Att. A

Maine Medical Center

MaineHealth

Office of the Executive Vice President and Chief Operating Officer

Chair Elizabeth Boepple and
Members of the Portland Planning Board
c/o City of Portland Planning Department
389 Congress Street
Portland, Maine 04101

April 7, 2017

RE: Maine Medical Center's Institutional Development Plan (IDP)

Dear Chair Boepple and Members of the Portland Planning Board:

Maine Medical Center is pleased to submit Draft #2 of its Institutional Development Plan (IDP). As you know, for the past six months MMC has been diligently working with City staff, our neighbors and the public to create an IDP which meets the requirements of the soon-to-be-adopted Institutional Overlay Zoning text.

MMC is proud of the IDP document being submitted, which will guide its future operations and development. The document was not created in isolation, however. MMC has incorporated input from its neighbors, from City staff, as well as from other institutions, to create this guiding document. We believe it is nearly complete and welcome receiving your thoughts and input at the April 25, 2017 Planning Board workshop.

One area that our neighbors have consistently raised as a concern throughout this process is the height of the Gilman Block parking garage. Under MMC's existing Contract Zone, this was the only area available to MMC to build parking sufficient to meet its parking demand. Following dialogue with our neighbors, and listening to apprehension raised by the scale and massing of the proposed garage in that location, the Hospital is actively engaged in considering two alternative sites, in addition to the Gilman Block, to build a garage to meet its parking needs: 1.) the MMC South Lot at the corner of Bramhall and Chadwick Streets and 2.) 222 St. John Street owned by East Brown Cow Inc. MMC is undertaking a feasibility analysis to determine whether these sites -or a combination of them- could meet some, or all, of the Hospital's requirements. It is hoped the results of those studies will be completed shortly and incorporated into the MMC IDP.

Thank you in advance for your time and consideration in the review of MMC's IDP.

Sincerely,

Jeff Sanders

Jeffrey Sanders
Chief Operating Officer, MMC
Enc.

22 Bramhall Street, Portland, Maine 04102-3175 • (207) 662-2491
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Att. B

Maine Medical Center
MaineHealth

Institutional Development Plan

DRAFT FOR PLANNING BOARD REVIEW / APRIL 7, 2017

DRAFT

Maine Medical Center
MaineHealth

Institutional Development Plan

DRAFT

Purpose

This Institutional Development Plan was prepared by Maine Medical Center (MMC) to comply with the Institutional Overlay Zoning (IOZ) requirements of the City of Portland Code of Ordinances.

Date

Draft For Planning Board Review / April 7, 2017

Term

This document is valid until superseded by an approved update.

This document was prepared for Maine Medical Center by Perkins+Will with input from Maine Medical Center, VHB, Gorrill Palmer, and Sebago Technics, Inc. MMC would like to thank its neighbors and the City of Portland for their contributions to the Institutional Development Planning Process.

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CHAPTER ONE

INTRODUCTION

Maine Medical Center has been a Portland landmark and a destination for excellent health care since it was built as Maine General Hospital in 1874. The campus has grown in size and complexity within its footprint to meet growing demand and changes in healthcare technology and care delivery.

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ABOUT MAINE MEDICAL CENTER

Maine Medical Center (MMC) is a complete health care resource for the people of greater Portland, the entire state of Maine, and northern New England.

Incorporated in 1864, MMC is the state's largest medical center, licensed for 637 beds and employing more than 6,000 people. MMC's unique role as both a community hospital and a tertiary referral center requires an unparalleled depth and breadth of services, including the state's only medical school, through a partnership with Tufts University School of Medicine, and a world-class biomedical research center, the Maine Medical Center Research Institute.

The MMC care model includes the state's largest multispecialty medical group, Maine Medical Partners. Maine Medical Partners provides a wide range of primary, specialty, and subspecialty care delivered through a network of more than 40 locations throughout Maine.

Maine Medical Center is named one of "America's Best Hospitals" by U.S. News & World Report. MMC's Trauma Center is the busiest in Maine, providing the most advanced tertiary care in the state.

Mission, Vision and Values

Maine Medical Center is dedicated to maintaining and improving the health of the communities it serves by:

- Caring for our community
- Educating tomorrow's caregivers
- Researching new ways to provide care

We proudly carry our unique responsibility as Maine's leader in patient care, education and research. We are dedicated to the traditions and ideals of not-for-profit healthcare. Our care is available to all who seek it.

Our efforts to execute on our Mission are aimed at achieving a simple, yet powerful Vision: "Working together so our communities are the healthiest in America."

We are guided by our Values, which call on us to meet and exceed the expectations of those we are privileged to serve. Our Values:

- Patient-Centered
- Integrity
- Ownership
- Excellence
- Respect
- Innovation

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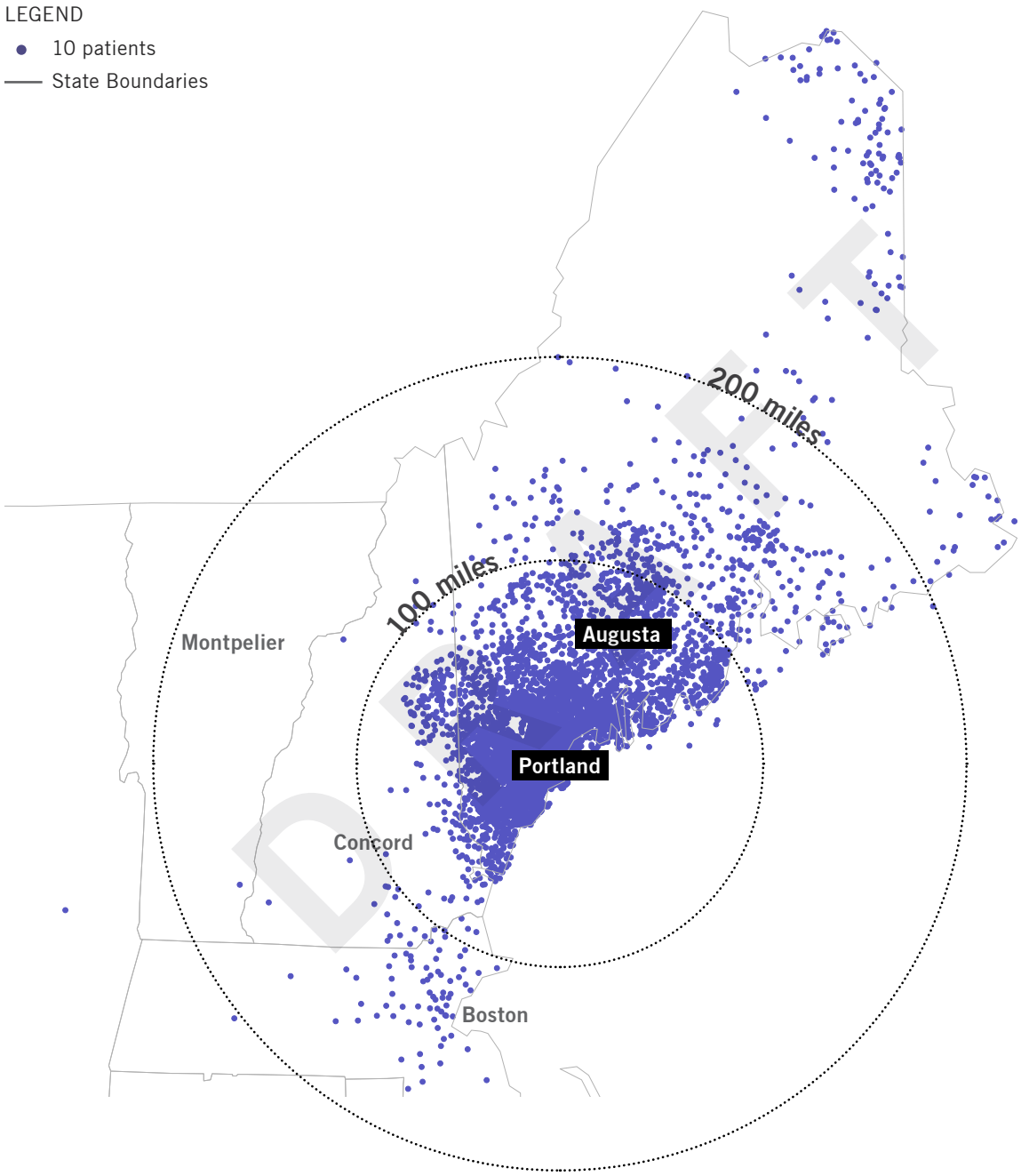
Fig.1.1 Dot Density Map Showing Patient Origin by Zipcode (2016)



History

Maine Medical Center opened its doors in 1874 as Maine General Hospital on Bramhall Hill, at the northern end of the tree-lined Western Promenade and adjacent to the Bramhall Reservoir.

The campus, designed by architect Francis Fassett, included four pavilions around a central administration building. The east pavilion and two outbuildings were erected first, providing patients with sweeping views of Casco Bay and the Fore River. The hospital was designated as the training facility for the Portland School for Medical Instruction and the Medical School of Maine at Bowdoin College, and had its own School of Nursing. Built of red-brick in Italian Gothic style, Maine General soon became a local landmark and a destination for the most up-to-date medical care in the state.

The opening of Union Station (1888) down the hill at Congress and St John Streets brought commercial uses to the area, improving access to the hospital. The hospital also catalyzed development of the area with medical uses (such as the 1891 Maine Eye and Ear Infirmary) as well as residential uses. The Western Promenade neighborhood gained prominence at the turn of the century as high-end homes and apartment buildings were built near the hospital and improvements were

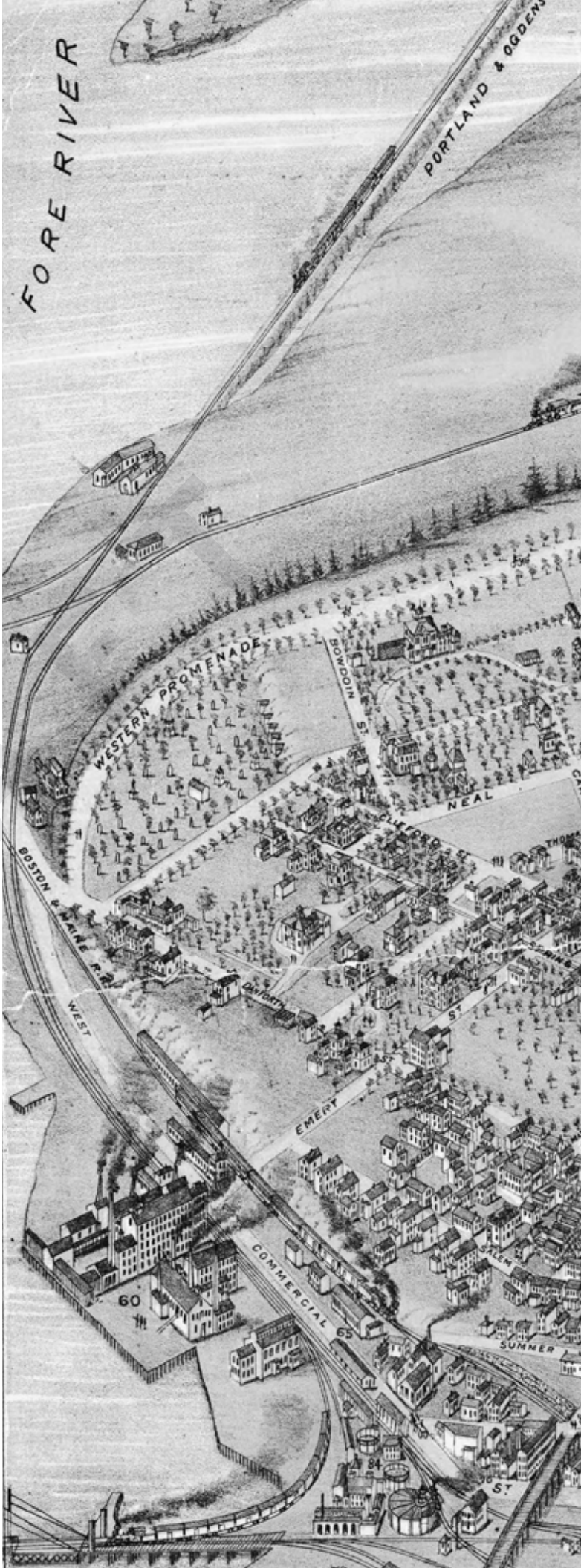


Fig.1.2 1876 Bird's eye view of Portland.

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MAINE CENTRAL R.R.
ST. JOHN ST.
CARTER
WEYMOUTH
ELLSWORTH
WESTERN PROMENADE
BRAMHALL ST.
CHADWICK ST.
WEST ST.
BRACKETT ST.
VAUGHAN ST.
PINE ST.
CARLETON ST.
CUMBERLAND
GROVE ST.
SHERMAN
GRANT
PORTLAND ST.
MELLEN AVE.
STATE ST.
DEERING
CONGRESS
SPRING
CLARK ST.
STATE ST.
DANFORTH ST.
PARK
HIGH ST.
YORK ST.
SOUTH ST.
10
11
25
28
59

made to the Western Promenade parklands. Maine General Hospital modernized its facilities through the 1920s and added a third pavilion in 1929.

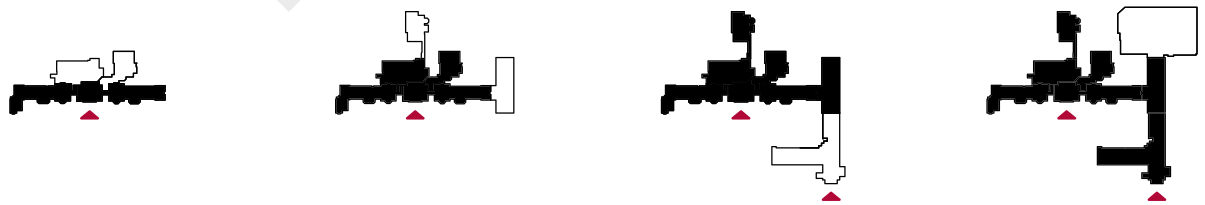
In 1951, Maine General Hospital, the Maine Eye and Ear Infirmary, and Children's Hospital merged to become Maine Medical Center. Two new pavilions were added in 1956 to provide modern patient rooms. Suburban growth and the construction of interstate highways in the 1960s increased demand for parking at the Medical Center, which was met by converting the Bramhall Reservoir into a surface parking lot (current South Lot).

In 1968, MMC doubled the size of its facilities with the addition of the eleven-story Richards Wing. The campus expanded its footprint down towards Congress Street with the addition of its first parking garage (now known as Employee Garage) in the 1970s. In the late 1970s, MMC became a teaching hospital for the University of Vermont College of Medicine.

In 1985, MMC opened the six-story L.L. Bean Building, another major addition to the campus. The Bean Building housed the new Neonatal Intensive Care Unit (NICU), operating suites, and specialty departments; it also now houses the Barbara Bush Children's Hospital (BBCH). The Dana Building was built in 1987, adding much-needed classroom and conference space to the campus.

Through the 2000s, MMC has renovated and expanded its facilities to meet its role requirements as the highest acuity provider of healthcare in the state. In 2008, MMC opened the 190,000 SF East Tower including new units for prenatal care, labor, delivery and recovery, neonatal intensive care, and

Fig.1.3 Historical evolution of Maine Medical Center



1890s **1920s** **1950s** **1960s**

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mother-baby units. The Emergency Department expanded into the basement of the East Tower the following year. The campus transformation project also included a new central utility plant and the 512-car Patient and Visitor Garage.

As its partnership with the University of Vermont came to a close, MMC initiated a new training program for medical students at the Tufts University School of Medicine in 2011. Today, MMC also hosts students from the Geisel School of Medicine at Dartmouth and University of New England College of Osteopathic Medicine.

In 2015, MMC completed construction on a portion of the LL Bean building roof to add new operating rooms and perioperative care beds.

Today, MMC is undertaking a new planning effort driven by the need to replace semi-private patient rooms with private rooms and to provide additional surgical capacity. The plan also provides an opportunity to address infrastructure needs, parking, wayfinding, and overall building organization to improve the delivery of care (see **Chapter 3** for details).

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1970s **1980s** **2000s** **PRESENT DAY**

Fig.1.4 Bird's Eye View of the Campus in Context, Looking North

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CHAPTER TWO

EXISTING CONDITIONS + CONTEXT

Maine Medical Center campus is located on a high point in the west end of the Portland peninsula that is easily accessible from I-295 and Congress St. Its dense, urban context includes historic landscapes and neighborhoods as well as areas that are designated for change in the City's 2017 Comprehensive Plan.

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MMC TODAY

Programs And Services

MMC provides a scope and depth of specialty and subspecialty inpatient and surgical care that is unparalleled in Maine.

MMC is the only Level I American College of Surgeons (ACS) trauma center in Maine and has the only Level III Neonatal Intensive Care Unit (NICU) and the only kidney transplant program in the state. MMC is an American Nurses Credentialing Center (ANCC) Magnet Hospital and has received numerous awards including: Best Regional Hospitals (2016-2017) from U.S. News and World Report, Gold Seal of Approval and Top Performer in Key Quality Measures from the Joint Commission.

MMC's clinical services are organized into six service lines listed in Table 2.1. at right.

Table 2.1 List of MMC Service Lines

More information available on the MMC website at http://www.mmc.org/care-and-services

ADULT MEDICINE	MMC's Adult Medicine Service Line extends across the continuum of care, spanning from primary care, to emergency and critical care, medical services for hospitalized adults, subacute rehabilitation and long-term care. It includes a wide array of specialty programs and services including Digestive Health, Endocrinology, Geriatrics, Infectious Disease, Nephrology, and Palliative Care. This service line also includes the procedural areas of Endoscopy and Transplantation.
CARDIOVASCULAR	MMC's Cardiovascular Service Line addresses the treatment needs of patients with cardiovascular diseases such as coronary artery disease, valvular heart disease, congestive heart failure, arrhythmias, congenital heart disease, and peripheral vascular disease.
ONCOLOGY	MMC's Oncology Service Line provides health services to patients diagnosed with cancer such as medical oncology, radiation oncology, gynecological oncology, and surgical oncology.
SURGICAL	MMC's Surgical Service Line addresses specific health problems requiring surgical intervention including cancer, cardiovascular disease, eye diseases and injuries, gastric and intestinal diseases and injury, gynecological diseases and injury, joint and bone diseases and injury, neurological and spinal diseases and injury, bariatric, trauma, and genito-urologic diseases and injury.
NEUROSCIENCES	MMC's Neurosciences Service Line addresses the treatment needs of patients with neurological diseases such as stroke, epilepsy, neuro-oncology, multiple sclerosis, neuroendovascular diseases, Parkinson's disease, Alzheimer's disease and dementia, neuromuscular diseases, peripheral nerve and muscle conditions, and spine disorders as well as an array of neurodiagnostic services including electroencephalography (EEG) and sleep lab.
WOMEN'S AND CHILDREN'S	MMC's Women's and Children's Service Line addresses the health problems and needs of women and of children under 18 years of age with such clinical services as child birth and pediatric subspecialties including, neonatology, pediatric medicine, oncology, cystic fibrosis, gastroenterology and nutrition, cardiology and cardiac surgery, nephrology, neurology, pulmonology, ophthalmology, orthopedics, and urology.

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Daily Census

While the number of patients, visitors, and employees on campus vary day-to-day, a daily census estimate can be produced for a typical week day using a variety of data sources, including the annual patient counts (see **Table 2.2**). The estimated daily census of individuals on the MMC Bramhall Campus is included in **Table 2.3** below and exceeds six-thousand individuals.

Table 2.2 Census of Patients on Bramhall Campus (FY 2013-2016)

	2013	2014	2015	2016
Inpatient Discharges	29,253	29,401	30,196	30,889
Outpatient Activity	138,626	132,257	140,862	154,434
Bramhall Outpatient Clinics	39,829	40,694	38,209	39,709
TOTAL	**207,708**	**202,352**	**209,267**	**225,032**

Table 2.3 Estimated Daily Census of Individuals on the Bramhall Campus on a Typical Week Day (FY 2016)

Inpatient Discharges	99
Inpatient Visitors	248
Outpatient Activity	594
Outpatient Visitors	594
Bramhall Outpatient Clinics	153
Employees: Shift 1	3,639
Employees: Shift 2	206
Employees: Shift 3	519
Students on Campus: Medical	100
Students on Campus: Nursing	86
Other Students (PA, Pharma, etc.)	20
Non-MFP Related Contractors	25
TOTAL DAILY CENSUS	**6,283**

Assumptions: Daily inpatient discharges estimated from annual count, using six-day weeks to accommodate for reduced activities Sun-Tue. Daily outpatient activity estimated from annual count, using five-day weeks. Inpatient visitors estimated at 2.5 / patient, outpatient visitors estimated at one per patient. 60% of employees are estimated to be on the Bramhall campus at one time.

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Fig.2.1 Bird's Eye View of the Campus in Context, Looking South

Maine Medical Center

Existing Facilities

MMC regularly conducts building assessments to inform future investment and development decisions on campus. The assessments evaluate the condition of building structure and systems, and compliance with current building codes and regulations including fire safety. The 2015 assessment (see **Fig.2.2** on page 23) illustrates that a number of buildings on campus are approaching the age and level of condition for replacement.

Among those that are listed for replacement in the long-term are the Pavilions, the Richards Building and the LL Bean Building, which together host a large percentage of the hospital's bed inventory. These include a large number of semi-private beds that must be replaced to conform to current patient care standards. The Employee Garage is identified for replacement in the short-term due to its structural challenges.

Property Ownership

MMC owns and leases a number of properties across the City of Portland. These properties are listed and identified on a map on the following pages (see **Fig.2.3** and **Tables 2.5 and 2.6** on page 24.)

Properties that have a functional relationship to the MMC Bramhall campus, which is the subject of this IDP are highlighted with an ***** on **Tables 2.5 and 2.6**. Per the requirements of the IOZ, a functional relationship is defined as uses or activities that are integrally linked to the day-to-day operations of the MMC Bramhall Campus, without which activity MMC would be severely limited in one or more services.

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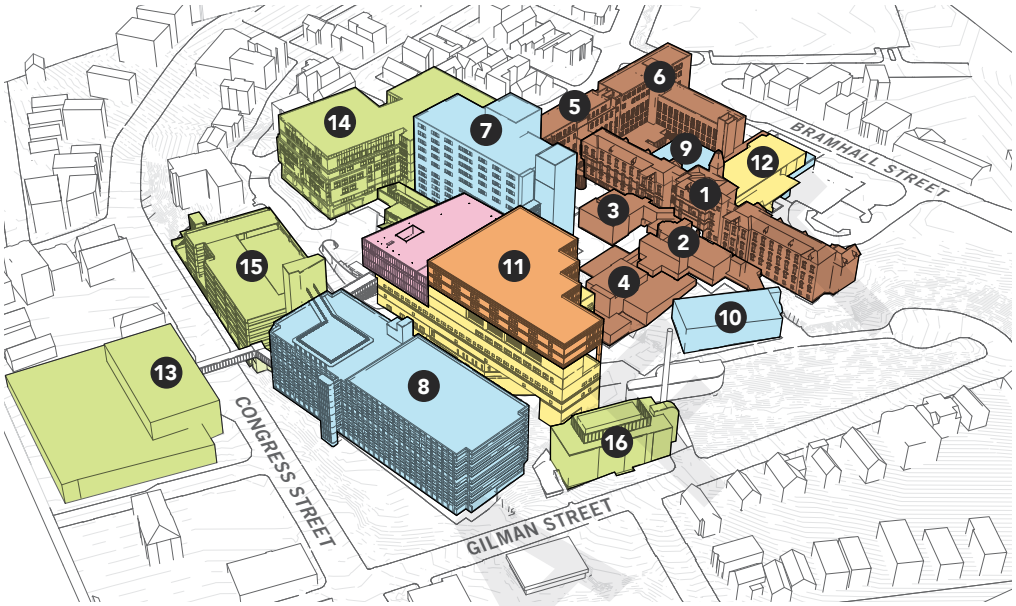
Table 2.4 Inventory of Existing Facilities

	Building Name	Date	Gross SF
1	Maine General	1870s	72,920
2	Annex B	1870s	36,250
3	Annex C	1870s	13,190
4	Annex A	1929	10,110
5	Pavilion A	1929	66,380
6	Pavilions C & D	1956	83,460
7	Richards Building	1968	228,920
8	Employee Garage	1970s	--
9	Diagnostics Building	1976	89,150
10	Engineering Services Building	1978	23,840
11	LL Bean Building	1985	231,830
12	Dana Building	1987	19,310
13	Congress Street Medical Bldg	1999	47,000
14	East Tower	2008	200,000
15	Patient and Visitor Garage	2008	--
16	Central Utility Plant	2008	--
		TOTAL	**1,122,360 GSF**

Fig.2.2 Existing Facilities, by Age And Condition

Pre 1960
1960 - 1970
1980
1990
2000 - 2010
2015



Continued investment in this building is:

Recommended
Cautioned
Not Recommended

For future use.

Fig.2.3 Map of MMC-Owned Parcels and Leased Properties

All Parcels within the City of Portland owned by Maine Medical Center or MMC Realty Corp.

Locations where MMC leases space (map extent only)

Table 2.5 List of Properties Owned by MMC within the City of Portland

Parcel Address	*Current Use*
A MMC BRIGHTON CAMPUS	
335 Brighton Ave	MMC Brighton
367 Brighton Ave	Residential
27 Hollis Rd	Residential
136 Prospect St	Residential
142 Prospect St	Residential
170 Prospect St	Residential
B MMC BEHAVIORAL HEALTHCARE	
556 St John St	Medical Office
D GATEWAY GARAGE BUILDING	
177 High St	Business Office
429 Cumberland Ave	Business Office
Note: MMC does not own but leases parking spaces in the Gateway Garage.	
E PORTLAND FAMILY MEDICINE	
272 Congress St	Medical Office
263 Congress St	Parking Lot
148 Cumberland Ave	Parking Lot
C MMC BRAMHALL CAMPUS AREA	
* 22 Bramhall St	MMC Bramhall
* 930 Congress St	Medical Office
* 932 Congress St	Business Office
* 887 Congress St	Medical Off. / Pkng
* 308 Brackett St	Parking
* 993 Congress St	Parking
* 995 Congress St	Business Office
* 98 Chadwick St	Maint. Garage
* 94 Chadwick St	Parking / Storage
* 47 Bramhall St	Business Office
* 229 Vaughan St	Business Office
216 Vaughan St	Medical Office
66 Bramhall St	Medical Office
19 West St	Medical Office
120 West St	Residential
34 Ellsworth St	Vacant Land
40 Ellsworth St	Vacant Land
231 Western Prom	Residential
227 Western Prom	Vacant Land
44 Gilman St	Parking
52 Gilman St	Medical Office
261 Valley St	Parking
262 Valley St	Parking
264 Valley St	Vacant Land

Table 2.6 List of Properties Leased by MMC in the City of Portland

Parcel Address	*Current Use*
* 131 Chadwick St	Business Office
180 Park Ave	Business Office
233 Vaughan St	Business Office
241 Oxford St	Business Office
315 Park Ave	Business Office
39 Forest Ave	Business Office
509 Forest Ave	Business Office
* 7 Bramhall St	Bus. Off. / Pkng
794 Congress St	Business Office
295 Park Ave	Medical Office
20 Portland St	Medical Office
818 Congress St	Medical Office
* 181 High St	Parking
* 222 St. John St	Parking
* 905 Congress St	Parking
98-100 India St	Parking
183 Brackett St	Residential
25-29 Crescent St	Residential
* 321-325 Brackett St	Res. / Pkng
75 St. James St	Storage
85 St. James St	Storage
Located off the map extent:	
12 Andover Road	Medical Office
1250 Forest Ave	Medical Office
1577 Congress St	Medical Office
901 Washington Ave	Business Office
190 Riverside St	Business Office
87 Central Ave	Medical Office

* Denotes properties with a functional relationship to the MMC Bramhall Campus. A functional relationship is defined as uses or activities that are integrally linked to the day-to-day operations of the MMC Bramhall Campus, without which activity MMC would be severely limited in one or more services.

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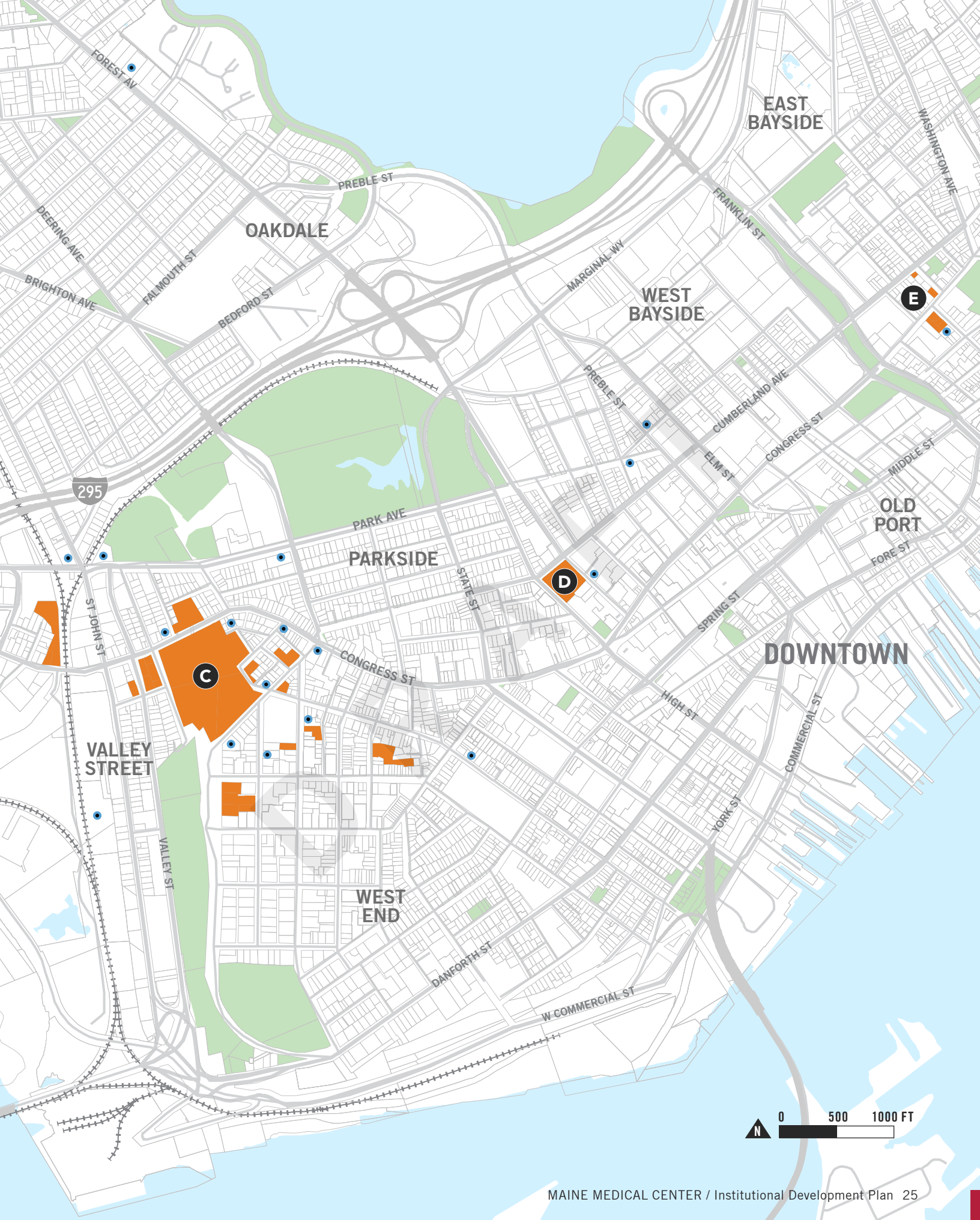
EAST BAYSIDE
WASHINGTON AVE
FRANKLIN ST
FOREST AV
PREBLE ST
OAKDALE
DEERING AVE
BRIGHTON AVE
FALMOUTH ST
BEDFORD ST
MARGINAL WY
WEST BAYSIDE
E
PREBLE ST
CUMBERLAND AVE
CONGRESS ST
ELM ST
MIDDLE ST
295
OLD PORT
PARK AVE
PARKSIDE
FORE ST
D
STATE ST
SPRING ST
ST JOHN ST
C
CONGRESS ST
DOWNTOWN
HIGH ST
COMMERCIAL ST
VALLEY STREET
YORK ST
VALLEY ST
WEST END
DANFORTH ST
W COMMERCIAL ST
N
0
500
1000 FT

CAMPUS CONTEXT

The Maine Medical Center Bramhall campus is located at a high point in the west end of the Portland peninsula that is renowned for the Western Promenade—an 18-acre park and national historic landmark designed by the Olmsted Brothers, among others. The campus abuts the Western Promenade in a dense urban setting that serves, in many ways, as a transitional zone between areas with diverse character, land uses, and demographics.

The campus, which serves the entire state of Maine as well as eastern New Hampshire, is located within less than a mile's distance of I-295, which links Portland to destinations across New England. To the north, the campus fronts on Congress Street—Portland's main street that extends along the spine of the peninsula to Portland's downtown and beyond. The MMC campus is located at the western gateway into the City.

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Fig.2.4 Bird's eye view of the campus in its urban context

Adjoining Neighborhoods

The 21.8-acre MMC Bramhall campus abuts four distinct neighborhoods. To the west and north is the St John Valley Neighborhood, a diverse area featuring a wide mix of uses including industrial warehouses, a large food processing plant, bus garages and facilities, single-family residential, local and chain restaurant, multi-family rentals, and alternative grocery stores. St John Valley, and the largely residential Parkside neighborhood to its east, are among the most ethnically and racially diverse in Portland. (City of Portland GIS Maps, 2010 Diversity Index). The two neighborhoods share easy access to Hadlock Field, Fitzpatrick Stadium, and Deering Oaks Park north of Park Avenue.

The Western Promenade neighborhood is located to the south of the medical campus. The focal point and namesake of the neighborhood is the 18-acre linear park that wraps the 120-feet tall escarpment, providing sweeping views of Casco Bay and the Fore River. Designated as a park as early as 1836, and designed in 1905 by the Olmsted Brothers, the Western Promenade was also recognized as a national historic site in 1989. The Western Promenade neighborhood and large sections of the adjoining West End neighborhood are included in the West End local historic district in recognition of their cohesive residential character featuring major architectural styles from 1850 to the 1920's.

Zoning Context

Development on the MMC campus has been historically governed by Contract Zone agreements C41 (main campus) and C18 (Congress Street Medical Building).

MMC is currently working with the City and surrounding neighborhoods to establish a new Institutional Overlay Zoning (IOZ) District to regulate future development on campus. MMC's IOZ District will supersede the contract zones for hospital-owned properties. See **Fig.2.5** on page 29 for a map of MMC's IOZ district in its zoning context.

As the City implements new institutional zoning for the MMC campus, opportunity exists to comprehensively review the zoning regulations for Congress Street to provide for orderly redevelopment on both sides of the gateway corridor.

Historic Resources

The MMC Bramhall campus abuts the West End Historic District, one of the eleven locally-designated historic districts in the City of Portland (see **Fig.2.5** on page 29). The West End Historic District includes the Western Promenade, which was designated as a national historic site in 1989.

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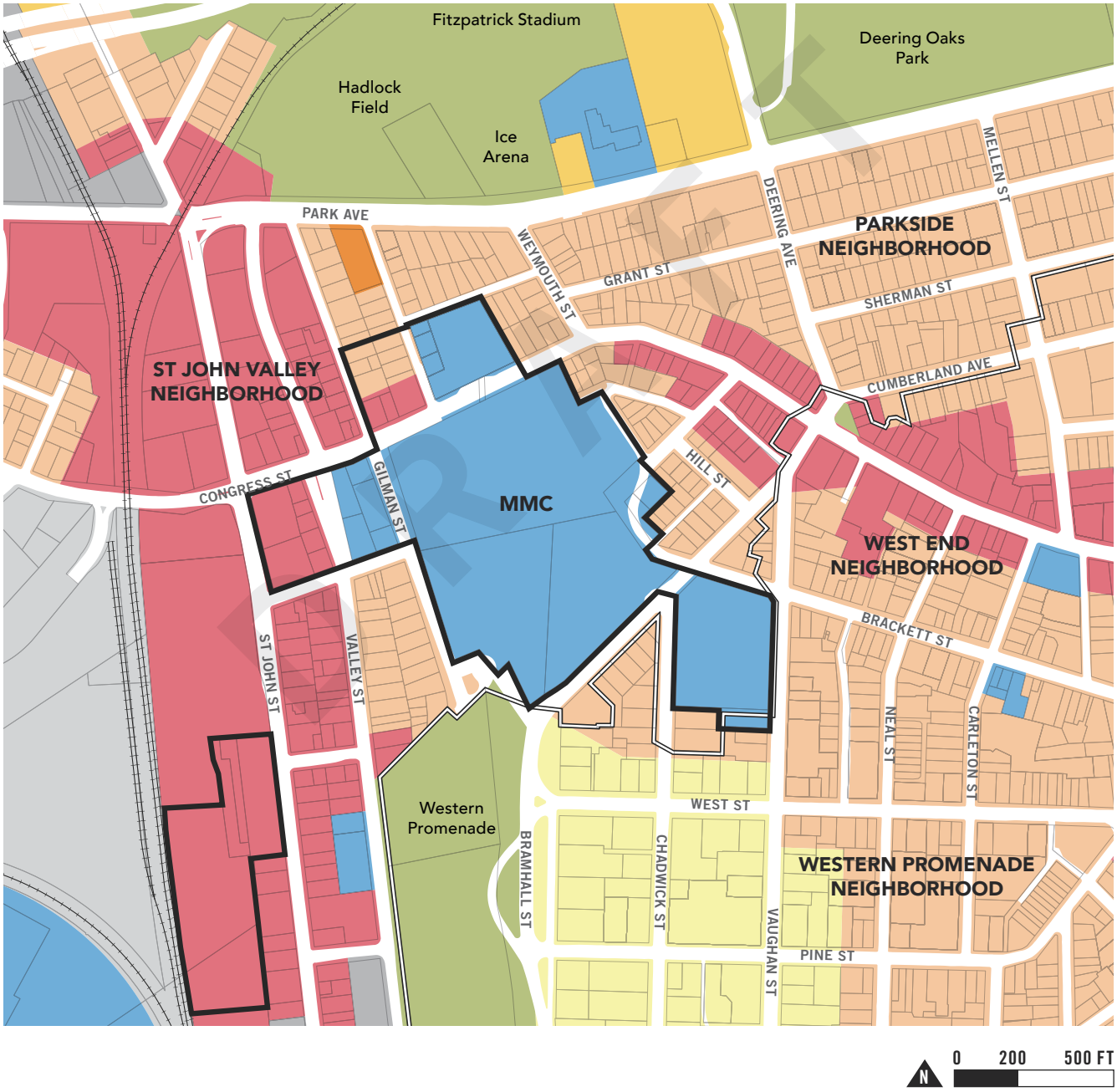
Fig.2.5 MMC Campus: Neighborhood and Zoning Context (Data Source: City of Portland GIS)

LEGEND

- MMC Institutional Overlay Zoning (IOZ) District Boundary
- West End Historic District Boundary
- Parcel Boundaries

CITY OF PORTLAND EXISTING ZONING DISTRICTS

- R4 Residential
- R5 Residential
- R6 Residential
- RP Residential Professional
- B2 or B2b Business Community
- IL Industrial - Low Impact
- IM or IMb Industrial - Moderate Impact
- ROS Recreation Open Space
- Contract Zones (including existing MMC Contract Zones 18 and 41)



TRANSPORTATION CONTEXT

Maine Medical Center's service area includes all of Maine and parts of New Hampshire. The majority of MMC patients and visitors do not live within walking distance or near public transportation and arrive by car. The nature and acuity of patient needs does not lend itself to the use of alternative modes of transportation. This situation is not atypical for a hospital, but rather is the norm even in locations with a robust public transit system.

The campus' proximity to I-295 provides ease of access to most patients and visitors. **Fig.1.1 on page 9** provides an illustration of the geographic breakdown of MMC's patient home origins in Maine and beyond.

MMC is open to patients every hour, every day of the year. Most MMC staff and physicians do not use alternative modes of transportation. Work responsibilities that require the use of an automobile, work shifts that do not lend themselves to taking transit, a lack of transit options to accommodate staff schedules, and an insufficient bicycle infrastructure in the surrounding municipalities could all be factors that contribute to a high drive share by staff. See **Fig.2.9** for a map of MMC employee residences.

Vehicular Access and Circulation

Vehicle access and circulation on the MMC Bramhall Campus was planned and designed to maintain a safe and efficient transportation system. Most notably, the concept of separating patients, employees, emergency department operations and loading/service are all considerations that exist at MMC currently. **Fig.2.6** provides an illustrative summary of MMC's access and circulation system on the Bramhall Campus. Aspects of that system are described in greater detail below.

- Patient/Visitor Access: Patients and visitors have several choices when accessing the hospital. Through a strong wayfinding and signage plan, they are directed to park directly in the Congress Visitor Garage or the South Lot. They also have access to a convenient patient drop-off area that is located off of Bramhall Street, with direct access to parking in the South Lot.
- Emergency Department Access: MMC's Emergency Department (ED) is located near the main entrance but is clearly delineated and separated from it. Within the ED area, ambulances have their own dedicated area and are separated from patient ED access and short-term ED parking.
- Staff Access: Staff primarily park in the Employee Garage, which is located on Congress Street with access off of Gilman Street. This design limits the mixing of patient and staff traffic, resulting in fewer staff vehicles near patient access zones.
- Loading/Service Access: Trucks destined for MMC are directed to a dedicated loading and service facility located off of Gilman Street, separate from all active patient access and circulation functions. MMC does not accept large deliveries from any location other than through the loading dock area.

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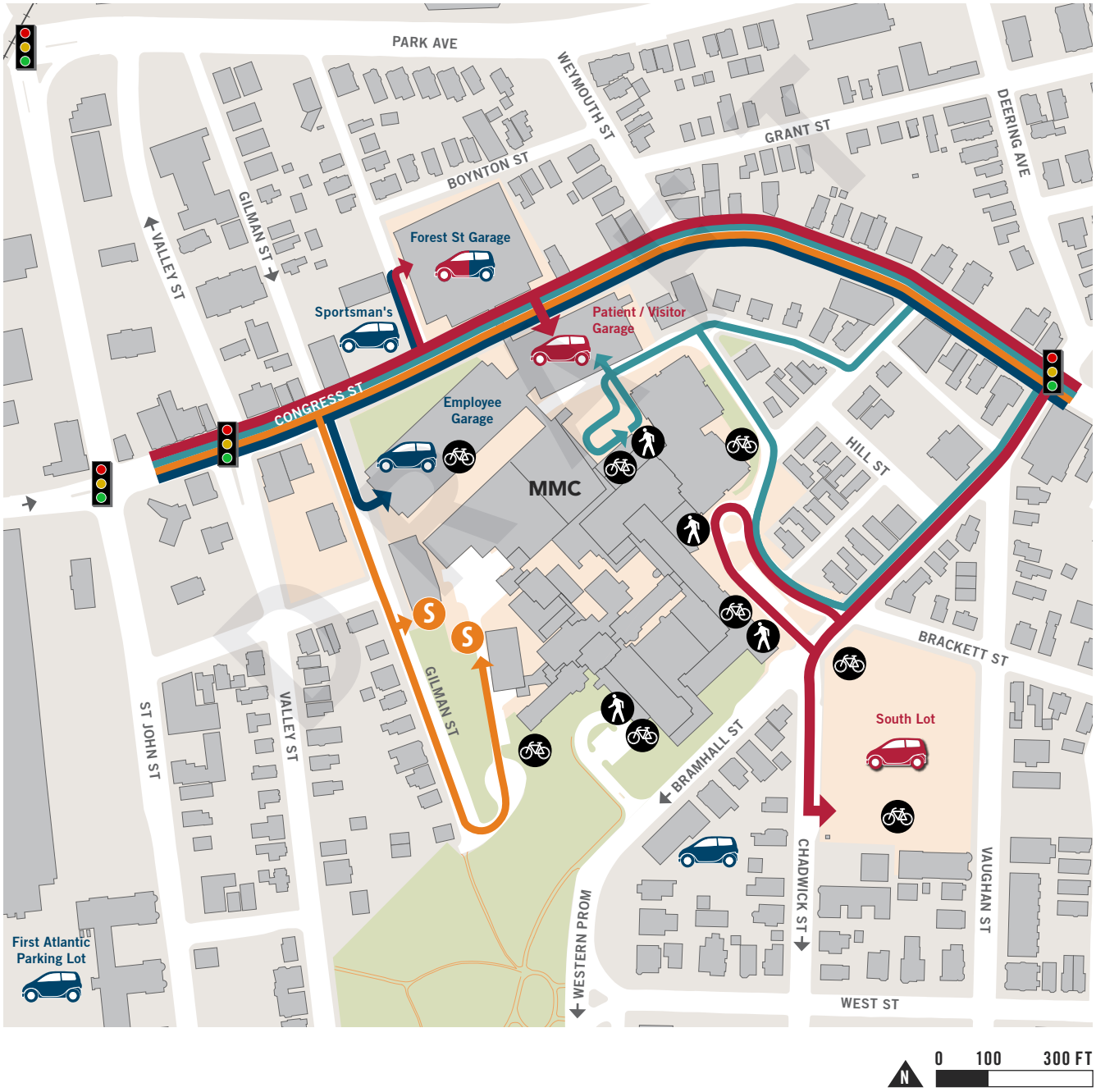
Fig.2.6 MMC Existing Circulation Routes and Access Points

KEY VEHICULAR CIRCULATION ROUTES

- Patients / Visitors
- Emergency Drop-off / Ambulance
- Staff
- Service

- Patients and Visitor Parking
- Staff Parking (In map extent only. See list on following page for all locations)
- Limited Parking for Service Vehicles / Service Staff
- Bicycle Rack Locations
- Main Pedestrian Entrances



Parking

MMC offers its patients, visitors, physicians, and employees several options for parking. MMC currently controls approximately 2,877 total off-street parking spaces either via ownership or through leases with others that specifically serve the Bramhall Campus. Of the 2,877 spaces, 850 spaces are available for public use by patients and visitors, and 2,027 parking spaces are subscribed to staff and physicians. About 1,538 of these employee parking spaces are located on the MMC Bramhall Campus.

In addition to their on-campus parking spaces, MMC controls an additional 489 spaces for employees in remote parking facilities that serve the Bramhall Campus. Off-site spaces that are used by employees require shuttle services to the Bramhall Campus by dedicated MMC-operated shuttle services. **Table 2.7** provides a summary of existing Maine Medical Center parking facilities and **Fig.2.6** illustrates each facility's geographic location.

MMC has continued to see demands on the existing supply intensify due to increased patient volumes and higher acuity patients (longer lengths of stay). And under current conditions, the MMC staff parking system typically operates at capacity during the weekday daytime hours. When off-site, remote staff parking facilities reach capacity, staff are directed to park on-campus in the Congress Visitor

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Table 2.7 Existing Parking Spaces

		Patient / Visitor	Employee	Total at Facility	Ownership
ON-CAMPUS 850 patient / visitor 1,538 employee spaces	Employee Garage	0	1,274	1,274	Owned
	Congress Visitor Garage	480	0	480	Owned
	South Lot	370	0	370	Owned
	887 Congress (CMOB Garage)*	0	178	178	Owned
	7 Bramhall St	0	26	26	*Leased*
	905 Congress St (Sportsman Lot)	0	60	60	*Leased*
OFF-CAMPUS 489 employee spaces	222 St John St (First Atlantic Lot)	0	283	283	*Leased*
	181 High St (Gateway Garage)	0	100	100	*Leased*
	993 Congress St (Classic Lot)	0	97	97	Owned
	321 Brackett St	0	9	9	*Leased*
	TOTAL PARKING SPACES	850 Patient / Visitor	2,027 Employee	2,877 Total	

* The CMOB Garage has an additional 222 spaces that are dedicated to medical office staff and patients.

Garage. Some staff also independently choose to park nearby utilizing neighborhood on-street parking, although this is discouraged by MMC.

Tables 2.8 and 2.9, respectively, highlight the number of on-campus parking spaces that MMC controls, and measures those space counts as a ratio of total beds on the Bramhall Campus. The tables also compare those ratios to comparable peer academic medical centers to get a better relative understanding of the amount of parking that MMC uses to support its Bramhall Campus versus these peer institutions.

As shown in **Table 2.8**, MMC's 850 patient/visitor parking spaces equates to about 1.33 parking spaces per bed. This is low when compared to other New England and national peers. Patient drive rate is consistently high among large academic medical centers regardless of location. Therefore it is appropriate and reasonable to compare MMC patient parking needs on a space per bed basis to highly urban, suburban, and rural settings. MMC would need about 340 additional patient/visitor parking spaces to achieve the midpoint parking space/bed ratio (approximately 1.87) of its peers.

As shown in **Table 2.9**, MMC's 2,027 staff parking spaces equates to about 3.18 parking spaces per bed. This ratio is also low when compared to other peer institutions. When studying staff/physician parking needs, it is important to compare institutions that would reside in similar contexts where driving behavior and auto mode shares would be similar. Because of this, the list of institutions in **Table 2.9** is shorter, and only includes those that provide for a reasonable comparison to MMC, where the staff drive mode share is very high (over 90 percent).

Under current conditions, MMC would likely require about 150-200 additional on-campus parking spaces to alleviate current staff parking shortfalls that have been estimated via observations and data collection activities and eliminate on-street parking by MMC staff. To help alleviate these pressures, MMC continues to pursue a number of strategies to address its constrained parking situation, including:

- The study of enhanced Transportation Demand Management (TDM) actions to reduce single-occupancy vehicle trips and parking demand,
- Moving employees to off-campus locations (both program and parking), and,
- Securing additional remote parking and serving that remote parking with convenient shuttle services for staff.

See "Future Parking Conditions" on page 74 for MMC's future parking plan.

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Table 2.8 Peer Institutions: Inpatient Parking Demand Ratios

	Total Beds	Total Patient Parking Spaces	Parking Ratio (spaces /bed)
Maine Medical Center / Portland, ME	637	850	*lowest* **1.33**
Advocate Illinois Masonic Medical Center / Chicago, IL	211	292	1.38
VCU Health / Richmond, VA	1,125	1,830	1.63
University of Pennsylvania Health System / Philadelphia, PA	695	1,155	1.66
New Spaulding Rehabilitation Hospital / Boston, MA	132	230	1.74
Washington University Medical Center / BJHN / St. Louis, MO	220	402	1.83
Rush University Medical Center / Chicago, IL	674	1,249	1.85
Loyola University Medical Center / Maywood, IL	536	1,018	1.89
Brigham and Women' Hospital / Boston, MA	793	1,564	1.97
Beth Israel Deaconess Medical Center / Boston, MA	632	1,302	2.06
Massachusetts General Hospital / Boston, MA	902	2,057	2.28
Central DuPage Hospital / Winfield, IL	361	965	2.67
Florida Hospital Orlando – Ginsburg Tower / Orlando, FL	440	1,726	3.92
Edward Hospital / Naperville, IL	357	1,425	*highest* **3.99**

median **1.87**

Notes:
Gross on-campus patient parking spaces to total inpatient beds. Includes any related outpatient demand at each respective facility.
Florida Hospital Orlando - Ginsburg Tower includes some staff parking on-campus.

Table 2.9 Peer Institutions: Employee Parking Demand Ratios

	Total Beds	Total Patient Parking Spaces	Parking Ratio (spaces /bed)
Maine Medical Center / Portland, ME	637	2,027	*lowest* **3.18**
Washington University Medical Center / St. Louis, MO	986	3,569	3.61
Florida Hospital Orlando – Ginsburg Tower / Orlando, FL	440	1,726	3.92
University of Virginia Health System / Charlottesville, VA	600	2,895	4.83
Elliot Hospital / Manchester, NH	296	1,852	6.26
VCU Health / Richmond, VA	1,125	7,063	*highest* **6.28**

median **4.38**

Notes:
Gross employee parking spaces to total inpatient beds. Includes any related outpatient demand at each respective facility.
Elliot Hospital includes patient and visitor parking. Florida Hospital Orlando - Ginsburg Tower includes some staff parking on-campus.

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Public Transit Access

METRO provides bus service throughout the Greater Portland region and makes stops within walking distance of museums, galleries, shops, restaurants and historic landmarks. **Table 2.10** (page 41) and **Fig.2.13** (page 42) summarize and illustrate those key bus routes that the METRO operates that are within a 5-minute walk of the MMC Bramhall campus. METRO bus stops that are located near the MMC campus are also noted on **Fig.2.13**. MMC riders can transfer to other METRO buses at the Portland Transportation Center (PTC) and the Downtown Hub. The PTC also serves as the connection to Amtrak Downeaster service.

Bicycle Access and Storage

MMC is committed to supporting bicycle access to the Bramhall Campus. As shown in **Fig.2.7**, bicycling is prevalent within the City of Portland, however, bike use at and around the MMC campus is generally lower than in other Portland locations. This could be a result of the severe grades in the Bramhall neighborhood, but also the lack of strong municipal bicycling infrastructure, including dedicated bike lanes, paths and sharrows.

In recent years, the hospital has invested in bicycle racks, showers, and lockers. **Fig.2.6** on page 31 indicates the location of bicycle racks on campus. MMC currently has capacity to accommodate up to 193 bicycles on campus.

Pedestrian Entrances and Access

As illustrated previously in **Fig.2.6**, there are many options for MMC patients, visitors and staff to access the Bramhall Campus. Most notably, the major parking garages are directly connected to the hospital with elevated, covered, and temperature-controlled pedestrian walkways. This limits exposure to adverse weather conditions as well as minimizes on-street vehicle conflicts at intersections and pedestrian crossings.

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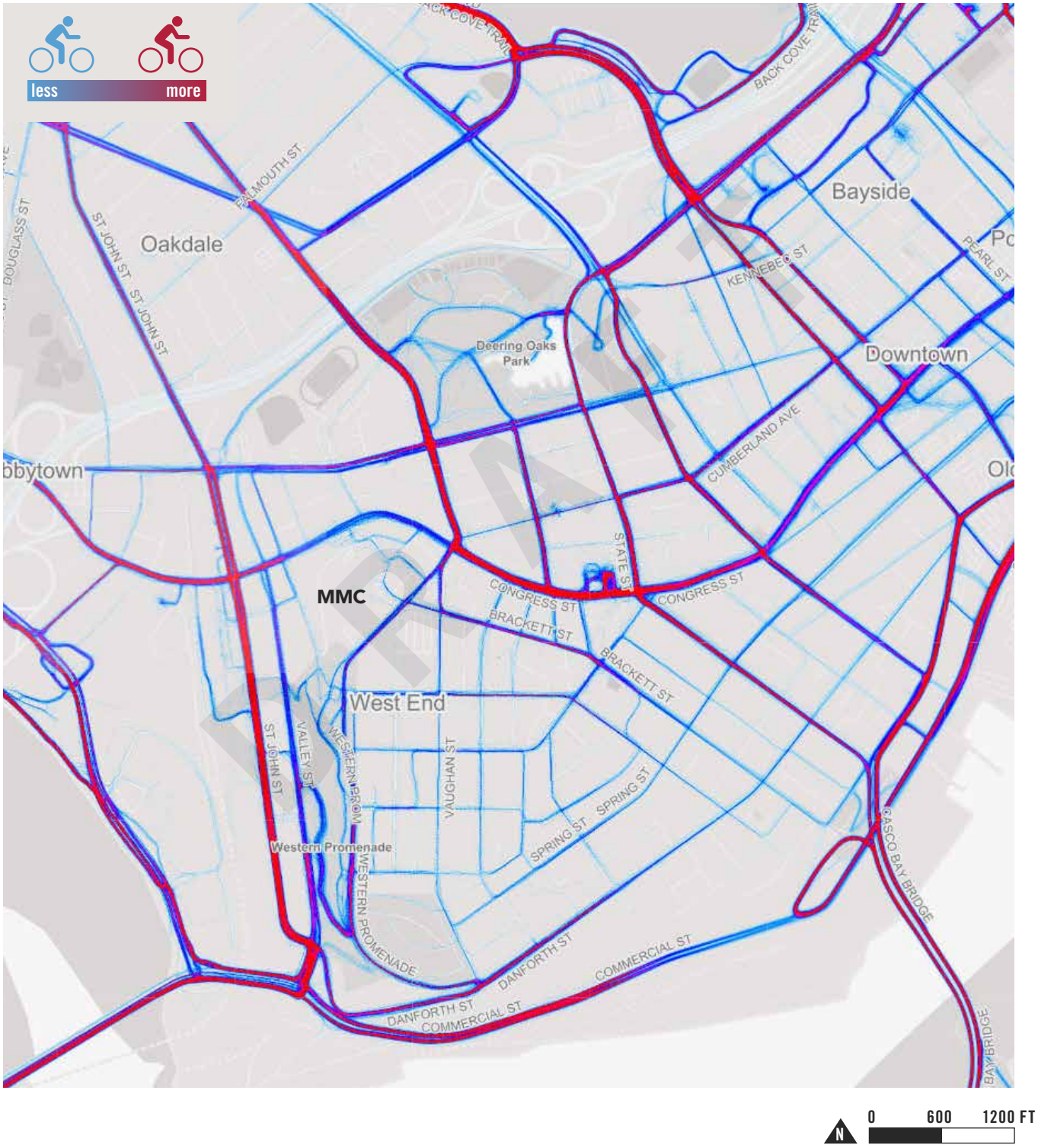
Fig.2.7 Heatmap Showing Popular Bicycle Routes in the Area, as Recorded by Strava App Users

Source: Based on self-tracking app data mapped by Strava Labs (labs.strava.com/heatmap)



Transportation Demand Management (TDM)

As part of its efforts to monitor and enhance the "Get on Board!" (MMC's existing TDM) program, MMC recently completed a survey of its employees to better understand existing conditions. The current mode split is shown in **Fig.2.8**.

Maine Medical Center is open 24 hours per day, 7 days per week, 365 days per year. Patients require the round-the-clock care that MMC provides. Robust public transportation is not available to service the needs of the broad geographic area. The high percentage of employees driving to work alone and parking near campus is not surprising given the nature of the services provided.

"Get on Board!" TDM Plan

MMC's TDM Plan, "Get on Board!" was successfully implemented in June 2008 and updated annually.

The "Get on Board!" Program, aims to reduce MMC's traffic impact on the peninsula by reducing the number of single-occupancy vehicles (SOV) trips to the campus. The goal is advanced through the subsidy, and marketing of alternative commute options including walking, bicycling, public transit, and rideshare.

"Get on Board!" has continued to grow since implementation. Its success is demonstrated in the growing enrollment in the "Get on Board!" program. The "Get On Board!" Program is administered through an employee portal that includes

Fig.2.8 MMC Bramhall Campus Employees Commuting Mode Split (2017)

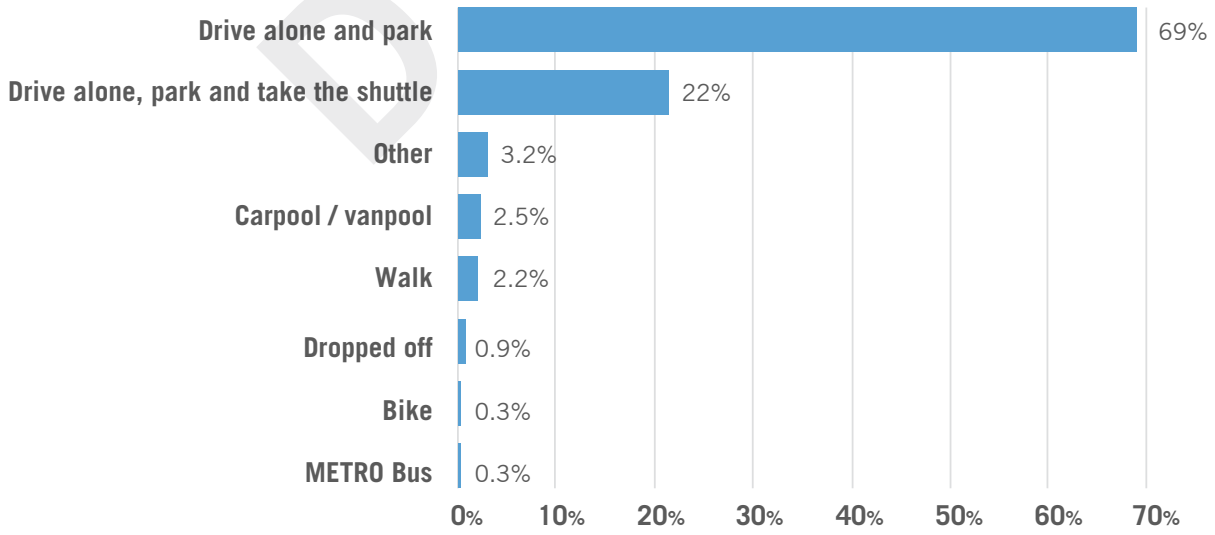


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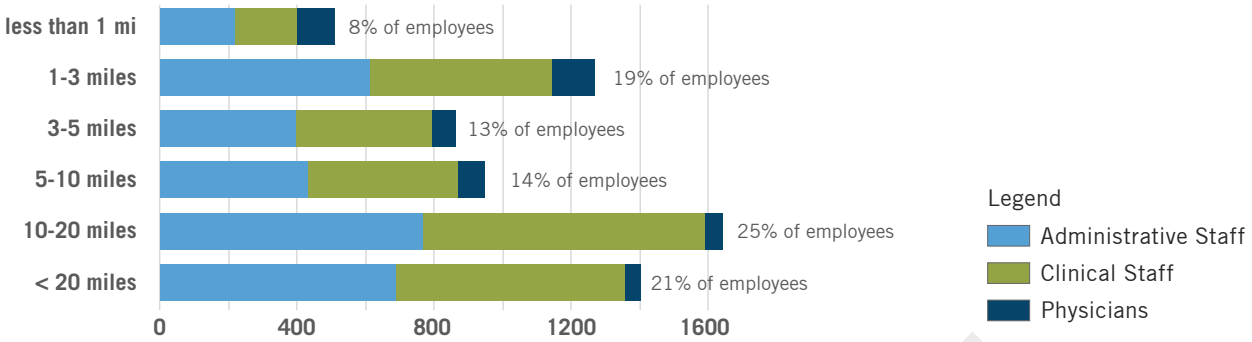
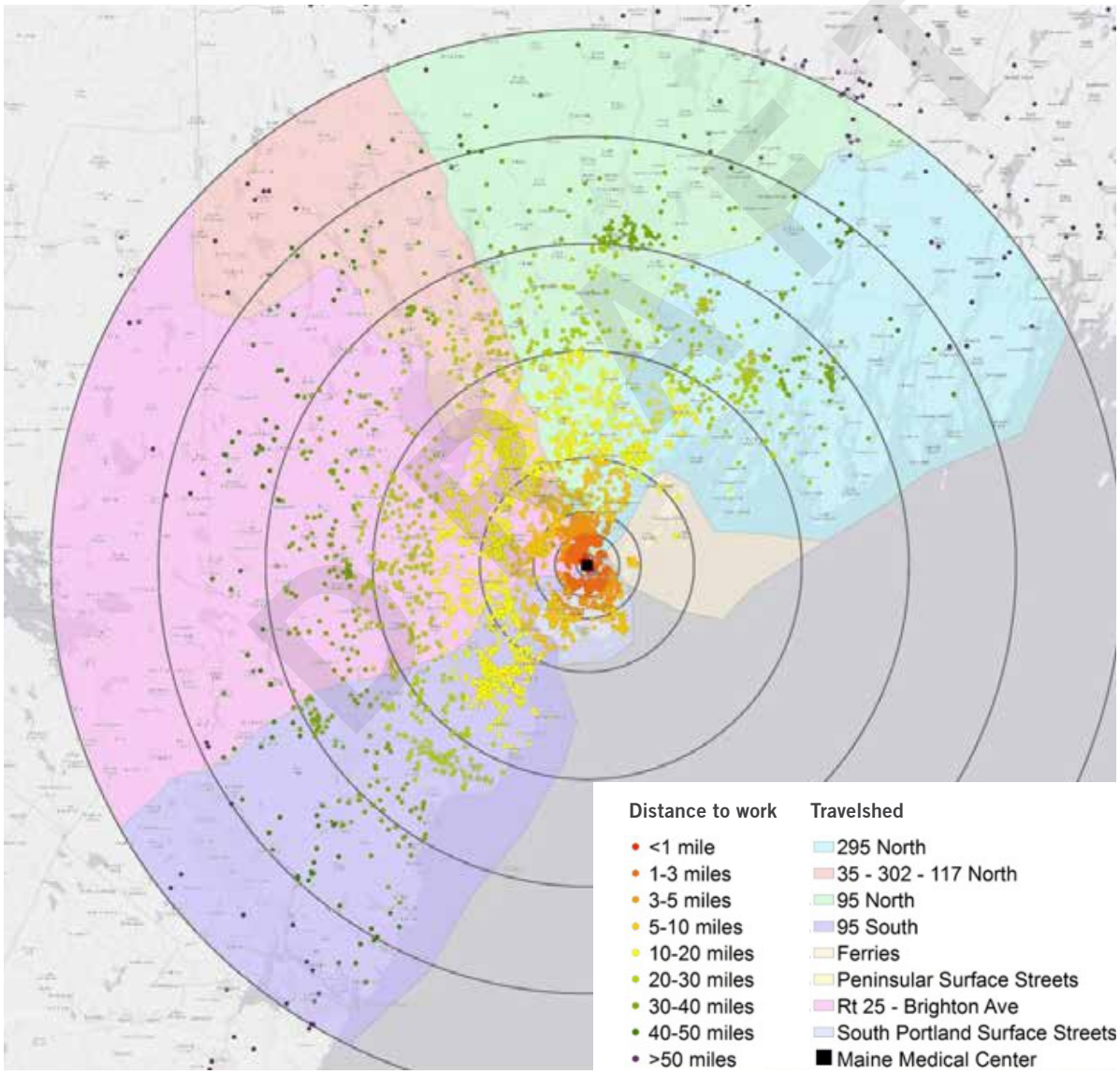
Fig.2.9 MMC Employees, Distance to Work





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information and resources for alternative commutes. The website provides links to Maine Department of Transportation and the Maine Turnpike Authority's "GO MAINE" program to provide employees easy access to additional benefits. All new employees receive "Get On Board!" information during orientation with instructions on how to join the program. This has increased the number of people that join the program at the start of their employment and has made "Get On Board!" a focus of institutional policy to help influence travel behavior by MMC staff.

Individual program elements and related incentives are outlined in the following section.

Supporting Mass Transit Commutes

Employees can purchase discounted bus tickets and Shuttle-Bus Zoom tickets conveniently in the cafeteria. MMC buys the tickets at the regular price and offers them to employees at the reduced prices listed below. This is a clear demonstration of MMC's commitment to making "Get on Board!" work. **Table 2.10** includes a list of buses currently serving the MMC campus. See **Fig.2.13** on page 42 for a map of these routes, and stops located within walking distance of the campus.

	MMC COST	EMPLOYEE COST
METRO	$13.50	$8
S. PORTLAND	$13.50	$8
ZOOM 10 RIDE	$39	$29.60
ZOOM MONTHLY	$100	$84.50
ZOOM QUARTERLY	$260	$197.50

Supporting Employee Carpools

Employees participating in the Ride Share (carpooling) program are given access to preferred parking in a gated, ID-card access only area of the Employee Garage that connects directly to the Main Lobby on the ground floor of the hospital.

Supporting Bicycle Commutes

The MMC campus is located in close proximity to popular bicycle corridors, including St John and Congress Streets which connect riders to destinations across the City of Portland (see **Fig.2.7** on page 36**).** MMC has worked diligently to support bicycle commuters. In 2008, MMC installed five strategically-located bike racks and ten bike lockers on their Bramhall Campus. Three new bicycle racks were added in the vicinity of the Main entrance and in the South Lot in 2016, bringing total storage capacity to 193 bicycles across campus (see **Fig.2.6** on page 31 for location of bicycle racks on campus). Bicycle commuters also have access to a shared toolshed with basic tools.

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MMC Employee Shuttles

The MMC employee shuttle operates Monday-Friday from 6am to 11pm. The number of shuttles running to off-site parking locations at any given time varies from 1-5 shuttles depending on traffic volume. These offsite lots fill to capacity on a daily basis. The employee shuttle service has three distinct routes and schedules:

A. Service to and from the offsite 1st Atlantic and Classic parking lots runs from M-F from 6am to 11pm, in a continuous loop. The 1st Atlantic parking lot (222 St John St) is utilized first in the mornings. Once it nears capacity, service shifts to the Classic parking lot (993 Congress St). Return trips in the evenings service both lots.

B. The Gateway shuttle moves employees between the MMC Bramhall campus, the Gateway office building / garage and the MaineHealth home office at 110 Free Street. The shuttle leaves every 20 minutes from the south entrance M-F from 6am to 4pm. Transportation is provided on an "On Call" basis between 4pm and 11pm. This shuttle also provides a limited courtesy transportation service to patient families staying at the Ronald McDonald House (250 Brackett St.).

C. A courtesy shuttle runs between Brighton Medical Center (335 Brighton Ave) and Maine Medical Center every 20 minutes from 6am to 4pm.

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Fig.2.12 Map of MMC Shuttle Routes A & B.

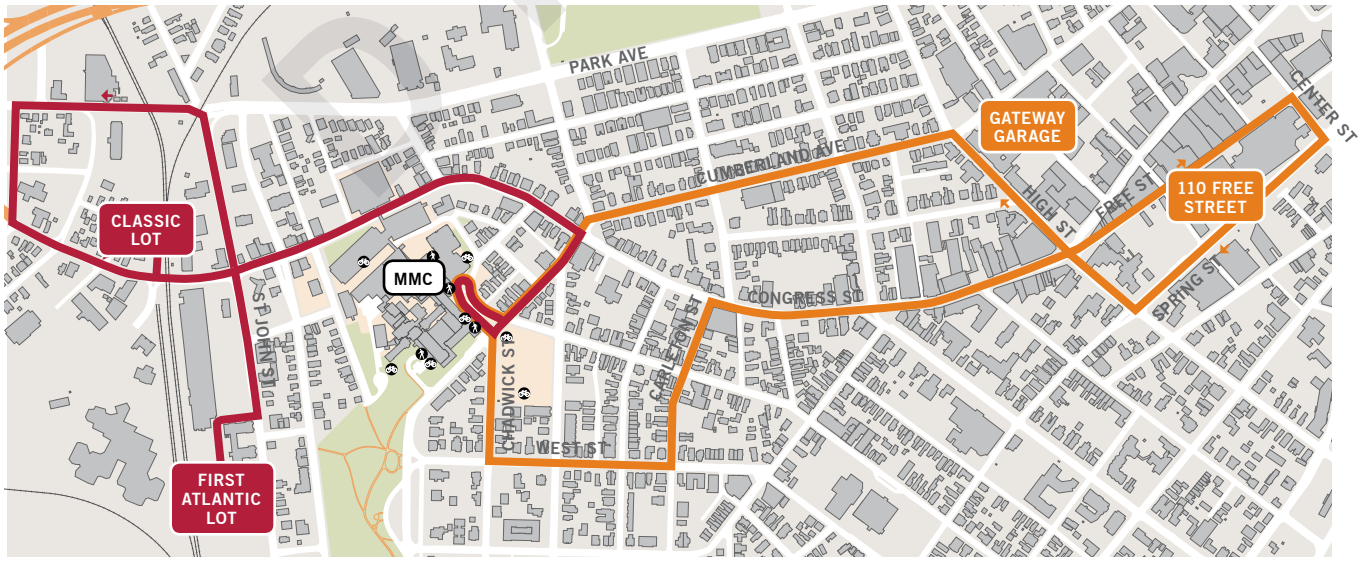

Table 2.10 Bus Routes Serving MMC Bramhall Campus

The following bus routes are accessible within a five minute walk of the MMC campus.

M1 **M1 – CONGRESS STREET**
Connection to Portland Transportation Center (PTC), Downtown, Munjoy Hill and Eastern Promenade

M5 **M5 – JETPORT / MAINE MALL**
Connection to Downtown, Hannaford Plaza, Maine Mall and Portland Jetport

M8 **M8 – PENINSULA LOOP**
Connection to Downtown, Franklin Towers, Whole Foods Plaza and Hannaford Plaza

9A/B **M9A / 9B – NORTH DEERING VIA STEVENS AVENUE**
Connection to MMC Brighton campus, Highlands, Rosemont, and North Deering

BRZ **METRO BREEZ EXPRESS (BRZ)**
Connection to PTC, Downtown, Falmouth, Yarmouth, Freeport

ZM **ZOOM Turnpike Express (ZM)**
Connection to Biddeford and Saco

Rte #	Closest Stop	Times of Operation	Headways
M1	Congress Street	5:35am to 11:10pm (M-F) 7:45am to 6:05pm (Sat) 8:10am-6:35pm (Sun)	Varies between every 30 minutes during daytime to every 45 minutes late evenings
M5	St John Street	5:30am to 10:45pm (M-F) 6:05am to 10:45am (Sat) 7:55am to 6:40pm (Sun)	Varies between 25-35 minutes during weekdays (day-time) to every 40-45 minutes on weekend evenings
M8	Bramhall	6:40am to 6:00pm (M-F) 7:50am to 6:17 pm (Sat) 9:35am-4:17pm (Sun)	Varies between every 30-40 minutes during weekdays to every hour during weekends
M9A/9B	Congress	5:35am to 10:35pm (M-F) 7:35am to 10:30pm (Sat) 8:35am-4:35pm (Sun)	Varies between 10 minutes on weekday mornings to every 1 hours on weekends and evenings
BRZ	Congress	6:00am to 7:45pm (M-F) 8:20am to 6:10pm (Sat) No Sunday Service	Varies between 45 minutes on weekday mornings to every 2 hours on Saturdays
ZOOM	Bramhall and Congress	6:00am to 6:40pm (M-F) No Weekend Service	5 buses in the morning b/w 6am-8:17am 6 buses in the afternoon b/w 2:46pm-5:35pm

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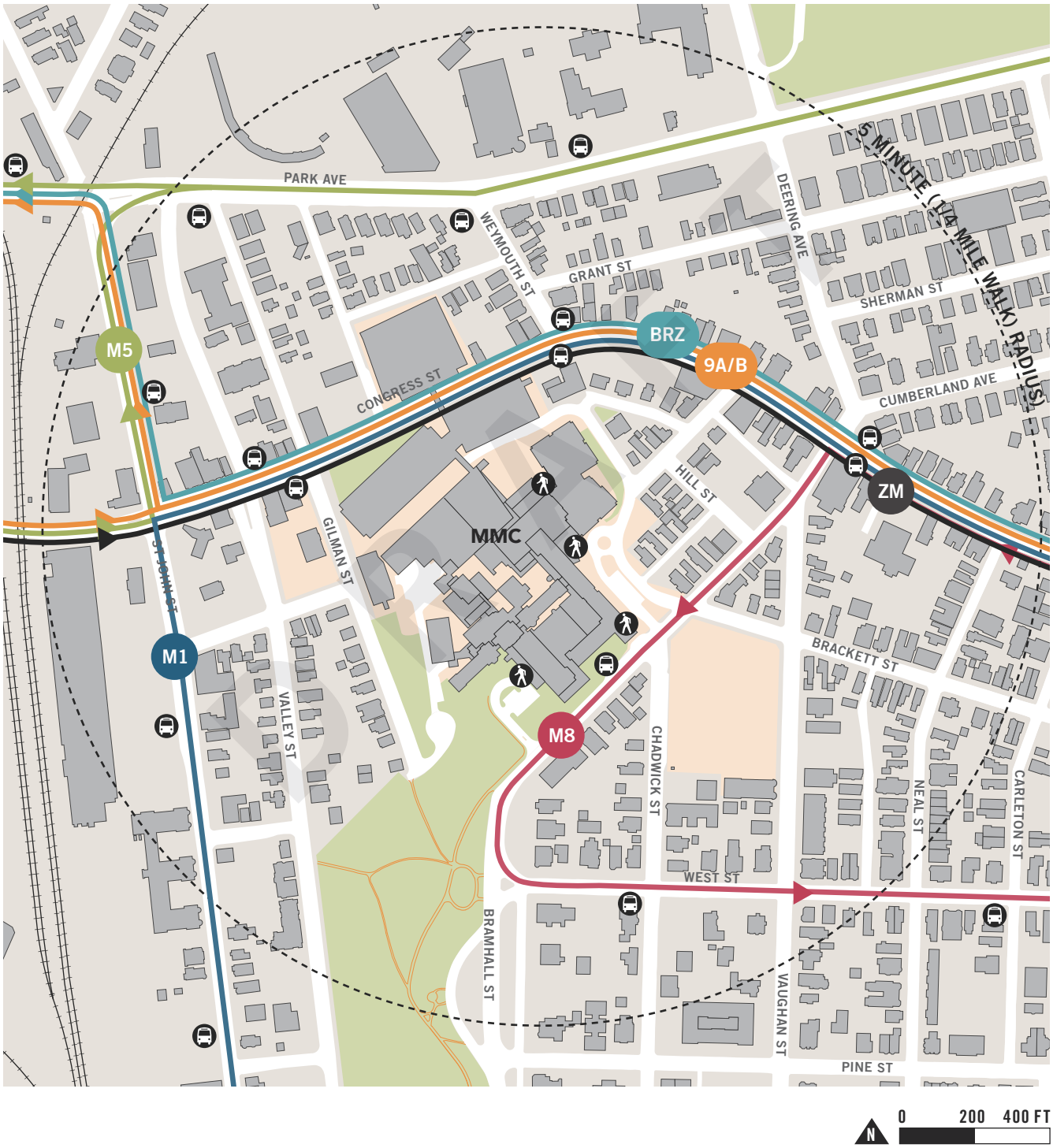
Fig.2.13 Map of Existing Transit Routes and Stops

MMC Main Pedestrian Entrance

Existing bus stops in the area (see previous page for transit route legend)



The shuttles provide a predictable alternative to employees commuting between the three sites while reducing vehicular traffic in and around campus.

Contractor Parking and Shuttle

MMC has instituted a shuttle service for contractors from the Classic Parking Lot (993 Congress Street) to the hospital to reduce traffic and parking impact on the campus and surrounding neighborhoods. In 2015, MMC added a 20-space contractor lot on Forest Street. Only essential contractor vehicles are permitted to park on campus: contractor parking passes are distributed by the Engineering Department on a case-by-case basis.

UCar

Through contract with Uhaul CarShare, MMC provides a UCar on its campus for use by employees as well as members of the surrounding community. Instituted in 2016, the UCar has been accessed 106 times over the last year. In March 2017 Uhaul representative Leo Sturger stated: "[The 106 rentals] is obviously low considering the amount of time, and the reason for that is that the Ford CMAX that we have at your location was effected by a recall and had to be taken offline for a period of almost 6 months. The vehicle is back online now and is renting again. We expect to see numbers climb significantly in the coming months."Working in conjunction with the City's Parking Division and UHaul's UCar program, MMC promotes the UCar as available gap transportation for employees who choose not to have a vehicle or choose to take alternative modes of transportation to work.

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ENVIRONMENTAL AND INFRASTRUCTURE CONTEXT

Environmental Context

The MMC Bramhall campus is located in an urban context with development history dating back to the late 19th century. The campus and adjoining neighborhoods benefit from proximity to the Western Promenade, which provides recreational open space, wildlife support, and natural stormwater management in the otherwise densely developed urban environment.

FEMA Flood Zones

The MMC Bramhall campus is not located in a FEMA-designated flood zone. The 100-year flood zone boundary is located at the western edge of the Pan Am rail line and consist of flood-prone flats along the Fore River. Redevelopment on MMC's campus is not expected to impact existing flood risk in this area.

Existing Utility Context

In 2008, MMC's 22 Bramhall Street campus went live with its upgraded and centralized utility plant. The Central Utility Plant (CUP) was designed to provide better management of and more efficient results for energy consumption by the hospital. The plant produces steam, chilled water, and back-up power for the Bramhall campus. The peak tonnage of the plant is currently close to 2,400 tons per hour of chilled water.

Since 2008, MMC has experienced dramatic energy consumption decreases directly resulting from the state of the art utility plant. The CUP controls both electrical and gas utilization, and heating and chilling functionality, and will service the short-term modernization project under development at the Bramhall campus.

Because MMC, of necessity, is such a large consumer of energy, it utilizes the services of an energy procurement broker, Competitive Energy Services, to provide it with strategic energy consulting services and management of energy procurement activities for electricity, natural gas, and oil in order to maximize efficiency and to ensure MMC achieves the most competitive pricing. MMC purchases its energy through a competitive bid-based energy procurement process.

The electrical consumption at MMC for calendar year 2016 was 35,375,765 Kw-Hr.

The CUP upgraded contains state-of-the-art dual natural gas /oil system allowing for switching between oil and gas depending upon price and availability. The oil consumption at MMC for calendar year 2016 was 411 gallons. The natural gas consumption at MMC for calendar year 2016 was 1,633,686 CCF units.

In addition to its conservation methods in the electric, oil and gas arena, MMC has also undertaken investment in infrastructure upgrades at its 22 Bramhall Campus to reduce building air changes and temperature set-points allowing for the monitoring and control of humidity and temperature

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during high demand use times. Upgrades in sequencing and timing of set points have achieved efficiencies of HVAC run times and energy demand.

Further, MMC has been investing in lighting and plumbing features that allow for reduced energy consumption. LED lights have been installed in its garages and in the public corridor within the Bean Building. Low flow plumbing fixtures with aerators are installed when replacements or renovations are required. These fixtures lower overall water consumption at the hospital.

Stormwater Management

The MMC Bramhall campus is located at a high point in the west end of the Portland peninsula. From the high point of the property along Bramhall Street, runoff from the site drains west, north and east entering the to the City of Portland's separated storm drain system and combined sewer system (see **Fig.2.15** on page 48).

In general, the campus redevelopment over the last 15 years has collected runoff from parking lots and new rooftops into a separated storm drainage system, including storm drains in the public right of way. Where feasible, the on-site separated drainage system has been connected to a municipal separated storm drain. This includes the storm drain A Street constructed by the City in 2001 and Gilman Street constructed by MMC in 2005.

Other locations abutting the campus including Congress Street, Wescott Street, Charles Street, Bramhall Street and Bracket Streets are only served by combined sewers. At these locations, MMC's recent drainage construction terminates in a separated storm drain manholes connected to adjacent City combined sewer manholes to provide points of connections for future municipal separated storm drains. The campus' stormwater conditions were most recently evaluated in a stormwater management report prepared by Sebago Technics, Inc. in 2004 as part of the Planning Board's review of the Bramhall campus expansion project,

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which included the construction of the Women and Infants Center, Emergency Department Expansion, Congress Street Parking Garage and the Central Utility Plant.

Stormwater Quality Features

To meet the 2004 stormwater treatment requirements, MMC installed two Downstream Defender Stormwater treatment units to treat runoff from impervious areas on the site. The redevelopment separated and redirected stormwater runoff from approximately 6.3 acres of existing development from the combined sewers in Crescent Street, Ellsworth Street, and Congress Street to the separated storm drain in A Street.

A 6' diameter unit has been installed in the Congress Street Parking Garage, treating runoff from the garage (see Location 2 on **Fig.2.15** on page 48), and a 10' diameter unit has been installed in Gilman Street (see Location 6 on **Fig.2.15** on page 48).

Sanitary Flows

The MMC campus is served by the City of Portland's combined sewer system. Located at a high point in the west end of the Portland peninsula, sanitary flows from the campus to the City's sewer system at approximately seven locations (see **Fig.2.15** on page 48).

This information is provided to the best of MMC's knowledge after researching its own records and those of the City of Portland. Due to the age of the public sewer system and MMC's buildings, record plans of the existing sewer systems may be incomplete and additional currently unidentified connections may exist.

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Fig.2.14 Diagrams Illustrating Elevation and Location of Steep Slopes

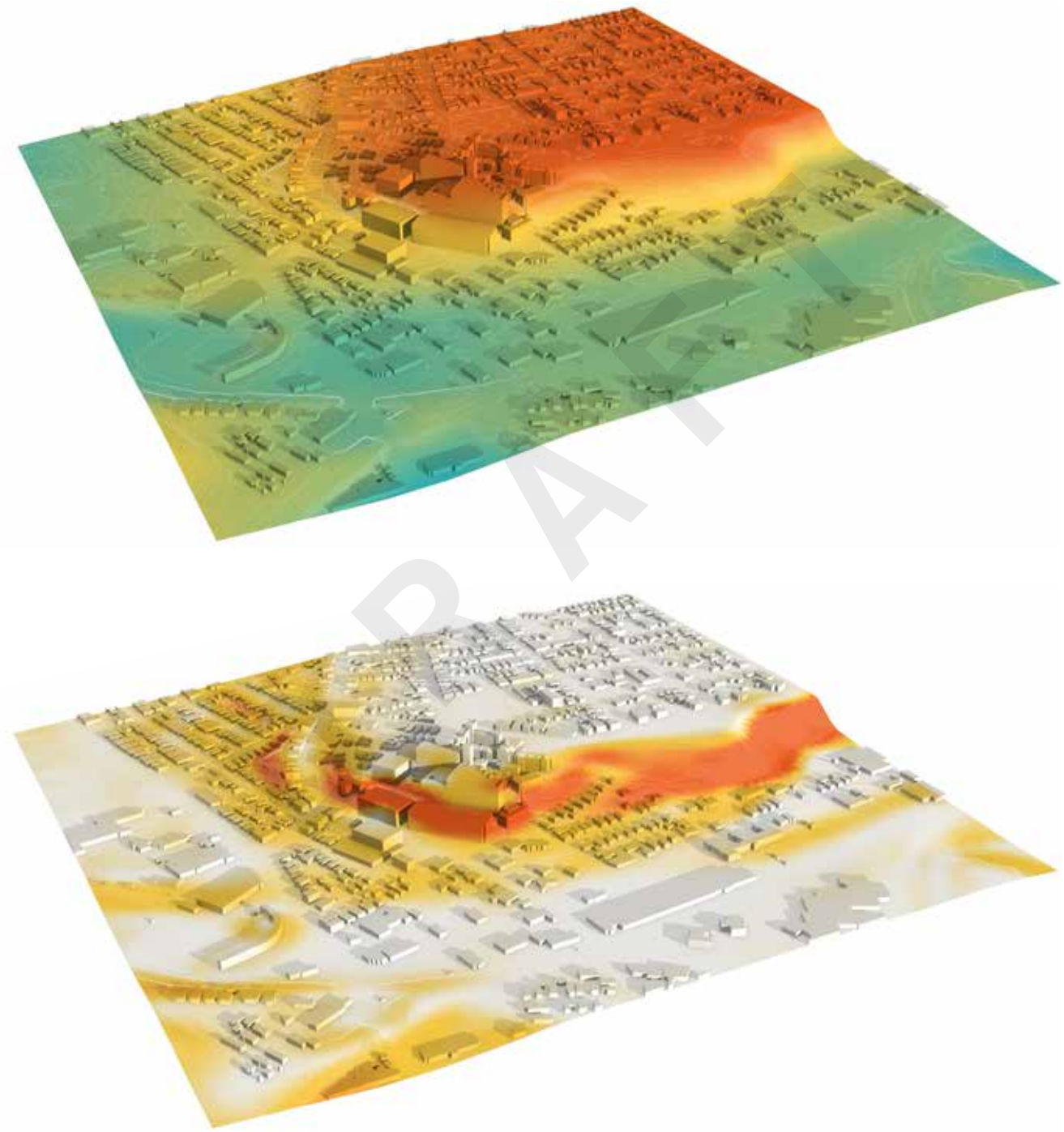

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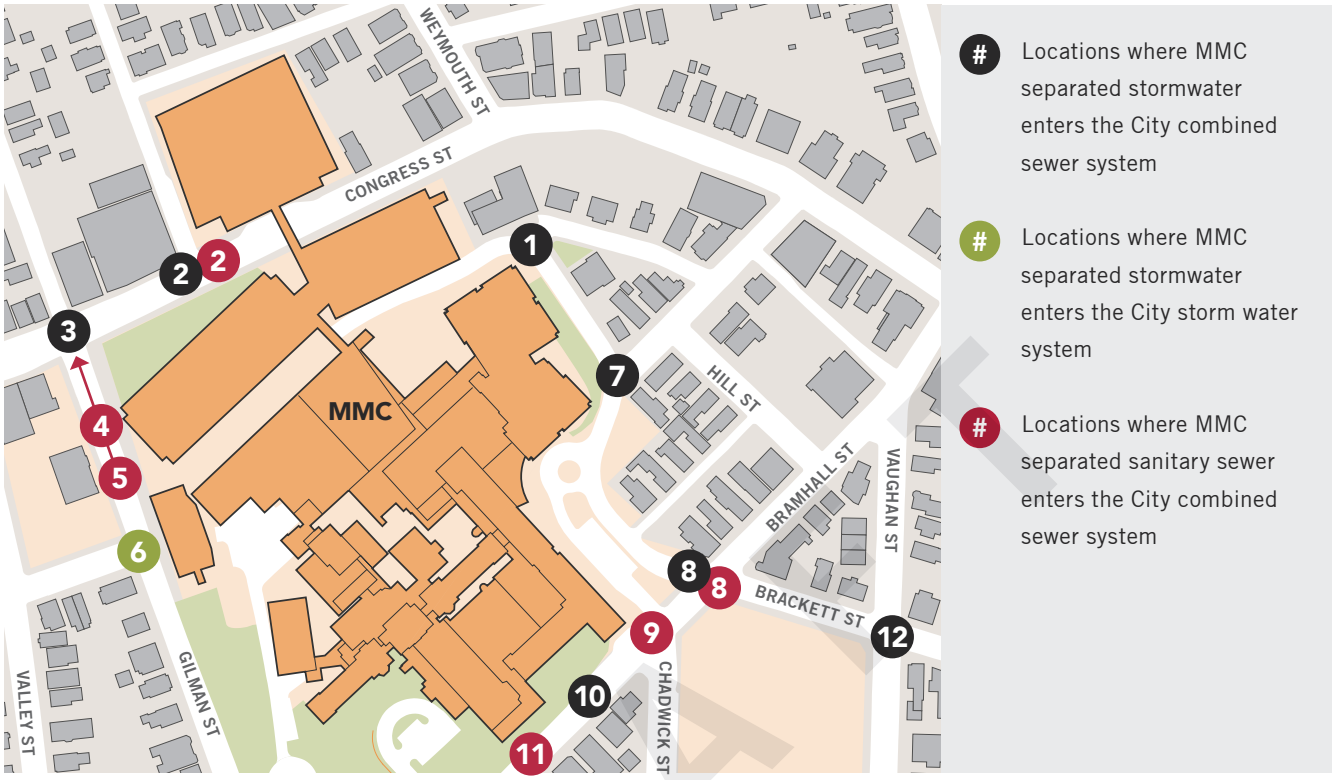
Fig.2.15 Existing Sewer Connection Points



LOC.	MMC STORM WATER FLOWS	MMC SANITARY FLOWS
1	Runoff from the campus and storm drains constructed by MMC in Wescott St enters a combined sewer manhole at the intersection of Wescott St and Crescent St. The outfall of this system a 12" combined sewer that drains in a westerly direction along Crescent St, eventually draining to Park Ave via sewers in Ellsworth St, Congress St and Weymouth St.	N/A.
2 2	Separated runoff from the MMC parking garage enters the municipal combined sewer at the intersection of Congress St and Forest St. The sewer outlet from this manhole is an 18" reinforced concrete pipe that drains north in Forest St to Park Ave.	Sanitary sewer outfalls from the MMC parking garages enter the municipal combined sewer at the intersection of Congress and Forest St. The sewer outlet from this manhole is an 18" reinforced concrete pipe that drains north in Forest St to Park Ave. Areas tributary to this system include the Emergency Department, Women and Infants Center and Richards Wing.
3	Runoff from areas of the campus along Congress and Gilman St enter catch basins connected to the City's combined sewer system at the intersection of Gilman and Congress St. From this point the combined sewer drains north in Gilman St to Park Ave. Runoff in the roadway that bypasses the catch basins at the intersection runs west along Congress to St John St.	Sanitary sewer flows from #4 and #5 enter the City combined sewer at this location.

LOC.	MMC STORM WATER FLOWS	MMC SANITARY FLOWS
4	N/A.	The sanitary sewer serving the LL Bean Building, Annex B / Maine General Bldg, and the Engineering Services Building enters the City's 12" concrete sewer in Gilman St. From this point the sewer drains north in Gilman St to Congress St (#3) and continues to Park Ave.
5	N/A.	The sewer service from the Central Utility Building enters the 12" concrete City sewer in Gilman St, a short distance above Location 4.
6	Runoff at the intersection of Gilman St and A St at the upstream end of a separated storm drainage system constructed by the City of Portland in 2001 as part of the St. John St sewer separation project. The storm drain was extended along A St, from its intersection with St. John St to a drain manhole in Gilman St opposite the MMC Central Utility Plant. This storm drain was extended to the hospital property specifically for the purpose of providing a point of connection for separated stormwater runoff from the hospital. In 2005 MMC constructed drainage on campus to collect runoff from areas of the site including the existing emergency room parking area, L.L. Bean Wing, and service areas abutting the Central Utility Plant to the A St storm drain. This project also extended the separated storm drain in Gilman St to the south, separating runoff in Gilman St and the Dana Center from the City's combined sewers.	N/A.
7	Runoff at the intersection of Ellsworth St and Wescott St. Separated storm drains constructed by MMC in 2005 connect to a combined sewer system manholes in Ellsworth St. The combined sewer drains in an east in Ellsworth St towards to Congress St.	N/A.
8 8	Separated storm drainage from the MMC parking lot enters the combined sewer in Charles St at its intersection with Bramhall St.	Sanitary sewer manhole in the intersection of Bramhall and Brackett Sts where sewer services from Pavilions A and C connect to the City sewer. The outfall of the manhole at this location is a 15" sewer that drains to the east in Bramhall St.
9	Runoff from small areas of the site along Bramhall St enters the combined sewer system at Location 8.	Sewer service from the south end of Pavilion A enters a City sewer manhole at the intersection of Bramhall and Chadwick St. From this location, the sewer continues east to Location 8.
10	Small areas along Bramhall St enter catch basins in the city right-of-way	N/A.
11	N/A.	Sewer manhole in Bramhall St where a sewer service from the Dana Center enters the City sewer in Bramhall St. From this location, the sewer continues east to Location 9.
12	Runoff at the intersection of Brackett St and Vaughan St where separated MMC storm drains in the Brackett St parking lot connects to the combined sewer draining southeast in Bracket St.	N/A.

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PUBLIC ENGAGEMENT IN IDP

MMC appreciates the importance of maintaining an open dialogue with its neighbors keeping its neighbors up to date on its evolving plans for replacement and modernization at its Bramhall Campus. In August 2016, MMC leadership met with the neighborhood representatives of its four adjacent neighborhood groups: St. John Valley, West End, Western Promenade, and Parkside to explain its need to modernize its campus. Since November 2016, MMC has met on a monthly basis with two representatives of each neighborhood ("Expansion Group") to engage in a productive dialogue regarding the City's new IOZ process and MMC's Institutional Development Plan. The City's Planning Director has been invited to each of these monthly meetings. Recently, an invitation was extended to a representative of the Libbytown neighborhood to join in the ongoing conversation. The minutes of the monthly meetings are distributed to the Group members who are asked to disseminate them to its neighborhood constituents.

MMC also has created a website (http://www.mmc.org/modernization) to ensure open communication with the community at large and specifically its

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Fig.2.16 Public Meeting #1 (January 12, 2017): Open House Portion for Collecting Public Comments

adjacent neighbors. The minutes of each Expansion Group meeting are posted on the website, as are any updates or current events occurring which involve MMC's plan. These include dates for the Planning Board workshops and hearings and a link to the City's Planning website. A designated contact email has been established where residents can ask questions, provide suggestions, etc.

Finally, to date, MMC has held two larger neighborhood meetings where information has been shared about MMC's needs and its plans to address its issues of bed capacity, operating needs and transportation and parking. These meetings have been well attended and have allowed time for participants to ask questions and to get answers. The minutes of these meetings, as well, are posted on the MMC website as well as submitted to the City of Portland.

MMC, its neighborhoods and the City staff have embarked, together, on the creation of a new zoning mechanism known as the IOZ/IDP.

Major Areas Of Public Concern

At the initiation of MMC's Master Facility Planning engagement with its neighbors, it was recognized there would be concerns identified by MMC as well as by the neighborhood residents which would require ongoing dialogue and an openness to new ideas or suggestions. It was understood that there may be many areas where consensus of approach will be reached, and other areas where reasonable minds could differ. MMC and the participants in this process have identified the following "areas of major public concern:"

- By far the biggest concern with the MMC proposed IDP revolves around transportation and parking, most notably the size of the MMC staff garage on the Gilman Block*;
- A fear of property acquisition by MMC in residential zones;
- Patients, visitors, or employees smoking in the neighborhood; and,
- Hope for continued public engagement between MMC and its neighbors.

* Note: Alternative employee parking solutions are currently being investigated.

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CHAPTER THREE

INSTITUTIONAL NEEDS

As it nears its 150th anniversary, Maine Medical Center continues to improve its facilities and services to fill its role as Maine's leader in patient care, education, and research. MMC is planning projects to address immediate clinical, building, and parking needs in the short-term.

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FACTORS AFFECTING HEALTHCARE PLANNING

There are a multitude of factors to consider in healthcare planning that are unique to the industry and some that limit the ability to plan too far into the future. Due to the unpredictability of many of these factors, healthcare planning beyond three years with relative accuracy is challenging. Therefore, healthcare planning is typically completed in three-year increments. For example, the rate of change in healthcare payment and policy often follows federal and state election cycles but can change as often as annually. A summary of factors that affect healthcare planning is included in the table below.

Table 3.1 Factors Affecting Healthcare Planning

Factor	Definition
POPULATION	Changes in utilization due to population growth: — Population increase or decrease — Population aging — Population distribution — Consumer preference
EPIDEMIOLOGY	The underlying causes of disease (divided into two categories): — Disease-based: Estimates the incidence and prevalence that are impacted in the long-run by preventative measure (i.e. vaccinations effectiveness) — Behavioral-based: Changes in disease incidence and prevalence due to behavioral and sociocultural factors (i.e. obesity, smoking, diet)
ECONOMICS	Macro-economic factors that affect healthcare utilization: — Employment — Healthcare Consumer Price Index — Gross domestic product growth or decline — Employer-based coverage levels — Benefit level and out-of-pocket expense — Regional/Local healthcare environment
PAYMENT & POLICY	Legislative and market-driven reform, including specific payment and policy innovations that will impact utilization: — Health insurance coverage expansion — Bundled payment initiatives/pilots — Accountable Care Organizations (ACOs) — Publicly-funded prevention and wellness initiatives
INNOVATION & TECHNOLOGY	Structural technology that shifts the site at which care is delivered or innovations that affect utilization across different care settings: — Imaging and diagnostics — New therapeutics — Pharmaceutical advancements — Quality innovations
SYSTEMS OF CARE	Increased efficiency resulting from better care coordination and serve integration across various care sites: — Clinical Integration: Use of evidence-based practices and elimination of redundant care — Alignment: Coordination between providers, including inpatient and outpatient providers — Information Technology: Includes computerized physician order entry (CPOE) and e-care
WORKFORCE AVAILABILITY	The healthcare workforce is highly specialized which requires years of training. The availability of qualified individuals can severely limit a healthcare organization's ability to provide care.

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MMC FUTURE NEEDS

Maine Medical Center (MMC) is a 637 licensed bed Academic Medical Center with an affiliation with Tufts University School of Medicine. MMC is the leading provider of tertiary services in the State of Maine. Tertiary services are defined as a set of Medicare severity diagnosis-related groups (MS-DRGs) that are rare and complex, require collaboration across treatment modalities, complex treatment decisions dependent upon unique diagnostic tests, regionalized care, and associated with complex co-morbidities and complications. MMC is the top provider of these services in the state. In 2014, MMC provided 42% of all the tertiary services for the state of Maine.

MMC treats Maine's sickest patients and estimates that the average patient seeking care at MMC will continue to get sicker. MMC's case mix index (CMI) was 1.86 in fiscal year 2015 (October – September); the highest in the state of Maine. A hospital's case mix index is calculated by finding the average severity of diagnosis-related groups at that hospital. The average case mix index for a hospital in the U.S. is 1.31 (CMS.gov). In fiscal year 2016, MMC's CMI grew to over 2.00 and is expected to continue to increase.

Key Drivers for Campus Transformation

MMC's facility needs are multi-factorial but can be summarized into three categories:

1. Immediate Clinical Need
2. Building Need
3. Parking Need

Immediate Clinical Need

On an average day, MMC can expect over 500 patients in the hospital and over 60 beds closed. On a routine day, MMC can expect approximately 100 admissions from Surgery and the Emergency Department and 30 to 50 transfer requests per day from other healthcare and provider organizations.

MMC routinely closes inpatient beds due to patient condition such as infection from disease-resistant organisms (DROs) or behavior related issues, room sharing restrictions such as male/female, and regular building maintenance. On average more than 60 beds are closed each day for these reasons. This along with construction closures for renovations and repairs reduces MMC's licensed bed capacity of 637 beds to an effective bed capacity closer to 560.

While MMC is licensed to operate 637 inpatient beds, the medical center operates at capacity with a census in the mid-500s. When 500 patients are in the hospital and over 60 beds are closed, a limited number of inpatient beds are available for new patients. Inpatient beds are specialized for medical/surgical, intermediate care, intensive care, psychiatric, pediatric, or infant care services. The actual number of beds available for specific populations of patients is much smaller. For example, if a patient needs a critical care bed but, the only beds that are available are general medical/surgical, then MMC struggles to meet that patient's needs.

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Fig.3.1 demonstrates a snapshot of the challenge MMC is faced with daily to meet the needs of the community. The challenge is expected to grow in complexity as patients get sicker and require highly specialized care.

Building Need

Facilities at MMC date back to the 1870's with the construction of the Maine General Building. Since the early 1900s, MMC has grown to meet the needs of patients. A building assessment was completed by a team of engineers in 2015 that evaluated essential systems in each of the buildings that comprise MMC's campus (see **Fig.2.2** on page 23). Close to 77% of MMC's clinical activities occur in buildings more than 30 years old. Nearly half of MMC's operating rooms are smaller than 500 square feet and over half of MMC's inpatient beds are in semi-private rooms.

MMC's Care teams work collaboratively with MMC's Facilities and Engineering teams to ensure patients are cared for in the best possible environment. This requires continuous maintenance and improvements to the facilities. The remaining opportunities for improvement and retrofits in the existing buildings are marginal. It is impossible to enlarge operating rooms or make semi-private rooms private without major disruptions to the delivery of patient care, reduction in capacity, major facility expansion, or some combination.

The proposed Development Plan (see page 58) will partially replace rooms and modernize MMC's campus to meet anticipated future need. Proposed patient rooms will be private and adaptable to the level of care needed by patients. They will be "universal rooms" capable of being occupied by a wide spectrum of patient populations from intensive care to recovery from surgery. Procedure rooms will be large enough to fit the equipment and technology needed for the complex procedures that patients increasingly require at MMC.

Parking Need

MMC hosts a wide variety of people on campus every day. Patients, families, staff, and students all require access to the facility. Patients and families from all over northern New England come to MMC for care. These people do not live close enough to take advantage of alternative methods of transportation like buses, cycling, or walking that are provided locally—even if they were healthy enough to do so. Clinical and support staff require safe, reliable, and often emergent, access to the facility in order to provide services to patients. Providing parking is a priority at MMC (see **Section 5** on page 80 for additional details).

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Fig.3.1 A Day In The Life Of Maine Medical Center: Bed Shortage

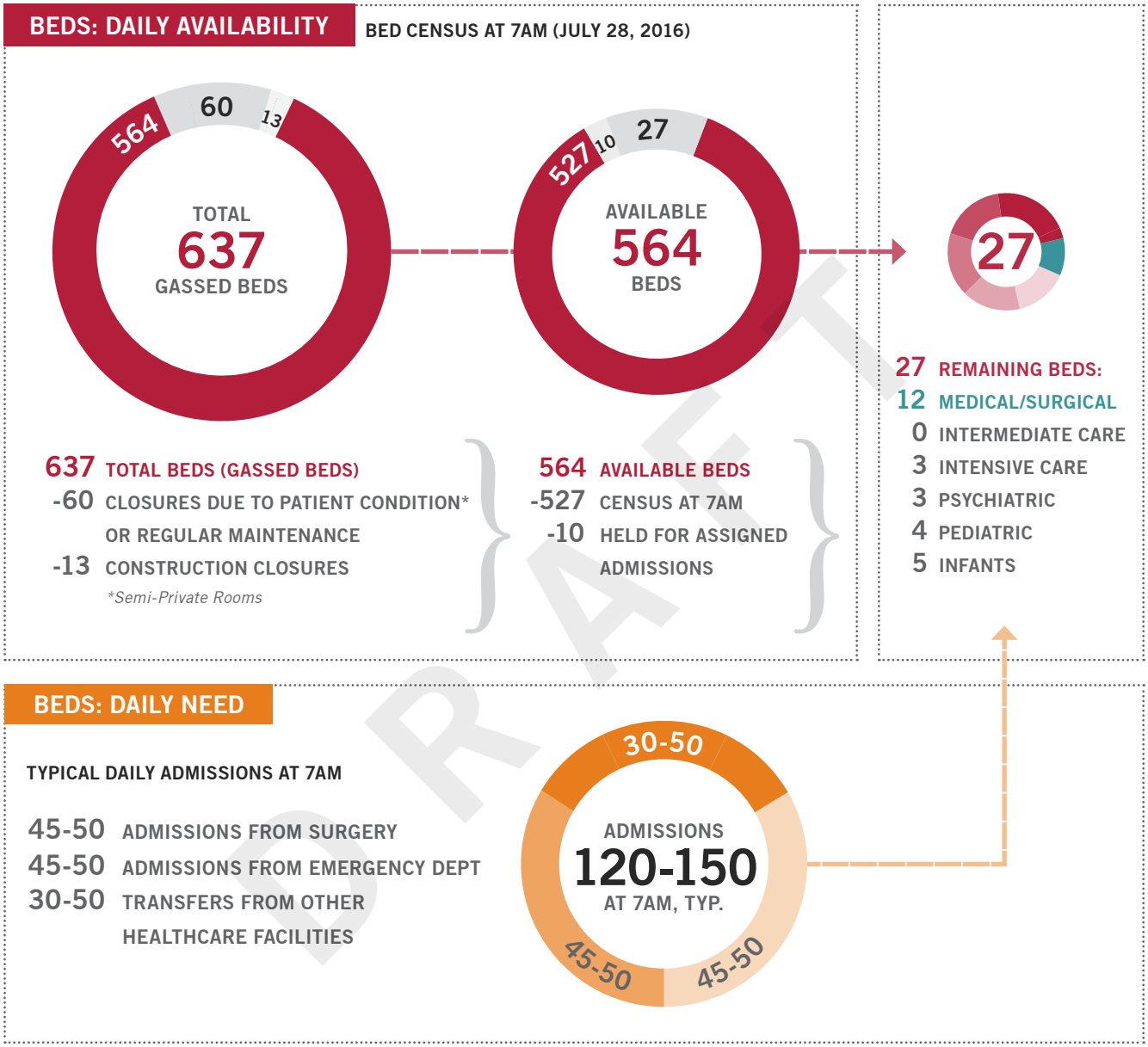
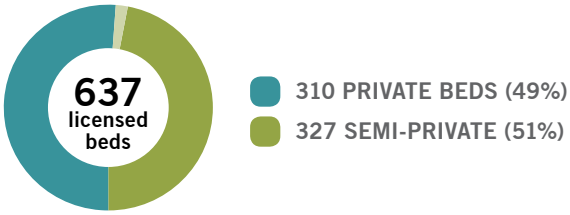


Fig.3.2 Existing Inventory of Private vs Semi-Private Beds



SHORT-TERM DEVELOPMENT PLAN (0-5 YEARS)

A series of projects have been planned throughout the campus to meet current needs and to improve the efficiency of care delivery. These projects are possible options for expansion.

The bed count will stay the same in the short-term. The Long-Term Plan adds approximately 770,000 GSF to the MMC campus over the next twenty years, and may also provide additional services and inpatient beds.

Demolitions

A Employee Garage Demolition
The 2015 building assessment does not recommend continued investment in this structure (see **Fig.2.2** on page 23).

D Removal of existing one and two-story structures currently used as office space and for small clinical functions will be required to construct the proposed parking garage.

E Abandonment of service road to enable connection between Congress Street Development (A) and existing facilities.

Additions / New Construction

A Congress Street Development, Phase I (New Construction, 285,000 GSF)
New six-story building along Congress Street on former site of the Employee Garage, plus two-story connector to the LL Bean Building. Building program includes: main hospital drop-off and entrance, universal, private inpatient beds and new operating rooms. The relocation of the main entrance changes the campus's orientation to Congress Street.

B Visitor Garage (Vertical Expansion)
Addition of three floors at top to accommodate 225 new parking spaces.

C East Tower (Vertical Expansion, 60,000 GSF)
Addition of two floors at top to accommodate 64 inpatient beds and relocated heliport.

D Gilman Garage (New Construction)
13-story free-standing garage to accommodate 1135 new parking spaces. **(Note: Alternative employee parking solutions are currently being investigated).**

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Fig.3.3 Short-Term Development Plan (0-5 Years)

EXISTING MMC FACILITIES
SHORT-TERM PROJECTS (0-5 Years)
DEMOLITION
ADDITION / NEW CONSTRUCTION (see opposite page for descriptions)

✱ Alternative employee parking solutions are currently being investigated.

LONG-TERM DEVELOPMENT PLAN (5-20 YEARS)

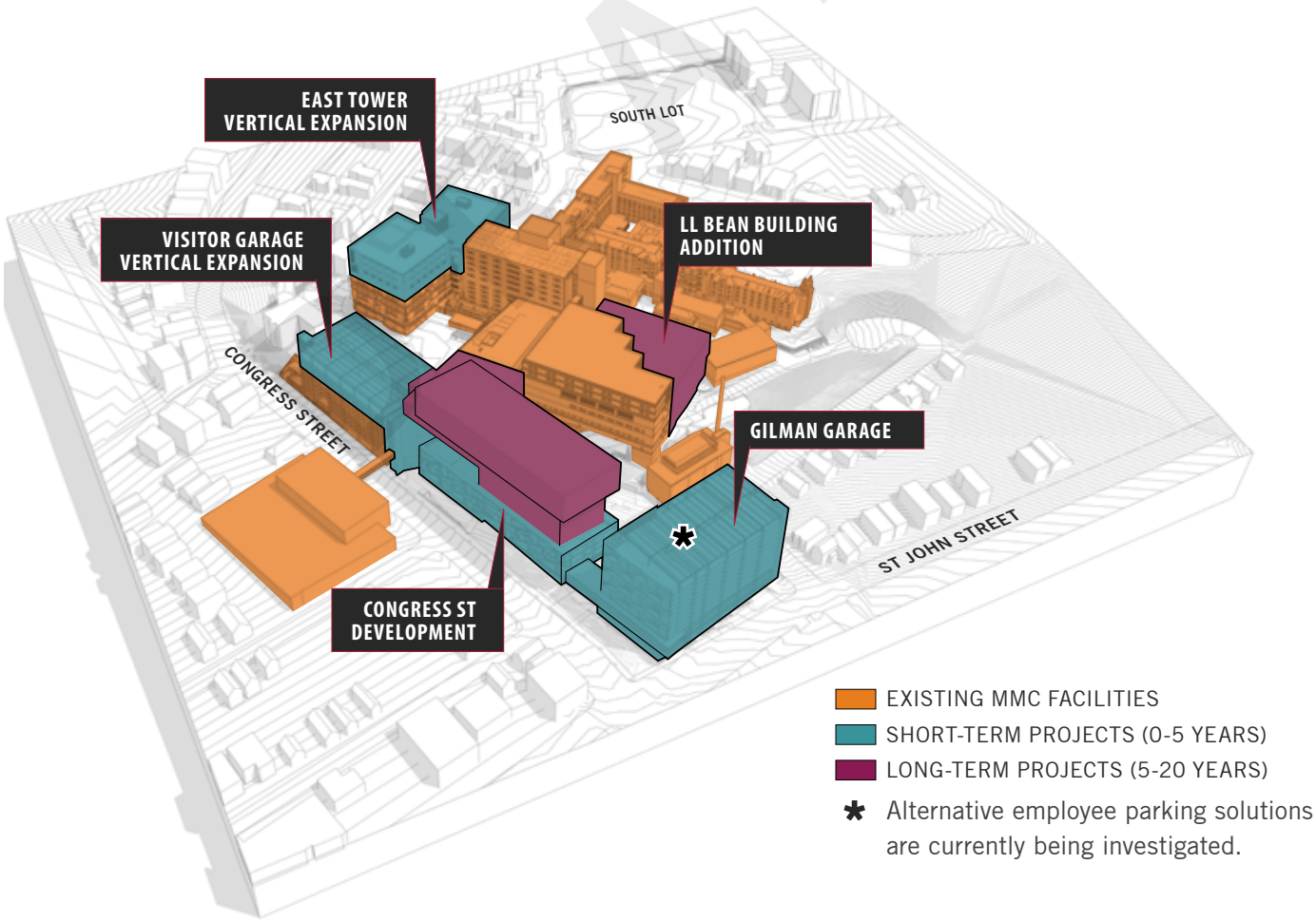
The facility planning process has also identified potential long-term projects that are identified below. Given the changing nature of the healthcare industry, it is currently uncertain if these projects will be implemented. MMC will continue to evaluate its facility needs, if any, following the implementation of the Short-Term Development Plan by 2023.

Long-Term Projects

Congress Street Development, Phases II and III (Vertical Expansion, Approx. 300,000 GSF)
Future vertical expansion to include additional private inpatient beds.

LL Bean Building, MFP Phase III (Addition, 120,000 GSF)
Expansion of diagnostics and treatment, and interventional platforms. If necessary, existing Laundry Building and Engineering Services Building may be modified or removed to facilitate expansion.

Fig.3.4 MMC Development Plan: Short- and Long-Term Projects



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Long-Term Redevelopment Zones

While no plans currently exists for other projects, all properties within the IOZ boundary are considered potential redevelopment zones for the long-term horizon. MMC may locate the following healthcare-related uses, including ancillary or supporting uses, within the City of Portland.

Table 3.2 MMC Potential Future Uses in the City of Portland

ON-CAMPUS (Within the IOZ Boundary)

Healthcare facilities including but not limited to the following ancillary and/or supporting uses:

- Hospital
- Medical Office / Clinic
- Laboratory Center / Services
- Research and Development Laboratory or Facility
- Educational Facility / Conference Center
- Administrative / Business Office
- Accessory Service or Trade Uses
- Guest House
- Medical Resident Apartments
- Rehab / Skilled Nursing Facility
- Retail Facility
- Restaurant / Cafe
- Employee Service Amenities
- Day Care Center (Child / Adult)
- Fitness Center or Gymnasium
- Parking Lot
- Parking Garage
- Bicycle Storage
- Heliport
- Antenna Station

OFF-CAMPUS (Outside the IOZ Boundary)

- Medical Office / Clinic, including Primary Care and/or Specialty Clinic
- Laboratory Center / Services
- Inpatient / Outpatient Surgery Center
- Imaging Services
- Physical Therapy Center
- Specialty Hospital
- Post-acute care
- Rehab/Skilled Nursing
- Respite Care
- Adult Daycare
- Administrative / Business Office
- Information Technology Center
- Distribution Center
- Parking Lot
- Parking Garage

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PROJECTED DAILY CENSUS

The anticipated change in campus users over time are summarized in **Table 3.3** on the following page. MMC developed this estimate considering the following summarized factors:

- MMC is Maine's largest medical center, the only American College of Surgeons Level 1 trauma center, the one of three American Academy of Pediatricians Level III nurseries and the largest academic medical center, in partnership with Tufts University School of Medicine and is therefore best equipped to meet the rising patient need.
- The number of Maine Residents seeking care outside of Maine has been decreasing over the past several years.
- MMC's share of inpatient discharges has increased over the past several years.
- MMC's Case Mix Index is increasing.
- Complex healthcare services are consolidating across the country.

MMC uses national healthcare consulting firm Sg2 and The Advisory Board to consider additional factors impacting the evolving healthcare industry and local demand for services. Additional factors considered in the volume estimate include:

- Changes in healthcare utilization as a result of changes in the population within the hospital's service area;
- Changes in the underlying causes of disease (i.e. incidence and prevalence of disease and the impacts of a focus on prevention) and behavioral-based impacts to health (i.e. smoking and obesity);
- Macro-economic factors affecting healthcare utilization (i.e. employment, employer-based insurance coverage, health care consumer price index);
- Legislative and market-driven healthcare reform;
- Innovations in technologies and models of care;
- Improvements in the systems of care that improve coordination among providers; and,
- Continuous process improvements within care models that reduce potentially avoidable admissions and 30-day readmissions.

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Table 3.3 Individuals on Campus on an Average Week Day, 10-Year Projection

	2016 (FYE Sept-Oct)	Forecast, 2026	Projected 10-Year Growth	CAGR (2016-2026)
Inpatient Discharges	99	107	7.84 %	0.76 %
Inpatient Visitors	248	267	7.84 %	0.76 %
Outpatient Activity	594	620	4.45 %	0.44 %
Outpatient Visitors	594	620	4.45 %	0.44 %
Bramhall Outpatient Clinics	153	150	-1.79 %	-0.18 %
Employees: Shift 1	3,639	3,892	6.96 %	0.67 %
Employees: Shift 2	206	220	6.96 %	0.67 %
Employees: Shift 3	519	555	6.96 %	0.67 %
Students on Campus: Medical	100	110	10 %	0.96 %
Students on Campus: Nursing	86	95	10 %	0.96 %
Other Students (PA, Pharma, etc.)	20	22	10 %	0.96 %
Non-MFP Related Contractors	25	25	--	--
TOTAL / AVERAGE	**6,283**	**6,683**	6.43 %	0.63 %

CAGR = Combined Annual Growth Rate

Assumptions:

- Daily inpatient discharges for 2016 estimated from annual count, using six-day weeks to accommodate for reduced activities Sun-Tue.
- Daily outpatient activity for 2016 estimated from annual count, using five-day weeks.
- Inpatient visitors estimated at 2.5 per patient for the base year of 2016.
- Outpatient visitors estimated at one per patient for the base year of 2016.
- 60% of employees are estimated to be on campus at one time for the base year of 2016.

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COMPLIANCE WITH THE COMPREHENSIVE PLAN

MMC, being a long term member of the City of Portland community, recognizes the City's Comprehensive Plan contains the overall goals for growth and change within the City by its articulation of a variety of policy directives and goals for the development of the City. Among other things, the Plan address the City's infrastructure, commercial/ business development, transportation resources, industry, and commerce and residential housing.

The IDP and the Regulatory Framework of MMC are in basic harmony with the City's over arching goals and policies. With its IDP and Regulatory Framework MMC has balanced and accommodated the many City goals and policies in a way that advances the City's overall best interests while at the same time addresses the high priority healthcare needs of Portland's residents and the people of the State of Maine. This balancing is exactly the type of flexibility that the City's recently drafted Institutional Overlay Zone zoning policy is meant to facilitate.

MMC's Institutional Development Plan: Compliance with the Comprehensive Plan

In this IDP, MMC communicates its needs to modernize its facility in order to meet the healthcare needs of the people of Northern New England. This includes not only upgrading clinical space and providing for the needs of its patients, but also continuing its investment in its personnel and their ability to travel to and from the workplace and secure needed parking. The Portland Comprehensive Plan "promotes the orderly expansion of institutional uses, such as educational and hospital campuses, which are central to workforce development, employment, and the health of the local and regional economies."

Economic Growth

Employee engagement indicators reveal that one of the issues of greatest importance to current and future employees, in addition to compensation, is parking availability. In order to attract a high quality, highly educated workforce, MMC factors into its operations these two important considerations. Following the completion of its short-term modernization project, MMC projects a growth in its employment base into the future in part because of its status as an excellent academic medical center located in the city of Portland. Portland's Comprehensive Plan promotes the growth in employment base and supports sustainable growth in education and medical institutions.

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Transportation

MMC has also considered its transportation needs holistically, factoring into its future development alternative means of transportation. Since 2009 the Medical Center has had in place a Transportation Demand Management plan called "Get on Board!". MMC is updating that plan and considering enhancements to encourage more walking, cycling, and public transportation by its employees. Changes by the City and State will be needed in order to make this Plan successful and allow for reliable alternatives to driving. It is recognized that this endeavor is a joint responsibility between MMC and the City and State which will take years to address. The Comprehensive Plan challenges the City to "support the vision of large, transformative projects [such as the MMC modernization project] through strategic, cost effective, and incremental actions. " MMC has been, and continues to be, committed to the process and has often been cited by the City of Portland Planning Department as a TDM role model in the City.

Environment

A clean environment is important for healing and health. MMC is environmentally conscious and engages in recycling to minimize the generation and environmental impacts of solid waste. The Hospital conserves water when possible, and has switched away from pesticides to more organic landscape solutions reflecting Portland's goal of "model[ling] environmentally sound landscape management practices, such as planting native species, and limiting the use of pesticides and fertilizers." Buildings are built with energy efficiency standards in mind. Local farmers market truck visits the campus weekly during harvest months and employees are encouraged to support the local food movement. The Comprehensive Plan also notes the need to "support a healthy, resilient, and sustainable food system by collaborating with local and regional stakeholders."

MMC's Regulatory Framework:
Compliance with the Comprehensive Plan

In keeping with the goals of the Comprehensive Plan, MMC has projected its future expansion needs, taking into account the neighborhood in which it is situated. MMC has minimized any expansion into residential areas adjacent to its campus, thereby preserving housing stock in the City. It has appreciated the neighborhood involvement in its zoning process and has been responsive to the concerns raised.

MMC is taking the bold step of reorienting its front entrance to Congress Street, which serves as a gateway corridor to the City of Portland. The area presently is commercial in nature and in need of investment and activation as is recognized by the City's Comprehensive Plan. Welcoming the public at

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the new front entrance accomplishes a number of land use goals: it adds tremendous activity to the streetscape, with people coming and going. It also eliminates traffic in the residential neighborhoods of the West End and Western Promenade by providing clear wayfinding directly off of Interstate 295 and the major arterials entering the City. Further, investment in this area will transform the area with the expectation that other properties in the vicinity will likewise invest. In fact, the owners of Union Plaza, located at the junction of Congress Street and St. John Street, testified before the Portland Planning Board that they have been waiting for such investment before they took the step of redesigning and investing further in that property. MMC expects, and is excited about, a transformation of the area into a more vibrant, active and clean area, good for local merchants, hospitality businesses, restaurants and residents.

The Comprehensive Plan identifies the St. John Street/Congress Street area as a "priority node, an area that has seen disinvestment, grown in sprawling patterns, simply have the potential to serve as focal points for change in the forms of increased density or, height, streetscape improvements, or diversification of uses to better serve neighborhood needs" (see **Fig.3.5** on page 67). MMC's IDP will serve as the catalyst to stimulate new development, investment and reinvestment in this area of the City.

From an analysis of MMC's IDP, it becomes clear that the IDP is consistent with the City's Comprehensive Plan and the Purposes contained within the City's Institutional Overlay Zone.

From an analysis of the Regulatory Framework that accompanies MMC's IDP, it becomes clear that the Regulatory Framework is consistent with the City's Comprehensive Plan and MMC's Institutional Development Plan.

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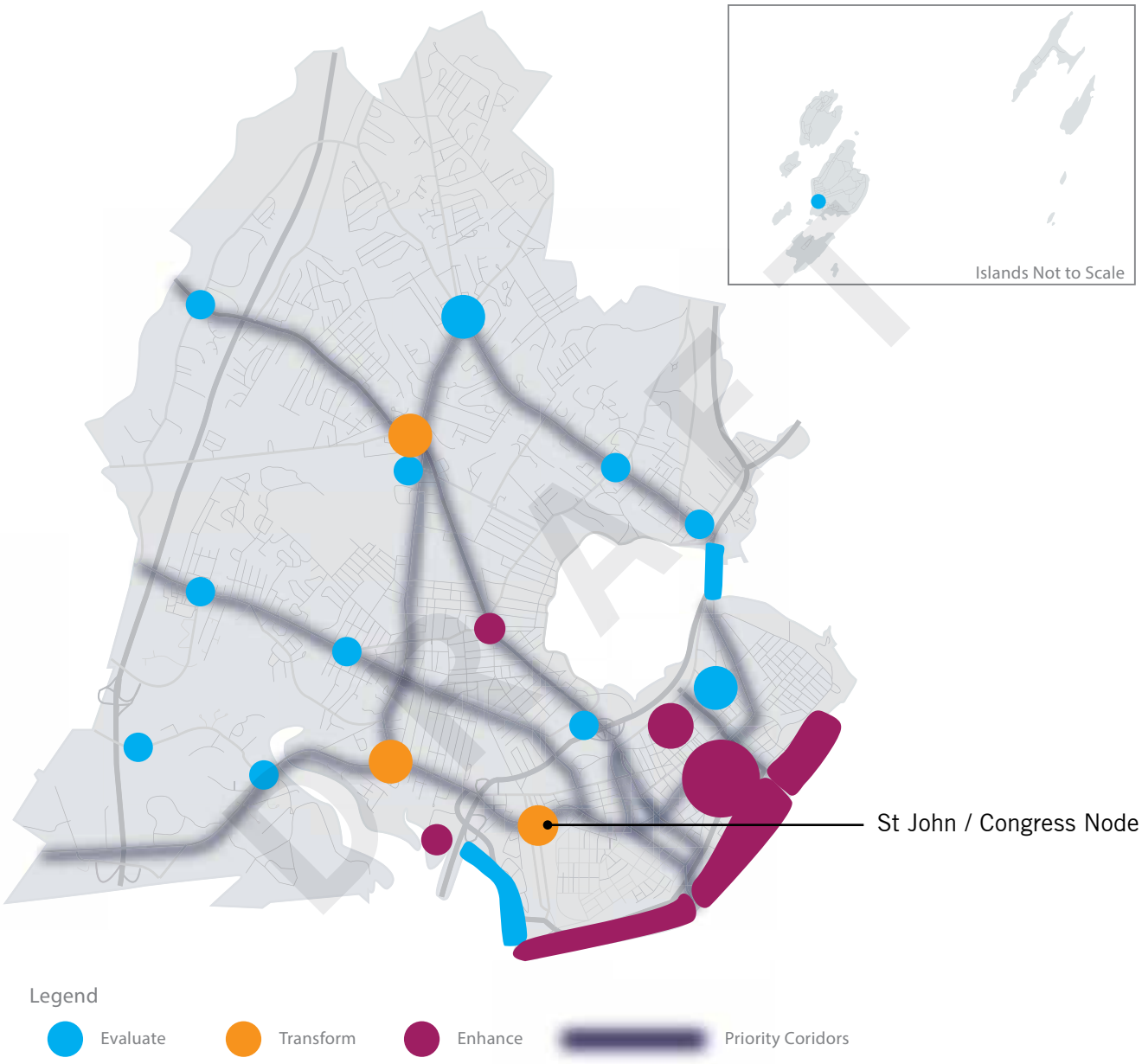
Fig.3.5 Diagram Showing Priority Nodes and Corridors, City of Portland Comprehensive Plan (2017)



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TRANSPORTATION PLAN

Maine Medical Center is developing a long-term transportation plan that will improve campus access, circulation, and wayfinding for patients and visitors. Ongoing initiatives are aimed at providing alternative transportation options to reduce traffic and parking impacts.

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Maine Medical Center's plan of transportation and parking improvements is designed to improve campus access, circulation, and wayfinding for patients, visitors, physicians, and staff. This plan will be developed and refined during the MDOT required Traffic Movement Permit process, with input from the City of Portland staff and the public, including adjacent MMC neighbors. This plan includes an assessment of the hospital's parking needs to adequately support the Bramhall Campus, and includes strategic initiatives aimed at providing alternative transportation options to reduce both traffic and parking impacts. The overriding goal throughout this transportation plan is to provide effective and intuitive transportation solutions that emulate Best Management Practices in transportation infrastructure and operations that support tertiary academic medical centers, enhance and optimize the patient experience, and improve overall traffic flow in the surrounding area.

The purpose of this chapter is to provide a framework for the key transportation elements of the transportation plan and for supporting infrastructure improvements that will address neighborhood concerns of on-street parking shortages and accommodate anticipated increases in MMC patient demand and staffing.

VEHICULAR ACCESS AND CIRCULATION

Well-designed curbside drop-off/pick-up areas for patients and visitors are critical to the functionality of any medical center campus. These amenities provide the opportunity for patients and visitors to quickly reach their destination, without the need to park their vehicle, and in some cases, having to walk long distances, often times unprotected from weather conditions. MMC provides both ambulatory /outpatient care and complex inpatient care at the Bramhall campus. Ambulatory/outpatient care services experience higher curbside demands for patient drop-off/pick-up activities because of the shorter visits and higher "turnover". Inpatient care centers have less turnover, but those patient's medical concerns are generally of a higher acuity, and with that comes higher rates of accessibility need. In addition to general patient access and egress by private vehicles, Maine Medical Center will also experience other demands created by taxis (including ride-share such as Uber, Lyft, etc.), shuttle buses, short-term deliveries (like flowers, etc), and staff – vehicles that do not necessarily park, but intend to only drop-off passengers and then exit the hospital campus.

Proposed Main Entrance Relocation

MMC's Short-Term Development Plan includes a new Main Entrance on Congress Street to improve access and egress for patients and visitors. As previously described in the Existing Conditions section, most motorists arrive on campus via

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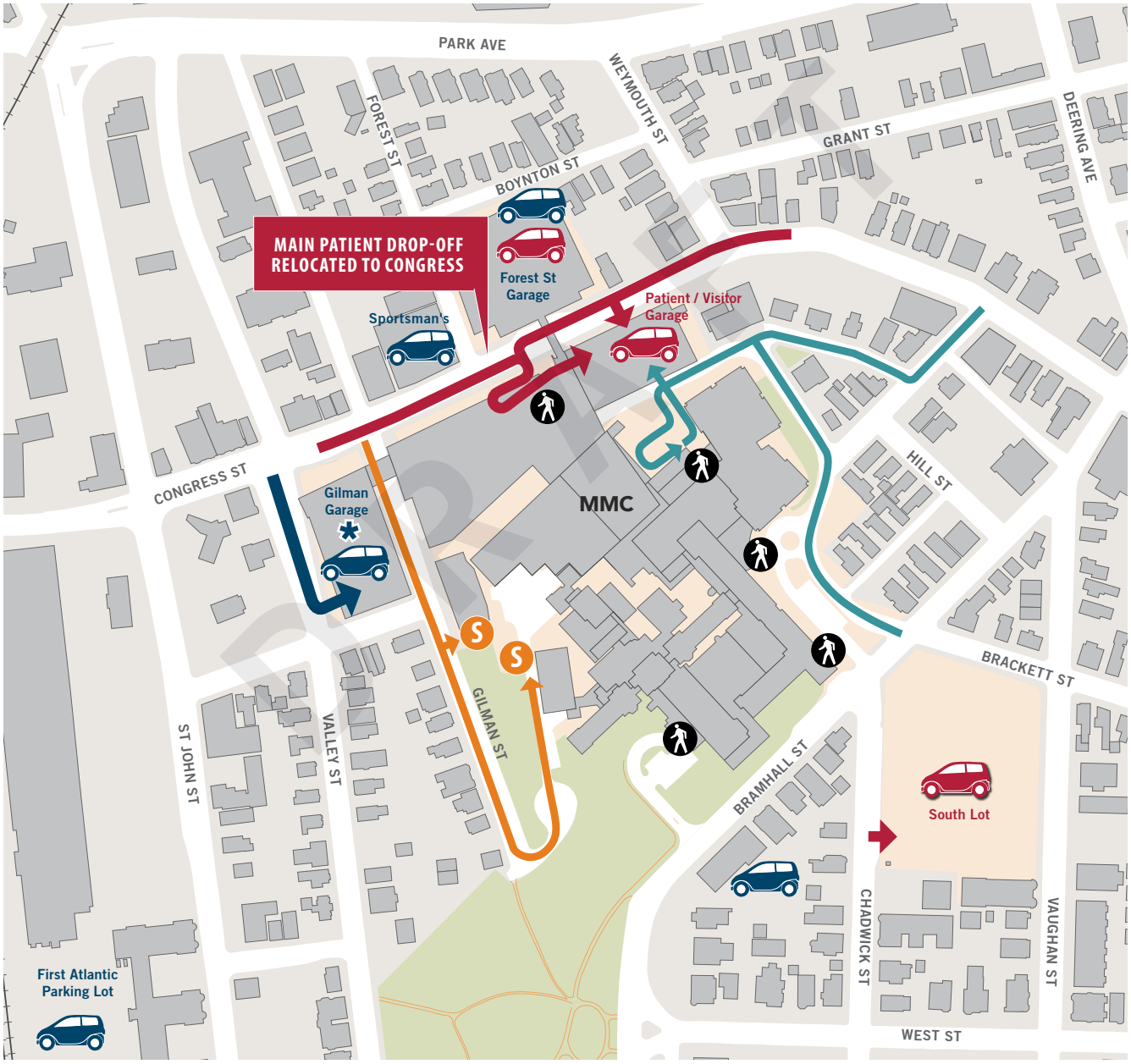
Fig.4.1 Transportation Plan (Future): Vehicular Access and Parking

KEY VEHICULAR CIRCULATION ROUTES

- Patients / Visitors
- Emergency Drop-off / Ambulance
- Staff
- Service

PARKING

- Patients / Visitors (including parking after emergency drop-off)
- Staff Parking (In map extent only)
- Limited Parking for Service Vehicles / Service Staff



✱ Alternative employee parking solutions are currently being investigated.

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Congress Street and either park off Congress Street in the Congress Visitor Garage, or use Bramhall Street to reach the emergency room or main entrance on Charles Street.

It is anticipated that the new Congress Street main entrance will be used primarily by vehicles dropping off or picking up patients, shuttle buses, or short-term deliveries (like flowers, etc). The design will allow vehicles to either exit back onto Congress Street or directly enter the adjacent Congress Visitor Garage after passing through the drop-off zone without having to go back onto the public street. The existing hospital entrance (at the East Tower) will remain open and continue to accommodate some defined patient demand. Changes to patient/visitor circulation and the impacts on Congress Street traffic operations will be studied as part of the Traffic Movement Permit Application (TMP) process as described in a following section of this report.

The new main entrance is expected to improve access to the campus while reducing vehicular traffic on neighborhood streets. Work is currently underway to identify design options for the new main entrance and drop-off that minimize impact on existing pedestrian, bicycle, transit and vehicular traffic along Congress Street. MMC is currently studying queuing demands in order to estimate the projected demand at the drop-off/pick-up at the proposed main entrance on Congress Street and ensure that the geometric configuration of that space is suitable to support future anticipated demands and does not generate adverse traffic impacts along Congress Street. The proposed site plan will be reviewed as part of the State's Traffic Movement Permit (TMP) Application and the City's Site Plan review process.

Proposed Employee Parking Garage Relocation

As part of MMC's Short-Term Development Plan, the existing 1,274 space Employee Garage will be demolished. MMC is looking at multiple sites currently for the replacement of lost employee parking spaces.

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Loading and Service Vehicles

Loading and service vehicles will continue to use Gilman Street to access the Utility Plant and Engineering and Services Building. This IDP submission does not anticipate changes to how loading and service functions are handled at the MMC Bramhall campus. The current configuration provides for separation between loading/service vehicles and patient, visitor and employee vehicles on-campus. The current location also provides for direct, convenient access to arterial roads and regional highway connections. Trucks will continue to access/egress loading dock bays off-street and not impede vehicular flows on area roadways or in surrounding residential neighborhoods.

Traffic Movement Permit

As mentioned previously, the traffic impacts of the MMC Short-Term Development Plan will be studied comprehensively as part of the MaineDOT TMP application process delegated to the City of Portland. A project generating a net increase of 100 peak hour trip ends or greater must apply for and obtain a TMP prior to receipt of a Certificate of Occupancy. The proposed Development Plan will be required to obtain a TMP, as it does trigger this 100 peak hour trip end threshold.

Some of the traffic items reviewed as part of this application include:

- Trip generation methodology
- Trip distribution assumptions
- Weekday morning and evening traffic operations/capacity analyses
- Average and 95% queue analyses for key intersection approaches
- Pedestrian and bicycle safety evaluations
- Identification of potential mitigation to address identified deficiencies created or exacerbated by the proposed development.

The conduct of a comprehensive Traffic Impact Study typically requires several months to develop, and involves close inter-coordination between the City and the applicant. Since the TMP is technically a MaineDOT permit, it is a separate process from all other City processes; however, it typically runs concurrent with the site plan approval process.

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FUTURE PARKING CONDITIONS

With regard to Parking, the goal of MMC's transportation plan is to accomplish the following key objectives:

1. Address neighborhood complaints of MMC staff occupying on-street parking spaces.
2. Support a premier arrival experience for patients and visitors
3. Where feasible, allow for segregation of MMC patients/visitors and staff parking
4. Rely upon an enhanced TDM program to help reduce vehicle trips and parking demands wherever reasonably feasible
5. Provide for a parking supply that is sufficient to support the medical center and is comparable to other peer institutions.

The aspects of the parking plan are described in greater detail in the text below.

Future MMC Parking Demand Summary

As MMC implements their Transformation Plan, there will be an increased demand for parking that is driven by growth in patient demand. Currently, MMC anticipates that the overall patient demand will grow by 8 percent over the next ten years (or 0.75 percent per year). Similarly, employment at MMC is expected to grow by approximately 7 percent over the next ten years (or 0.7 percent per year). These expected trends will result in increased parking needs.

As described previously in the Existing Conditions chapter, the Bramhall campus is served primarily by three large on-campus facilities that accommodate both patient/visitor and physician/staff parking. There are also several off-campus parking facilities that provide additional remote staff parking. The following key points summarize MMC parking activity under current conditions, and provide the context for assessing and understanding the parking objectives that are proposed for the transportation plan:

- Under current conditions, the MMC parking system typically operates at capacity during the weekday daytime hours.
- The hospital requires about 150-200 additional on-campus parking spaces to alleviate current 2017 staff parking shortfalls that have been estimated via observations and data collection activities, and to eliminate the need for MMC staff to park on neighborhood streets.
- When compared to other peer academic medical centers, MMC generally has a lower parking-to-licensed bed ratio both for its patients as well as its physicians and staff.

Modifications

Key patient/visitor and physician/staff parking supply actions resulting from the MMC Transformation Plan are summarized as follows:

- Congress Visitor Garage Addition: MMC will expand its existing 480-space Congress Visitor Garage by three levels to

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accommodate an additional 225 spaces by 2019.

- New Gilman Garage: MMC will demolish the existing 1,274-space employee garage and construct a replacement Gilman Employee Garage on Congress Street that will contain a supply of 1,135 spaces. (NOTE: Alternative employee parking solutions are currently being investigated.)

Patient/Visitor Parking

The patient/visitor parking needs will be fully accommodated by the Short-Term Development Plan. However, there will be a period of time when there will be a temporary shortfall of patient parking spaces. This period of time is associated with the construction of the Congress Visitor Parking Garage Addition, which requires some parking to be taken out of service temporarily. To help alleviate this shortfall, MMC intends to maximize parking opportunities elsewhere and/or increase valet services from satellite lots. All other means of assisting patient and visitor parking will be considered prior to the commencement of construction of the visitor garage addition. The Development Plan will increase patient/visitor parking supply from 850 spaces to 1,075 spaces (or an increase of 225 parking spaces). As a ratio of parking spaces per bed, MMC's position will improve from an existing ratio of 1.33 (a rate that is low when compared to peers) to 1.68 (average to its peers). Parking rates for peer institutions are listed in **Tables 2.8 and 2.9** in Chapter 2.

Staff / Physician Parking

Detailed review and observation of existing staff/physician parking supply/demand and anticipated growth indicates that there will be a measurable shortage of available parking to support anticipated future staff demands. This shortfall is driven by the following factors, based on an evaluation of current parking practices and future parking capacity:

- Future staff growth
- Staff parkers relocated from patient parking facilities
- Staff parkers prohibited from using neighborhood on-street parking

In total, MMC estimates a need for 500-600 additional staff/physician parking spaces to accommodate future demands. Studies to determine an appropriate parking solution that accommodates these demands and is supportive of the IDP are currently underway.

This increase in staff / physician parking supply will improve MMC's ratio of staff / physician parking to patient beds from their existing ratio of 3.18, which is very low when compared to peer academic medical centers, as illustrated in **Table 2.9** in Chapter 2.

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FUTURE TDM STRATEGIES

MMC is committed to reducing single-occupant vehicle (SOV) commuting. As the Medical Center looks to the future, it seeks to build on the past successes of its "Get On Board!" Program. Based on a review of census data, employee travel origin and destination information, existing employee travel mode split, and transportation survey results, MMC believes it can further reduce the portion of employees driving alone to work, thus reducing trip making and resultant parking demands. An initial estimate is that an additional 1.5% of the daytime population could be shifted into alternative modes of accessing the campus. This represents approximately 65 fewer individuals driving alone to campus.

The reduction would be achieved through MMC's existing TDM initiatives, as well as new strategies. MMC is considering the following range of new programs. It will endeavor to reduce the number beyond the target identified above through further enhancements or program expansions in the coming years.

Increased Education of Employees about the "Get on Board!" Program

Presently, all new MMC employees receive information and sign up materials for the "Get on Board!" program during the MMC New Employee Orientation process. MMC will be enhancing that education process by periodically educating existing employees of the options and benefits available through the "Get on Board!" program. Additionally, newsletters will be distributed highlighting the environmental, health and other benefits of TDM.

"Get on Board Coordinator!"

MMC will be hiring a "Get on Board!" Coordinator responsible for the implementation, operation and continuing sustainability of MMC's TDM. This individual will continually monitor the program, its operations and future opportunities to reduce vehicle dependency by staff at MMC. The Coordinator will also be responsible for data collection and TDM updates as required.

Pay for Parking

MMC will charge its employees no less than $3 per paycheck to utilize MMC parking.

Guaranteed Ride Home (GRH) Program

For those employees who regularly use alternative modes of transportation to and from its Bramhall Campus, MMC will guarantee a ride home in emergency situations.

Enhanced Active Transportation Network

As noted above, changes along Congress Street and adjacent streets should enhance the streetscape and overall quality of experience for pedestrians and cyclists. MMC supports enhancements for pedestrians and cyclists improving access to the campus. As the City, generally, experiences an increase in its residents walking and biking to other work locations throughout the City, an increase in people visibly using alternative forms of transportation the streets of Portland may spur more participation by MMC employees in the future.

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Fig.4.2 Portland Bikeway and Pedestrian Network *(Source: City of Portland, 2014)*

EXISTING FACILITIES

- Bicycle Lane
- Paved Shoulder
- Neighborhood Byway
- Shared Use Pathway
- Shared Lane, with Marking
- Shared Lane

PLANNED FACILITIES

- On Road Bikeway
- Neighborhood Byway
- Shared Use Pathway or Rail with Trail

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Enhanced Transit Fare Discount

MMC employees can currently purchase METRO bus tickets at a discounted price from MMC. Increasing the discount on METRO tickets would provide employees with an additional financial incentive to use the transit system serving the MMC district. METRO may need to improve its services in order to meet hours of operation at twenty four hour facilities such as MMC, however.

Enhanced Carpool/Vanpool Matching

"Get on Board!'s" most successful initiative to date has been its carpooling program. Most of these connections are ad-hoc. MMC could increase participation by actively matching potential riders. Additionally, while Go Maine is the primary administrator of vanpools in the state, MMC could work to proactively identify and assist with the formation of vanpools.

Active Transportation Incentives

MMC will undertake an internal marketing program which offers fun and useful prizes for those participating in alternative modes of transportation. Making alternative transportation fun and a community-wide effort is likely to increase participation by some who might not otherwise engage in the process.

UCar

Working with UHaul and the City's Parking Department, MMC will continue to monitor the use of the UCar presently located in its Congress Street parking garage. In the event an additional car is warranted, MMC will work with its partners in finding a suitable location on the main campus for the storage and use of the UCar.

Transportation Survey

MMC will conduct a Transportation Survey of its employees every 2 years to collect data about commuting mode split, barriers to TDM use and marketing effectiveness.

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FUTURE TRANSPORTATION PLANNING CONSIDERATIONS

The patient experience of getting to and leaving MMC is also critically important to the transportation plan. Inefficient area traffic operations can lead to delays in patient treatment and an increase in patient frustration in addition to negative impacts on the adjacent local neighborhoods. MMC will need to accommodate new patients/visitors and add employees to the campus, increasing traffic demands on the existing roadways, however modestly. Initially identified issues and possible improvements that should receive additional consideration include the following measures:

- Community Access Circulation: Focus on logical traffic flow, pedestrian access and safety, bicycle access and on-street parking.
- Managing key neighborhood access and circulation concerns:
  - » Chadwick Street: A portion of Chadwick Street is one-way. The conversion to two-way could reduce the amount of traffic going further into the West-end neighborhood. MMC will work with the City to investigate the viability of converting this road section into two way travel.
  - » Chadwick Street at West Street: Develop potential safety improvements at this unsignalized intersection. Neighborhood comments have indicated observations of low compliance with stop-signs and two-way travel. However, if Chadwick is made two –way, the need for improvements may be eliminated.
  - » Vaughan Street at Bramhall Street: This is a difficult intersection geometry for pedestrians, cyclists and vehicles. Develop potential safety improvements for the unsignalized intersection.

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CHAPTER FIVE

ENVIRONMENTAL AND INFRASTRUCTURE PLAN

Sustainable and resilient infrastructure is key to ensure safe and efficient operations of healthcare facilities in the 21st century. Maine Medical Center is seeking to advance its good stewardship of environmental and infrastructure resources through its Institutional Development Plan.

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NATURAL RESOURCE PROTECTION

The Maine Medical Center Bramhall campus is located at a high point in the west end of the Portland peninsula. There are several locations where natural resources are significant (see **Fig.5.1** on page 82):

- The Western Promenade, a culturally significant public park that is listed in the National Registry of Historic Places (NRHP'89);
- MMC-owned landscape along Bramhall Street abutting the Western Promenade and serving as a foreground to the Maine General Building and original hospital structure;
- MMC, located in an urban setting, maintains small landscaped areas that provide visual respite from surrounding hard scape. These areas are well maintained, flowers watered and mulched and trees fertilized in order to preserve the pleasing aesthetics important to its neighbors, employees and patients. landscaped campus; and,
- MMC-owned natural area along Gilman Street. This steeply sloping zone contains natural vegetation consisting primarily of mature evergreen tree growth which serves as a natural buffer between the hospital and residences on Gilman Street.

The Western Promenade, in particular, is a treasured resource for the public, including employees, patients and visitors to the MMC Bramhall Campus. The Development Plan utilizes vertical expansion and/or previously developed sites to minimize impact on natural resources and maintain existing campus open spaces. The plan does not encroach upon or negatively impact any of the natural resources listed above.

Fig.5.1 Campus Relationship to the Western Promenade

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PROJECTED UTILITY DEMAND

Green Building Design

The historic Maine General Hospital incorporated natural light and ventilation as an important part of the healing process. The design of buildings identified in the Development Plan will take advantage of the natural light, heat, and ventilation, which will not only contributes to the healing process and improves the quality of patient and family spaces, but it also improves the building's energy performance.

Energy

Healthcare projects and hospitals are traditionally some of the largest consumers of energy by building type due to the demands of the internal programs. It is the goal to reduce the impact of these projects by minimizing energy consumption. A key element is to lower the Energy Use Intensity (EUI) for each project against the traditional code minimum baseline to both address sustainable goals and reduce the impact on infrastructure. Use of industry standards such as LEED will serve as a model for evaluation of future buildings on the MMC campus.

Each project in the Development Plan has specific needs and vary in their impacts. The proposed projects combined are anticipated to generate 5,400 KW of additional electricity demand (see **Table 5.1** for details). MMC is currently working with Central Maine Power to identify capacity for the projected energy loads.

Steam

The steam loads are met by the Central Utility Plant and will not impact city infrastructure. The removal of the laundry facility to an off-site location has created extra steam capacity for the campus. MMC's Central Utility Plant has the capacity needed to service MMC' short term growth needs.

Gas

The gas infrastructure has capacity to handle any increases to the current steam load.

Table 5.1 Projected Energy Demand

		Projected Net Energy Demand	Potential On-Site Energy Production (Rooftop PV)
Gilman Garage*	Stand-alone project not on the campus primary metered system	1,250 KW	300 KW
East Tower Vertical Expansion	Utilizing new systems for efficiency	300 KW	--
Visitor Garage Vertical Expansion	Utilizing existing systems	350 KW	150 KW
Congress Street Development	Net demand with the deletion of the existing garage currently on site	1,700 KW	
Central Utility Plant Expansion	Additional summer cooling demand	1,800 KW	
TOTAL ENERGY DEMAND		**5,400 KW**	**450 KW**

* Alternative employee parking solutions are currently being investigated.

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Sanitary and Stormwater Flows

The development site is served by a combined sewer system at multiple locations surrounding the campus. We are unaware of any existing capacity issues in the City's existing system and will have to rely on the City to identify known off-site deficiencies.

Sanitary Sewer Impacts

The East Tower expansion will increase sanitary flows in the combined sewer located at the intersection of Congress Street and Forest Street ultimately discharging to the Forest Street combined sewer. The increased sewer flow has not yet been determined. The East Tower project is not expected to affect stormwater flow rates.

The Congress Street Building will increase sewer flows in the Congress Street combined sewers. The sewer connection locations and loads have not yet been determined and more than one connection location may be required. New sewer flows from the Congress Street Building are expected to increase sanitary flows in the combined sewer located at the intersection of Congress Street and Forest Street ultimately discharging to the Forest Street combined sewer. The Congress Street Building may also include a sewer connection increasing flow in the combined sewer located at the intersection of Congress Street and Gilman Street ultimately discharging to Gilman Street.

Stormwater Impacts

The East Tower and Visitor parking garage projects are vertical expansion and are not expected to increase or decrease stormwater discharge. Both of these project currently discharges stormwater to the combined sewer located at the intersection of Congress Street and Forest Street ultimately discharging to the Forest Street combined sewer

The Congress Street Building will be required to meet the City's stormwater management ordinance requirements and mitigate any increases in discharge to the extent practicable. The current design of the building and project site redevelopment includes an extensive green roof component and proposes removals of existing impervious area. The net impact of this design is expected to result in no increase in the peak rates of runoff from the site. If necessary, a subsurface chamber system is being considered as a stormwater treatment measure to further mitigate increases in discharge to the City system. The project may however alter the location of the discharge points to a limited extent.

The primary existing stormwater discharge point for the Congress Street Site Congress Street Site is the combined sewer at the intersection of Congress Street and Forest Street ultimately discharging to the Forest Street combined sewer system. A limited amount of stormwater from the Congress Street Site drains to the Gilman Street combined sewer. It is expected that the primary post-development

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stormwater connection will be to the Forest Street Combined sere at the intersection of Congress Street and Forest Street

The Congress Street Building will be required to meet the City's stormwater management ordinance requirements and mitigate any increases in discharge to the extent practicable. The new Gilman Garage* is comprised of the redevelopment of an existing site removing buildings and surface parking and replacing it with a new parking garage. Preliminary studies indicate that the rate of runoff from the site will be relatively unchanged. A subsurface chamber stormwater treatment system is proposed to provide stormwater quality treatment measure, further mitigating increases in discharge to the City System. The site will discharge to the existing combined sewer in Congress Street discharging west toward Saint John Street.

Other Impacts to City Infrastructure

The electrical meter and service for the street lights on Congress Street in front of the Congress Street building will be relocated as part of MMC's Short-Term Development Plan. At least one city street light will be removed for the construction of the new Congress Street entrance. We are not aware at this time of other impacts to City owned infrastructure.

* Note: Alternative employee parking solutions are currently being investigated.

OPERATIONAL IMPACTS

Noise Impact

MMC's Development Plan aims to minimize noise and disturbance both for the benefit of its neighbors and its patients. Key to this is relocating the main campus entrance to Congress Street. This will limit traffic and associated noise from moving up onto the hill. The relocation of the helipad will maintain current flight paths, which were designed to minimize neighborhood noise impacts by following the recommended approach to the hospital over the Congress Street corridor as opposed to over dense residential areas.

Hazardous Waste Generation and Disposal

MMC has a Hazardous Materials and Waste Plan supported by policies for the handling and disposal of hazardous waste, universal hazardous waste and biomedical waste.

Biomedical and Hazardous Waste

Biomedical waste sharps, biomedical waste, pathological waste (tissues, etc), and hazardous pharmaceutical and other chemical waste are collected by MMC Environmental Services or contractors, and stored at secure locations across campus prior to pick up, transfer, and ultimate disposal by contractors. DEA controlled substances are wasted at the point of generation (e.g. medication rooms), solidified, and collected by MMC Environmental Services at a secure holding room for pick-up, transfer and ultimate disposal by contracted vendor. All hazardous materials leave the campus through the loading docks (see **Fig.5.2**).

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MMC's Short-Term Development Plan is not expected to create significant increases waste volumes. No changes are currently planned to hazardous materials storage and transfer locations on campus.

Grease Discharge

MMC will be installing a grease trap system capable of separating grease from waste water as part of its Short-Term Development Plan.

Soiled Linen

MMC has its own Linen Services department that is responsible for overseeing the processing of laundry for all of MMC and Maine Medical Partners (MPP) locations. The plant is located in Westbrook, and the linen is transported between these locations by MMC's Materials Management team.

Sustainable Operations

MMC expects to continue, and where possible, expand on the following sustainable operation strategies as part of its long-term plan.

Campus Recycling

MMC separates paper and cardboard out of the waste stream through on-campus recycling. MMC Kitchen and Café provide recycling for can and bottle returnables, and separate compostable items from the waste stream. MMC has also switched to reusable needle boxes to reduce plastic waste. Expired medical equipment and devices are reprocessed by contractors.

Landscaping

MMC contracts with an outside landscaping company. In renewing its contract, MMC is requiring the use of organic pesticides and fertilizers for all planting and green space on campus.

Snow Removal

MMC contracts with an outside snow removal company. The environment requires the use of melting agents, but MMC has taken steps to minimize its use by installing heated sidewalks at the front entrance and South lot entrance as well as the Emergency Department entrance. MMC will continue to use replace calcium chloride instead of salt, when possible, to reduce environmental impact of snow removal.

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Fig.5.2 Environmental Protection Plan

MMC FACILITIES
- Existing Buildings To Remain
- Short-Term Projects
- Long-Term Projects

PROTECTED OPEN SPACES
- A Western Promenade (NRHP'89, City-owned)
- B Bramhall Street Landscape (MMC-owned)
- C Gilman Street Landscape (MMC-owned)

MMC OPERATIONS
- Hazardous Waste Departure Point
- New Grease Trap System (Location TBD)

✿ Alternative employee parking solutions are currently being investigated.

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DESIGN

Maine Medical Center aims to continue its tradition of design excellence with its new campus projects. Future buildings are being designed to improve care delivery while also providing a new gateway to Portland on Congress Street.

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NEIGHBORHOOD IMPACTS

MMC's vision is "Working together so our communities are the healthiest in America." MMC sees the IDP as an opportunity to design an environment for better care delivery that also improves the overall neighborhood condition.

The following section outlines some of the different design aspects that MMC's Development Plan takes into account to improve its immediate context.

Minimizing Shadow Impact

In order to understand the shadow impact on the campus surroundings, the design team has done detailed shadow studies (see **Fig.6.1** on page 91). The objective of the new building massing is to minimize the shadow impact to surrounding areas.

Along Congress Street and Valley Street, the Development Plan is minimizing the shadow impact of the new buildings by either bringing the overall building height down as much as possible and/or by setting the building massing back from the sidewalk to allow more sunlight to hit the street.

Context-Appropriate Lighting

By modulating the lighting intensity along the campus edges, the Development Plan responds to its immediate context in a respectful way. Providing appropriate artificial lighting will help create a safe environment within and around the campus. At the same time, the lighting design takes into account the necessary lighting cut-offs to minimize the impact on the neighboring properties.

For instance, the Development Plan proposes having the highest level of lighting intensity along Congress Street since this is a commercial street. Indoor circulation and waiting areas are located along Congress Street animating the streetscape 24/7. Along streets that are adjacent to residential areas, the lighting intensity is minimized and strict light cut-offs prevent artificial lighting from spilling into the neighbors' properties.

Mitigating Wind Impact

Upon final design of MMC's applicable site plans, it will consult with the City of Portland's Arborist to selectively determine the placement of trees or other landscape features on any new landscape areas on the campus to minimize the amount of wind created by the buildings' mass.

Mitigating Impact of Building Heights

The overall buildings' heights are kept to a necessary minimum. Generous setbacks and potential public landscaped areas along sidewalks will mitigate the buildings' heights along Congress Street and Valley Street.

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Fig.6.1 Future Campus Buildings Solar and Wind Studies

SUMMER SOLSTICE (JUNE 21)

WINTER SOLSTICE (DEC 21)

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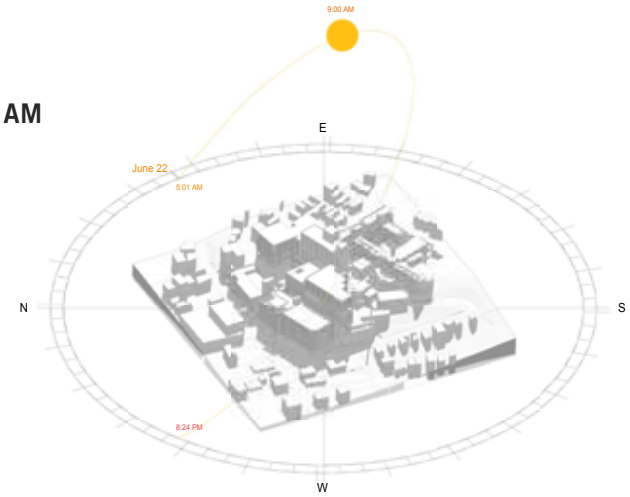

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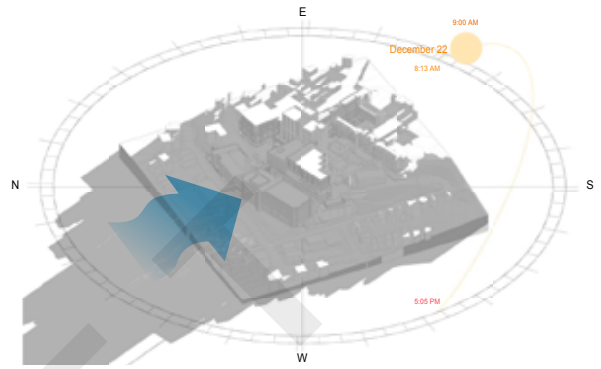

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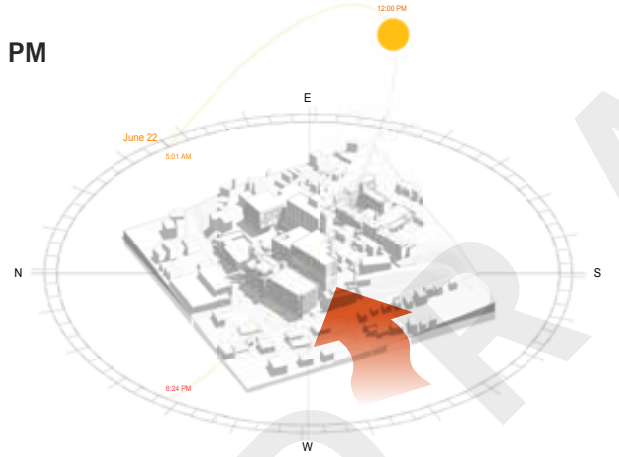

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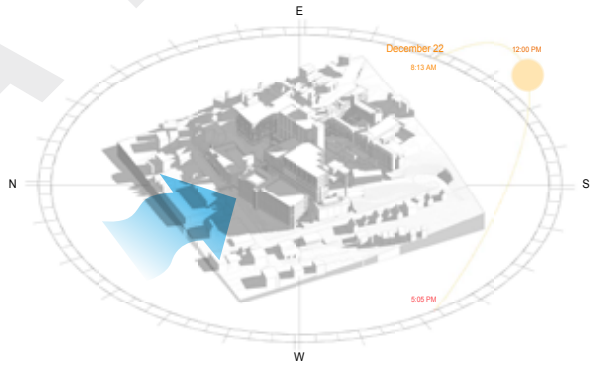

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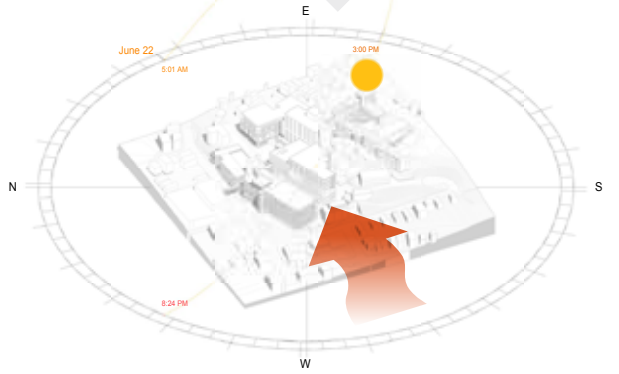

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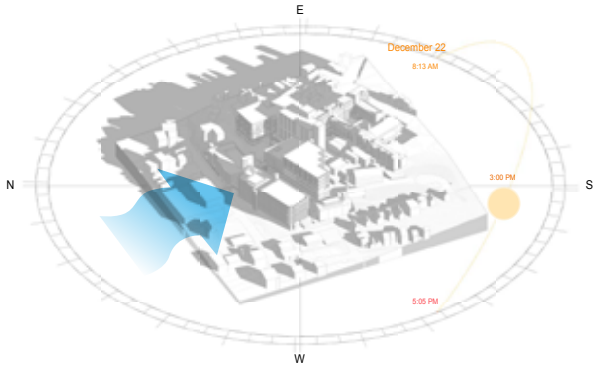

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Building on the Western Promenade

MMC's IDP embraces the historic Western Promenade as valuable open space amenity for campus users as well as the broader community. The landscape framework is built on the basic idea that access to views, natural light and nature create a positive patient and visitor experience that supports healing. Landscape plays a key role in MMC's Development Plan: in a strategic move that extends the experience of the Western Promenade into the campus, a series of landscapes are introduced along the revised main circulation route to provide views, and where possible, physical access to landscape for the benefit of all campus users (see **Fig.6.2** on page 92).

NEIGHBORHOOD TRANSITION

The design goal is to create a campus that belongs in Maine and engages with the surrounding community. Maine's natural environment is an important source of inspiration for the campus design and the landscape design intends to incorporate the different Maine landscape typologies (from tundra plateau to coastal outcrops). The future campus will be designed to create a seamless transition between the bucolic character of Western Promenade and the urban condition along Congress Street. With the addition of the new buildings, the campus extends its reach down from the top of the hill to engage with the community along Congress Street.

While a holistic design approach gives coherence to the overall campus, the site plan design will pay special attention to the neighborhood context.

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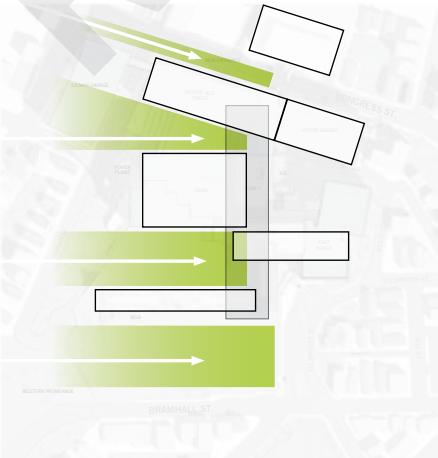
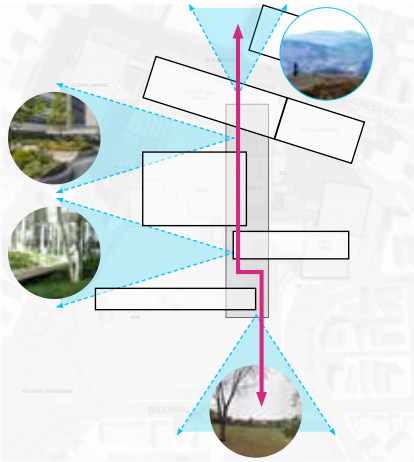


Pulling Western Promenade into the campus with a series of landscape spaces at different levels



Clear wayfinding with views out to nature

Fig.6.2 Landscape Design Framework inspired by the Western Promenade

Congress Street

This area has an urban and active character, which MMC's Development Plan intends to strengthen.

Transparency of large portions of the building facades along Congress Street at the pedestrian level will activate the streetscape 24/7. Active inside and outside uses, such as a café area and waiting area, are on the lower levels. The articulation on the bed floor elevation helps bringing down the building scale. The building mass of the clinical block and the new Gilman Garage* is set back providing a generous public landscape area along the sidewalk enhancing the pedestrian and vehicular experience.

Valley Street

Valley Street defines the western edge of campus. This active vehicular road transitions from a residential area to Congress Street, which is a commercial Street.

The Gilman Garage* massing is set back along Valley Street to give room to a new green area. The landscape design creates a buffer zone between the building mass and the pedestrian sidewalk. The presence of the exposed circulation that ties this garage structure back to the new lobby will make the streetscape safer and create an active backdrop at the intersection of Valley Street with Congress Street.

East Upper Campus

This campus area is adjacent to a residential neighborhood and brick is the predominant material on the campus buildings.

The East Tower addition fits and blends within its immediate campus context. The use of brick as the main material reinforces the existing character of this part of campus. The goal is to preserve the current relationship between the existing campus and the neighboring buildings.

Upper Campus

This part of campus benefits from the presence of the Western Promenade and includes the original Maine General building. The IDP does not propose any changes for this section of the campus.

*Note: Alternative employee parking solutions are currently being investigated.

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CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

MMC aims to create a healthy and safe environment for the surrounding community. MMC plays an active role to enhance the safety within the adjacent neighborhoods. MMC's Development Plan incorporates the Crime Prevention Through Environmental Design (CPTED) principles. These principles are implemented through the following design strategies:

- Design clarity and an aesthetically pleasing environment, will improve pedestrian experience for users, neighbors and passers-by.
- Clear and properly-sized signs located in strategic locations will provide safe wayfinding.
- The circulation paths from parking areas to the main building entrance are secured, conditioned and well-lit with clear sight lines.
- The ground floor of the new buildings are designed to avoid entrapment areas. By creating a continuous elevation without recesses, the design minimizes potential hideouts.
- The large number of people walking through the transparent bridge that connects the Gilman Garage* with the clinical block will provide natural surveillance of less visible areas such as Gilman Street.
- The use of vandal resistant materials and proper maintenance of the green open spaces will create territorial reinforcement, discouraging vandalism as well as misuse of the streetscape.

*Note: Alternative employee parking solutions are currently being investigated.

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PUBLIC REALM PLAN

A conceptual public realm plan for the proposed short-term development is shown below.

Fig.6.3 Public Realm Improvements along Congress and Valley Streets

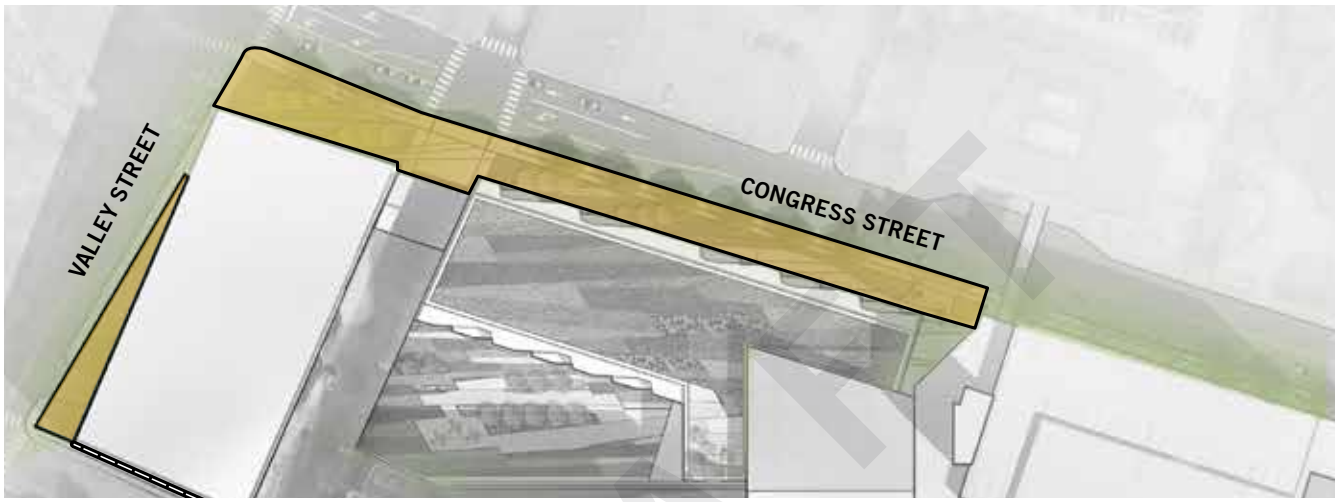
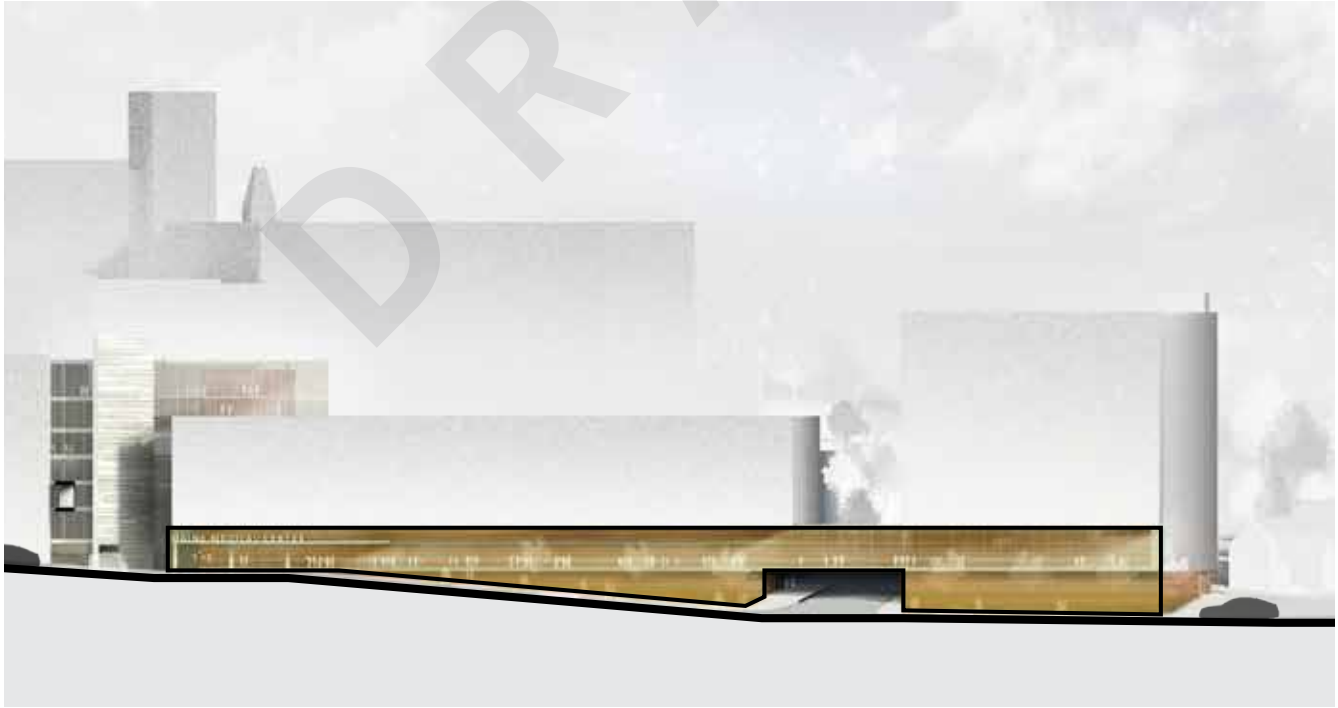


Fig.6.4 Pedestrian Concourse and Congress Street Landscape



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NEIGHBORHOOD ENGAGEMENT

Maine Medical Center strives to be a good neighbor to surrounding communities. Ongoing dialogue and exchange of information and ideas is a core tenant of MMC's neighborhood engagement plan.

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ONGOING COMMUNITY ENGAGEMENT

It is important for MMC and its neighbors to maintain the dialogue that has been established during the development of MMC's IDP. As a result, MMC proposes the following ongoing community engagement to ensure community members are informed throughout the MMC build out period and beyond:

- For the purposes of keeping the surrounding residential areas apprised of its future development plans, and to address any neighborhood issues related to the operations of the MMC campus, no less than quarterly, MMC shall invite representatives of the adjacent neighborhood associations to meet with designated MMC representatives. MMC will engage neighbors in more routine dialogue during major planning efforts. These meeting invitation shall also be extended to the Director of Planning at the City of Portland. Minutes of such meeting shall be taken.
- MMC shall host at least two neighborhood meetings during the development of future IDPs in compliance with IOZ requirements.
- During construction, MMC will designate MMC shall provide contact information for a designated community liaison on its website for day-to-day inquiries and complaints.
- MMC shall also employ social media to make information about any pending project readily available to the public. This shall include a dedicated website page and a dedicated email address for residents to ask questions, provide suggestions or voice concerns.
- Finally, MMC will set up a text alert system to notify any subscriber of advance construction impacts which may be necessary during construction (for example, road closure, large truck delivery etc.)

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CONSTRUCTION MANAGEMENT PRINCIPLES

The following section provides an overview of the construction management principles that MMC has identified to minimize impacts from noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding buildings and communities. It is MMC's full intent to schedule and conduct operations in a manner that will minimize, to the extent feasible, the disturbance to the public in areas adjacent to the work and to occupants of buildings in the vicinity.

Communication Initiatives

MMC appreciates the importance of keeping its neighbors up to date on planned construction activities that may impact them. To that end MMC will implement a communication strategy using social media and texting to alert surrounding neighbors of activities that may cause disruption.

MMC has created a dedicated webpage on its website devoted to the MFP Project to inform the public of important information related to the Project. (http://www.mmc.org/modernization) Information and updates on the Project are regularly posted including project updates, neighborhood meeting minutes, Portland Planning Board information related to the project, news releases, fact sheets and frequently asked questions. As construction commences, important alerts regarding construction activity such as activities impacting roadways, potential creation of dust, vibration, or noise, etc. will also be posted. To the extent possible, MMC will provide two week advance notice of such activities.

MMC has created a dedicated email address which allows for members of the public to ask questions and provide information directly to the Construction Team. These emails will be answered in a timely fashion by the people directly involved in the construction activities.

MMC has created a dedicated email address which allows for members of the public to ask questions and provide information directly to the Construction Team. These emails will be answered in a timely fashion by the people directly involved in the construction activities.

Construction Schedule

The construction period for the project is expected to be approximately 54 months in duration. It is anticipated that the project is estimated to start on or about January, 2018 and last through June, 2022. Estimated dates for the project phases identified as follows:

- East Tower: Dec 2017-Oct 2019
  (Helipad Occupancy: July 2019)
- New Garage (location TBD):
  Oct 2017-June 2019
- Visitor Garage Expansion: Jun-Oct 2018
- Removal of Employee Garage: June-Dec 2019
- Congress Street Clinical Building:
  Jan 2020-July 2022

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Schedules are subject to change based on site conditions and other considerations.

Construction Management Plan

Prior to construction, MMC will develop comprehensive Logistics and Safety Programs. Maintaining normal campus operations and public safety, and minimizing impacts to areas surrounding the campus will be the primary considerations in this process.

Project Work Hours

Construction will occur during the daytime hours as defined by the Portland Noise Regulation (7am to 6pm, Monday through Friday). In some unavoidable instances, weekday night hours could extend to beyond 6pm when a second shift is employed. Weekend work hours will be 7AM to 4PM on the Saturdays and Sundays when required.

Perimeter Protection/Public Safety

In general, secured fencing will be used to isolate construction areas from pedestrian traffic and Police Details will be provided, when necessary, to facilitate traffic flow. MMC will work to ensure the sidewalk protection minimizes impact to pedestrian and vehicular flow. The specific configuration of sidewalk protection and pedestrian access around the site will vary depending on the phase of the work being performed. Construction procedures will be designed to meet all OSHA safety standards for specific site construction activities. MMC will provide sufficient temporary site lighting to ensure the safety of all pedestrians accessing the sidewalks around the site, including lighting at all covered pedestrian walkways, until permanent street lights are installed.

Construction Noise Impacts

The project will require the use of equipment that can be heard from off -site locations. MMC is committed to mitigating construction noise impacts. Increased community sound levels, however, are an inherent consequence of construction activities. When these events are scheduled, advance notice will be provided.

Construction Traffic and Parking Impacts

Construction Workers

The number of workers required during the construction will vary with an estimated average daily workforce of 150 during the peak of construction. Jobsite personnel shall park at an offsite parking area and will be shuttled to the construction site. MMC will work with the Construction Management Company to identify an off-site parking location and shuttle service. No personal vehicles will be allowed to park at the project construction site or in the adjacent residential streets. The construction company and its subcontractors shall encourage the use of public transportation by their workers, if available.

Truck Routes and Volumes

Truck traffic will vary throughout the construction period, depending on the activity. It is expected that

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truck traffic will average 8-10 trucks daily spread evenly throughout the day. An off-site marshalling area will be utilized for trucking.

MMC will install way finding signage at strategic locations identifying no travel zones for construction vehicles. To the extent possible, all truck traffic will be directed to enter the sites utilizing Congress Street. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queueing on Congress Street or Gilman Street, unless during specific times as addressed on the site logistics plans.

Construction Air Quality Impacts

To reduce emission of fugitive dust and minimize impacts on the local environment, MMC will adhere to a number of strictly enforced mitigation measures. These include the use of wetting agents to control and suppress dust; covering stock piles of soils and trucks transporting debris; managing construction practices to reduce unnecessary transfers of loose materials; periodic cleaning of streets and sidewalks; and, use of wheel wash stations.

Fig.7.1 Screenshot of MMC Website dedicated to the Project

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MMC COMMUNITY BENEFITS

MMC provides much to the City of Portland community, which often goes overlooked. These benefits are not only to our adjacent neighbors but also to the residents elsewhere in the City.

Smoking Policy and Related Initiatives

MMC, as a health care institution, understands that smoking is an addiction that has harmful effects—effects from directly inhaling nicotine, as well as the effects of second hand smoke. The effects are serious and can be life threatening. In order to advance its vision to make the people in Maine the healthiest in America, MMC, like other businesses in the City of Portland—including the City itself—has instituted a no smoking policy on its premises.

But the hospital also recognizes that addiction is difficult to overcome and the ability to quit smoking is often difficult. That is why MMC offers assistance to its employees, patients and visitors to quit smoking and to reduce and eliminate noxious fumes in the environment. MMC provides free smoking cessation classes to its employees. It offers free nicotine gum to visitors to the hospital in an effort to reduce the desire to smoke. MMC conducts periodic "walk-abouts" in the neighborhood to talk with people about smoking and its health impacts.

Neighborhoods throughout the City all deal with unwanted smoke. MMC has heard the concerns of its neighbors relating to people walking on the public sidewalks in their neighborhoods while smoking. Whether or not people smoking in MMC's adjacent neighborhoods are affiliated with the Hospital, MMC has taken significant measures to respond in a positive fashion to these concerns. In addition to the proactive walk-abouts providing education about smoking and resources to assist in quitting (such as providing the hotline telephone number for the Center for Tobacco Independence), the Hospital has taken steps to alleviate the unsightliness of cigarette butts on public streets near its campus. As documented in its MMC Neighborhood Council Meeting minutes of June 23, 2016, MMC has purchased 30 "butt butlers" for use by the City in areas around the MMC main campus. In 2016 MMC and the neighbors collaboratively walked the neighborhood and identified areas for installation of the butt butlers.

At the request of the neighborhood representatives, MMC also modified its smoking policy as follows:

- Limits the distance from entrances within which individuals can smoke from 50 feet to 20 feet;
- Remove MMC Tobacco Free signs installed along the perimeter of the open "South Lot" (Bramhall, Chadwick, Vaughan, and Brackett Streets).
- Letter to employees sent by the MMC CEO and COO regarding these changes and the expectations for employees to abide by them
- MMC has hired, at its expense, a trash removal vendor to collect cigarette butts and trash in the areas surrounding the

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hospital. This vendor provides such service between April 1 and first snow, on M, W, and F at 4–6 hours per day.

- MMC has a telephone line dedicated to the receipt of concerns from neighbors regarding MMC related events in their neighborhoods

While MMC recognizes that it cannot prevent people from smoking, it is committed to ongoing efforts to address this public health issue.

Neighborhood Garden

The St. John Valley Neighborhood requested the use of property owned by MMC at 268-270 Valley Street. In an effort to respond to the neighbors, MMC contacted the City for guidance on how it permitted use of public property for such community gardens. MMC fashioned an agreement with SJVNA which mimicked the Agreement used by the City for use of its land by gardening neighbors. As of June 2016 SJVNA was looking into procuring insurance of the same type required by the City.

Neighborhood Clean Up Days

MMC has sponsored neighborhood clean-up days in the past in an effort to partner which its adjacent Neighborhood Associations to beautify the neighborhood. It has supplied lunch, trash bags, gloves and water for those participating.

Snow Ban Parking

MMC allows its neighbors the use of its parking garage at 887 Congress Street on those days when the City calls a snow ban. Although there have been glitches of this policy by MMC in the past, as well as abuses of this policy by neighbors leaving cars parked long-term in the past, for the most part the locations of vehicle parking and the hours for such parking have been respected and appreciated by the neighbors.

City-Wide Benefits

MMC is actively involved in giving back to the City of Portland. The following initiatives provide some examples of the actions undertaken by MMC to give back to the community.

- MMC-Preble Street Learning Collaborative: MMC nurse practitioners, primary care residents, medical students, and MMC Homeless Health Partners, provide services to the most vulnerable underserved people in Portland, allowing them access to quality, barrier-free health care.

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City-Wide Benefits, *continued*

- Portland School Based Health Clinics are made possible through a partnership between Maine Medical Center and Portland Public Health.
- Portland School Athletic Contributions: The Sports Medicine division at MMC's Family Medicine Center provides physical exams and training room support for area school teams, marathons and other sports events.
- MMC RN Health Fairs: MMC RN's routinely hold community health fairs on MMC's time to benefit vulnerable populations. Locations of health fairs include: the Preble Street Teen Center, Boys and Girl's Club of Portland, and the Florence House, a permanent shelter for chronically homeless women. The events are frequently accompanied by a collection of supplies.
- Sagamore Village Health Center: MMC provides staff and support at the Sagamore Health Resource Center, a community-based nurse managed clinic that provides public health, primary care and mental health services to residents. MMC provides the services and support in collaboration with the USM School of Nursing and Portland Housing Authority. In addition to staff and administrative support, MMC provides direct financial support to the Health Clinic.
- MMC Care Partners: A "safety net" program designed to provide care for those who cannot afford commercial insurance but are not eligible for government programs. CarePartners provides administrative support to help serve the target population, including comprehensive eligibility assessment, care management, and access to low cost or free pharmaceuticals.
- Virology Treatment Center: A resource to patients and physicians caring for patients with HIV/AIDS; it also provides education and conducts clinical trials, including many that otherwise would not be available in the community.
- International Clinic: Provides services and healthcare education to immigrants and refugees from around the world who have settled in Portland.
- Northern New England Poison Center: MMC is the home of the NNEPC. The NNEPC provides a 24 x 7 hotline and chat service to provide 24 x 7 consultation with healthcare professionals and the public regarding accidental pediatric or geriatric poisonings, therapeutic errors and adverse

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effects/interactions, management of drug- or poison-related suicide attempts and substance abuse misadventures, environmental exposure, food poisoning and other toxic exposures. The Center also provides education for the public and healthcare professionals, including school nurses and law enforcement, assists with preparedness and toxic-surveillance for events including food or water contamination/tampering, weapons of mass destruction, regional antidote management, and infectious disease.

- Sexual Assault Response Services of Maine (SARSSM): MMC, through its Emergency Department, teaches classes to support SARSSM. Emergency department members present at meetings and conferences in support of these services.

- The Maine Medical Center Research Institute (MMCRI) is the largest hospital-based biomedical research facility in northern New England. Many clinicians author scholarly work or participate in various studies and research activities, and the institute offers a summer student program. Residents and community members participate in clinical trials to manage and treat diseases and medical conditions, which would otherwise not be available in the community.

- MMC Classroom Facilities at the MMC Dana Center are used by health care mission focused community groups for meetings and educational sessions. Local Chapters of Alcoholics Anonymous, Al-Anon, the National Alliance for the Mentally Ill and Take Off the Pounds Sensibly meet weekly at the Dana Center. HOPE Support Group, Making Strides against Breast Cancer, an Autism Parent Support Group, and Survivors of Suicide are some of the organizations that make use of MMC's facilities on a weekly basis throughout the year.

- MMC's Certified Nursing Assistant (CNA) Program: In affiliation with Portland Adult Education this program has graduated approximately 1,200 graduates to date. Offered 3 times a year at no charge to students, this state-approved 180-hour course incorporates experienced MMC nursing staff as faculty/mentors within classroom presentations, skills labs, and supervised clinical experiences. Clinical nurses and others throughout MMC instruct and mentor these student team members, highlighting MMC's belief in CNAs as integral to the comfort, care, and outcomes of our patients and services. An average of 75 participants attend per session. Near the end of this eleven-week program, students take the

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City-Wide Benefits, *continued*

state certification examination during the course at no cost to the student.

- Medical Explorers: Provides opportunity for High School students to experience a combination of lecture, experiential learning, and hand-on skills practice. MMC also offers summer internships and opportunities through the school year for High School students to meet, observe and interact with many disciplines in the medical profession.

- Doc for a Day: MMC provides students, chosen from underrepresented minority groups or educationally or economically disadvantaged backgrounds, an overview of what is involved in becoming a physician, and participate in hands on clinical activities in the simulation lab.

- Disaster Preparedness and Emergency Services: MMC is deeply involved in disaster planning at the local and State levels. It is one of three state Regional Resource Centers for Emergency Preparedness, and the hospital has a full-time Director of Emergency preparedness. Additionally, MMC is a member Southern Maine Regional Resource Center for Health Emergency Preparedness, which coordinates all Emergency Preparedness Activities of the Southern 4 Counties of Maine including: York, Cumberland, Sagadahoc and Lincoln. These Public Healthcare Emergency services include services and support to other local Hospitals and Medical Centers, Laboratories, Clinics and Ambulatory Centers, Assisted Living and Long Term Care Facilities and Home Health Agencies in the greater Portland Community.

- Financial Support to Community Agencies: MMC supports financially and provides in kind services to various community agencies and sponsors events throughout the City, including the Heart Walk; American Cancer Society walk, Hospice of Southern Maine, Let's Go Program, Ronald McDonald House, March of Dimes and National Multiple Sclerosis Society. MMC and its employees participate in the United Way, which donations benefit numerous local agencies.

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Fig.7.2 Photographs from Community Benefit Events Supported by MMC

The Annual Maine Children's Cancer Program (MCCP) Walk

Tobacco Cessation Program

Park Clean-Up

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Maine Medical Center
MaineHealth

Institutional Overlay Zone (IOZ) Regulatory Framework

INTERNAL DRAFT FOR REVIEW BY MMC / March 20, 2017

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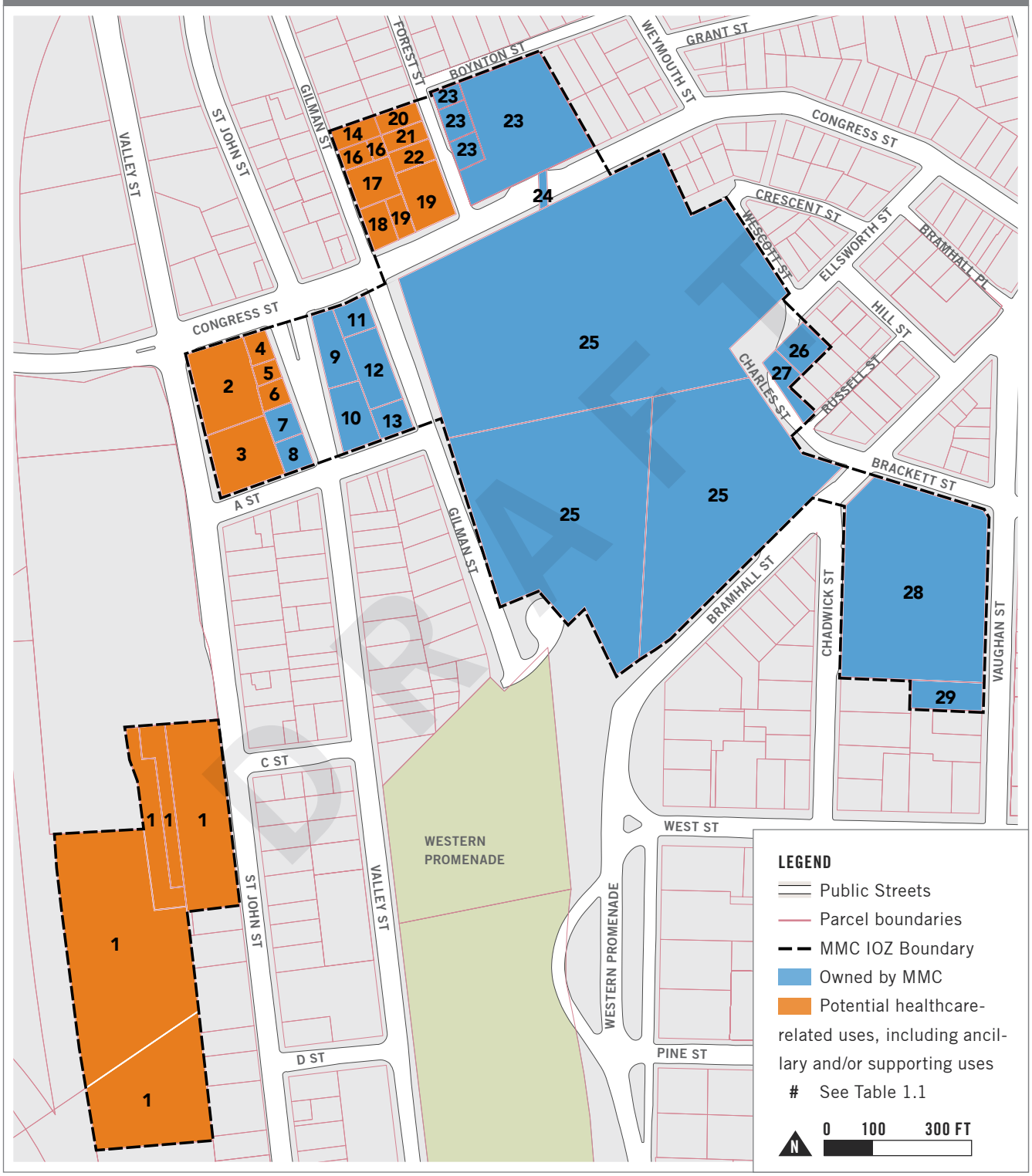
1. BOUNDARY

MAP 1.1 Maine Medical Center IOZ Boundary



1. BOUNDARY

TABLE 1.1 List of Properties Included in the Maine Medical Center IOZ

Map#	Legal Description	Address	Acreage	MMC Title?
1	64-A-2-8-9-11 74-A-7 / 75-A-6	222 St John St	4.6516	No
2	65-G-1	950 Congress St	0.4628	No
3	64-B-1	275 St John St	0.4163	No
4	65-G-2	942 Congress St	0.0659	No
5	65-G-3	940 Congress St	0.0482	No
6	65-G-4	274 Valley St	0.0667	No
7	65-G-5	268-70 Valley St	0.0978	Yes
8	64-B-2	264 Valley St	0.0895	Yes
9	65-H-1	932 Congress St	0.1864	Yes
10	65-H-9	261 Valley St	0.2185	Yes
11	65-H-2	930 Congress St	0.1040	Yes
12	65-H-5	52 Gilman St	0.2384	Yes
13	65-H-8	44 Gilman St	0.1128	Yes
14	65-E-18	93 Gilman St	0.0826	No
15	65-E-22	85 Gilman St	0.0565	No
16	65-E-32	85 Gilman St	0.0282	No
17	65-E-24	81 Gilman St	0.1653	No
18	65-E-28	919 Congress St	0.1059	No
19	65-E-29-30	909 Congress St	0.3233	No
20	65-E-21	18 Forest St	0.0831	No
21	65-E-23	14 Forest St	0.0826	No
22	65-E-25	12 Forest St	0.0883	No
23	53-I-1-2-3-12	887 Congress St	1.3400	Yes
24	53-X-1	Congress St Air Rights and Pedestrian Walkway	---	Yes
25	53-D-7 54-H-1 64-C-1	22 Bramhall St	12.563	Yes
26	54-C-6	34 Ellsworth St	0.1341	Yes
27	54-C-10	40 Ellsworth St	0.1155	Yes
28	54-I-1	308 Brackett St	2.5200	Yes
29	63-B-8	214 Vaughan St	0.1983	Yes

Notes: Properties owned by MMC are listed under Maine Medical Center or MMC Realty Corp.

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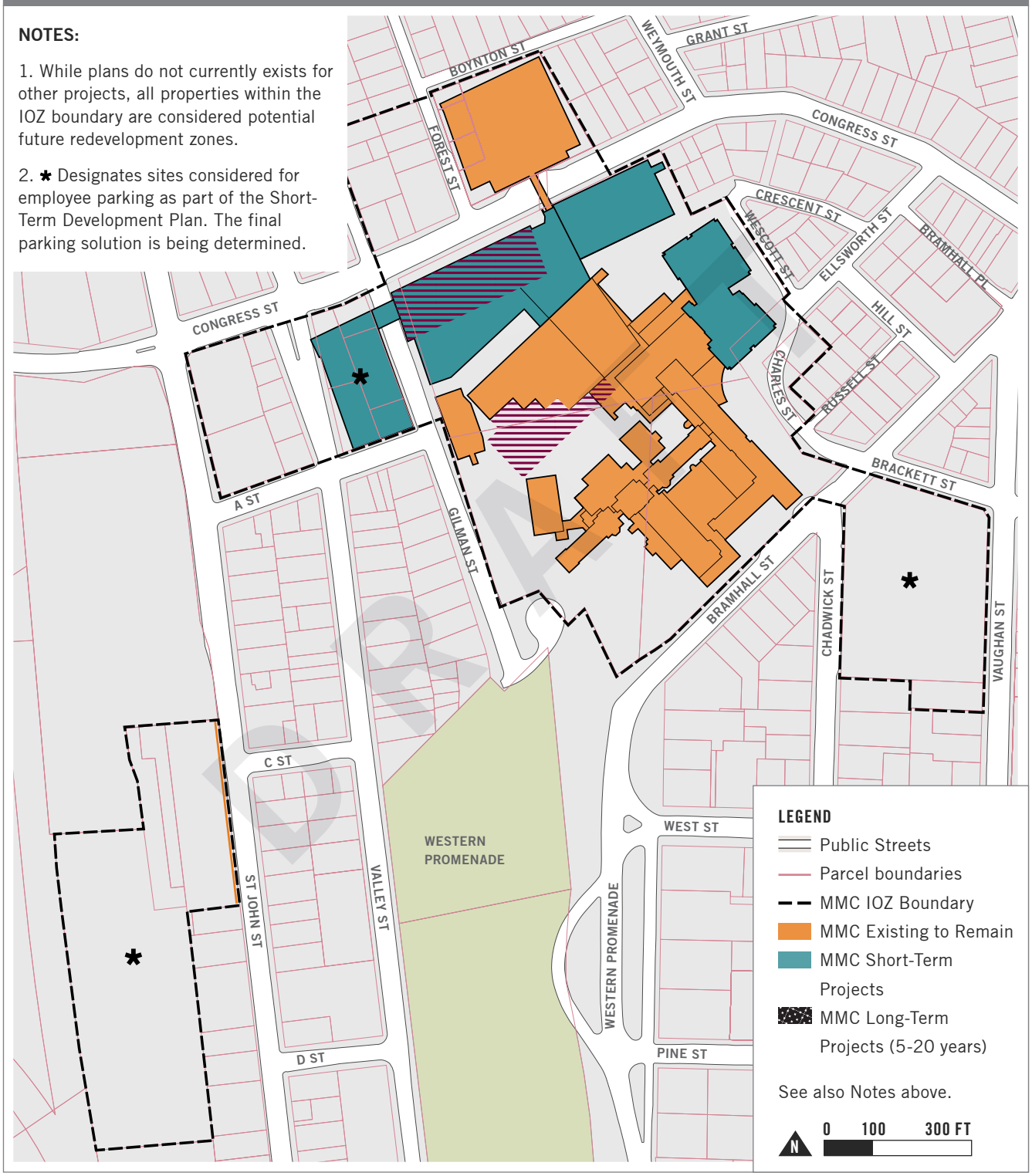
2. PHASING AND SCHEDULES

MAP 2.1 Maine Medical Center Development Phasing Plan



2. PHASING AND SCHEDULES

TABLE 2.1 Thresholds for Plan Amendments

Plan Name	Threshold for Update
Maine Medical Center Institutional Development Plan (IDP)	Every ten (10) years, or, prior to development projected to increase total facility holdings by more than 800,000 GSF of healthcare uses, not including parking.
Maine Medical Center Transportation Demand Management (TDM) Plan	Every five (5) years. Monitoring reports to be provided every 5 years upon request by the City.

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3. USES

TABLE 3.1 List of Uses Permitted by Right within the IOZ	
Healthcare facilities including but not limited to the following ancillary and/or supporting uses:	
• Hospital • Medical Office / Clinic • Laboratory Center / Services • Research and Development Laboratory or Facility • Educational Facility / Conference Center • Administrative / Business Office • Accessory Service or Trade Uses • Guest House • Medical Resident Apartments • Rehab / Skilled Nursing Facility	• Retail Facility • Restaurant / Cafe • Employee Service Amenities • Day Care Center (Child / Adult) • Fitness Center or Gymnasium • Parking Lot • Parking Garage • Bicycle Storage • Heliport • Antenna Station

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4. DIMENSIONAL REQUIREMENTS

TABLE 4.1 Dimensional Requirements	
Building Heights (max.)	See Map 4.1. for maximum building heights.
Floor-Area-Ratio (max.)	None
Building Setbacks (min.)	See Map 4.3 for minimum building setbacks.
Congress Street Build-to-Zone*	A Build-to-Zone is identified for properties that abut Congress Street. The Congress Street Build-to-Zone extends between 0 to 40 feet from the right-of-way boundary. Buildings located in these parcels must have a minimum of 70% of the façade facing Congress Street located anywhere within the build-to-zone.
Transition Zones	Transition zones are identified inside the IOZ boundary in areas where the IOZ abuts or is located across a public right-of-way from a residential use district or a historic-designated district. See Map 4.2. for location of transition zones. i. Transition zones that abut a Residential District with an intervening public right-of-way that is not an alley shall have a height limit that matches the maximum height across in the Residential District. ii. Buildings located in transition zones that abut a Historic District may be subject to review by the Historic Preservation Board per the City of Portland zoning ordinance. iii. In areas where the IOZ abuts a Residential or Historic District without an intervening public right of way or an alley, minimum side and rear yard requirements of the abutting Residential or Historic District apply within the IOZ boundary.

*A "build-to zone" is the area on the lot where all or a portion of the street-facing building facade must be located, measured as a minimum and maximum yard (setback) range from the public right-of-way boundary.

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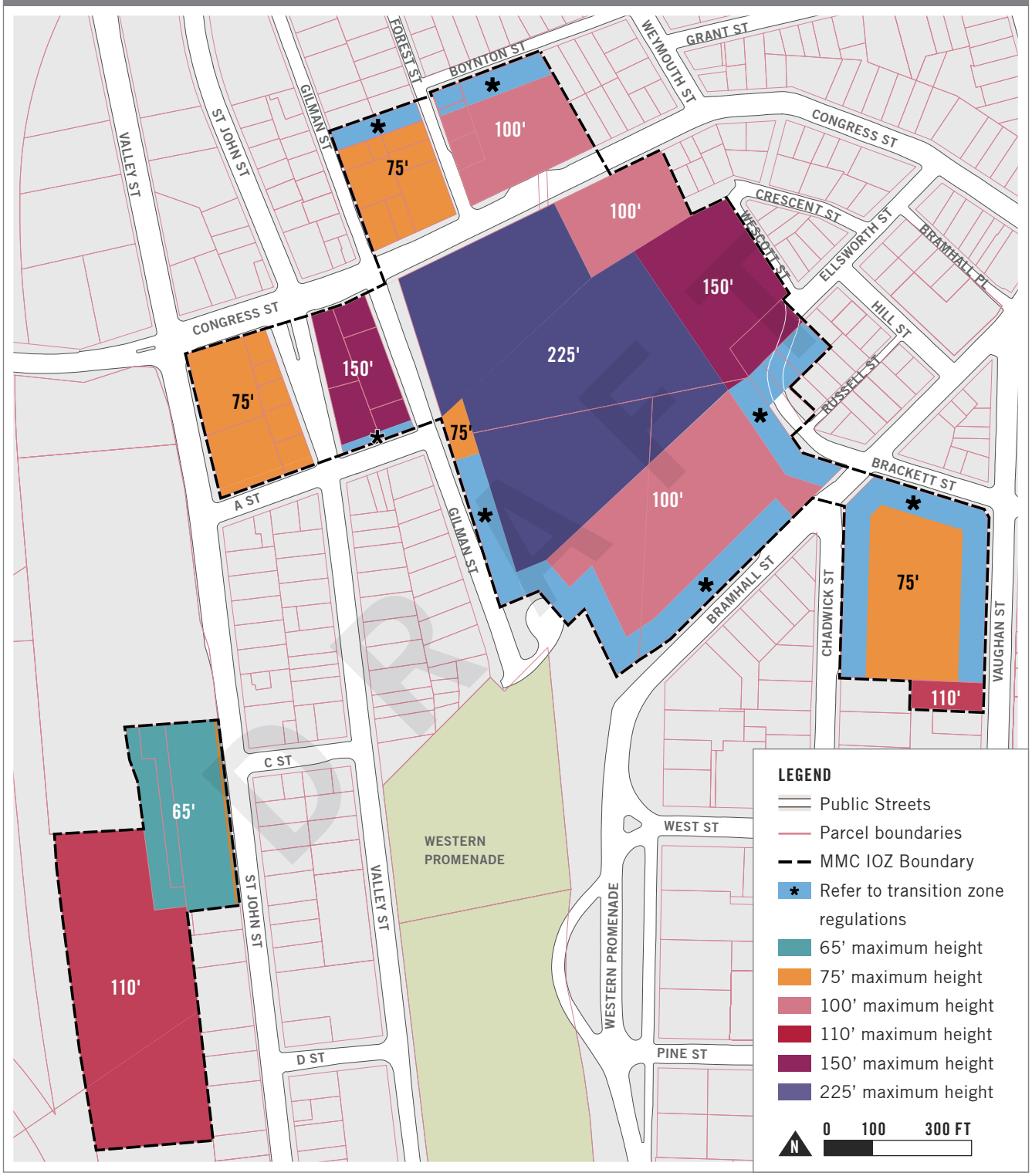
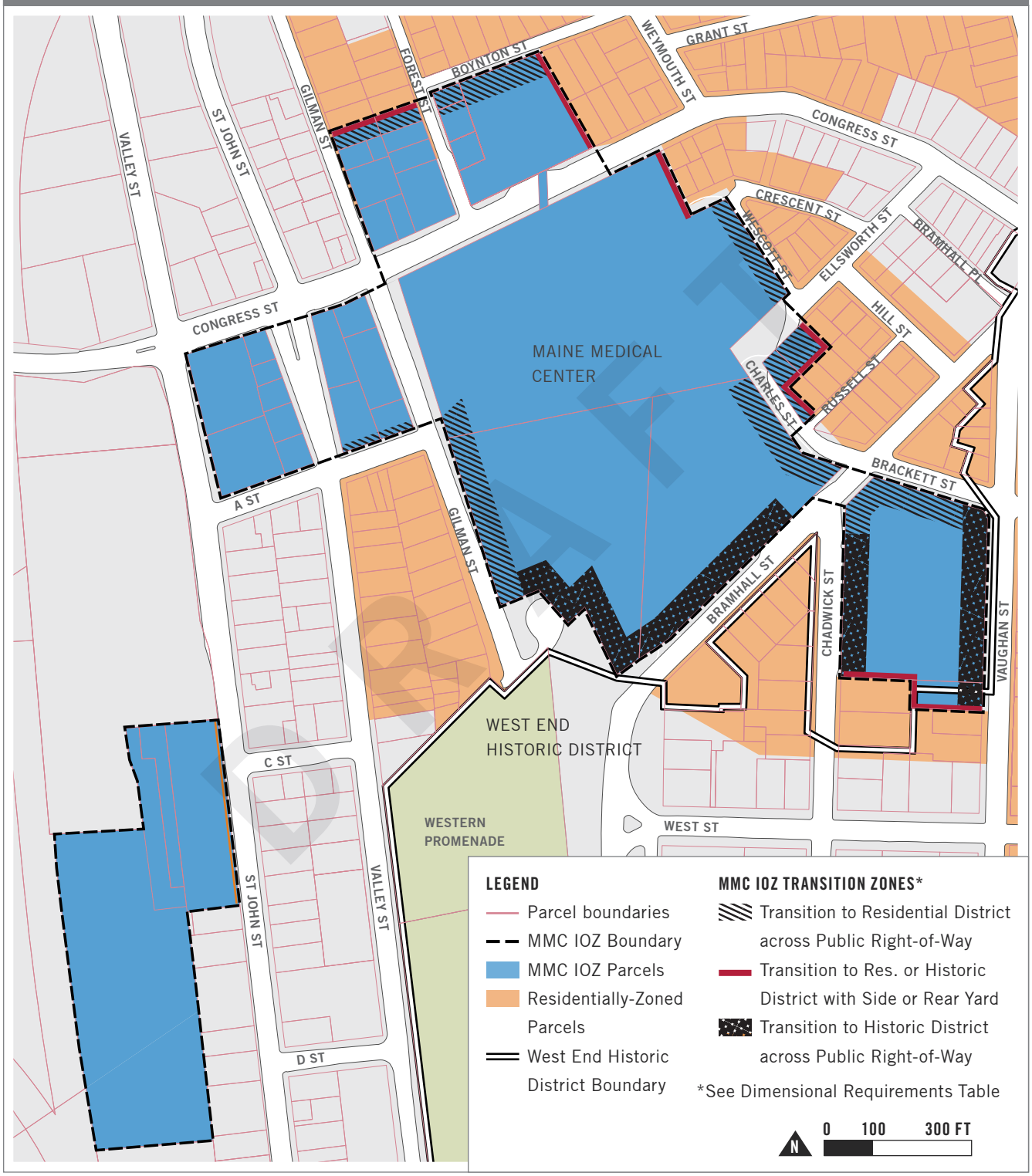
4. DIMENSIONAL REQUIREMENTS

MAP 4.1 Building Heights Map



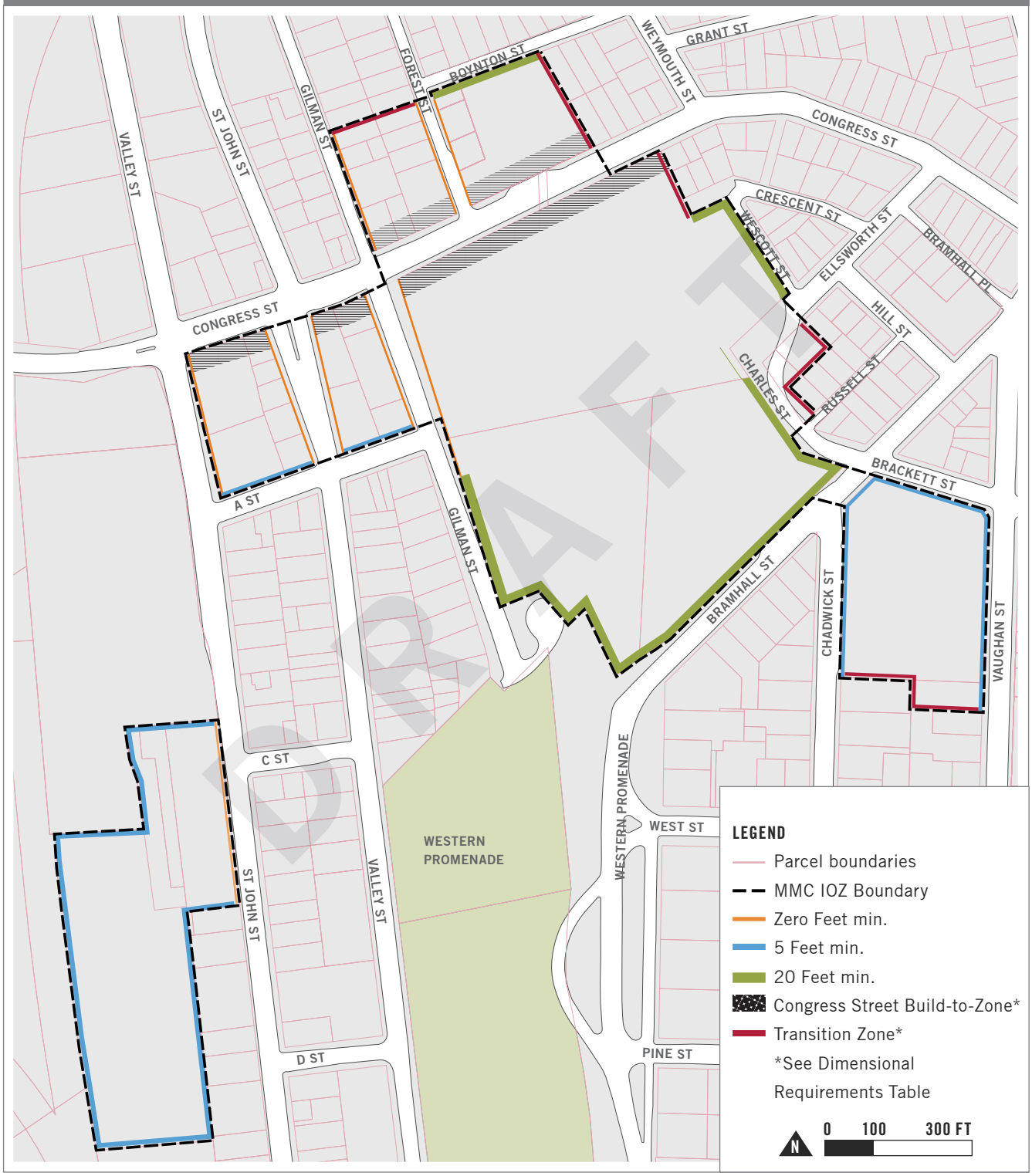
4. DIMENSIONAL REQUIREMENTS

MAP 4.2 Map of Transition Zones



4. DIMENSIONAL REQUIREMENTS

MAP 4.3 Map of Minimum Setbacks



5. TRANSPORTATION

A. Maine Medical Center shall comply with City of Portland Site Plan Standards for ensuring pedestrian, vehicular, bicycle and transit access and safety.

   i. Sidewalk Material: In order to maintain the safety of patients and visitors to/from the hospital, MMC need not comply with the City's brick sidewalk policy but may use alternative material substantially similar to that used along the sidewalks abutting the Bramhall Street entrance.

B. Maine Medical Center shall endeavor to meet a TDM trip reduction target of 65 by year 2020.

C. Maine Medical Center shall meet thresholds for access improvement upon the issuance of a Traffic Movement Permit.

D. Maine Medical Center shall provide no less than 915 parking spaces for patients and visitors and no less than 2325 parking spaces for employees. Parking requirements shall be revised with every TDM update.

6. SITE PLAN REVIEW

The following elements shall be considered by the Planning Board at Level III Site plan review:

- Building envelope design
- Landscape and public realm design
- Vehicular circulation and safety
- Pedestrian and bicycle safety measures
- Mitigation measures for development impact
- Construction management approach

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7. OTHER REQUIREMENTS

A. Helipad Permitted Use and Specifications

The Helicopter Landing Pad shall not be subject to the provisions of section 14-409 (Heliports), but shall be governed by the provisions of the Helistop Overlay Zone (Sections 14-325 through 14-327), except as follows:

i. Setbacks. Because it is to be located on the roof of an existing structure, the landing pad shall not be required to meet the setback requirements of Section 14-327(3) or the fencing requirements of Section 14-327(4).

ii. Flight Routes. MMC shall identify preferred flight routes, to be approved by the CITY, designed to minimize noise impact of helicopter flights on surrounding residential areas, shall notify all flight providers likely to use the Helicopter Landing Pad of such preferred routes, and shall take the following measures to ensure that such preferred routes are utilized whenever weather conditions, safety considerations and the best interests of the patient being transported permit, with the expectation that this will be the usual case. MMC will instruct all providers which regularly use the Helicopter Landing Pad that pilots must file an exception report with the Air Medical Provider Administration of Lifeflight of Maine or its successor entity for operations modified for safety considerations or at the direct request of Approach Control at the Portland International Jetport. Logs of these exception reports will be made available to MMC and to the City upon request but no more frequently than annually. When and if the Portland Jetport has the capacity to maintain and preserve data which specifically identifies flight routes actually taken by aircraft utilizing the Helicopter Landing Pad, the City shall consult such data to review compliance with this paragraph, and MMC, upon request of the City, shall be responsible for the cost of translating this data into usable form but not for the costs of the flight monitoring.

Initially, such preferred flight routes shall be as shown on the flight map (see **Map 7.1**). At the initiative of either the City or MMC, the map of preferred flight routes may be amended from time to time by agreement between MMC and the City.

MMC will continue to engage providers of helicopter emergency medical transport who operate in compliance with the "Fly Neighborly Guide," third edition, (and any subsequent revisions) prepared by the Helicopter Association International Fly Neighborly Committee and published by the Helicopter Association International.

Helicopter landings on the Helipad shall be used for emergency patient care only, and on the rare occasion for emergency management training by federal or state management agencies or U.S. military or government aircraft.

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7. OTHER REQUIREMENTS

MAP 7.1 MMC Helicopter Flight Path

7. OTHER REQUIREMENTS

B. City Snow Ban Parking

MMC recognizes that City snow ban parking locations in the vicinity of MMC is limited. MMC also recognizes the need to prioritize its parking for patients, visitors and staff. However, during winter months when the City of Portland implements citywide parking bans for snow plowing and or snow removal, MMC will offer to its neighbors the ability to park in a designated area of the Forest Street garage for so long as such spaces are not needed to service MMC and according to the following requirements:

Hours: Due to the patterns of patient flow in the hospital, the hours that we are able to offer community parking during the announced City of Portland Snow Parking Bans is strictly limited to 6:00pm until 6:00am. On Saturdays and Sundays, the morning deadline is 8:00am.

Note: Vehicles that are not moved out of this Lot prior the applicable time each morning will be towed, without notice, and at the owner's expense.

C. Signage

MMC shall abide by the requirements of sections 14-366 through 14-372.5 of the Portland Land Use Code, except as otherwise approved by the Portland Planning Board under Chapter 14, Article V.

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