


**TECHNICAL MEMORANDUM  
PARKING STUDY**

**PENN MEDICINE PRINCETON HEALTH CAMPUS**  
Township Of Plainsboro, Middlesex County, New Jersey

*Prepared for*  
**PENN MEDICINE PRINCETON HEALTH**  
Township Of Plainsboro, New Jersey

*Prepared by*  
DTS Provident Design Engineering, LLP  
One North Broadway  
White Plains, New York

April 14, 2023  
REVISED: September 14, 2023  
REVISED: July 31, 2024  
DTS Provident Project No. 0905

  
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Charles (Carlito) S. Holt, P.E.  
New Jersey P.E. #24GE04890500  
Partner

## **TECHNICAL MEMORANDUM**

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TO:	Ms. Bonnie N. Flynn Director of Planning & Community Development	DATE:	April 14, 2023 Revised through 7/18/2024
FROM:	Carlito Holt, P.E., PTOE Partner	RE:	Parking Study Penn Medicine Princeton Health Campus, Plainsboro, NJ

### **Introduction**

DTS Provident Design Engineering, LLP (DTS Provident) has prepared this Technical Memorandum to summarize the evaluation of existing/future parking conditions at the Penn Medicine Princeton Health (PMPH) Campus located along Plainsboro Road and Campus Road in Plainsboro Township, Middlesex County, New Jersey. The purpose of this evaluation is to verify that the parking provisions are consistent with the Amended Redevelopment Plan.

The parking evaluation contained in this Technical Memorandum considers the number of parking spaces required at the existing Health and Medical Office Complex (HMOC) component of the Campus, which consists of the Hospital, Medical Office Building and the former Health/Fitness Center, as well as the future number of parking spaces required as part of the Cancer Center expansion to the HMOC.

Based upon the information contained herein, it is the considered professional opinion of DTS Provident that the parking ratio contained in the Amended Redevelopment Plan for Medical Office Building (4 spaces per 1,000 sf) will be more than adequate to accommodate the proposed Cancer Center expansion based on the comparison of parking ratios to other sources. Furthermore, the parking currently provided at the HMOC, combined with the additional parking spaces to be constructed, will meet the future overall parking needs of the HMOC.

### **Existing & Future Parking Requirements**

Based on the approved "Amended Preliminary and Final Major Site Plan" prepared by French & Parrello Associates on July 22, 2010, the total number of parking spaces required for the existing HMOC component of the Campus is 1,540 parking spaces. Recently, the approximately 48,000 square foot Health/Fitness Center portion of the HMOC was vacated and will be re-purposed via a portion of the proposed Cancer Center and fit-out of in the future to another healthcare-related space that is currently unknown at this time.

The proposed Cancer Center expansion would require four parking spaces for every 1,000 square feet of floor area. This parking ratio is based on the parking requirements contained in the Amended Redevelopment Plan for Medical Office space. Although the proposed Cancer Center would equal

approximately 200,000 square feet of total floor space, DTS Provident has taken into consideration the Township's interpretation of the parking requirement code that allows the facility size used in the required parking space calculations to be reduced by the amount of common space area (i.e., accessory/mechanical space). The total usable floor area for the proposed Cancer Center is based on the conceptual floor plans submitted by the Applicant.

DTS Provident took a similar approach with the future repurposing of the Health/Fitness Center space not displaced by Cancer Center expansion. Although the remaining portion of the Health/Fitness Center will equal approximately 32,000 square feet of total floor space, the Applicant has developed a conceptual clinical program for the remaining portion of the Health/Fitness Center space, identifying both usable and unusable space.

Copies of the conceptual layout plans for the proposed Cancer Center and re-purposed Health/Fitness Center are included in Attachment A. For purposes of this evaluation, DTS Provident utilized a space of 154,559 square feet for the proposed Cancer Center expansion (based on the conceptual floor plans prepared by the Applicant) and 28,210 square feet for the remaining portion of the Health/Fitness Center (based on the conceptual clinical program prepared by the Applicant) in determining the future parking requirements.

Using the required parking space parameters outlined above, the HMOC site would require a future parking space supply total of 2,272 parking spaces. This includes the 1,540 parking spaces that are required for the existing HMOC site and using a parking ratio of 4 parking spaces per 1,000 square feet for the 28,210 square foot re-purposed Health/Fitness Center space and the proposed 154,559 square foot Cancer Center expansion.

### **Existing & Future Parking Supply**

The Total Parking Supply currently provided at the HMOC site is 1,539 parking spaces contained within the various surface parking lots surrounding the HMOC site. As a result of the Cancer Center expansion, the previously approved multi-level Parking Garage will be constructed within an existing surface parking lot just north of the existing HMOC building to accommodate both the loss of parking spaces due to the Cancer Center expansion as well as the additional parking demand created by patrons/staff of the proposed Cancer Center. The proposed Parking Garage will consist of a total of 1,161 parking spaces. The number of parking spaces that will be displaced by the Cancer Center expansion is 176 parking spaces and the number of parking spaces that will be displaced by construction of the proposed Parking Garage is 182 parking spaces.

Combining the existing parking space supply at the HMOC site (1,539 spaces) with the additional parking space supply created by the proposed Parking Garage (1,161 spaces), while discounting the number of parking spaces displaced by the Cancer Center expansion (176 spaces) and Parking Garage construction (182 spaces), results in a total future parking space supply of 2,342 parking spaces for the HMOC site, which exceeds the required future parking space supply as outlined above by 70 parking spaces.

Table No. 1 below summarizes the existing/future parking space requirements and supply as described above.

<b>TABLE NO. 1</b> <b>PARKING REQUIREMENTS &amp; SUPPLY WITHOUT PARKING LOT P10</b> <b>PENN MEDICINE PRINCETON HEALTH, PLAINSBORO, NEW JERSEY</b>	
<b>Parking Demand/Supply</b>	<b>Number of Parking Spaces</b>
<b>Required HMOC Parking</b> (obtained from "Amended Preliminary and Final Major Site Plan", French & Parrello, 7/22/2010)	1,540
<b>Vacant Fitness Center Space not displaced by Cancer Center</b> (28,210 SF, see conceptual layout plan in Attachment A) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+113
<b>Required Cancer Center Expansion Parking</b> (Proposed 154,559 SF) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+619
<b>Total Parking Required</b>	2,272
<b>Existing Parking Supply (excluding Lot P10)</b>	1,539
<b>Additional Supply (Proposed Parking Garage)</b>	+1,161
<b>Displaced Parking Supply (due to Cancer Center expansion)</b>	-176
<b>Displaced Parking Supply (due to Parking Garage structure)</b>	-182
<b>Total Parking Supply</b>	2,342
<b>Excess Parking Capacity</b>	+70

Notes:

1. The displaced parking supply due to Cancer Center Expansion includes the spaces lost for the 10 landbanked parking spaces, thus providing a conservative analysis.
2. The total parking required takes no credit for provision of EV or EV Ready spaces, thus providing a conservative analysis.

Although not counted towards the parking space supply requirements contained in the Amended Redevelopment Plan, it is noted that the HMOC site also utilizes Parking Lot P10, typically referred to as the "Crescent Lot", located north of the HMOC in the Hospital Auxiliary District (HAD) to allow additional parking availability on the HMOC site to accommodate atypical surges in parking demand for less frequent hospital events (i.e. school bus accident that may bring a high number of parents to the Hospital).

Parking Lot P10 provides an additional 436 parking spaces, bringing the existing Total Parking Supply available to patrons/staff of the HMOC site to 1,975 parking spaces.



Accounting for the utilization of parking spaces within Parking Lot P10, the total future parking space supply for the HMOC site equals 2,778, which exceeds the required future parking space supply by 506 parking spaces.

Table No. 2 below summarizes the existing/future parking space requirements and supply while taking into account utilization of the existing/future parking spaces within Parking Lot P10.

<b>TABLE NO. 2</b> <b>PARKING REQUIREMENTS &amp; SUPPLY WITH PARKING LOT P10</b> <b>PENN MEDICINE PRINCETON HEALTH, PLAINSBORO, NEW JERSEY</b>	
Parking Demand/Supply	Number of Parking Spaces
<b>Required HMOC Parking</b> (obtained from "Amended Preliminary and Final Major Site Plan", French & Parrello, 7/22/2010)	1,540
<b>Vacant Fitness Center Space not displaced by Cancer Center</b> (28,210 SF, see conceptual layout plan in Attachment A) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+113
<b>Required Cancer Center Expansion Parking</b> (Proposed 154,559 SF) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+619
<b>Total Parking Required</b>	2,272
<b>Existing Parking Supply (excluding Lot P10)</b>	1,539
<b>Existing Parking Supply (Lot P10)</b>	436
<b>Additional Supply (Proposed Parking Garage)</b>	+1,161
<b>Displaced Parking Supply (due to Cancer Center expansion)</b>	-176
<b>Displaced Parking Supply (due to Parking Garage structure)</b>	-182
<b>Total Parking Supply</b>	2,778
<b>Excess Parking Capacity</b>	+506

**Notes:**

1. The displaced parking supply due to Cancer Center Expansion includes the spaces lost for the 10 landbanked parking spaces, thus providing a conservative analysis.
2. The total parking required takes no credit for provision of EV or EV Ready spaces, thus providing a conservative analysis.

### **Proposed Cancer Center Parking Demand**

The Amended Redevelopment Plan identifies a Medical Office Building Parking Ratio of 4 parking spaces for every 1,000 square feet of gross floor area. In order to verify that this Parking Ratio is adequate to support the proposed Cancer Center, the following sources were referenced:

- Actual observed parking ratios at two existing Memorial Sloan Kettering Cancer Center facilities
- Parking Count Demand Model utilizing anticipated staffing and patient visitations

The following is a summary for each of these sources:

#### **Observed Memorial Sloan Kettering Cancer Center Facilities**

DTS Provident conducted Parking Accumulation Surveys at two existing Memorial Sloan Kettering Cancer Center facilities located in Middletown, New Jersey and Montvale, New Jersey. The facilities are outpatient cancer care centers similar to the proposed Cancer Center expansion within the HMOC component of the PMPH Campus.

Based on Site Plans obtained for the two facilities, the Middletown, New Jersey facility consists of a 245,080 square foot cancer care center while the Montvale, New Jersey facility consists of a 150,000 square foot cancer care center. The Site Plans are contained in Attachment B for reference. The square footage used for determining the required parking is noted on each Site Plan.

DTS Provident also researched the Township of Middletown's and Borough of Montvale's Zoning Code to determine their off-street parking requirements. Both municipal codes require 1 parking space per 300 square feet. The definitions for 'Floor Area' are contained in Attachment B.

The Applicant filed Open Public Records Act (OPRA) requests with the municipalities to obtain floor plans for each facility to help determine which space is accounted for on the Site Plans; however, the requests were denied due to security concerns. In order to further verify the similarity in uses between the two surveyed facilities and the proposed Cancer Center, the websites for each existing facility were researched. The following lists the services provided at each existing facility:

#### **Middletown, NJ Facility**

- surgical, medical, and radiation oncology consultations
- outpatient surgical and endoscopic procedures
- chemotherapy
- immunotherapy
- radiation treatment
- gastroenterology clinic and procedures
- interventional radiology procedures, including image-guided biopsies and venous access placement
- mammography, ultrasound, MRI, CT, and PET imaging
- clinical trials

- services at our specialty breast center, including services for at-risk patients
- a cancer-specific retail pharmacy
- supportive services, including rehabilitation, genetic counseling, pain management, lymphedema therapy, social work, and nutrition
- a thyroid nodule assessment program to look for thyroid cancer and determine whether treatment is needed

Montvale, NJ Facility

- surgical, medical, and radiation oncology consultations
- chemotherapy
- immunotherapy
- radiation treatment
- mammography, ultrasound, MRI, CT, and PET imaging
- clinical trials
- a cancer-specific retail pharmacy
- supportive services, including rehabilitation, lymphedema therapy, genetic counseling, social work, and nutrition

The Parking Accumulation Surveys were conducted at each facility between the hours of 10:00 AM and 8:30 PM at 30-minute intervals. The results of the Parking Accumulation Surveys indicate that the Middletown, New Jersey facility experienced a peak parking demand of 507 parking spaces while the Montvale, New Jersey facility experienced a peak parking demand of 330 parking spaces. Utilizing the square footage indicated on the above-referenced Site Plans, the peak parking demand of 507 occupied parking spaces counted at the Middletown, NJ facility results in a peak parking demand ratio of 2.07 parking spaces per 1,000 square feet while the peak parking demand of 330 occupied parking spaces counted at the Montvale, NJ facility results in a peak parking demand ratio of 2.20 parking spaces per 1,000 square feet.

Copies of the Parking Accumulation Surveys at the existing Memorial Sloan Kettering Cancer Center facilities are contained in Attachment C.

Parking Count Demand Model

A final source considered by DTS Provident is a Parking Count Generator Model prepared by the PMPH Consultant Team. The Model estimates a peak parking demand for the proposed Cancer Center expansion based on assumptions on various patient programming parameters such as the number of program spaces in the expansion, visit/session duration (time in treatment), and session overlap duration (how early a patient arrives prior to a visit), as well as accounting for staff parking accommodations. The Model conservatively assumes a visit/session duration of between 30 – 160 minutes and a session overlap duration of between 10 – 120 minutes, depending on the program visited. Based on the Model, the proposed Cancer Center expansion would require a total of 430 parking spaces, or 2.78 parking spaces per 1,000 square feet of usable floor area. A copy of the Parking Count Generator Model is contained in Attachment D.

Table No. 3 below summarizes a comparison of the parking ratio contained in the Amended Redevelopment Plan for a Medical Office Building to the various other sources of parking ratios outlined above.

<b>TABLE NO. 3</b> <b>PARKING DEMAND RATIO COMPARISON - CANCER CENTER FACILITY</b> <b>PENN MEDICINE PRINCETON HEALTH, PLAINSBORO, NEW JERSEY</b>			
Source		Parking Demand Ratio (Spaces/1,000sf GFA)	Parking Demand for a 154,559 sf Facility (Spaces)
Amended Redevelopment Plan		4.00	619
Parking Accumulation Surveys (conducted at existing Memorial Sloan Kettering Cancer Center facilities)	Middletown, NJ Facility	2.07	320
	Montvale, NJ Facility	2.20	341
Parking Count Demand Model		2.78	430

As shown in Table No. 3 above, the parking ratios obtained from actual parking accumulation surveys at existing similar facilities and estimates obtained from a Parking Count Demand Model prepared by the PMPH Team all indicate the 4.0 parking ratio will be more than adequate to support the proposed Cancer Center use. Additionally, the future total parking supply of 2,342 parking spaces will provide a surplus of 348 to 369 parking spaces on the HMOC Campus even when considering the repurposing of the Health/Fitness Center and applying the observed parking ratios. The surplus parking when factoring in the additional P10 Lot parking spaces would be 784 to 805 parking spaces. Based on the foregoing, the proposed parking to be provided in association with the Cancer Center expansion will be more than adequate to accommodate the proposed use, as well as create surplus parking to support existing operations and repurposing of the portion of the Health/Fitness Center not displaced by the Cancer Center. This is even further supported by the extremely conservative parking demand model.

### **Conclusions**

Based on the foregoing, it is the considered professional opinion of DTS Provident that the parking ratio contained in the Amended Redevelopment Plan for Medical Office Building (4 spaces per 1,000 sf) will be more than adequate to accommodate the proposed Cancer Center expansion based on the comparison of parking ratios to other sources. Furthermore, the parking currently provided at the HMOC, combined with the additional parking spaces to be constructed, will meet the future overall parking needs of the HMOC, which includes the repurposing of the portion of the Health/Fitness Center not displaced by the Cancer Center.

cc: Jim Watson, P.E.  
Lou Ploskonka, P.E.  
Trishka Cecil  
Ron Yake  
PMPH Team  
Tom Letizia

[https://divneytungschwalbe.sharepoint.com/sites/DTSP/Shared Documents/General/PDE Q/PROJECTS-DTSP/0905 - Penn Medicine Cancer Center Traffic and Parking Study/Memo/Parking Tech Memo\\_2023-04-14\\_REV2.docx](https://divneytungschwalbe.sharepoint.com/sites/DTSP/Shared Documents/General/PDE Q/PROJECTS-DTSP/0905 - Penn Medicine Cancer Center Traffic and Parking Study/Memo/Parking Tech Memo_2023-04-14_REV2.docx)

## ATTACHMENTS

**ATTACHMENT 'A'**

**Conceptual Layout Plans/Program – Proposed Cancer Center & Re-purposed Health/Fitness  
Center**



# PMPH – Cancer Center

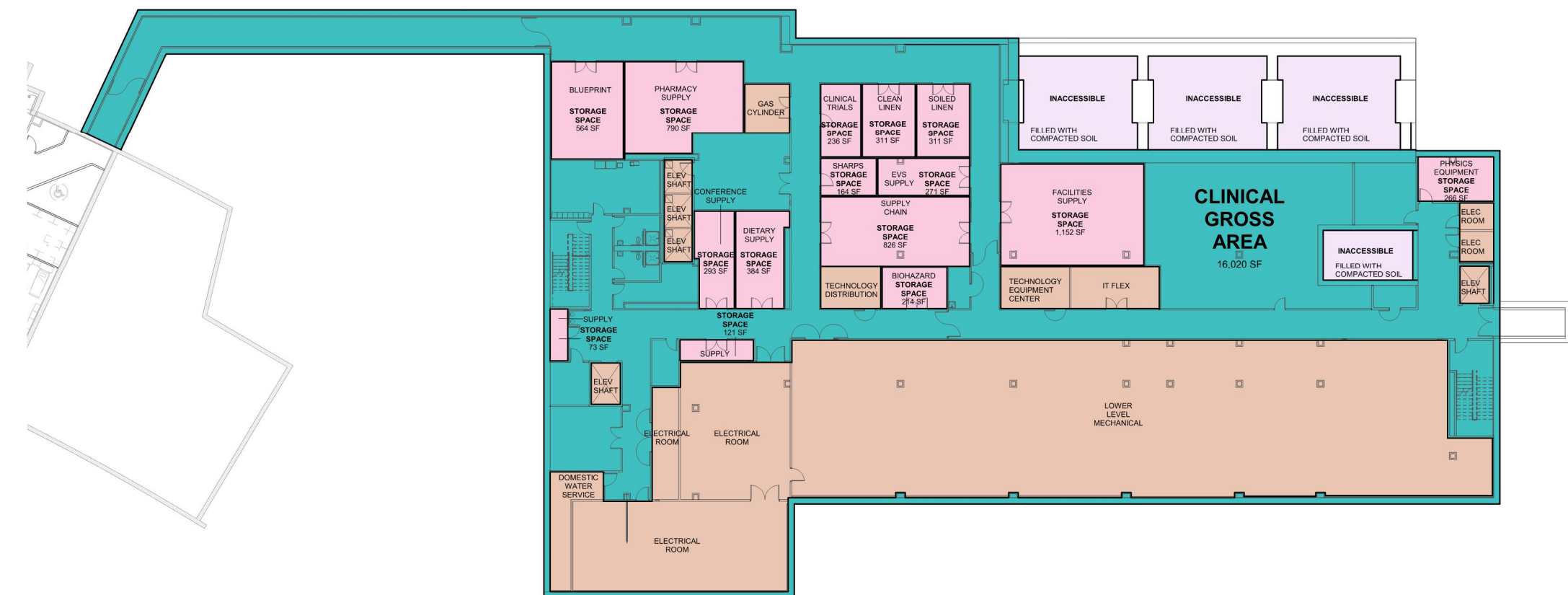
## Cancer Center Floor Area Plans

### AREA AVAILABLE FOR TREATMENT CARE

FLOOR	SPACE TYPE	AREA (GSF)	AREA (GSF)
LOWER LEVEL	CLINICAL	16,020 GSF	
	STORAGE		5,976 GSF
	UNOCCUPIED		13,271 GSF
FLOOR 1	CLINICAL	43,016 GSF	
	UNOCCUPIED		2,154 GSF
FLOOR 2	CLINICAL	32,347 GSF	
	UNOCCUPIED		3,308 GSF
FLOOR 3	CLINICAL	33,586 GSF	
	UNOCCUPIED		2,098 GSF
FLOOR 4	CLINICAL	26,585 GSF	
	UNOCCUPIED		2,180 GSF
PENTHOUSE	UNOCCUPIED		23,734 GSF
TOTAL		151,555 GSF	52,721 GSF 204,276 GSF



**LEVEL 1 - TOWNSHIP FLOOR AREA PLAN**  
SCALE 1/16" = 1'-0"



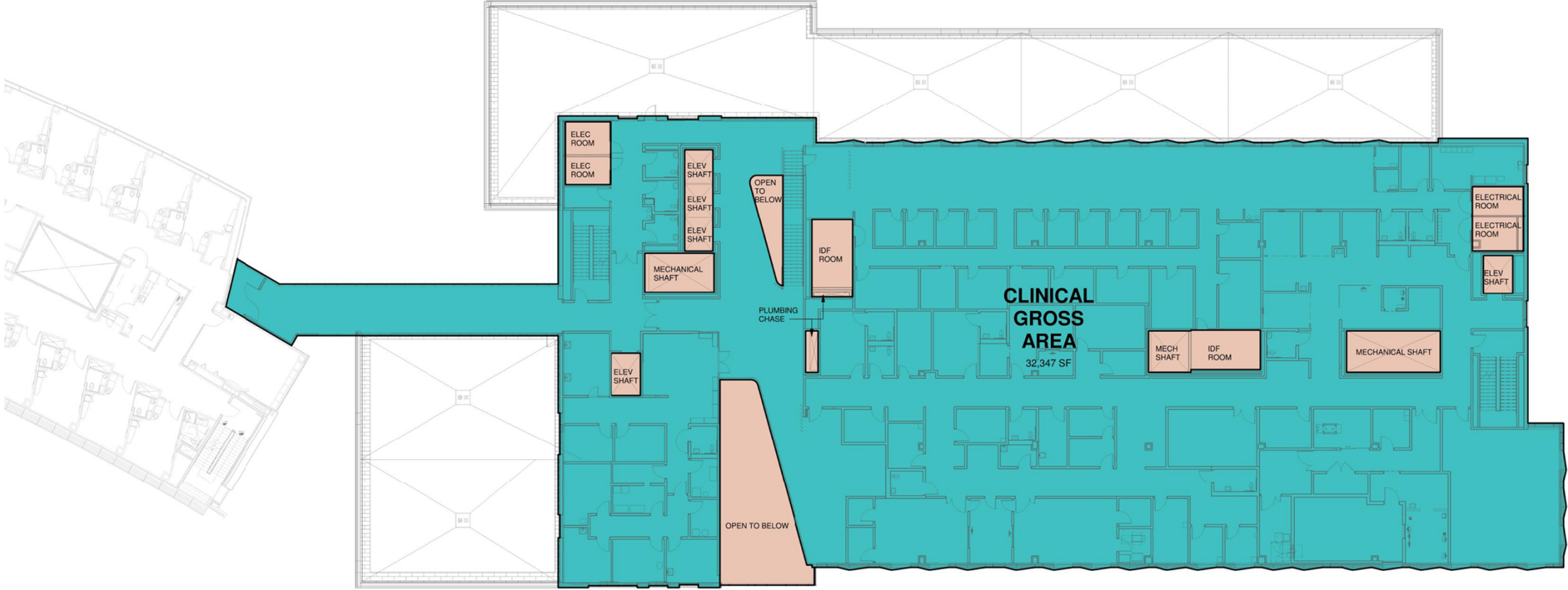
LOWER LEVEL - TOWNSHIP FLOOR AREA PLAN  
SCALE 1/16" = 1'-0"

PMPH – Cancer Center

# Cancer Center Floor Area Plans



LEVEL 3 - TOWNSHIP FLOOR AREA PLAN  
SCALE 1/16" = 1'-0"

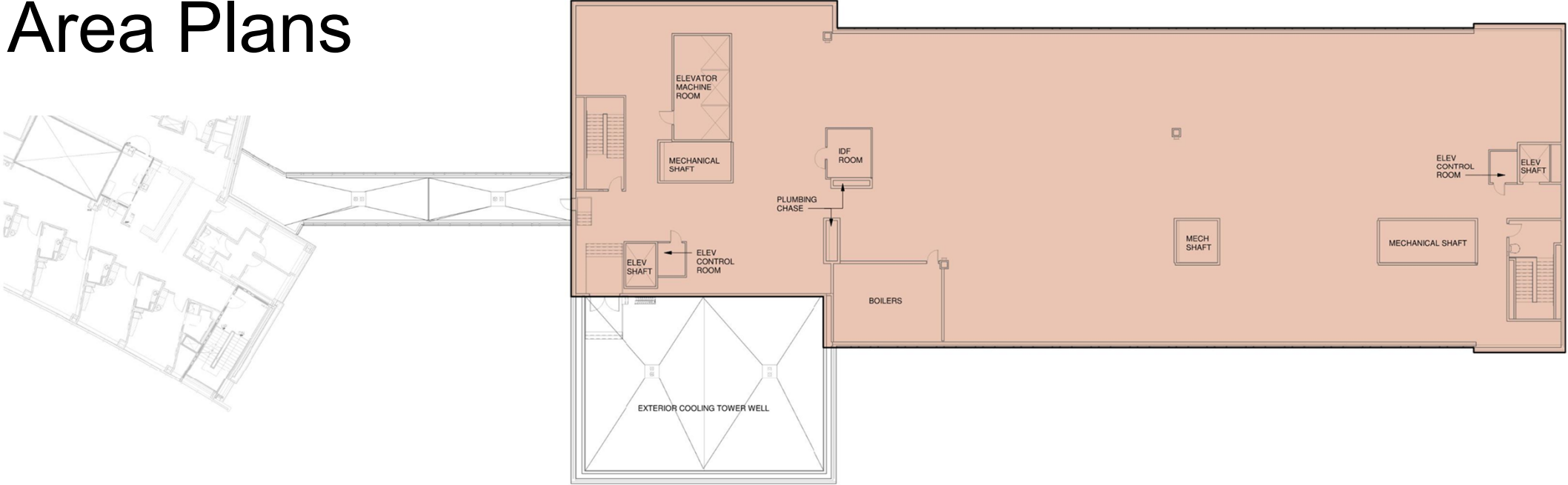


LEVEL 2 - TOWNSHIP FLOOR AREA PLAN  
SCALE 1/16" = 1'-0"



# PMPH – Cancer Center

## Cancer Center Floor Area Plans

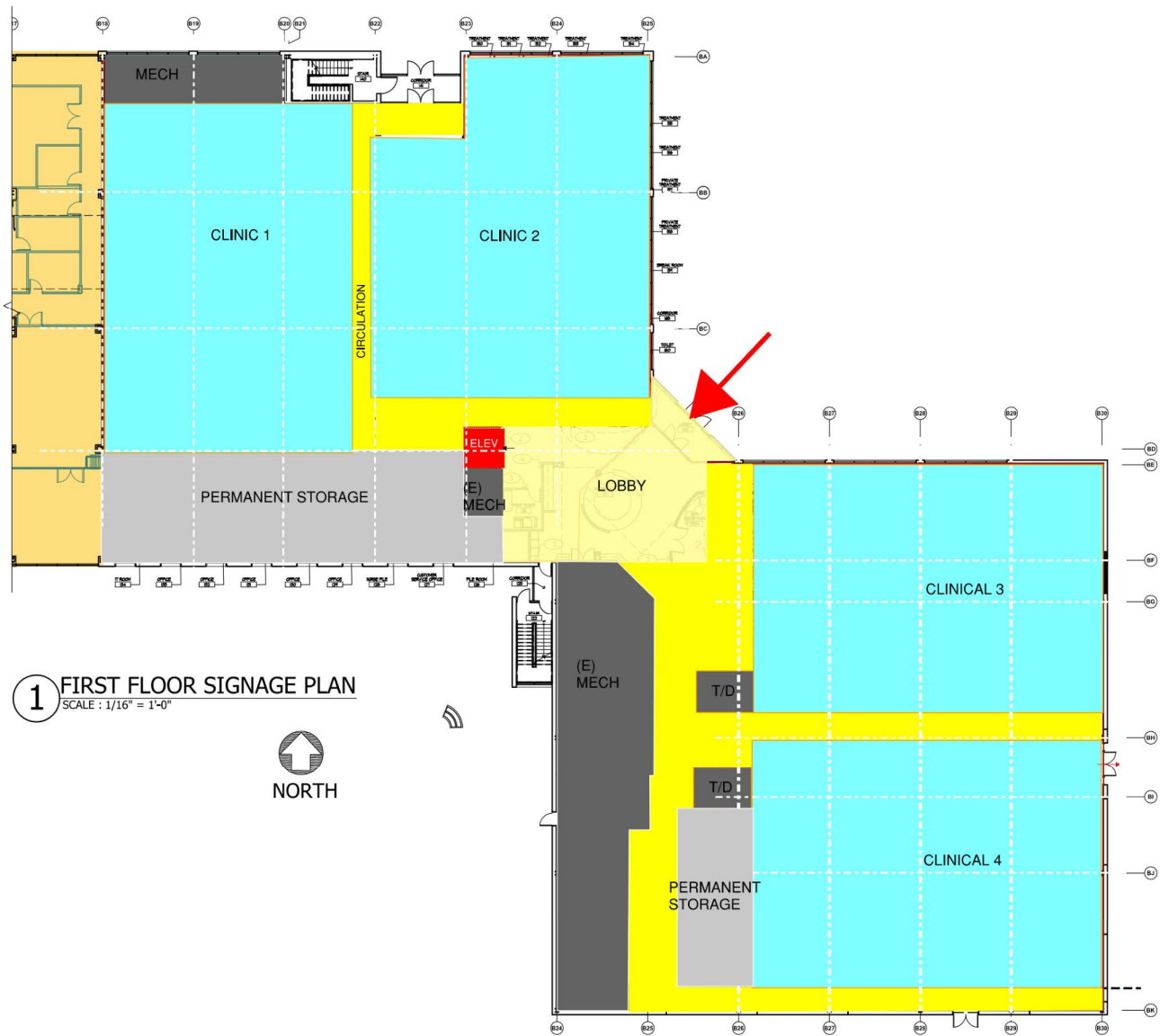
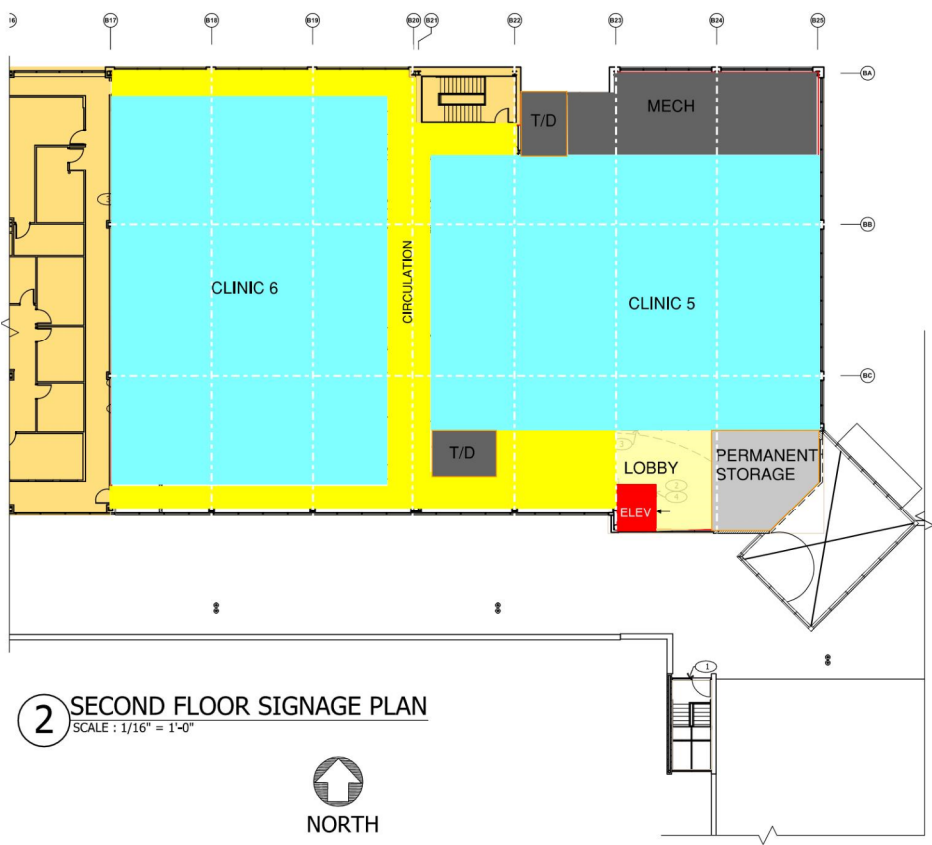


PENTHOUSE - TOWNSHIP FLOOR AREA PLAN  
SCALE 1/16" = 1'-0"



LEVEL 4 - TOWNSHIP FLOOR AREA PLAN  
SCALE 1/16" = 1'-0"

# PMPH – Cancer Center Fitness Center Floorplans



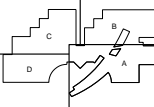
## AREA AVAILABLE FOR TREATMENT CARE

<b>FLOOR 1</b>	<b>33,000 SF</b>
CLINICAL SPACE	20,370 SF
MECHANICAL SPACE	3,120 SF
PERMANENT STORAGE	3,300 SF
BUILDING CIRCULATION	6,210 SF
<b>FLOOR 2</b>	<b>15,000 SF</b>
CLINICAL SPACE	10,150 SF
MECHANICAL SPACE	1,205 SF
PERMANENT STORAGE	455 SF
BUILDING CIRCULATION	3,190 SF
<b>TOTAL OF FLOOR 1 &amp; 2</b>	<b>48,000 SF</b>
<b>TOTAL USEABLE AREA</b>	<b>39,920 SF</b>
<b>TOTAL NON-ACTIVITY AREA</b>	<b>8,080 SF</b>

**ATTACHMENT 'B**

**Site Plans & Zoning Code Definitions – Memorial Sloan Kettering Cancer Center Facilities**





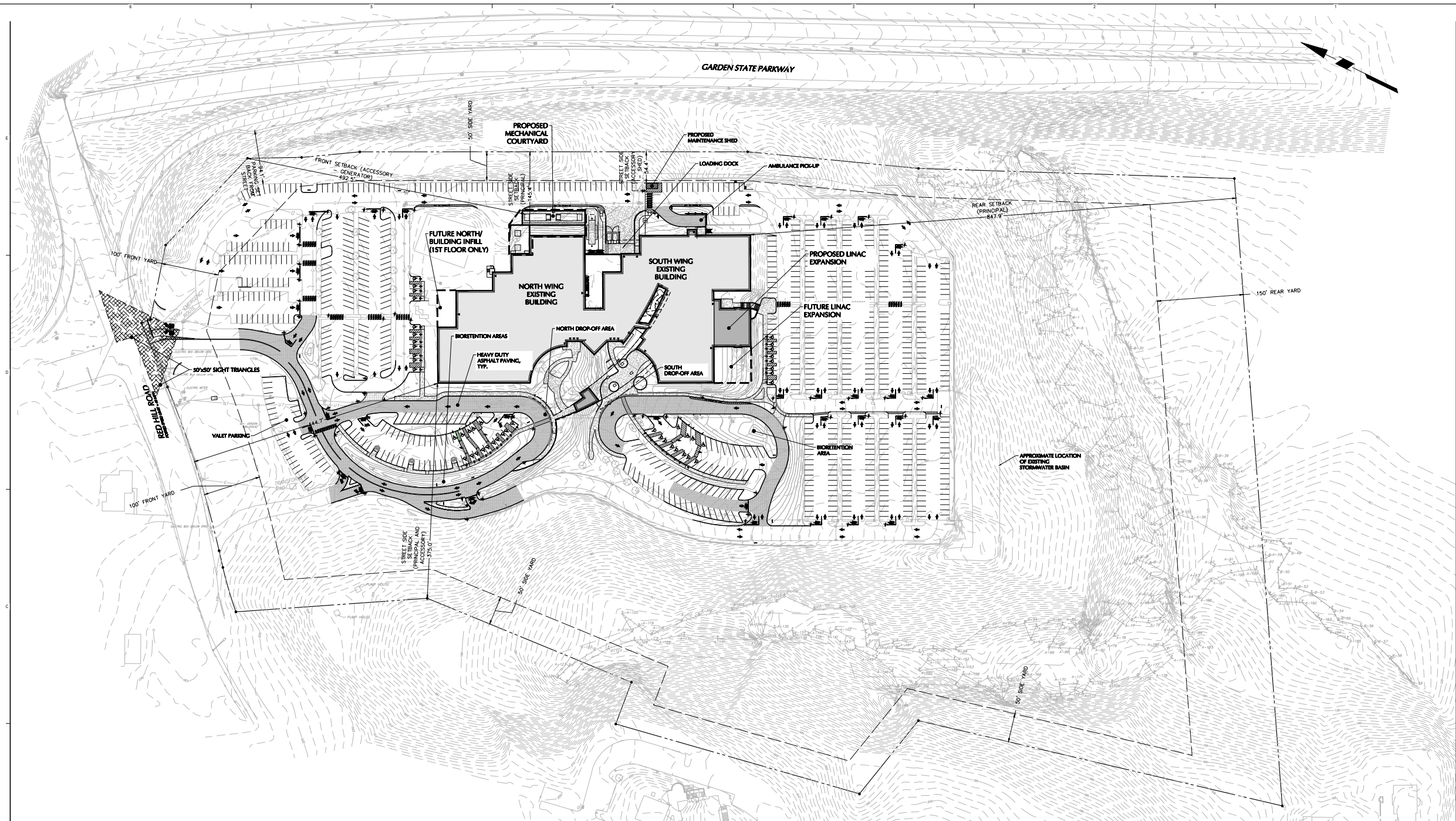
Revisions

1. CIVIL AND LANDSCAPE GMP	06.08.2014
2. APPROXIMATE SUBMISSION	04.30.2014
3. SCHEMATIC DESIGN SUBMISSION	04.16.2014
4. CIVIL AND LANDSCAPE PERMITTING SUBMISSION	07.22.2014
5. FINAL DESIGN & NORTH BUILDINGS - CIVIL AND LANDSCAPE	07.17.2014
NO. ISSUE DATE	

Sheet Information	
Date	01.22.2014
Job Number	012672.000
Drawn	EDH
Checked	KAR
Approved	CMH

**OVERALL SITE  
PLAN**

Sheet



APPLICABLE REGULATION	REQUIRED / ALLOWABLE	EXISTING	PROPOSED	COMPLIANCE	VARIANCE/REASON REQUIRED
10-B30 - Standards and Regulations Affecting the DR Zone:					
A. Minimum Standards					
1. Lot Area:					
a. Gross Lot Area	167,000 SQ FT	1,760,950 SQ FT (40.43 AC)	1,760,950 SQ FT	YES	NO
b. Buildable Lot Area	2.5 acres	31.09 ACRES	31.09 ACRES (260.68% CLASS II CRITICAL AREAS)	YES	NO
2. Building Setbacks:					
a. Front (Principal and Accessory)	100 FT	444.7 FT	444.7 FT	YES	NO
b. Side (Principal and Accessory)	100 FT	375.0 FT	375.0 FT	YES	NO
c. Street Side (Principal and Accessory)	50 FT	145.4 FT (B), 129.3 FT (A)	145.4 FT (B), 54.4 FT (A)	YES	NO
d. Rear (Principal and Accessory)	150 FT	847.9 FT	847.9 FT	YES	NO
e. Street Rear (Principal and Accessory)	100 FT	N/A	N/A	YES	NO
3. Lot Frontage:	100 FT	530.13 FT	530.13 FT	YES	NO
4. Gross Floor Area:	20,000 SQ FT	285,187 SQ FT	295,080 SQ FT	YES	NO
5. First Floor Area:	20,000 SQ FT	95,000 SQ FT +/-	11,250 SQ FT	YES	NO
B. Maximum Regulations					
1. Dwelling Unit Density	N/A	N/A	N/A	YES	NO
2. Lot Coverage	35%	32.3% (12.98 AC/40.43 AC)	31.8% (12.87 AC/40.43 AC)	YES	NO
3. Floor Area Ratio	22%	16.2% (285,187/1,760,950)	16.8% (295,080/1,760,950)	YES	NO
4. Building Height	3 story, 50 FT	3 story, 43.4 FT	3 story, 43.4 FT	YES	NO
C. Other Regulations					
1. Temporary construction trailers shall be permitted where active construction work is proposed. Such trailers shall not be placed on site until building permits have been issued and in no case more than seven (7) days prior to the commencement of work. Trailers shall not remain on site more than seven (7) days after completion of all work. Temporary construction trailers shall not be placed within the right of way of any improved public road.				WILL COMPLY	

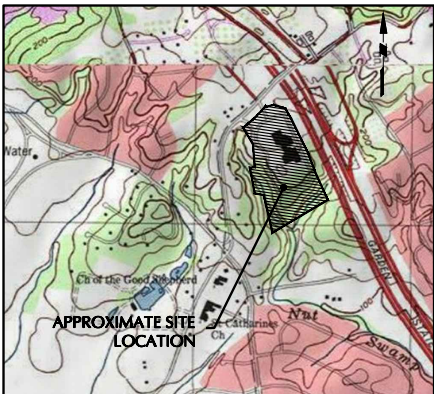
Parking Requirements- Total Spaces Required					
Use	Existing Floor Area (SF)	Proposed Floor Area (SF)	No. Spaces Req'd per Ordinance	Total Spaces Req'd	No. Spaces Provided
Health Care Facility	285,187	245,080	GFA/300	817	
Data Center		50,000	GFA/600	83	
Total	285,187	295,080		900	900

Parking Requirements- ADA Spaces Required				
Use	Proposed GFA (SF)	Total Spaces Required	ADA Requirement per IBC	Total ADA Spaces Required
Health Care (Outpatient)	118,400	395	10% of Total Required Spaces for Outpatient Service Use minus number of valet spaces provided for outpatient use*	36
Health Care (Administrative)	30,000	100	2% of Required Spaces	2
Office	96,680	322	2% of Total Required Spaces	6
Data Center	50,000	83	2% of Total Required Spaces	2
Total	295,080	900		46

\*Valet spaces provided for outpatient use are excluded in the required ADA parking calculation. ADA Spaces Required = (395 spaces - 34 valet Spaces) \* 0.10 = 36 Spaces

ADA Spaces Provided		
Standard	Van Accessible*	Total
37	9	46

\*1 Van Accessible Space is required for every 6 standard accessible Parking Spaces.



SITE LEGEND	
PROPERTY LINE	---
EXISTING CURB	---
EXISTING TREE	+
EXISTING SIGN	+
EXISTING SITE LIGHTING	+
EXISTING BUILDING (GROUND LEVEL)	---
PROPOSED BUILDING (GROUND LEVEL)	---
PROPOSED BUILDING OVERHANG	---
PROPOSED 6" CURB	---
PROPOSED FLUSH CURB	---
DECORATIVE CROSSWALK	---
PROPOSED CONCRETE PAVING	---
PROPOSED HEAVY DUTY ASPHALT PAVING	---
PROPOSED CONCRETE GRASS PAVING	---
PROPOSED SIGN (SEE SIGN LEGEND)	---
PROPOSED ACCESSIBLE RAMP	---
PROPOSED PEDESTRIAN CROSS WALK	---
PROPOSED PAVEMENT MARKING	---
PROPOSED GUARDRAIL	---
PROPOSED RETAINING WALL	---



# BERGEN REGIONAL

## FLOOR AREA

BASEMENT:	22,500	BGSF
1ST FLOOR:	62,000	BGSF
2ND FLOOR:	60,500	BGSF
TOTAL EXISTING AREA:	145,000	BGSF

NEW LINEAR ACCELERATOR ADDITION:	5,000	BGSF
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TOTAL PROPOSED

## PARKING

EXISTING SPACES:	558 SPACES
REDUCED FOR LINEAR ACCELERATOR:	-10 SPACES
REDUCED FOR RESTRIPING FROM 8'-6" WIDE SPACES TO 9'-0" WIDE SPACES:	-41 SPACES
TOTAL PARKING SPACES:	507 SPACES

PARKING RATIO:  
507 SPACES / 150,000 BGSF =  
1 SPACE / 296 BGSF

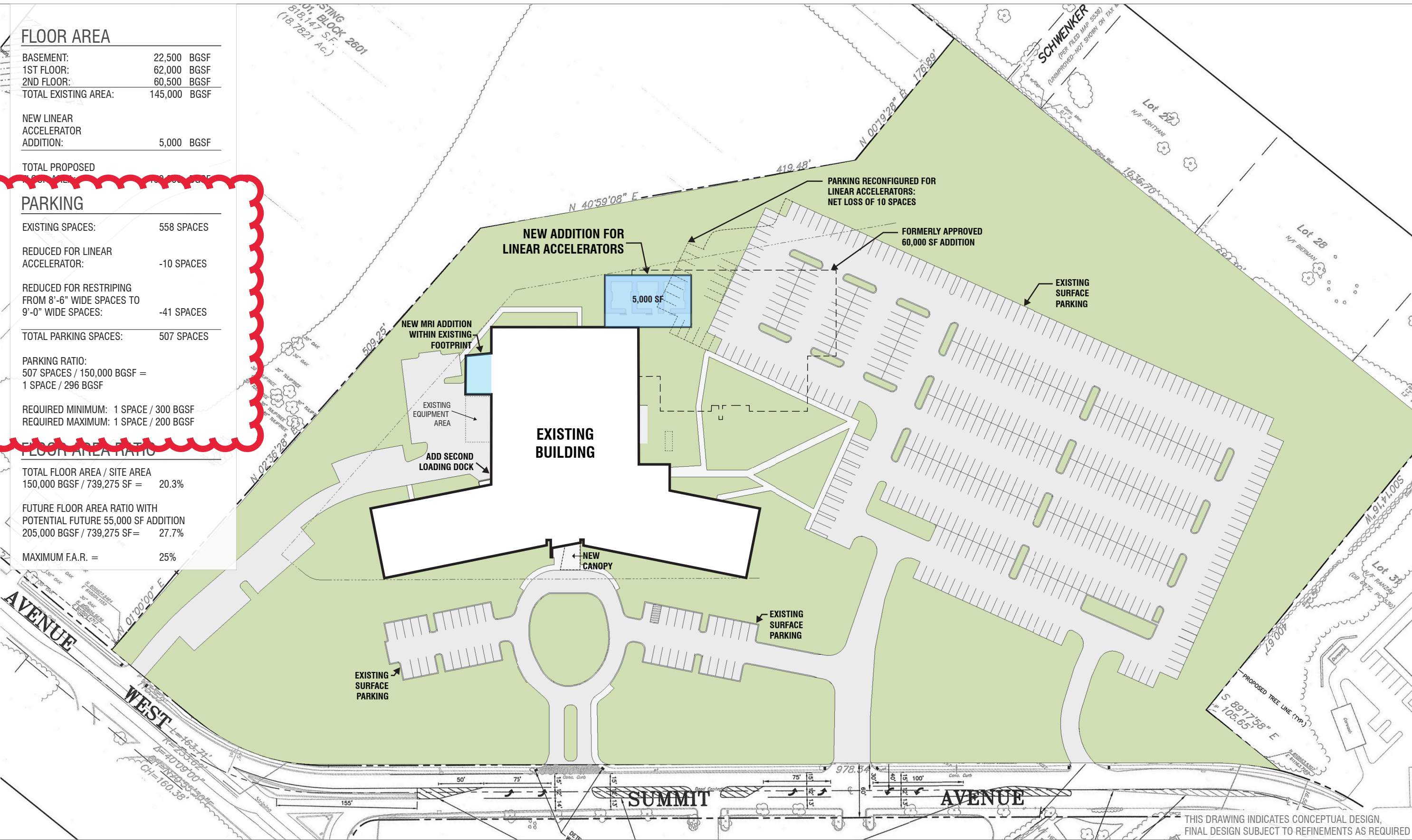
REQUIRED MINIMUM: 1 SPACE / 300 BGSF  
REQUIRED MAXIMUM: 1 SPACE / 200 BGSF

## FLOOR AREA RATIO

TOTAL FLOOR AREA / SITE AREA  
150,000 BGSF / 739,275 SF = 20.3%

FUTURE FLOOR AREA RATIO WITH  
POTENTIAL FUTURE 55,000 SF ADDITION  
205,000 BGSF / 739,275 SF = 27.7%

MAXIMUM F.A.R. = 25%



**MEMORIAL SLOAN KETTERING CANCER CENTER**  
DESIGN + CONSTRUCTION DEPARTMENT  
FACILITIES MANAGEMENT DIVISION  
1233 York Avenue SR201 New York NY 10065

APRIL 15, 2015

**PROPOSED SITE PLAN**  
WITH FORMERLY APPROVED ADDITION



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§ 540-627 Off-street parking.

- (47) Data center: one space per 600 square feet of gross floor area.  
[Amended 10-15-2012 by Ord. No. 2012-3071]
- (48) Health care facility: one space per 300 square feet of gross floor area.  
[Amended 10-15-2012 by Ord. No. 2012-3071]

**FLOOR AREA, GROSS**

The sum of the gross horizontal areas of the floor or several floors of a building measured between the outside face of exterior walls. In the case of residential structures, such area shall be finished in accordance with the requirements of the building code. Any cellar, garage, crawl space, unfinished attic or space of any nature, or accessory building shall not be included. Any space with a clear ceiling height of four feet or more, but less than the minimum ceiling height prescribed in the building code for the type of building concerned, shall not be included when in excess of 10% of the floor area which complied with such prescribed ceiling heights. In the case of bi-level multistory buildings, the first floor area shall be considered to be the first level or levels of the structure over the full perimeter of the structure which are above the average finished grade of the adjoining ground, and constructed on other than a concrete slab or other such floor. Any floor area which is located at grade or on such a slab may, however, be included in the calculations of total floor area, provided it complies with the other terms of this definition. In the case of all multistory buildings, the first floor area shall be considered to be the first level or levels of the structure extending over the full perimeter of the structure and which is above the average finished grade of the adjoining ground, whether or not such level is constructed on a concrete slab or other such floor.



§ 400-57 Off-street parking in B-1 and B-2 Business Districts.

☐ § 400-58 Off-street parking in OR-1, OR-2, OR-3 and OR-4 Districts.

[Amended 11-10-1981 by Ord. No. 81-740; 1-31-2012 by Ord. No. 2012-1350]

- A.** Except for fitness centers and hotels, as pursuant to § **400-59**, and for assisted living residences pursuant to § **400-24E(3)**, all uses in the OR-1, OR-2, OR-3 and OR-4 Office and Research Districts shall provide a minimum of one parking space for each 300 square feet of building floor area and a maximum of one parking space for every 200 square feet of building floor area.  
[Amended 2-28-2017 by Ord. No. 2017-1423]



## § 400-8 Definitions and word usage.

### **FLOOR AREA**

For the purpose of this chapter, the aggregate area of all floors, using the outside wall dimensions of all buildings, including the basement and cellar area. To the extent that the basement space within a building is used for mechanical equipment such as heating and ventilating apparatus or dead storage and is not devoted to the principal use of the building or to the extent that the on-grade level or basement or cellar levels of a parking garage are devoted to off-street parking, such floor areas, including aisles, ramps and maneuvering space, shall be excluded.

[Amended 1-31-2012 by Ord. No. 2012-1350]

**ATTACHMENT 'C'**

**Parking Accumulation Surveys – Memorial Sloan Kettering Cancer Center Facilities**

PARKING ACCUMULATION SURVEY  
MEMORIAL SLOAN KETTERING CANCER CENTER, MIDDLETOWN, NEW JERSEY

INVENTORY - PARKING SPACE SUPPLY								
STRIPED SPACES	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
	459	82	73	33	70	119	91	3
TOTAL - SUPPLY								
								930
WEDNESDAY, NOVEMBER 30, 2022								
OCCUPIED SPACES								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	202	55	63	22	3	54	45	0
10:30 AM	201	52	69	20	4	61	55	0
11:00 AM	206	55	64	17	4	61	55	1
11:30 AM	206	57	65	12	4	56	53	2
12:00 PM	209	46	65	13	4	55	51	1
12:30 PM	210	50	66	9	4	57	49	2
1:00 PM	205	51	70	10	4	58	49	1
1:30 PM	208	45	66	13	7	54	46	1
2:00 PM	204	51	70	13	4	54	47	0
2:30 PM	197	41	70	16	5	53	49	1
3:00 PM	197	39	70	15	5	56	46	2
3:30 PM	192	34	71	15	3	53	41	1
TOTAL								
								444
								462
								463
								455
								444
								447
								448
								440
								443
								432
								433
								410
WEDNESDAY, NOVEMBER 30, 2022								
PERCENT OCCUPIED								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	44%	67%	86%	67%	4%	45%	49%	0%
10:30 AM	44%	63%	95%	61%	6%	51%	60%	0%
11:00 AM	45%	67%	88%	52%	6%	51%	60%	33%
11:30 AM	45%	70%	89%	36%	6%	47%	58%	67%
12:00 PM	46%	56%	89%	39%	6%	46%	56%	33%
12:30 PM	46%	61%	90%	27%	6%	48%	54%	67%
1:00 PM	45%	62%	96%	30%	6%	49%	54%	33%
1:30 PM	45%	55%	90%	39%	10%	45%	51%	33%
2:00 PM	44%	62%	96%	39%	6%	45%	52%	0%
2:30 PM	43%	50%	96%	48%	7%	45%	54%	33%
3:00 PM	43%	48%	96%	55%	7%	47%	51%	67%
3:30 PM	42%	41%	97%	45%	4%	45%	45%	33%
TOTAL								
								48%
								50%
								50%
								49%
								48%
								48%
								48%
								47%
								48%
								46%
								47%
								44%
THURSDAY, DECEMBER 01, 2022								
OCCUPIED SPACES								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	188	51	70	23	4	60	49	0
10:30 AM	196	56	71	30	3	63	49	0
11:00 AM	204	63	71	24	6	63	75	1
11:30 AM	200	61	70	27	6	58	48	1
12:00 PM	192	49	64	19	5	59	48	0
12:30 PM	200	46	65	15	4	50	47	0
1:00 PM	203	48	68	16	4	54	47	1
1:30 PM	200	45	67	17	4	56	43	1
2:00 PM	198	46	72	18	4	58	50	0
2:30 PM	191	37	71	13	4	55	43	0
3:00 PM	189	36	60	16	4	54	55	1
3:30 PM	192	35	51	11	5	44	42	2
TOTAL								
								445
								468
								507
								471
								436
								427
								441
								433
								446
								414
								415
								382
THURSDAY, DECEMBER 01, 2022								
PERCENT OCCUPIED								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	41%	62%	96%	70%	6%	50%	54%	0%
10:30 AM	43%	68%	97%	91%	4%	53%	54%	0%
11:00 AM	44%	77%	97%	83%	9%	53%	82%	33%
11:30 AM	44%	74%	96%	82%	9%	49%	53%	33%
12:00 PM	42%	60%	88%	58%	7%	50%	53%	0%
12:30 PM	44%	56%	89%	45%	6%	42%	52%	0%
1:00 PM	44%	59%	93%	48%	6%	45%	52%	33%
1:30 PM	44%	55%	92%	52%	6%	47%	47%	33%
2:00 PM	43%	56%	99%	55%	6%	49%	55%	0%
2:30 PM	42%	45%	97%	39%	6%	46%	47%	0%
3:00 PM	41%	44%	82%	48%	6%	45%	60%	33%
3:30 PM	42%	43%	70%	33%	7%	37%	46%	67%
TOTAL								
								48%
								50%
								55%
								51%
								47%
								46%
								47%
								47%
								48%
								45%
								45%
								41%
WEDNESDAY, MARCH 15, 2023								
OCCUPIED SPACES								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
4:00 PM	169	45	42	9	4	45	33	1
4:30 PM	191	34	49	8	4	45	25	1
5:00 PM	176	26	41	6	4	37	22	1
5:30 PM	124	23	35	4	3	30	19	0
6:00 PM	95	16	23	3	3	30	19	0
6:30 PM	65	10	12	3	3	17	18	0
7:00 PM	49	6	9	2	3	11	16	0
7:30 PM	41	4	5	0	3	5	16	0
8:00 PM	40	1	3	0	3	3	15	0
TOTAL								
								348
								357
								313
								238
								189
								128
								96
								74
								65
WEDNESDAY, MARCH 15, 2023								
PERCENT OCCUPIED								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
4:00 PM	37%	55%	58%	27%	6%	38%	36%	33%
4:30 PM	42%	41%	67%	24%	6%	38%	27%	33%
5:00 PM	38%	32%	56%	18%	6%	31%	24%	33%
5:30 PM	27%	28%	48%	12%	4%	25%	21%	0%
6:00 PM	21%	20%	32%	9%	4%	25%	21%	0%
6:30 PM	14%	16%	16%	9%	4%	14%	20%	0%
7:00 PM	11%	7%	12%	6%	4%	9%	18%	0%
7:30 PM	9%	5%	7%	0%	4%	4%	18%	0%
8:00 PM	9%	1%	4%	0%	4%	3%	16%	0%
TOTAL								
								37%
								34%
								26%
								20%
								14%
								10%
								8%
								7%

LEGEND

Overall Peak Hour

**PARKING ACCUMULATION SURVEY**  
**MEMORIAL SLOAN KETTERING CANCER CENTER, MONTVALE, NEW JERSEY**

INVENTORY - PARKING SPACE SUPPLY			
STRIPED SPACES	<u>LOT A (LARGE LOT IN BACK)</u>	<u>LOT B (FRONT OF BUILDING)</u>	<u>LOT C (LOADING DOCK)</u>
	474	48	3
			<b>TOTAL - SUPPLY</b>
			525

WEDNESDAY, JANUARY 11, 2023				
OCCUPIED SPACES				
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>	<b>TOTAL</b>
10:00 AM	294	32	1	327
10:30 AM	295	33	1	329
11:00 AM	291	32	0	323
11:30 AM	286	28	1	315
12:00 PM	290	31	1	322
12:30 PM	247	32	0	279
1:00 PM	265	32	0	297
1:30 PM	276	30	0	306
2:00 PM	275	32	1	308
2:30 PM	260	33	0	293
3:00 PM	266	33	0	299
3:30 PM	249	35	0	284

WEDNESDAY, JANUARY 11, 2023				
PERCENT OCCUPIED				
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>	<b>TOTAL</b>
10:00 AM	62%	67%	33%	62%
10:30 AM	62%	69%	33%	63%
11:00 AM	61%	67%	0%	62%
11:30 AM	60%	58%	33%	60%
12:00 PM	61%	65%	33%	61%
12:30 PM	52%	67%	0%	53%
1:00 PM	56%	67%	0%	57%
1:30 PM	58%	63%	0%	58%
2:00 PM	58%	67%	33%	59%
2:30 PM	55%	69%	0%	56%
3:00 PM	56%	69%	0%	57%
3:30 PM	53%	73%	0%	54%

THURSDAY, JANUARY 12, 2023				
OCCUPIED SPACES				
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>	<b>TOTAL</b>
10:00 AM	252	39	0	291
10:30 AM	275	34	0	309
11:00 AM	280	39	0	319
11:30 AM	287	42	1	330
12:00 PM	278	35	0	313
12:30 PM	267	32	0	299
1:00 PM	263	34	0	297
1:30 PM	272	36	0	308
2:00 PM	269	37	1	307
2:30 PM	260	36	0	296
3:00 PM	251	31	0	282
3:30 PM	229	35	0	264

THURSDAY, JANUARY 12, 2023				
PERCENT OCCUPIED				
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>	<b>TOTAL</b>
10:00 AM	53%	81%	0%	55%
10:30 AM	58%	71%	0%	59%
11:00 AM	59%	81%	0%	61%
11:30 AM	61%	88%	33%	63%
12:00 PM	59%	73%	0%	60%
12:30 PM	56%	67%	0%	57%
1:00 PM	55%	71%	0%	57%
1:30 PM	57%	75%	0%	59%
2:00 PM	57%	77%	33%	58%
2:30 PM	55%	75%	0%	56%
3:00 PM	53%	65%	0%	54%
3:30 PM	48%	73%	0%	50%

WEDNESDAY, MARCH 15, 2023				
OCCUPIED SPACES				
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>	<b>TOTAL</b>
4:00 PM	234	32	0	266
4:30 PM	217	31	0	248
5:00 PM	188	30	0	218
5:30 PM	149	22	0	171
6:00 PM	124	20	0	144
6:30 PM	97	15	0	112
7:00 PM	83	14	0	97
7:30 PM	66	11	0	77

WEDNESDAY, MARCH 15, 2023				
PERCENT OCCUPIED				
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>	<b>TOTAL</b>
4:00 PM	49%	67%	0%	51%
4:30 PM	46%	65%	0%	47%
5:00 PM	40%	63%	0%	42%
5:30 PM	31%	46%	0%	33%
6:00 PM	26%	42%	0%	27%
6:30 PM	20%	31%	0%	21%
7:00 PM	18%	29%	0%	18%
7:30 PM	14%	23%	0%	15%

**LEGEND**  
 Overall Peak Hour



**ATTACHMENT 'D'**

**Parking Count Generator Model**

## PMPH Simple Parking Count Generator

Floor	Type	Program Spaces in Building	Vehicles / Session	Session Overlap (min)	Visit Length (min)	Vehicles at Session Transition
4	Infusion	30	30	20	160	60
3	Clinic Exam	36	36	20	60	72
1	Rad Onc Vaults (3 vaults, HDR, CT Sim)	5	5	10	30	10
1	Rad Onc Exam	9	9	20	30	18
1	Conference Center	2	10	20	30	20
2	Integrative Therapy/Lymphodema	6	6	20	30	12
2	IR Shell	1	1	120	60	3
2	Pet/CT	1	1	120	60	3
2	CT	1	1	60	60	2
2	Ultrasound	2	2	30	30	4
2	Chest Xray	1	1	30	30	2
2	MRI	1	1	30	30	2
2	Multipurpose Procedure	1	1	60	30	3

Patient Load	211
Programed Staff	210
Staff accommodated Off Site	0
Net Parking Required	421