SF

BMP REQUIREMENTS:

ACCORDING TO ARTICLE VIII, SECTION 15–63 OF THE DUPAGE COUNTY STORMWATER ORDINANCE, POST CONSTRUCTION BEST MANAGEMENT PRACTICES ARE REQUIRED SINCE THE NET NEW IMPERVIOUS AREA EXCEEDS 2,500 SF.

NO SITE RUNOFF STORAGE IS REQUIRED ACCORDING TO ARTICLE IX, SECTION 15–72 OF THE DUPAGE COUNTY STORMWATER ORDINANCE SINCE THE NEW NET IMPERVIOUS AREA DOES NOT EXCEED 25,000 SF.

IMPERVIOUS

	EXISTING (2.52 AC)	EXISTING (112,820 SF)
BUILDING	0.35 AC	15,246 SF
PARKING LOT	1.72 AC	74,923 SF
DRIVEWAY	0.30 AC	13,068 SF
SIDEWALK	0.22 AC	9,583 SF
	PROPOSED (2.65 AC)	PROPOSED (115,434 SF)
BUILDING	0.55 AC	23,958 SF
PARKING LOT	1.58 AC	68,825 SF
DRIVEWAY	0.32 AC	13,939 SF
SIDEWALK	0.20 AC	8,712 SF

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

KEY NOTES

1. B6.12 CONCRETE CURB AND GUTTER, TYP. (SEE DETAILS)
2. DEPRESSED CURB AND GUTTER
3. CONCRETE SIDEWALK, TYP. (SEE DETAILS)
4. ACCESSIBLE PAVEMENT MARKINGS, TYP. (SEE DETAILS)
5. ACCESSIBLE PARKING SIGN, TYP. (MUTCD R7-8 & R7-I10)
6. 4" WIDE PAINTED SOLID LINE, TYP.
7. CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
8. 24" WIDE STOP BAR, TYP. (SEE DETAILS)
9. STOP SIGN, TYP. (MUTCD R1-1)
10. ACCESSIBLE RAMP W/ DETECTABLE WARNING PANELS (SEE DETAILS)
11. TRANSFORMER PAD (FOR REFERENCE ONLY)
12. MONUMENT SIGN
13. LIGHT POLES SHOWN FOR COORDINATION ONLY (SEE SITE LIGHTING PLANS)
14. SCREEN WALL (SEE ARCHITECTURAL PLANS FOR DETAILS)
15. 3-FT TRANSITION CURB
16. DECORATIVE BOLLARD (REFERENCE ARCH PLANS)
17. SITE RETAINING (ROCKWOOD CLASSIC 8 STRAIGHT SPLIT CHARCOAL BLOCK)
18. ARCHITECTURAL RETAINING WALL (SEE ARCHITECTURAL PLANS FOR DETAILS)
19. FIRE LANE SIGN
20. BOLLARD, TYP. (SEE DETAILS)
21. WAY FINDING SIGN
22. STAIRS (SEE ARCHITECTURAL PLANS FOR DETAILS)
23. BIKE PARKING (HOOP RACK – PARKS 2 BIKES EACH)
24. DO NOT ENTER SIGN
25. DOUBLE SIDED "NO LEFT TURN" SIGN (MUTCD R3-2) (3)
26. 6" BARRIER CURB
27. VAN ACCESSIBLE PARKING SIGN (SEE C6.0 FOR DETAILS)
28. CAST IN PLACE CONCRETE WALL (SEE STRUCTURAL PLANS FOR DETAILS) (3)
29. "RIGHT TURN ONLY" SIGN (PLACED BELOW STOP SIGN) (3)

PAVING AND CURB LEGEND

- STANDARD DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- HEAVY DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- CONCRETE SIDEWALK — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- HEAVY DUTY CONCRETE PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- 2.5" MILL AND OVERLAY — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- STANDARD PITCH CONCRETE CURB AND GUTTER
- REVERSE PITCH CONCRETE CURB AND GUTTER
- CONCRETE DEPRESSED CURB AND GUTTER

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	7/15/2022	MMH
2	REVISED PER CITY COMMENTS	10/10/2022	MMH
3	REVISED PER CITY COMMENTS	11/07/2022	MMH

SCALE: AS NOTED
DESIGNED BY: SMW
DRAWN BY: MMH
CHECKED BY: SMW

Kimley»Horn

RYAN

SITE & PAVING PLAN

NAPERVILLE MOB
10 MARTIN AVE
NAPERVILLE, IL 60540

ORIGINAL ISSUE: 4/21/22
KHA PROJECT NO. 168018017
SHEET NUMBER
C2.0

Drawing name: K:\CHS_LDEV\168018017_Ryan_MOB_Naperville_IL\2 Design\CAD\PlanSheets\C2.0 – SITE & PAVEMENT PLAN.dwg C2.0 Oct 31, 2022 3:32pm by: Matt.Hader

ATTACHMENT 1

PARKING SUPPLY/DEMAND REPORT

EDWARD HOSPITAL

NAPERVILLE, ILLINOIS

Prepared for:

RONALD G. KOBOLD, AIA
PRINCIPAL
Matthei & Colin Associates, LLC

AUGUST 2017

PARKING SUPPLY/DEMAND REPORT

WALKER
PARKING CONSULTANTS

ATTACHMENT 2

Walker Parking Consultants
850 West Jackson – Suite 310
Chicago, Illinois 60607

Voice: 847.697.2640
Fax: 312.633.4262
www.walkerparking.com

August 17, 2017

Ronald G. Kobold, AIA, Principal
Matthei & Colin Associates, LLC
332 S. Michigan Avenue
Suite 614

Re: Parking Supply/Demand Study Update
Edward Hospital/Naperville, Illinois
Walker Project Number: 31-8208.00

Dear Mr. Kobold:

Walker Parking Consultants is pleased to submit the attached report, which is an update of our 2014 Parking Supply/Demand study completed for the Edward Hospital campus. Walker's report summarizes our findings regarding the observation and evaluation of the Hospital's parking system, the impact of any proposed future program changes, and Walker's assessment of the system's ability to handle the daily parking demand both now and in the future.

Upon your review, please call us to arrange a date to discuss the report and any questions or comments that you may have regarding the information provided. Finally, we appreciate the continued working relationship with you and the Hospital.

Respectfully submitted,

WALKER PARKING CONSULTANTS

Phill Schragal
Director of Operations Consulting

Natalie Kubik
Research Analyst

cc: Michael Werthmann, KLOA Inc.
Roger Pierce, Edward Elmhurst Health

PROJECT NO. 31-8208.00 AUGUST 2017

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FIGURES

TABLES

EXECUTIVE SUMMARY

The current parking supply at Edward Hospital is 3,740 parking spaces; when adjusted to reflect a cushion necessary for efficient operation (the "Effective Supply"), the supply is reduced to 3,401 spaces; a 9.1% cushion of spaces.

To determine peak parking demand conditions, occupancy counts were conducted on two typical weekdays in July 2017. Based upon the Survey Day results, peak occupancy was observed on Wednesday July 12th (10:00 AM), when 2,751 vehicles were parked on the Hospital campus.

Using information from the prior fiscal year (e.g. bed census, outpatient, and Emergency Department statistics), we adjusted the Survey Day data and estimated parking demand ratios in an effort to project Design Day conditions (95th percentile of patient activity). The Design Day, which is equivalent to a very busy day that may occur once or twice each month, was used to determine both current and future parking adequacy for the Hospital System.

We projected the Design Day statistics and parking demand ratios using the peak-hour demand ratio for each user-group on the Survey Days. The peak-hour parking demand projection for the Design Day, using the peak-hour demand ratio calculated for each user-group, is 3,088±.

When the Design Day projected peak-hour demand of 3,088± vehicles is compared to the effective supply (3,401 spaces), the resulting difference is a surplus of 313± spaces. Therefore, the System parking supply is sufficient to accommodate current peak-hour demand conditions.

To project the future parking demand, we utilized assumptions predicated upon programming and expansion plans for the East Building Addition (provided by the Hospital and Matthei & Colin Associates, LLC). These projections assume an increase in bed utilization, out-patient activity, and staffing, as well as growth attributed to the Hospital's Master Plan.

Assuming that the user group statistics and parking demand ratios remain unchanged; the Future Design Day peak-hour demand is projected to be 3,348± vehicles. Moreover, the future parking supply is planned to increase by 26, to 3,766 spaces, attributed to the redesign of the North Parking Garage entrance and North Entry plaza area. When compared to the future effective supply (3,423 spaces), the future peak-hour demand projection will result in a surplus of approximately 75± spaces. Therefore, the System should retain the capacity to accommodate future peak-hour Design Day demand conditions.

The future surplus (75±) is calculated by comparing the peak-hour demand projection to an effective parking supply that is about 9% (343± spaces) less than the actual System capacity. Therefore, the future surplus depicted most likely represents a conservative approach to calculating the future adequacy of the System. Finally, when the future peak-hour demand projection is compared to the full System supply, a surplus of 418± spaces is projected.

INTRODUCTION

Edward Hospital ("Hospital") engaged Walker Parking Consultants ("Walker") to assess the adequacy of the Hospital campus parking System (the "System"), and update the parking study previously completed in 2014. The current version is intended to assess existing parking adequacy, and project future parking requirements and adequacy based on the Hospital's projection of future growth, and the anticipated East Building addition.

BACKGROUND

The Hospital facilitates an array of programs and services. The Naperville campus contains a Cancer Center, Health & Fitness Center, Heart Hospital, Linden Oaks Hospital, two medical office buildings, and a Level II Trauma Center.

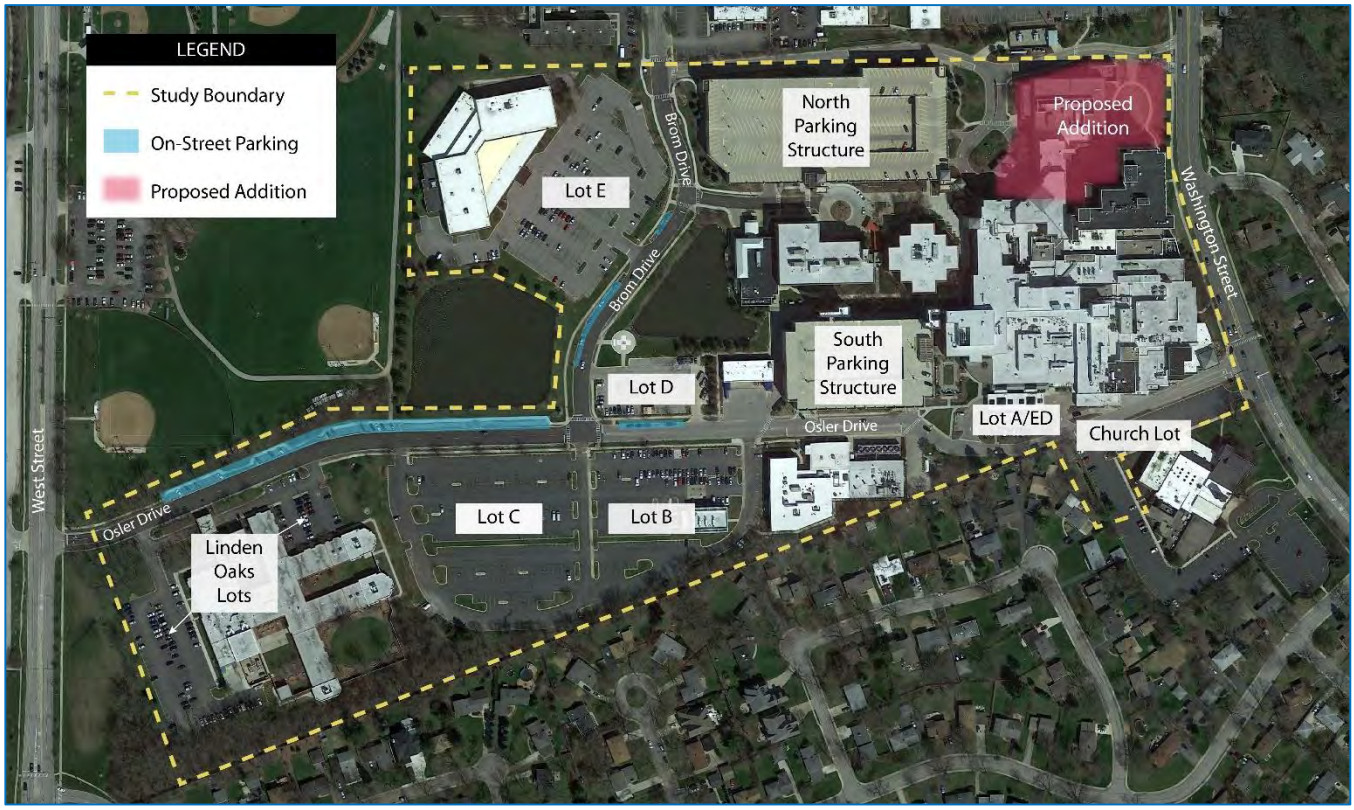
To assess future parking demand conditions, Walker utilized assumptions that are predicated upon programming and potential expansion plans provided by the Hospital and Matthei & Colin Associates, LLC ("M&CA"). The projections assume an increase in bed utilization, out-patient activity, and staffing, as well as growth attributed to the Hospital's Master Plan.

We used the growth assumptions provided to calculate parking adequacy, as well as the number of spaces required to effectively accommodate anticipated growth over the next five-year period.

STUDY AREA

The Hospital campus is located just south of downtown Naperville, and is generally bound by Martin Avenue on the north, building developments on the south, Washington Street on the east, and West Street on the west. An aerial photo of the campus is shown in *Figure 1* on the following page.

Figure 1: Study Area



Source: Google Earth and Walker Parking Consultants

DEFINITION OF TERMS

Some terminology used throughout the report has a unique meaning within the context of Walker's analysis. To clarify some of these terms, the following definitions are provided:

- Adequacy - The difference between the effective parking supply and parking space demand.
- Demand Ratio - The number of vehicles observed that occupy parking spaces compared to a reference number. For example, if a site employs 1,000 full-time equivalent (FTE) employees, and the observed peak occupancy is 400 vehicles in the employee lot, the demand ratio is calculated at 0.40 (400/1000) per FTE.
- Survey Day - The day that occupancy counts are recorded; typically, representative of normal day, but not peak conditions.
- Design Day - A day that best represents the level of demand the System is designed to accommodate; typically, the 95th percentile of patient activity levels. For reference, a parking supply designed to accommodate the absolute peak level of demand typically contains spaces that remain unused almost 100% of the time.
- Effective Supply - The total inventory of spaces adjusted to reflect a cushion of spaces needed to accommodate vehicles moving into and out of spaces, or spaces

unavailable due to maintenance or snow cover; also to reduce the time required for parkers to find the last available spaces. Effective supply can differ based upon the actual user group and type of parking; however, effective supply typically represents about 85% to 95% of the total supply of spaces. This adjustment factor is known as the "Effective Supply Factor".

- Inventory - The total number of marked parking spaces within the study area.
- Parking Demand - The number of spaces required by the various user groups. The observed demand is compared with effective supply to determine adequacy within the System.
- Patron or User - Any individual parker that utilizes the parking supply within the study area.
- Peak Hour - The busiest hour of parking demand observed on the Survey Day(s). On a medical campus, this usually occurs between the hours of 9:00 AM and 4:00 PM when staffing and outpatient activity is greatest.

METHODOLOGY

For the engagement, Walker completed the following: 1) review background information and data supplied by the Hospital and M&CA; 2) conduct an occupancy survey of all parking spaces on the campus on two typical days; and 3) develop a model to project future demand and determine the probable impact on future parking adequacy.

DESIGN DAY

When assessing the adequacy of any system, it's vital to define conditions for which the system was designed. Some organizations intend to provide adequate parking for every potential user every day of the year; consequently, a substantial number of spaces remain vacant most of the time. The benefit of such a system is that parkers, whether employees, visitors, or patients, always find an adequate supply of parking. More commonly, organizations would rather have fewer of their assets utilized for parking; therefore, these organizations plan a system that comfortably meets the needs of its end users on most days, but less than every day. The disadvantage of this type of system is that from time to time the parking demand may exceed the actual supply.

The level at which parking demand is accommodated is a policy decision ultimately made by the Hospital; however, for this analysis we define adequate conditions as those that satisfy the Design Day statistics projected for the study. The Design Day represents the 95th percentile of patient activity calculated using 365 days of census information provided by the Hospital.

Since it is almost impossible to identify, in advance, a day that perfectly represents Design Day conditions, the methodology used to estimate parking demand for our analysis consisted of the following:

1. Parking occupancy data was collected at designated intervals on Wednesday July 12th and Thursday July 13th (the "Survey Days"). The data collected was used to determine parking utilization throughout the day and identify and document patterns.

2. The Hospital provided demographic statistics and census data (e.g. number of occupied beds, emergency department and outpatient visits) for the Survey Days, as well as the prior fiscal year (365 days).
3. The census data was used to develop parking demand ratios that reflect the number of spaces required per unit statistic (i.e. number of spaces needed for each occupied bed, outpatient activity, employee, and visitor demand, etc.) during the peak-hour.
4. The demand ratio for each type of end user was adjusted to model the observed peak-hour demand on the peak Survey Day. The census data and Hospital population statistics were used to calibrate the model to the peak number of occupied spaces observed in the peak-hour, and project peak-hour demand for the Design Day.
5. Medical Office Building ("MOB") surveys were conducted to determine peak activity at the MOB I, MOB II and Cancer Center buildings.
6. Future demand was projected using future Hospital statistic estimates, and the same peak-hour parking demand ratios used to model Design Day conditions.

SUPPLY/DEMAND ANALYSIS

In the sections that follow, we discuss the current and effective parking supply, parking demand ratios, and the Survey and Design Day parking demand and parking adequacy.

PARKING SUPPLY - CURRENT

Using information provided by the Hospital and M&CA, Walker verified the number of parking spaces, user assignments (i.e. employees, physicians, patients, visitors, etc.) and restrictions that pertain to the entire System. The Hospital's parking inventory includes all marked spaces designated for use by identified user-groups, and/or the associated medical office buildings.

Based upon Walker's observation, it's difficult to precisely determine how the overall parking supply is divided between patient/visitors and employees. This is primarily attributed to the fact that the System is not gated or permitted. This fact allows for shared parking between several user-groups at various times throughout a normal day of operation.

In *Table 1* and *Figure 2* on the following page, we identify the parking inventory by intended allocation, which accounts for the highest number of spaces designated for use by the patient/visitor group, and detailed in the Appendix of this report.

Table 1: Parking Supply (2017)

User	Capacity	% Total
Physicians (Hospital)	206	5.5%
Physicians (Linden Oaks)	15	0.4%
Employees	1,105	29.5%
Employees (MOB 1)	120	3.2%
Employees (MOB 2)	120	3.2%
Patients/Visitors (ED)	12	0.3%
Ambulance (Employees)	4	0.1%
Public Safety/Charging/Valet	38	1.0%
Patients/Visitors	1,567	41.9%
Patients/Visitors (Fitness)	247	6.6%
Accessible (Patients/Visitors)	98	2.6%
Valet (Patients/Visitors)	156	4.2%
Outpatient (Patients/Visitors)	28	0.7%
Healy Pharmacy (Visitors)	2	0.1%
Contractors	6	0.2%
Service Vehicles	11	0.3%
Clergy (Visitors)	5	0.1%
Existing Parking Supply	3,740	100.0%

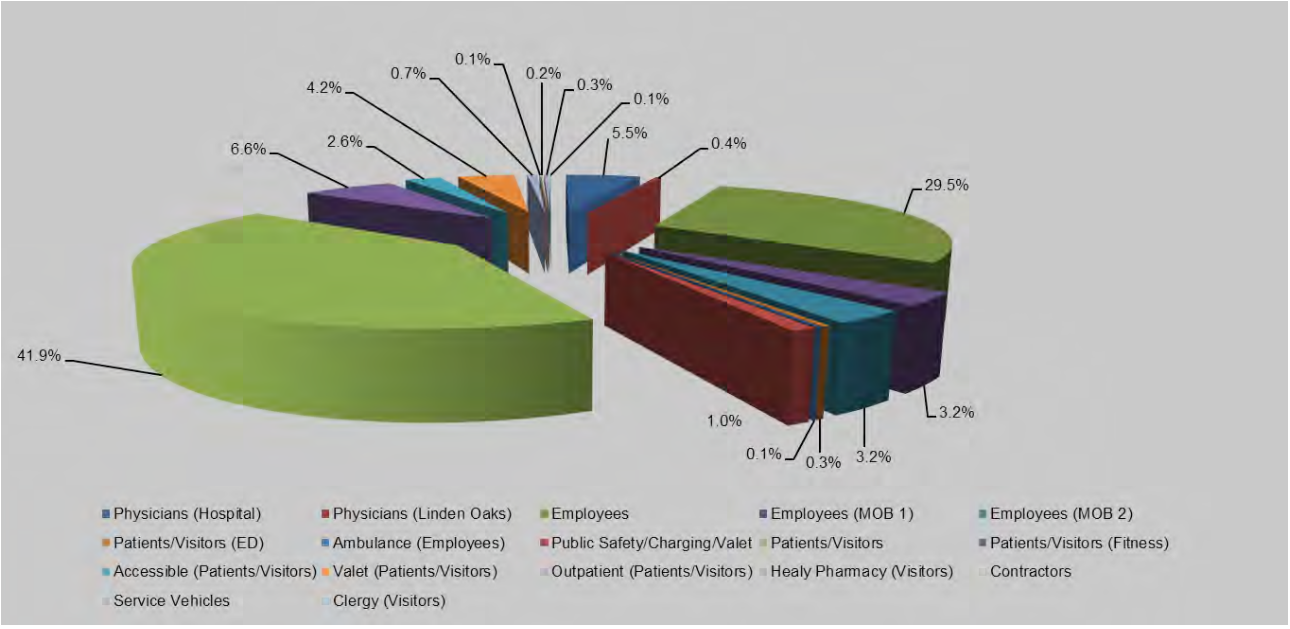
Source: Walker Parking Consultants & Edward Hospital

The System is comprised of two parking structures, seven surface parking lots and on-street spaces located on Brom and Osler Drives, which bisect the Hospital campus. An annual lease agreement is also in place with Our Saviour Lutheran Church for the use of 80 spaces in the church parking lot, which are used daily to accommodate valet and ED room patrons.

Walker's 2014 report identified a total parking supply of 3,720± spaces on the Naperville campus. When updating the supply count for the 2017 study, we field verified 3,740 spaces, noting the changes listed below to the supply compared to the 2014 inventory.

- North Structure – net gain of 25 spaces;
- Lot E – net loss of 16 spaces;
- Lot D – net gain of 25 spaces;
- Lot A/ED – net loss of 8 spaces;
- Linden Oaks Hospital – net loss of 4 spaces; and
- Osler/Brom On-Street – net loss of 2 spaces.

Figure 2: Parking Supply Distribution (2017)



Source: Walker Parking Consultants & Edward Hospital

EFFECTIVE PARKING SUPPLY

It is a generally accepted principle in parking supply/demand analyses that a parking supply operates at optimum efficiency when occupancy is no more than 85% to 95% of the total available spaces. Moreover, excess space will provide a "cushion" to accommodate the dynamics of vehicles moving into and out of parking spaces, and to reduce the time required to search for the last few available spaces within the system. This cushion also allows for daily, weekly and seasonal variations as well as vacancies created by restricting some locations to certain users, improperly parked vehicles, snow cover and/or minor construction projects.

When occupancy exceeds this level there may be delays in finding a space and users may be forced to park in an undesirable space at an uncomfortable walking distance, or they may even park improperly or illegally. Under these conditions, the parking supply can be perceived as inadequate, even though spaces are available.

Walker typically estimates the Effective Parking Supply ("Effective Supply") by applying an effective supply factor to the physical inventory of spaces within each parking area. The resulting Effective Supply is then used for analysis of parking adequacy rather than the actual total number of spaces. This cushion of spaces typically ranges from 5 to 15 percent, depending on the supply and type of end-users.

Using the conditions and parking patterns observed, we adjusted the patient/visitor designated spaces to 85 percent of capacity (effective supply factor = 0.85), assuming these patrons lack familiarity with the System. Spaces designated for Hospital staff and employee parking, as well as public safety/charging/valet spaces, were adjusted to 95 percent of capacity (effective supply factor = .95), while the valet, pharmacy, clergy, ambulance, and accessible parking spaces were not adjusted (effective supply factor = 1.00) based on the fact that these spaces are designated for specific end-users familiar with the System.

The parking inventory and resulting Effective Supply are summarized in *Table 2*. A detailed breakdown of the parking supply by parking area and user group can also be found in the Appendix. Assuming the previously discussed adjustment factors, the current effective parking supply for the System is estimated at 3,401± spaces.

Table 2: Effective Parking Supply

User	Capacity	% Total	Effective Supply
Physicians (Hospital)	206	5.5%	206
Physicians (Linden Oaks)	15	0.4%	14
Employees	1,105	29.5%	1,033
Employees (MOB 1)	120	3.2%	114
Employees (MOB 2)	120	3.2%	114
Patients/Visitors (ED)	12	0.3%	10
Ambulance (Employees)	4	0.1%	4
Public Safety/Charging/Valet	38	1.0%	36
Patients/Visitors	1,567	41.9%	1,358
Patients/Visitors (Fitness)	247	6.6%	210
Accessible (Patients/Visitors)	98	2.6%	98
Valet (Patients/Visitors)	156	4.2%	156
Outpatient (Patients/Visitors)	28	0.7%	24
Healy Pharmacy (Visitors)	2	0.1%	2
Contractors	6	0.2%	6
Service Vehicles	11	0.3%	11
Clergy (Visitors)	5	0.1%	5
Existing Parking Supply	3,740	100.0%	3,401

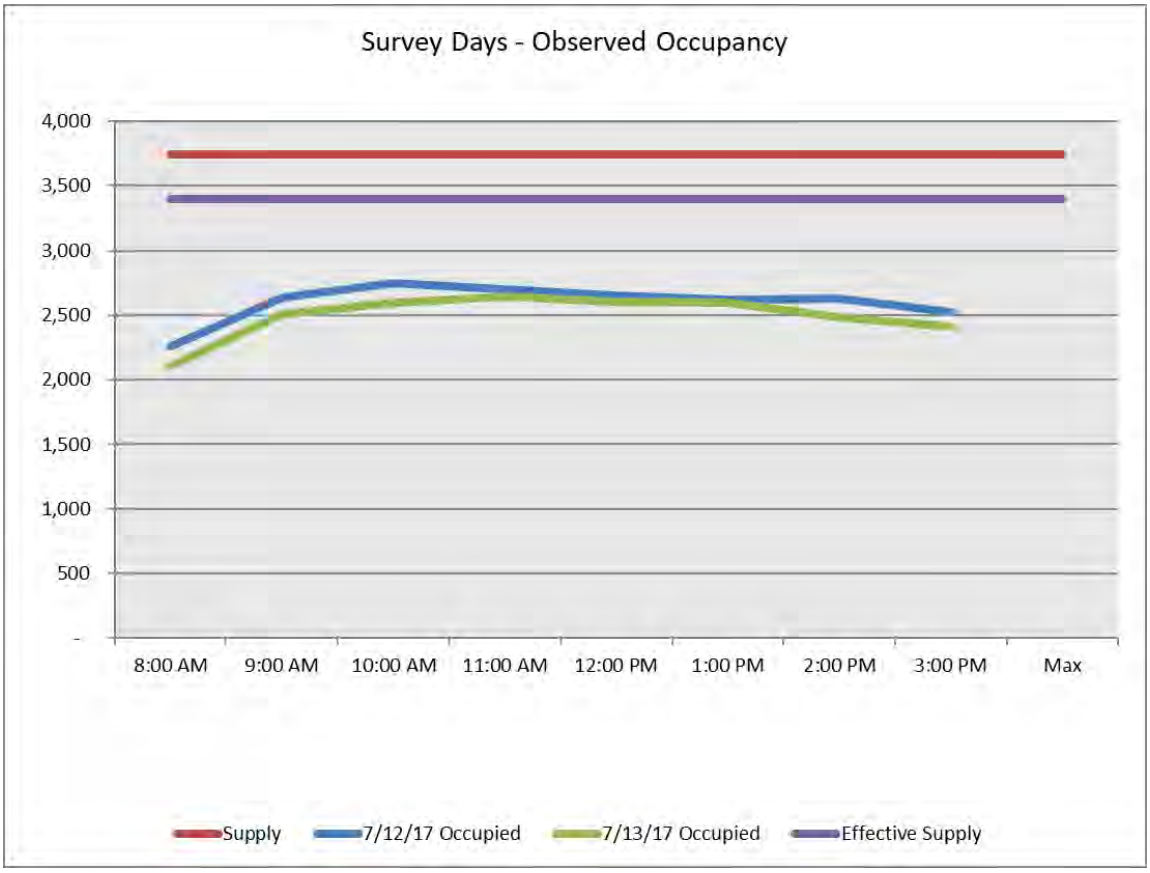
Source: Walker Parking Consultants – Field Survey

PARKING DEMAND - SURVEY DAY

Parking demand was determined through field observations by conducting occupancy counts on two typical weekdays. We observed the System and recorded occupancy counts throughout the study area beginning at 8:00 AM and ending with a final count at 3:00 PM on Wednesday (July 12th) and Tuesday (July 13th). Conducting hourly counts during this timeframe allows us to capture movements associated with shift changes as well as peak demand periods, and also provides us with a snapshot of existing conditions on the Survey Days.

Based on our analysis, peak parking occupancy observed was on July 12th when 2,751± vehicles were observed as parked within the System in the peak-hour (*Figure 3*). Actual hourly counts are detailed by Survey Day in the Appendix.

Figure 3: Parking Occupancy – Survey Days



Source: Walker Parking Consultants, field survey 2017

On the Survey Days it was difficult to determine with certainty whether individual spaces are used by employees, patients and/or visitors, as the only means of segregating parking areas is through the use of minimal directional signage that may or may not be adhered to by the end user. Given this fact, it's impossible to accurately determine specific parking demand ratios for each user group by area. Therefore, Walker developed the blended parking demand ratios shown herein for each user group in an effort to assess both existing and future conditions for the campus.

Some areas designated for reserved parking, as well as the lower levels of the North and South structures reached full capacity on the Survey Days. However, space was always available during each hour on the upper levels of the structures. Additionally, Lot B and the on-street spaces reached full capacity during some hours on each Survey Day.

Typically, as the parking demand nears the effective supply, users experience extended circulation time hunting for the remaining spaces, even though space is available on the upper levels of each structure. Furthermore, as each structure becomes more congested in the high-

demand areas (e.g. lower levels); the parking assignments designated through signage can break down. Consequently, it's reasonable to assume a co-mingling of user-groups exists within the System, because gates are not always present to regulate entrance to designated areas.

PARKING DEMAND – RATIOS

To accurately project parking supply requirements for the various end users, Walker compared the observed occupancy to the design statistics (e.g. number of physicians, employees, and patient activity) provided by the Hospital and shown in *Table 8.* Using this comparison, we developed parking demand ratios to project space requirements by user-group, which are intended to be representative of the overall parking demand.

In addition, since patient and visitor parking are unreserved and shared throughout the entire System, we also used population statistics for MOB I, MOB II and the Cancer Center to assess the overall demand. We divided the observed peak occupancy on each Survey Day by the user group statistic to develop a demand ratio for each individual user group. Subsequently, these ratios were used to model overall parking demand for current and future conditions.

The group population statistics, observed peak-hour parking demand (by user-group) and the resulting demand ratios developed for each Survey Day are shown in *Table 3* and *Table 4*.

Table 3: Parking Demand – Survey Day (Wednesday July 12th)

Survey Day - Wednesday July 12, 2017					
User Group	Size	Design Statistic [2]	Ratio	Unit	Demand [3]
Physicians (Hospital)		1,329	0.15	spaces/ physician	196
Physicians (Linden Oaks)		40	0.28	spaces/ physician	11
Sub-Total - Physicians		1,369	0.15		207
Full Time Employees (Hospital)		2,732	0.16	spaces/ employee	428
Part Time Employees (Hospital)		914	0.16	spaces/ employee	143
Employees (MOB 1)		147	0.42	spaces/ employee	62
Employees (MOB 2)		180	0.26	spaces/ employee	47
Employees (Cancer Center)		60	0.17	spaces/ employee	10
[1] Employees (Other)		694	0.16	spaces/ employee	109
Staff (Linden Oaks)		339	0.16	spaces/ employee	54
Service Vehicles		11	1.00	spaces/ vehicle	11
Sub-Total - Employees/Staff		5,077	0.17		864
Inpatients (Hospital)		261	0.98	spaces/ bed	256
Outpatients (Hospital)		788	0.98	spaces/ daily outpatient	773
Inpatients (Linden Oaks)		69	0.98	spaces/ bed	68
Outpatients (Linden Oaks)		17	0.98	spaces/ daily outpatient	17
Emergency Department (Hospital)		160	0.98	spaces/ daily ED patient	157
Patients/Visitors (MOB 1)		113	0.98	spaces/ patients-visitors	111
Patients/Visitors (MOB 2)		132	0.98	spaces/ patients-visitors	130
Patients/Visitors (Cancer Center)		35	0.98	spaces/ patients-visitors	34
Patients/Visitors (Fitness)		43	3.04	spaces/employee	132
Sub-Total - Patients/Visitors		1,618	1.04		1,677
Total		8,064	0.34		2,748

Footnotes:
[1] Includes students, volunteers and contract employees.
[2] Information provided by the Hospital.
[3] Peak-hour demand statistic on Survey Day.

Source: Walker Parking Consultants, Field Survey

Table 4: Parking Demand – Survey Day (Thursday July 13th)

Survey Day - Thursday July 13, 2017					
User Group	Size	Design Statistic [2]	Ratio	Unit	Demand [3]
Physicians (Hospital)		1,329	0.13	spaces/ physician	175
Physicians (Linden Oaks)		40	0.20	spaces/ physician	8
Sub-Total - Physicians		1,369	0.13	spaces/ physician	183
Full Time Employees (Hospital)		2,732	0.16	spaces/ employee	450
Part Time Employees (Hospital)		914	0.17	spaces/ employee	151
Employees (MOB 1)		147	0.30	spaces/ employee	44
Employees (MOB 2)		180	0.26	spaces/ employee	46
Employees (Cancer Center)		60	0.17	spaces/ employee	10
[1] Employees (Other)		694	0.17	spaces/ employee	115
Staff (Linden Oaks)		339	0.17	spaces/ employee	56
Service Vehicles		11	1.00	spaces/ vehicle	11
Sub-Total - Employees/Staff		5,077	0.17	spaces/ employee	883
Inpatients (Hospital)		270	0.88	spaces/ bed	236
Outpatients (Hospital)		764	0.88	spaces/ daily outpatient	668
Inpatients (Linden Oaks)		77	0.88	spaces/ bed	67
Outpatients (Linden Oaks)		10	0.88	spaces/ daily outpatient	9
Emergency Department (Hospital)		183	0.88	spaces/ daily ED patient	160
Patients/Visitors (MOB 1)		113	0.88	spaces/ patients-visitors	99
Patients/Visitors (MOB 2)		132	0.88	spaces/ patients-visitors	116
Patients/Visitors (Cancer Center)		35	0.88	spaces/ patients-visitors	31
Patients/Visitors (Fitness)		43	4.33	spaces/employee	188
Sub-Total - Patients/Visitors		1,627	0.97		1,574
Total		8,073	0.33		2,640

Footnotes:
[1] Includes students, volunteers and contract employees.
[2] Information provided by the Hospital.
[3] Peak-hour demand statistic on Survey Day.

Source: Walker Parking Consultants, Field Survey

PARKING DEMAND - DESIGN DAY

At many hospitals the number of physicians and employees fluctuates only slightly from day to day during a typical week, regardless of the level of patient activity. However, the area affected most by various levels of activity is typically the number of spaces needed to accommodate the patient and/or visitor parking demand.

Using census information provided by the Hospital regarding the number of licensed beds in service, outpatient, and emergency department ("ED") activity over the past year, we adjusted the Survey Day data to reflect a peak level of activity known as the Design Day. This level of activity and parking demand is equivalent to a very busy day that may occur once or twice monthly. Furthermore, we recommend that hospitals design their Systems to accommodate the Design Day (95th percentile) level of activity and parking demand.

Walker evaluated census data provided for the fiscal year (July 14, 2016 through July 13, 2017) to determine the 95th percentile of bed census, outpatient, and ED activity. In the table below we compare the census statistics for the Survey Days to the Design Day (95th percentile) included in the fiscal year census data.

Table 5: Hospital Census Data

Category	Bed Census at Midnight		On-Campus Outpatient Visits		
	Edward	Linden Oaks	Emergency [3]	Edward OP	Linden Oaks OP
Average/Day [1]	247	85	197	605	9
Survey Day (7/12/17)	261	69	160	788	17
Survey Day (7/13/17)	270	77	183	764	10
Design Day [2]	288	98	226	914	17

Notes:
[1] 7/14/16 to 7/13/16 average/day 365 days/year.
[2] Design Day represents the 95th Percentile of activity.
[3] Includes ED visits, plus patients admitted to an inpatient/observation bed.

Source: Walker Parking Consultants and Edward Hospital

We projected the Design Day statistics and parking demand ratios using the peak-hour demand ratio for each user-group on the Survey Days. The peak-hour parking demand projection for the Design Day, using the peak-hour demand ratio for each user-group, is 3,088± (*Table 6).*

Table 6: Parking Demand – Design Day (95th Percentile of Activity)

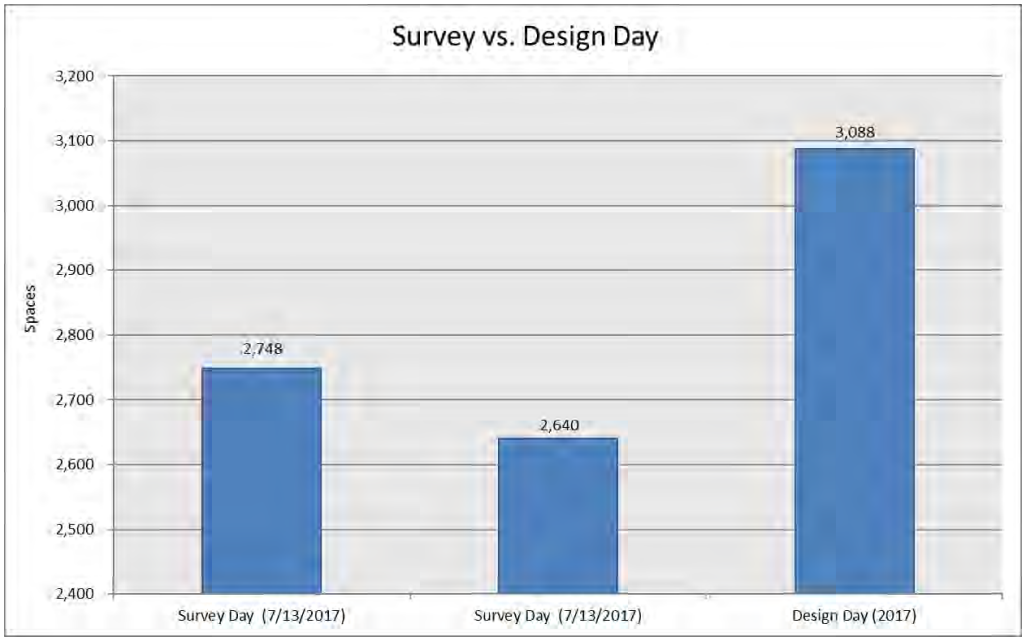
Design Day - 95th Percentile					
User Group	Size	Design Statistic [2]	Ratio [3]	Unit	Demand [4]
Physicians (Hospital)		1,329	0.15	spaces/ physician	196
Physicians (Linden Oaks)		40	0.28	spaces/ physician	11
Sub-Total - Physicians		1,369	0.15	spaces/ physician	207
Full Time Employees (Hospital)		2,732	0.16	spaces/ employee	450
Part Time Employees (Hospital)		914	0.17	spaces/ employee	151
Employees (MOB 1)		147	0.42	spaces/ employee	62
Employees (MOB 2)		180	0.26	spaces/ employee	47
Employees (Cancer Center)		74	0.17	spaces/ employee	12
[1] Employees (Other)		694	0.17	spaces/ employee	115
Staff (Linden Oaks)		339	0.17	spaces/ employee	56
Service Vehicles		11	1.00	spaces/ vehicle	11
Sub-Total - Employees/Staff		5,091	0.18	spaces/ employee	904
Inpatients (Hospital)		288	0.98	spaces/ bed	283
Outpatients (Hospital)		914	0.98	spaces/ daily outpatient	897
Inpatients (Linden Oaks)		98	0.98	spaces/ bed	96
Outpatients (Linden Oaks)		17	0.98	spaces/ daily outpatient	17
Emergency Department (Hospital)		226	0.98	spaces/ daily ED patient	222
Patients/Visitors (MOB 1)		113	0.98	spaces/ patients-visitors	111
Patients/Visitors (MOB 2)		132	0.98	spaces/ patients-visitors	130
Patients/Visitors (Cancer Center)		35	0.98	spaces/ patients-visitors	34
Patients/Visitors (Fitness)		43	4.33	spaces/employee	188
Sub-Total - Patients/Visitors		1,866	1.06		1,977
Total		8,326	0.37		3,088

Footnotes:
[1] Includes students, volunteers and contract employees.
[2] Represents 95th percentile of daily census and MOB surveys provided by the Hospital.
[3] Peak-hour demand ratio for each user-group on the Survey Days.
[4] Represents peak-hour demand statistic on Survey Day.

Source: Walker Parking Consultants

The projected Design Day peak demand of 3,088± vehicles represents an increase of 340± vehicles when compared to the peak of peaks demand observed on Survey Days, as shown below in *Figure 4*.

Figure 4: Parking Demand – Survey and Design Days



Source: Walker Parking Consultants

PARKING ADEQUACY - DESIGN DAY

The term "Parking Adequacy" is defined as the ability of the parking supply to accommodate the projected Design Day peak demand. Moreover, a positive or negative remainder when compared to the effective supply indicates a parking surplus or deficit within the System.

Based on Walker's analysis, when the effective supply is compared to the Design Day peak-hour demand projection, a surplus of 313± spaces exists. Therefore, the System should adequately accommodate current peak-hour demand conditions, as shown in *Table 7* and *Figure 5*.

Table 7: Parking Adequacy

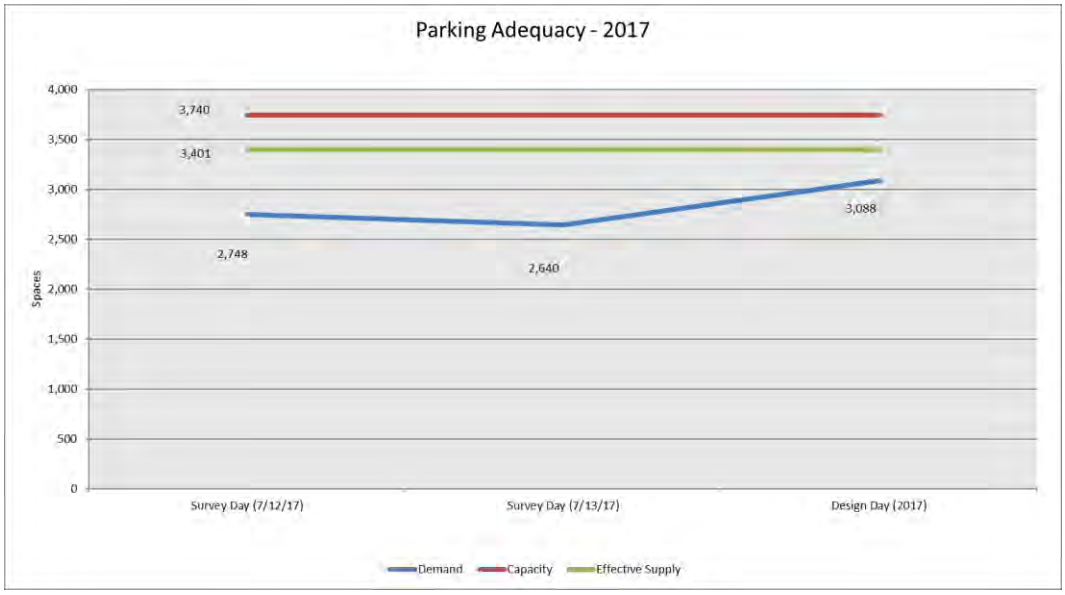
Survey Day Wednesday July 12, 2017					
User Group	Capacity	Demand	Surplus/(Deficit)	Effective Supply	Surplus/(Deficit)
Patients/Visitors	2,141	1,677	464	1,889	212
Employees	1,378	864	514	1,292	428
Physicians	221	207	14	220	13
Total	3,740	2,748	992	3,401	653

Survey Day Thursday July 13, 2017					
User Group	Capacity	Demand	Surplus/(Deficit)	Effective Supply	Surplus/(Deficit)
Patients/Visitors	2,141	1,574	567	1,889	315
Employees	1,378	883	495	1,292	409
Physicians	221	183	38	220	37
Total	3,740	2,640	1,100	3,401	761

Design Day *95th Percentile*					
User Group	Capacity	Demand	Surplus/(Deficit)	Effective Supply	Surplus/(Deficit)
Patients/Visitors	2,141	1,977	164	1,889	(88)
Employees	1,378	904	474	1,292	388
Physicians	221	207	14	220	13
Total	3,740	3,088	652	3,401	313

Source: Walker Parking Consultants

Figure 5: Parking Adequacy (Survey Days and Design Day)



Source: Walker Parking Consultants

FUTURE CONDITIONS

The assumptions used by Walker to project future conditions are predicated upon programming for the East Building Addition provided by the Hospital and M&CA (inset), and general growth attributed to the Hospital Master Plan (*Table 17*, Appendix).

East Building Addition	
Unassigned	3,702 SF
Future P/V	3,336 SF
Midwest Heart Clinic	8,525 SF
Midwest Heart CSA Clinic	1,414 SF
Vein Clinic	1,200 SF
Midwest Heart Administration Area	9,935 SF
[1] Relocated Administrative Offices	2,648 SF
Total	28,112 SF

[1] Not included in total addition square footage

Table 8: Design Statistics

	Survey Day	*Survey Day*	*Design Day*	*Future* (2)
Hospital Design Statistics	*7/12/2017*	*7/13/2017*	*95th Percentile*	2022
Edward Hospital:				
Total Number of Licensed Beds	354	354	354	388
Total Beds in Service	372	372	372	401
Bed Census	261	270	288	317
% of Total Licensed Beds	74%	76%	81%	82%
Payroll:				
Full Time Employees	2,732	2,732	2,732	2,814
Part Time Employees	914	914	914	941
Staff Physicians	1,329	1,329	1,329	1,369
Students	184	184	184	190
Volunteers	510	510	510	525
Patients/Visitors:				
ED Visits (daily)	160	183	226	237
Outpatient Visits (daily)	788	764	914	983
MOB I:				
Physicians	46	46	46	47
Employees	101	101	101	104
Patients/Visitors	113	113	113	116
MOB II:				
Physicians	74	74	74	76
Employees	106	106	106	109
Patients/Visitors	132	132	132	136
Cancer Center:				
Physicians	14	14	14	14
Employees	60	60	60	62
Patients/Visitors	35	35	35	36
East Building Addition (4)				
Total Square Footage				28,112
4 spaces/ksf (4.0/ksf)				112
Linden Oaks Hospital:				
Total Number of Licensed Beds	108	108	108	108
Total Beds in Service	108	108	108	108
Bed Census	69	77	98	86
Outpatient Visits	17	10	17	17
Staff (3)	339	339	339	349
Physicians (3)	40	40	40	41
Health & Fitness Center (1)	43	43	43	45

Notes:
(1) Based on FTE information provided by Hospital.
(2) Assume growth based upon projectsion provided by Hospital.
(3) Assume 379 FTE; 339 staff, plus 40 physicians.
(4) Demand ratio based on 80th percentile ITE Parking Generation 4th Edition

Source: Edward Hospital, Walker Parking Consultants

PARKING DEMAND – 2022

Assuming the previously discussed Hospital user-group statistics and parking demand ratios, the future Design Day (2022) parking demand is projected to be 3,348± vehicles. The projected future demand exceeds the current Design Day projected demand by 260± vehicles, as summarized in *Table 9*.

Table 9: Parking Demand – 2022 Design Day

2022 (Projected) Design Day - 95th Percentile					
User Group	Size	Design Statistic [2]	Ratio [3]	Unit	Demand [4]
Physicians (Hospital)		1,369	0.15	spaces/ physician	207
Physicians (Linden Oaks)		40	0.28	spaces/ physician	11
Sub-Total - Physicians		1,409	0.15	spaces/ physician	218
Full Time Employees (Hospital)		2,814	0.16	spaces/ employee	464
Part Time Employees (Hospital)		941	0.17	spaces/ employee	156
Employees (MOB 1)		151	0.42	spaces/ employee	64
Employees (MOB 2)		185	0.26	spaces/ employee	48
Employees (Cancer Center)		76	0.17	spaces/ employee	13
[1] Employees (Other)		715	0.17	spaces/ employee	118
Staff (Linden Oaks)		349	0.17	spaces/ employee	58
Service Vehicles		11	1.00	spaces/ vehicle	11
Sub-Total - Employees/Staff		5,243	0.18	spaces/ employee	931
Inpatients (Hospital)		317	0.98	spaces/ bed	311
Outpatients (Hospital)		983	0.98	spaces/ daily outpatient	964
Inpatients (Linden Oaks)		86	0.98	spaces/ bed	84
Outpatients (Linden Oaks)		17	0.98	spaces/ daily outpatient	17
Emergency Department (Hospital)		237	0.98	spaces/ daily ED patient	233
Patients/Visitors (MOB 1)		116	0.98	spaces/ patients-visitors	114
Patients/Visitors (MOB 2)		136	0.98	spaces/ patients-visitors	133
Patients/Visitors (Cancer Center)		36	0.98	spaces/ patients-visitors	35
Patients/Visitors (Fitness)		45	4.33	spaces/employee	194
Sub-Total - Patients/Visitors		1,974	1.06		2,086
East Building Addition [5]	28,112	112		spaces/ ksf	112
Total		8,626	0.39		3,348

Footnotes:
[1] Includes students, volunteers and contract employees.
[2] Represents 95th percentile of daily census and MOB surveys provided by the Hospital.
[3] Peak-hour demand ratio for each user-group on the Survey Days.
[4] Represents peak-hour demand statistic on Survey Day.
[5] East Building square footage provided by M&CA; parking ratio of 4.0/ksf based on 80th percentile ITE Parking Generation 4th E

Source: Walker Parking Consultants

PARKING ADEQUACY – FUTURE

The future Design Day parking demand is projected at 3,348± vehicles. The future parking supply will increase by 26 spaces with the redesign of the North Parking Garage entrance and North Entry (3,766 spaces). When compared to the future effective supply (3,423 spaces), the future peak-hour demand projection will result in a surplus of approximately 75± spaces. Therefore, the System should retain the capacity to accommodate future peak-hour demand conditions.

Table 10: Parking Adequacy – 2022 Design Day

Future					
User Group	Capacity	Demand	Surplus/(Deficit)	Effective Supply	Surplus/(Deficit)
Patients/Visitors	2,167	2,086	81	1,911	(175)
Employees	1,378	931	447	1,292	361
Physicians	221	218	3	220	2
East Building Addition	0	112	(112)	0	(112)
Total	3,766	3,348	418	3,423	75

Source: Walker Parking Consultants

PARKING ADEQUACY – FUTURE SCENARIO 2

The Hospital is also considering future plans that include possibly constructing two additional floors on the aforementioned East Building addition ("Scenario 2"). The additional floors would include 7,382 square feet of unassigned area on the 3rd floor and 11,349 square feet of unassigned area on the 4th floor, according to M&CA.

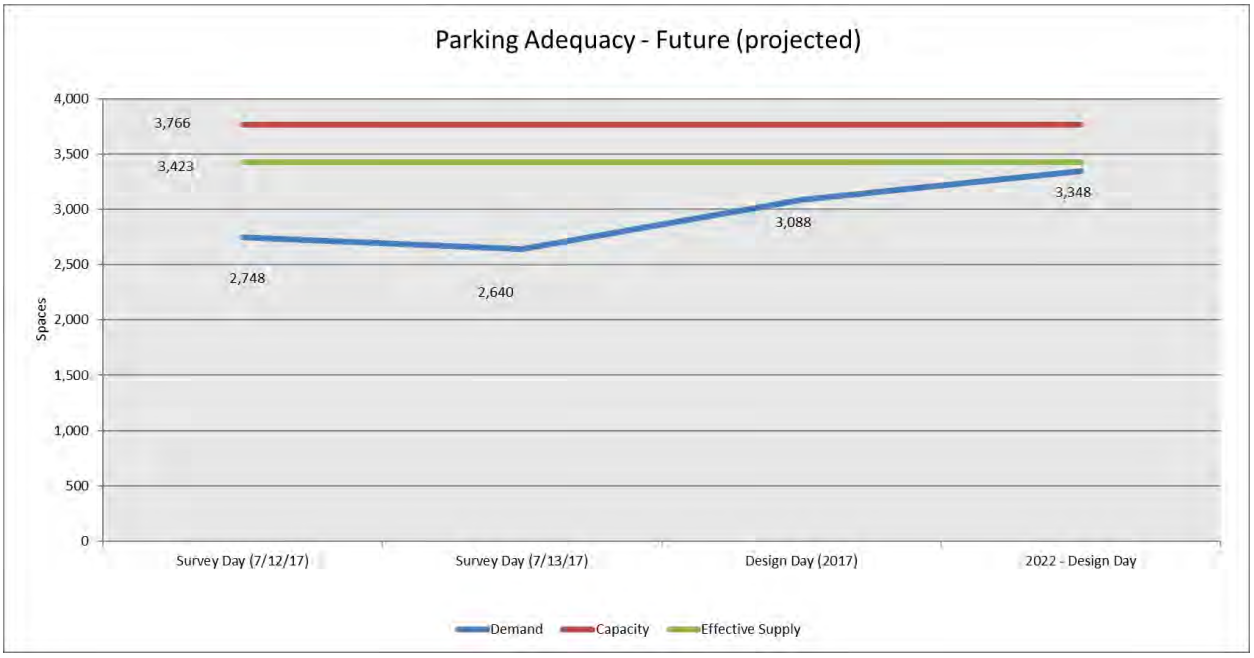
East Building Addition	
Unassigned	3,702 SF
Future P/V	3,336 SF
Midwest Heart Clinic	8,525 SF
Midwest Heart CSA Clinic	1,414 SF
Vein Clinic	1,200 SF
Midwest Heart Administration Area	9,935 SF
[1] Relocated Administrative Offices	2,648 SF
Scenario 2: 3rd Floor Expansion	7,382 SF
Scenario 2: 4th Floor Expansion	11,349 SF
Total	46,843 SF

When the same methodology and demand ratios are applied to Scenario 2, the future peak-hour parking demand is projected at 3,423± vehicles. When compared to the future effective supply (3,423 spaces), the projected peak-hour demand results in the System functioning at full capacity. However, if the future peak-hour demand projection for Scenario 2 is compared to the full parking supply, a surplus of 343± spaces is projected in the future.

PARKING ADEQUACY COMPARISON

A summary comparison of the parking adequacy for the Survey Days, Design Day, and Future Design Day are shown below in *Figure 6*.

Figure 6: Parking Adequacy Comparison



Source: Walker Parking Consultants

When the future Design Day peak-hour demand projection is compared to the future effective parking supply, a surplus will exist. Therefore, the System should be able to accommodate the future demand conditions projected in Walker's analysis.

The future surplus (75±) is calculated by comparing the future peak-hour demand projection to an effective parking supply that is about 9% (343± spaces) less than the actual System capacity. Moreover, the future surplus depicted most likely represents a conservative approach to calculating future adequacy. Finally, when the future peak-hour demand projection is compared to the full parking supply, a surplus of 418± spaces is projected.

APPENDIX

WALKER
PARKING CONSULTANTS

PROJECT NO. 31-8208.00 AUGUST 2017

Table 11: Parking Supply (2017)

Facility (2017 Supply)	Type	User Group	Capacity	Eff. Supply Factor	Effective Supply
North Structure/Ground Level:	Reserved	Physicians (Hospital)	71	1.00	71
	Cancer Center	Patients/Visitors	37	0.85	31
	Reserved	Valet (Patients/Visitors)	58	1.00	58
	Reserved	Healy Pharmacy (Visitors)	2	1.00	2
	Accessible	Accessible (Patients/Visitors)	22	1.00	22
	Reserved	Clergy (Visitors)	3	1.00	3
	Regular	Patients/Visitors	23	0.85	20
	Reserved	Service Vehicles	8	1.00	8
Level 1:	Regular	Patients/Visitors	218	0.85	185
	Reserved	Physicians (Hospital)	39	1.00	39
	Accessible	Accessible (Patients/Visitors)	9	1.00	9
Level 2:	Reserved	Employees (MOB 1)	120	0.95	114
	Regular	Patients/Visitors	177	0.85	150
Level 3:	Reserved	Employees (MOB 2)	120	0.95	114
	Regular	Patients/Visitors	195	0.85	166
Level 4 (roof):	Regular	Patients/Visitors	346	0.85	294
Sub-total (North Structure)			1,448	0.89	1,286
South Structure/Level 1:	Accessible	Accessible (Patients/Visitors)	19	1.00	19
	Reserved	Public Safety/Charging/Valet	38	0.95	36
	Reserved	Physicians (Hospital)	62	1.00	62
Level 2:	Reserved	Outpatient (Patients/Visitors)	28	0.85	24
	Accessible	Accessible (Patients/Visitors)	8	1.00	8
	Regular	Patients/Visitors	78	0.85	66
	Reserved	Patients/Visitors (ED)	12	0.85	10
	Reserved	Clergy (Visitors)	2	1.00	2
Level 3:	Accessible	Physicians (Hospital)	34	1.00	34
	Regular	Accessible (Patients/Visitors)	7	1.00	7
	Regular	Patients/Visitors	173	0.85	147
Level 4:	Accessible	Accessible (Patients/Visitors)	3	0.85	3
Level 5:	Regular	Patients/Visitors	168	1.00	168
	Reserved	Employees	228	0.95	217
Top Level:	Reserved	Employees	117	0.95	111
Sub-total (South Structure)			977	0.94	914
Lot E:	Accessible	Accessible (Patients/Visitors)	11	1.00	11
	Regular	Patients/Visitors (Fitness)	247	0.85	210
	Reserved	Valet (Patients/Visitors)	18	1.00	18
Sub-total (Lot E)			276	0.87	239
Lot D:	Regular	Employees	72	0.70	50
	Regular	Contractors	6	0.95	6
Sub-total (Lot D)			78	0.72	56
Lot C:	Regular	Employees	389	0.95	370
Sub-total (Lot C)			389	0.95	370
Lot B:	Accessible	Accessible (Patients/Visitors)	11	1.00	11
	Regular	Employees	197	0.95	187
	Reserved (Rehab.)	Patients/Visitors	0	1.00	0
	Reserved (IVF)	Employees	23	1.00	23
Sub-total (Lot B)			231	0.96	221
Lot A /ED:	Reserved	Patients/Visitors	12	1.00	12
	Accessible	Accessible (Patients/Visitors)	1	1.00	1
	Reserved	Ambulance (Employees)	4	1.00	4
Sub-total (Lot A/ED)			17	1.00	17
Off-Site - Church Lot [1]	Emergency Rm. (Valet)	Valet (Patients/Visitors)	80	1.00	80
Sub-total (Church Lot)			80	1.00	80
Linden Oaks Hospital:	Accessible	Accessible (Patients/Visitors)	7	1.00	7
	Regular	Patients/Visitors	140	0.85	119
	Reserved	Physicians (Linden Oaks)	15	0.95	14
	Reserved	Service Vehicles	3	0.95	3
Sub-total (Linden Oaks Hospital)			165	0.87	143
On-Street					
On-street/Osler Drive	Regular	Employees	68	0.95	65
On-street/Brom Drive	Regular	Employees	11	0.95	10
Sub-total (On-street)			79	0.95	75
Total			3,740	0.91	3,401

Footnotes:
[1] Spaces used per an annual lease agreement with Our Saviour Lutheran Church.

Source: Walker Parking Consultants

Table 12: Parking Supply 2022 (Projected)

Facility (2022 Supply)	Type	User Group	Capacity	Eff. Supply Factor	Effective Supply
North Structure/Ground Level:	Reserved	Physicians (Hospital)	71	1.00	71
	Cancer Center	Patients/Visitors	37	0.85	31
	Reserved	Valet (Patients/Visitors)	58	1.00	58
	Reserved	Healy Pharmacy (Visitors)	2	1.00	2
	Accessible	Accessible (Patients/Visitors)	22	1.00	22
	Reserved	Clergy (Visitors)	3	1.00	3
	Regular	Patients/Visitors	43	0.85	37
	Reserved	Service Vehicles	8	1.00	8
Level 1:	Regular	Patients/Visitors	218	0.85	185
	Reserved	Physicians (Hospital)	39	1.00	39
	Accessible	Accessible (Patients/Visitors)	9	1.00	9
Level 2:	Reserved	Employees (MOB 1)	120	0.95	114
	Regular	Patients/Visitors	177	0.85	150
Level 3:	Reserved	Employees (MOB 2)	120	0.95	114
	Regular	Patients/Visitors	195	0.85	166
Level 4 (roof):	Regular	Patients/Visitors	346	0.85	294
Sub-total (North Structure)			1,468	0.89	1,303
South Structure/Level 1:	Accessible	Accessible (Patients/Visitors)	19	1.00	19
	Reserved	Public Safety/Charging/Valet	38	0.95	36
	Reserved	Physicians (Hospital)	62	1.00	62
Level 2:	Reserved	Outpatient (Patients/Visitors)	28	0.85	24
	Accessible	Accessible (Patients/Visitors)	8	1.00	8
	Regular	Patients/Visitors	78	0.85	66
	Reserved	Patients/Visitors (ED)	12	0.85	10
	Reserved	Clergy (Visitors)	2	1.00	2
Level 3:	Accessible	Physicians (Hospital)	34	1.00	34
	Regular	Accessible (Patients/Visitors)	7	1.00	7
	Regular	Patients/Visitors	173	0.85	147
Level 4:	Accessible	Accessible (Patients/Visitors)	3	0.85	3
Level 5:	Regular	Patients/Visitors	168	1.00	168
	Reserved	Employees	228	0.95	217
Top Level:	Reserved	Employees	117	0.95	111
Sub-total (South Structure)			977	0.94	914
Lot E:	Accessible	Accessible (Patients/Visitors)	11	1.00	11
	Regular	Patients/Visitors (Fitness)	247	0.85	210
	Reserved	Valet (Patients/Visitors)	18	1.00	18
Sub-total (Lot E)			276	0.87	239
Lot D:	Regular	Employees	72	0.70	50
	Regular	Contractors	6	0.95	6
Sub-total (Lot D)			78	0.72	56
Lot C:	Regular	Employees	389	0.95	370
Sub-total (Lot C)			389	0.95	370
Lot B:	Accessible	Accessible (Patients/Visitors)	11	1.00	11
	Regular	Employees	197	0.95	187
	Reserved (Rehab.)	Patients/Visitors	0	1.00	0
	Reserved (IVF)	Employees	23	1.00	23
Sub-total (Lot B)			231	0.96	221
Lot A /ED:	Reserved	Patients/Visitors	12	1.00	12
	Accessible	Accessible (Patients/Visitors)	1	1.00	1
	Reserved	Ambulance (Employees)	4	1.00	4
Sub-total (Lot A/ED)			17	1.00	17
Off-Site - Church Lot [1]	Emergency Rm. (Valet)	Valet (Patients/Visitors)	80	1.00	80
Sub-total (Church Lot)			80	1.00	80
Linden Oaks Hospital:	Accessible	Accessible (Patients/Visitors)	7	1.00	7
	Regular	Patients/Visitors	140	0.85	119
	Reserved	Physicians (Linden Oaks)	15	0.95	14
	Reserved	Service Vehicles	3	0.95	3
Sub-total (Linden Oaks Hospital)			165	0.87	143
On-Street					
On-street/Osler Drive	Regular	Employees	68	0.95	65
On-street/Brom Drive	Regular	Employees	11	0.95	10
On-street North Entry	Regular	Patients/Visitors	6	0.85	5
Sub-total (On-street)			85	0.94	80
Total			3,766	0.91	3,423

Footnotes:
[1] Spaces used per an annual lease agreement with Our Saviour Lutheran Church.

Source: Walker Parking Consultants

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Table 13: Parking Occupancy (Survey Days)

Summary - All Locations - Thursday July 13, 2017										
All Locations - Combined	Supply	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	Max
Physicians (Hospital)	206	191	195	196	198	196	195	188	175	198
Physicians (Linden Oaks)	15	7	8	11	8	8	8	6	3	11
Sub Total	221	198	203	207	206	204	203	194	178	207
Valet (Patient/Visitors)	-	21	78	110	127	112	106	101	97	127
Patients/Visitors	1,567	1,031	1,242	1,309	1,256	1,239	1,226	1,298	1,266	1,309
Accessible (Patients/Visitors)	98	49	63	71	65	68	77	72	70	77
Healy Pharmacy (Visitors)	2	2	2	2	-	-	-	1	1	2
Public Safety/Charging/Valet	38	8	18	17	20	21	24	25	12	25
Patients/Visitors (ED)		8	10	10	8	8	10	10	9	10
Outpatient (Patients/Visitors)		19	24	24	26	25	25	25	27	27
Clergy (Visitors)	5	-	3	2	2	1	3	5	3	5
Patients/Visitors (Fitness)		116	146	132	124	115	92	71	107	146
Sub Total	1,710	1,254	1,586	1,677	1,628	1,589	1,563	1,608	1,592	1,677
Employees	1,105	701	725	743	748	740	730	710	641	748
Employees (MOB 1)	120	50	46	62	57	54	55	54	49	62
Employees (MOB 2)	120	43	61	47	47	48	50	49	43	61
Service Vehicles	11	11	11	11	11	11	11	11	11	11
Contractors	6	1	4	3	2	2	3	3	3	4
Ambulance (Employees)	4	1	1	1	1	1	2	2	2	2
Sub Total	1,366	807	848	867	866	856	851	829	749	867
Total	3,297	2,259	2,637	2,751	2,700	2,649	2,617	2,631	2,519	2,751

Summary - All Locations - Thursday July 13, 2017									
All Locations - Combined	Supply	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM
Physicians (Hospital)	206	160	179	177	175	170	171	145	161
Physicians (Linden Oaks)	15	4	7	6	8	8	7	9	9
Sub Total	221	164	186	183	183	178	178	154	170
Valet (Patient/Visitors)	-	37	68	85	90	98	114	90	73
Patients/Visitors	1,567	954	1,107	1,122	1,163	1,167	1,181	1,197	1,181
Accessible (Patients/Visitors)	98	51	71	72	74	76	82	79	72
Healy Pharmacy (Visitors)	2	-	-	1	1	-	-	1	1
Public Safety/Charging/Valet	38	8	12	20	21	20	18	25	23
Patients/Visitors (ED)		12	12	11	12	12	12	12	12
Outpatient (Patients/Visitors)		15	20	22	22	22	18	22	17
Clergy (Visitors)	5	-	1	4	3	3	4	3	3
Patients/Visitors (Fitness)		123	169	184	188	144	106	86	84
Sub Total	1,710	1,200	1,460	1,521	1,574	1,542	1,535	1,515	1,466
Employees	1,105	653	753	784	782	778	775	708	679
Employees (MOB 1)	120	38	46	42	44	44	47	49	44
Employees (MOB 2)	120	37	45	46	46	46	44	45	40
Service Vehicles	11	11	11	11	11	11	11	11	11
Contractors	6	3	3	4	4	2	1	2	1
Ambulance (Employees)	4	1	-	2	2	2	1	2	2
Sub Total	1,366	743	858	889	889	883	879	817	777
Total	3,297	2,107	2,504	2,593	2,646	2,603	2,592	2,486	2,413

Source: Walker Parking Consultant

Table 14: Medical Office Building I – Survey Summary

Edward Hospital
MOB I Summary
July 2017
Number of Physicians = 46

	Morning					Afternoon				
Day of Week	No. of Phys.	No. of Employees	No. of Employees Who Drive	Avg. No. of Patients Present at one time	Peak No. Patients Present at one time	No. of Phys.	No. of Employees	No. of Employees Who Drive	Avg. No. of Patients Present at one time	Peak No. Patients Present at one time
Monday	27	98	98	56	108	28	98	98	55	107
Tuesday	28	97	97	58	108	30	101	101	57	107
Wednesday	30	100	100	62	113	29	100	100	61	112
Thursday	26	94	94	54	100	27	97	97	55	107
Friday	27	101	99	56	108	26	94	94	55	107

Table 15: Medical Office Building II – Survey Summary

Edward Hospital
MOB II Summary
July 2017
Number of Physicians = 74

	Morning					Afternoon				
Day of Week	No. of Phys.	No. of Employees	No. of Employees Who Drive	Avg. No. of Patients Present at one time	Peak No. Patients Present at one time	No. of Phys.	No. of Employees	No. of Employees Who Drive	Avg. No. of Patients Present at one time	Peak No. Patients Present at one time
Monday	37	102	107	92	108	35	103	105	89	110
Tuesday	45	102	103	127	98	42	102	105	74	100
Wednesday	49	96	104	110	132	42	81	84	72	103
Thursday	38	102	105	74	94	37	103	104	70	95
Friday	42	108	111	101	118	40	105	106	93	115

Table 16: Cancer Center – Survey Summary

Edward Hospital
Cancer Center
July 2017
Number of Physicians = 14

	Morning					Afternoon				
Day of Week	No. of Phys.	No. of Employees	No. of Employees Who Drive	Avg. No. of Patients Present at one time	Peak No. Patients Present at one time	No. of Phys.	No. of Employees	No. of Employees Who Drive	Avg. No. of Patients Present at one time	Peak No. Patients Present at one time
Monday	14	60	60	35	35	14	60	60	35	35
Tuesday	14	60	60	35	35	14	60	60	35	35
Wednesday	14	60	60	35	35	14	60	60	35	35
Thursday	14	60	60	35	35	14	60	60	35	35
Friday	14	60	60	35	35	14	60	60	35	35

Source: Edward Hospital, MOB Surveys

Table 17: Hospital Statistics and Projected Growth Rates

Category	Design Day		FY2016 (July 2016 - June 2017)		5- Year Projection (12 months)	
	EDW	LOH	EDW	LOH	EDW	LOH
Total License Beds	354	108	354	108	388	108
Total Beds in Service (includes Observation beds)	372	108	372	108	401	108
Avg Daily census-includes Obs (at midnight)	288	77	246	85	271	86
OP visits (ex MOB)-On campus	914	10	607	9	652	10
ED reg- On campus (excl. Plainfield ED)* OP ED only	226	0	197	0	207	0

Category	EDW	LOH
	% Change - (5) Year Projection	
Avg Daily census-includes Obs (at midnight)	10.16%	1.46%
OP visits (ex MOB)-On campus	7.50%	4.99%
ED reg- On campus (excl. Plainfield ED)* OP ED only	5.00%	
General Growth per Hospital Master Plan	3.00%	3.00%

Source: Edward Hospital and Walker Parking Consultants

SCOPE OF SERVICES

A. Meet with the Project team to confirm study objectives, boundaries procedures and project schedule.

B. Review existing reports and studies pertinent to Edward Elmhurst Health parking.

C. Collect and review historical data supplied by Edward-Elmhurst Health via a "Background Information Survey" form.

D. Review plans for potential future development projects or other campus modifications with the Project Team.

E. Conduct an inventory of existing parking spaces to determine number, user assignment (employee/physician/visitor), time restrictions, etc. We anticipate a draft of the existing inventory will be provided by the Project Team for field verification.

F. Prepare medical office building suite survey form for distribution to each suite by Edward Elmhurst Health to determine peak presence of physicians, staff, and patients.

G. Consistent with the requirements set forth by the City of Naperville, conduct parking occupancy counts at hourly intervals on two typically busy days for all campus parking spaces to determine the pattern of parking utilization and identify/document unusual patterns. Occupancy counts will be recorded starting at 8:00 AM with the final count at 3:00 PM.

H. Develop a parking model to determine the present and future parking demand by user groups (physicians, patients, visitors, employees, etc.). this will be based on data gathered from Edward-Elmhurst Health and parking demand ratios developed from Walker's database of other medical facilities.

I. Determine the present and future parking supply and demand.

CLIENT RESPONSIBILITIES

- Hospital will provide statistical data required to complete the project in accordance with the proposed schedule.
- Hospital will provide a current AutoCAD or aerial site plan, as appropriate.
- Hospital will provide comments to the draft task reports within the agreed time frame.

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STATEMENT OF LIMITING CONDITIONS

This report is subject to the following limiting conditions:

1. This report is based on assumptions outside the control of Walker Parking Consultants/Engineers, Inc. ("Walker") and/or our client; therefore, Walker cannot guarantee the results.
2. The results and conclusions presented in this report may be dependent on future assumptions regarding the local, national, or international economy. These assumptions and resultant conclusions may be invalid in the event of war, terrorism, economic recession, rationing, or other events that may cause a significant change in economic conditions.
3. Walker assumes no responsibility for any events or circumstances that take place or change subsequent to the date of our field inspections.
4. Walker is not qualified to detect hazardous substances, has not considered such, and therefore urges the client to retain an expert in this field, if relevant to this study.
5. Sketches, photographs, maps and other exhibits included herein may not be of engineering quality or to a consistent scale, and should not be relied upon as such.
6. All information, estimates, and opinions obtained from parties not employed by Walker, are assumed to be accurate. We assume no liability resulting from information presented by the client or client's representatives, or received from third-party sources.
7. All mortgages, liens, encumbrances, leases, and servitudes have been disregarded unless specified otherwise. Unless noted, we assume that there are no encroachments, zoning violations, or building violations encumbering the subject property.
8. This report is to be used in whole and not in part. None of the contents of this report may be reproduced or disseminated in any form for external use by anyone other than our client without our written permission.
9. The projections presented in the analysis assume responsible ownership and competent management. Any departure from this assumption may have a negative impact on the conclusions.
10. Computer models that use and generate precise numbers generate some of the figures and conclusions presented in this report. The use of seemingly exact numbers is not intended to suggest a level of accuracy that may not exist. A reasonable margin of error may be assumed regarding most numerical conclusions. Conversely, some numbers are rounded and as a result some conclusions may be subject to small rounding errors.
11. This report was prepared by Walker Parking Consultants, Inc. All opinions, recommendations, and conclusions expressed during the course of this assignment are rendered by the staff of Walker Parking Consultants as employees, rather than as individuals.

ATTACHMENT 2