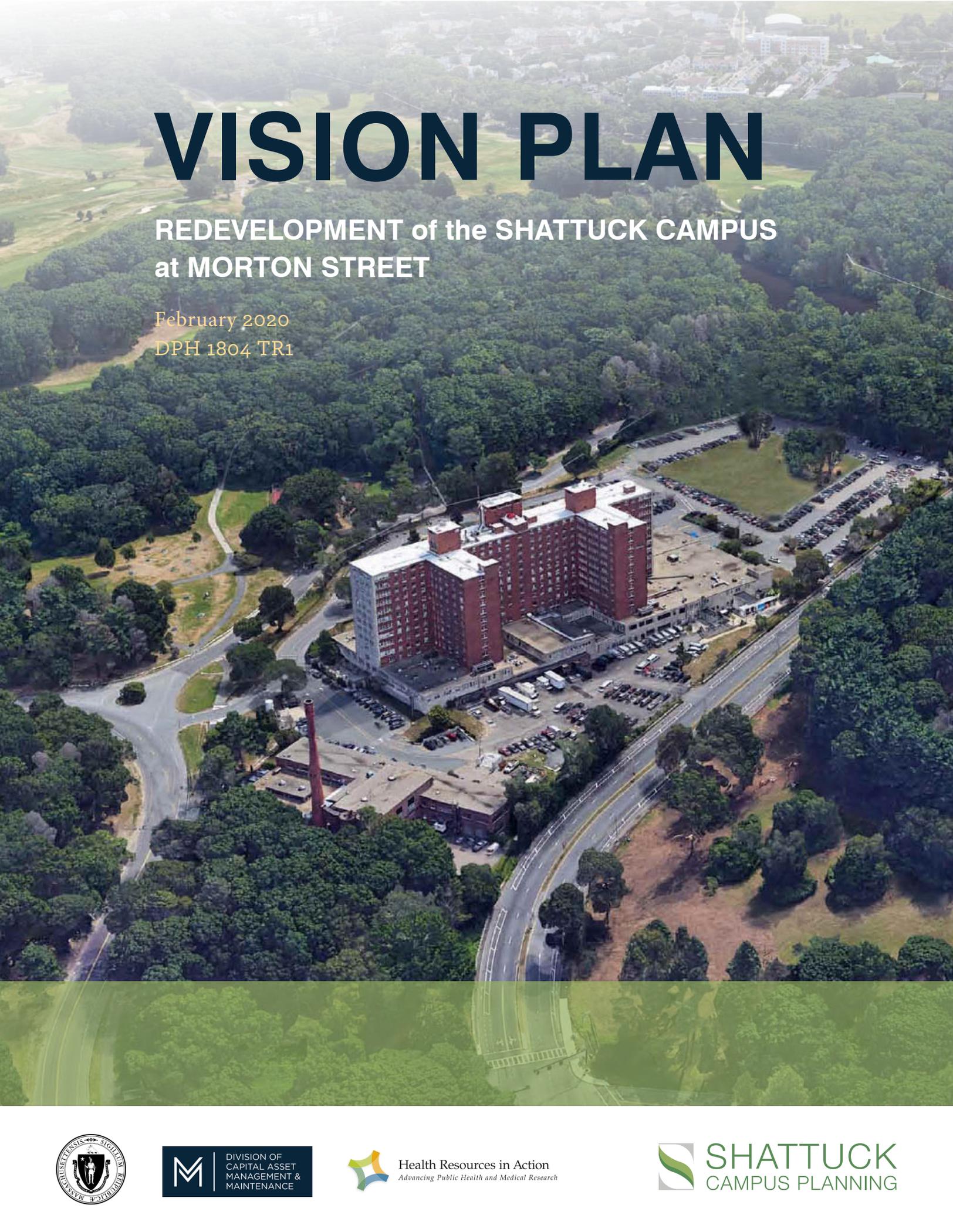


VISION PLAN

REDEVELOPMENT of the SHATTUCK CAMPUS at MORTON STREET

February 2020
DPH 1804 TR1



SHATTUCK CAMPUS AT MORTON STREET PLANNING

December 2019

Acknowledgments

EXECUTIVE OFFICE OF HEALTH AND HUMAN SERVICES

Marylou Sudders, Secretary

Lauren Peters, Undersecretary for Health Policy

DEPARTMENT OF PUBLIC HEALTH

Monica Bharel, MD, MPH, Commissioner

Eileen M. Sullivan, Chief Operating Officer

Frank Doyle, Assistant Commissioner,
Public Health Hospital Systems

DEPARTMENT OF MENTAL HEALTH

Joan Mikula, Commissioner

Stephen Barnard, Chief Financial Officer

Sara Fuentes, Metro Boston Area Director

Patricia Kenny, DMH Consultant

DIVISION OF CAPITAL ASSET MANAGEMENT & MAINTENANCE

Carol Gladstone, Commissioner

Liz Minnis, Deputy Commissioner, Office of Planning

Robin Luna, Director of Planning

Emily Glavey, Project Manager

Beth Rubenstein, Planning Consultant

Loryn Sheffner, Project Manager

Lisa Verrochi, Project Manager

Consultant Team

HEALTH RESOURCES IN ACTION

Kathleen McCabe, Project Manager,
Managing Director of Policy & Practice

Lisa Wolff, Vice President

Mo Barbosa, Director, Community Engagement

Elena Bengochea, Program Assistant, Policy & Practice

MCCABE ENTERPRISES

Kathleen "Kathy" McCabe, AICP, Principal

Jennifer Mecca, RA, Urban Designer

IBI PLACEMAKING (FORMERLY: CRJA | IBI GROUP)

John Amodeo, ASLA, LEED AP BD+C, Principal

Chris Bridle, Senior Associate

Carolina Carvajal, Senior Landscape Architect

PARE CORP

John Shevlin, PE, Sr. Vice President

Timothy Thompson, PE, Transportation Engineer

Harsha Prasad, Utility Engineer

PAUL LUKEZ ARCHITECTURE

Paul Lukez, FAIA, LEED AP, Principal

Mary Shoufan, Project Manager

PROJECT MANAGEMENT & COST

Peter Bradley, LEED AP, Principal

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Thank you to the Community Advisory Board for your time, effort, and input.

COMMUNITY ADVISORY BOARD (CAB):

Kathy Brown / Lincoln Larmond, Boston Tenants Coalition

Danielle Cerny, Stonybrook Neighborhood Association

Zack DeClerk, Jamaica Plain resident and person in recovery

Louis Elisa, Garrison Trotter Neighborhood Association

Steve Fox / Desmond Murphy, South End Forum

Jerome Frazier, Grove Hall commercial property owner

Peggy Johnson, Commonwealth Care

John Linehan, Franklin Park Zoo

Stan McLaren, Harvard Street Health Center

Carolyn Royce, JP Neighborhood Council

Sue Sullivan, Newmarket Business Association

Janna Cohen-Rosenthal / Mike Carpentier, Franklin Park Coalition

Mark St. John, BACHome Mayor's Advisory Council on Homelessness

*Chris Cook, City of Boston Chief Environment, Energy Open Space, Commissioner,
Parks and Recreation*

Sheila Dillion, City of Boston, Chief Housing, Department of Neighborhood Development

Jen Tracey / Rita Nieves, City of Boston, Office of Recovery Services

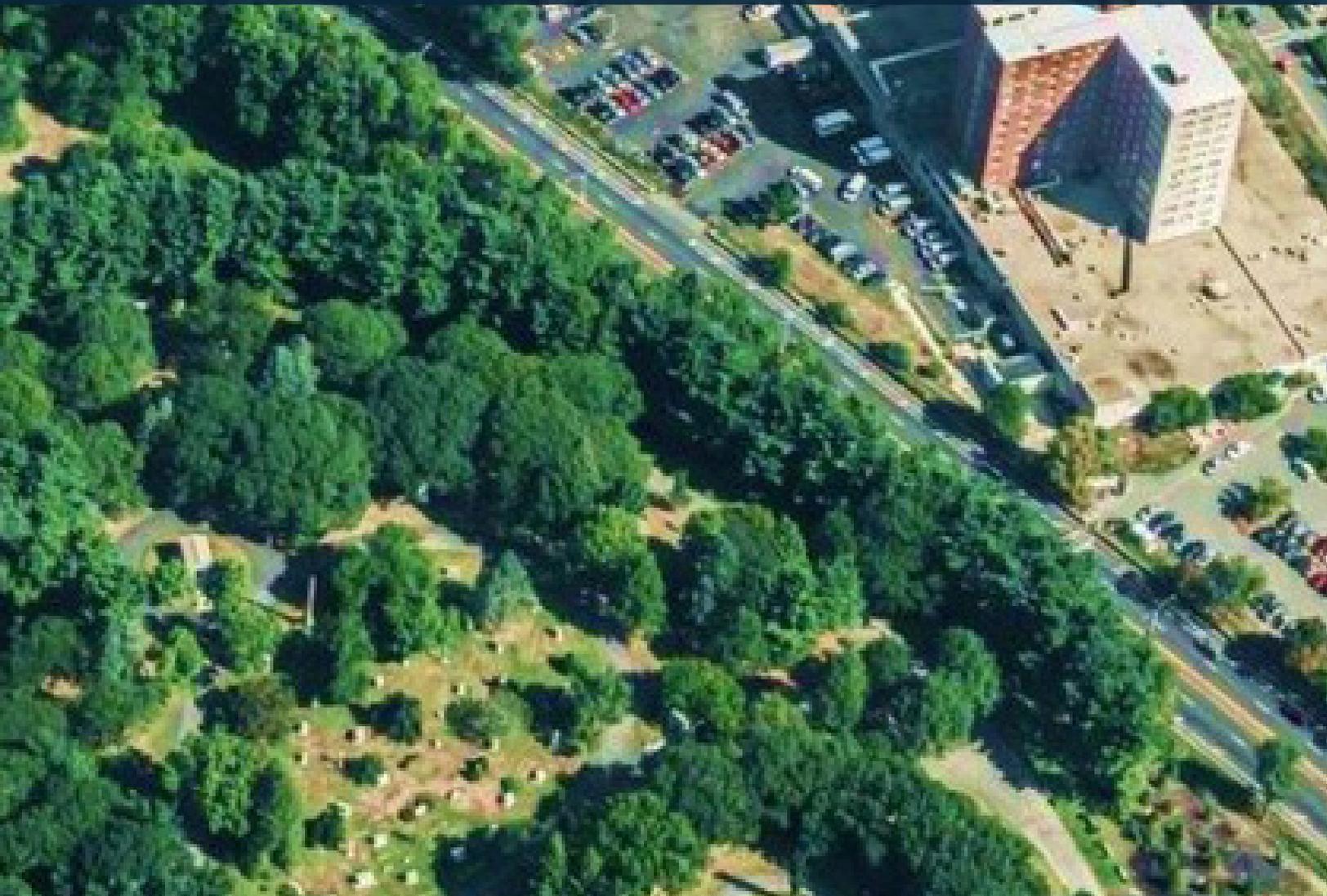
Keith Williams, City of Boston, Office of Civic Engagement

Liana Poston, State Representative Liz Malia's office

Ethan Smith, State Senator Sonia Chang-Diaz's office



EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

Overview

Inpatient and outpatient services at the Shattuck Hospital are moving to Boston’s South End in 2022. Within this plan, the Shattuck Hospital will be referred to as the Shattuck Hospital in the South End, and the Shattuck Campus, where the hospital is currently located, will be referred to as the Shattuck Campus at Morton Street or the Campus. The substance use disorder, mental health, and shelter services provided by five (5) private provider organizations are not relocating with the hospital services. The Commonwealth has been engaged in a year-long planning process to inform programmatic and design recommendations for the future use of the Shattuck Campus at Morton Street, consistent with the following planning parameters.



Above: Participants at the first Community Meeting, September 2018.

Planning Parameters:

- Ensure that the **Campus will continue to be used for public health purposes** consistent with the statutory* and deed use restrictions; and, minimize disruption in the delivery of critical services currently being provided at the Campus;
- Plan for a **minimum of 75 to 100 supportive housing units** on the site;
- Provide recommendations that are **economically feasible**;
- Engage a variety of **community stakeholders** to inform recommendations;
- Provide **necessary flexibility** to the Commonwealth in the next phase of implementation.

*Chapter 770 of the Special Acts of 1949.

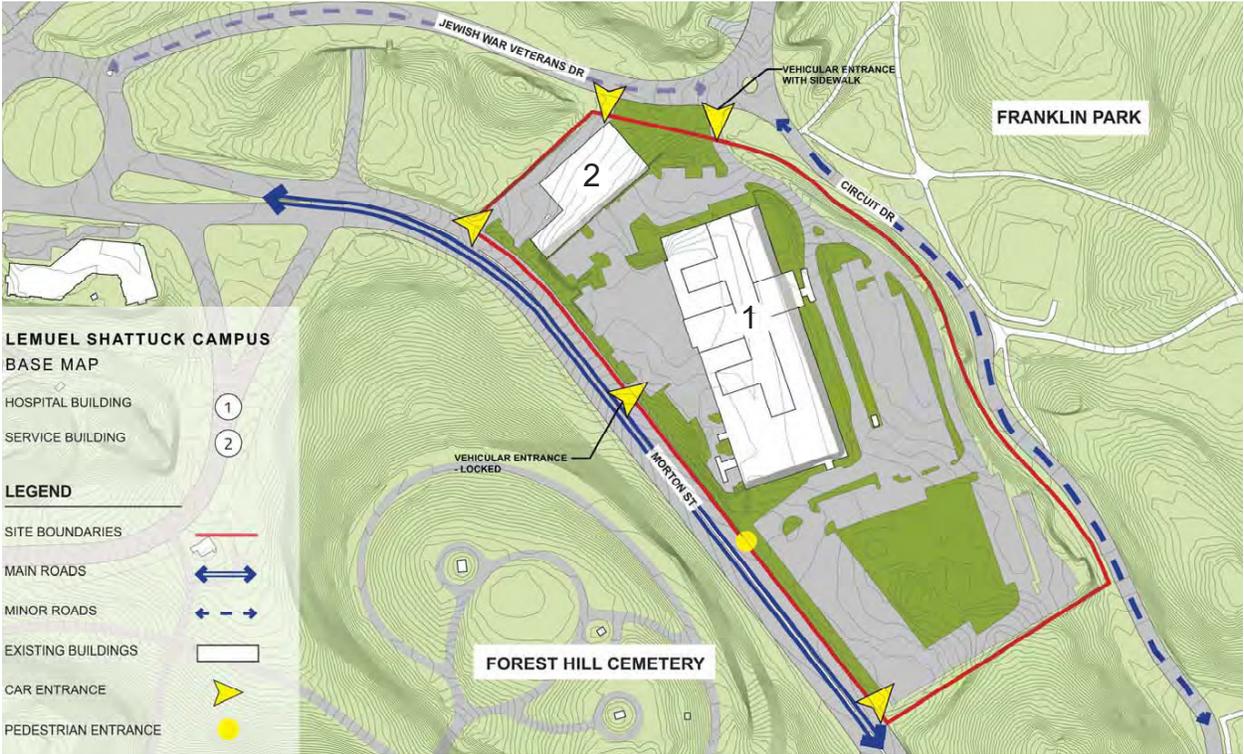
Location

The Shattuck Campus at Morton Street is 13+/- acres, abutting 485 acres of open space in the center of Boston. Neighboring Franklin Park is part of Frederick Law Olmsted’s Emerald Necklace and is Boston’s largest park. When the property was transferred to the State from the City of Boston, the property was, and remains, statutorily deeded for public health purposes consistent with the statutory and deed use restrictions (per the Special Acts of 1949). It is just over ½ mile (0.6 miles) from the Forest Hills MBTA station, and is accessible by the numbers 21, 31 and 16 MBTA bus service. The location provides a unique opportunity to integrate property development with existing and additional green and open space.

Purpose

The purpose of this Vision Plan is to establish a consensus vision for the future use of the Shattuck Campus at Morton Street for public health purposes consistent with the statutory and deed use restrictions (per the Special Acts of 1949). The Health Resources In Action consultant team facilitated a planning process **to understand current public health needs, solicit input and feedback from community members, develop a vision for the future program at the site, determine Planning Principles, and outline Design Goals.** This process and the resulting vision are documented in this plan.

Below: Existing Conditions site map.



Planning Process

Throughout the vision planning process, working closely with stakeholders, a set of Principles and Design Goals have been created; these are informed by an assessment of current and future public health needs, three public meetings and regular feedback from a Community Advisory Board. Additional information about potential programs and services was solicited through a Request for Information. Key findings from the health needs and services assessment illustrate that:

- Substance use and mental health disorders have a substantial impact on the health of Massachusetts residents;
- Current behavioral health, health care and housing systems are not person-centered and are difficult to navigate; and finding treatment can be challenging;
- Services at the Campus--that are not moving to the South End--play a critical role in the regional public health service and treatment system; and,
- Access to safe, affordable and stable housing matters for health; and there is a lack of permanent supportive housing in the region.

Below: Image from Community Meeting Two, January 2019.



The planning process has shaped a collective vision for the site.

- People receiving services at the Shattuck Campus and neighboring communities would benefit from added green and open space and improved integration with Franklin Park;
- Improved pedestrian and bike paths and trails near and through the Campus can provide needed connections from Morton Street to Forest Hills, and to Franklin Park.

The planning process has shaped a collective vision for the site, articulated in this Vision Plan. The vision provides recommendations for a program and service model that addresses the findings of the health needs and services assessment and reflects agreed-upon Planning Principles and Design Goals. The Commonwealth will use the recommendations in the Vision Plan to inform a future Request for Proposals (RFP). The purpose of the RFP process is to seek a private partner(s) to advance the desired program of services for the future of the Shattuck Campus at Morton Street.

Key Findings: Health Needs & Services Assessment

Substance use and mental health disorders have a **substantial impact on the health of Massachusetts residents.**

Behavioral health, health care and housing systems **are difficult to navigate and finding treatment can be challenging.**

Services at the Shattuck Campus--that are not moving to the South End--play **a critical role** in the regional public health service and treatment system.

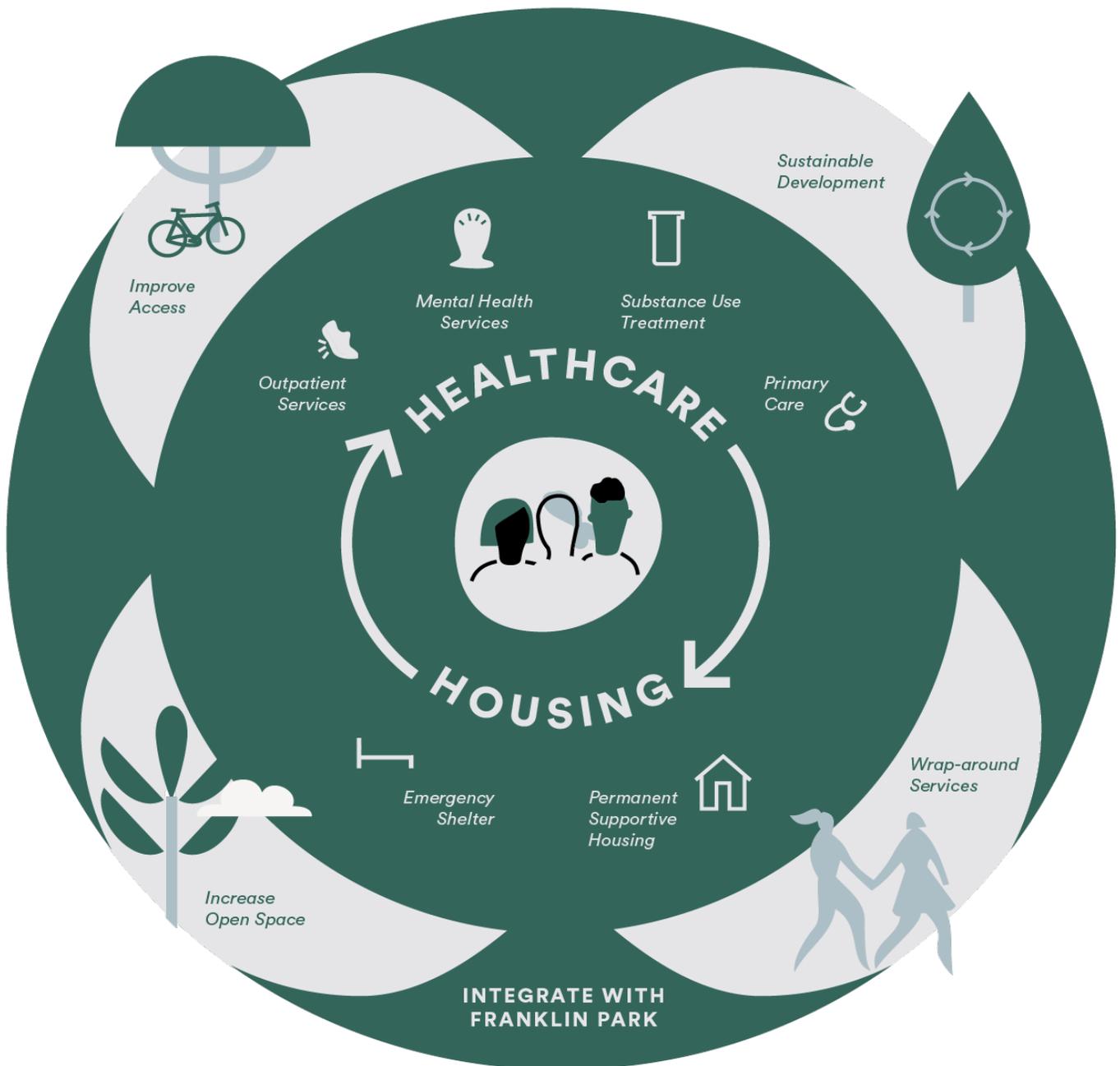
Access to safe, affordable and stable housing is a key determinant of one's health; there is a **lack of permanent supportive housing** in the region.

People receiving services at the Shattuck Campus and neighboring communities would **benefit from added green and open space and improved integration** with Franklin Park;

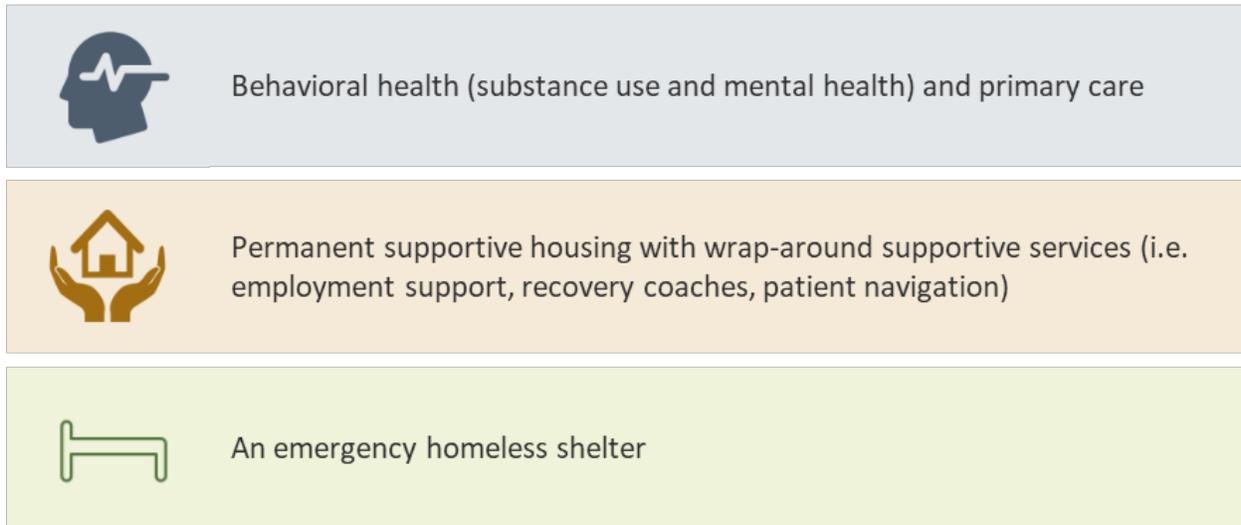
Improved pedestrian and bike paths and trails near and through The Campus can provide needed connections from Morton Street to Forest Hills and to Franklin Park.

Vision for the new Shattuck Campus

The vision for the Campus is a person-centered place, designed to promote health, reduce barriers to treatment and integrate care across physical and behavioral health and housing systems, while also prioritizing connections with the natural environment that are compatible with neighboring Franklin Park.



Future: A Continuum of Health Care & Housing Services



The Commonwealth hopes to enter into a Public-Private Partnership to provide a continuum of health care and housing services at the new Shattuck Campus including:

- Behavioral health (substance use and mental health) and primary care;
 - Examples of the types of services included are Medication-Assisted Treatment (MAT), including counseling, medical and referral services, and urgent psychiatric care;
- Permanent supportive housing with wrap-around supportive services (i.e. employment support, recovery coaches, patient navigation);
- An emergency homeless shelter.

The Campus could also include additional services. Examples of potential complementary services include: vocational training, an education/employment center, a social center, a community kitchen, a wellness center, gardening, social enterprise spaces, a food pantry, or other relevant uses.

The Campus could also include additional, complementary services.

Planning Principles for Shattuck Campus at Morton Street



- Integrate Shattuck Campus at Morton Street with Franklin Park;



- Improve access to neighborhoods with public transit, bike and pedestrian options;



- Increase green and open space;



- Align with local and state sustainable development goals and strategies;



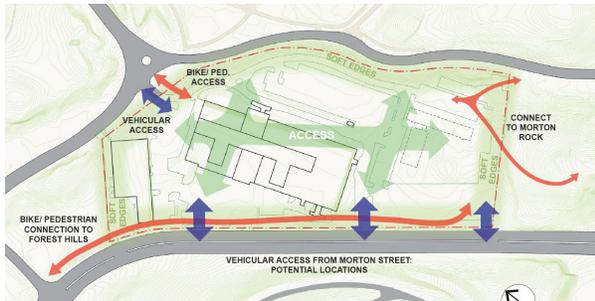
- Seek partner(s) to implement a program/ service model that reduces barriers to treatment, integrates care within and across physical and behavioral health and housing systems, and increases the housing supply (a minimum of 75-100 units of permanent supportive housing).

Design Goals

Redevelopment provides an opportunity to improve physical elements of the Campus to benefit people living at and/or receiving services on-site. The following design goals and strategies were generated with community input and are recommendations for future development.



Edges: The character of the edge conditions for the future Shattuck Campus should be permeable to inspire an inviting feel and to enhance the visual and physical connection to/from the Park. Priorities include: soft edges that feel like a park, no barriers, and building a community connection by maintaining visibility of the site functions from Morton Street.



Access: To improve access to the Campus, future development will likely require modifying existing entrances and intersections. Future development should be universally accessible and encourage access to the site via all modes of travel, including: safe bike and pedestrian routes, as well as via public transit. Recommendations include improving the link to Forest Hills with a multi-use path, providing increased vehicular access to the Campus from Morton Street, and improving the safety of nearby bus stops. The unique location of the Shattuck Campus will require a creative people-centered design strategy that emphasizes access for cyclists and pedestrians traveling to and through the site, connecting to Franklin Park. Future operation of shuttle services and other transportation management strategies should be explored.



Design Goals (continued)



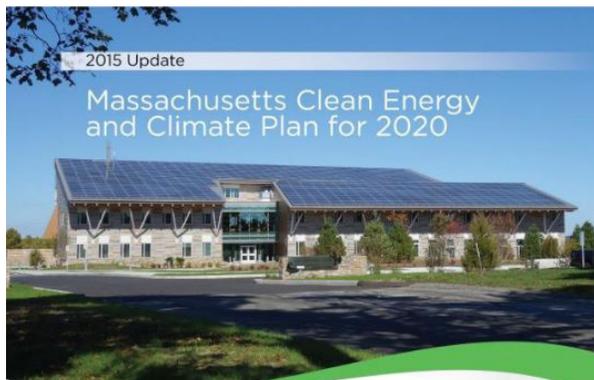
Mobility & Parking: Future development should utilize best practices in parking standards, including minimum parking requirements -- typically present in places designed with an emphasis on pedestrian and cyclist activity. Any required parking, will have a shield or screen; consider using trees, the natural topography of the site and/or the existing foundations on site. Future on-site employers should consider incentives to encourage employees to access the site via public transportation or carpooling. Other parking strategies may include: incorporating on-street parking on the site, using tree cover to mitigate heat island effect, incorporating bioswales to mitigate run-off, using permeable pavement to reduce surface run-off or other strategies that incorporate natural features within the site.

Buildings: Future development should make use of high-quality materials, a palette reflective of the natural environment, and balance the scale and character of uses and building types. Buildings should be sensitive to the surrounding context, integrated with the site, and future development teams should consider a 6-story maximum.

Design Goals (continued)



Landscape: A landscape plan for the new site should better integrate the Campus with Franklin Park, taking advantage of the unique opportunity for park paths, connecting to Morton Rock, and adding passive recreation—including healing spaces and gardening opportunities. Plantings should include indigenous tree and planting material and should incorporate original planting approaches – like those used by Frederick Law Olmsted.



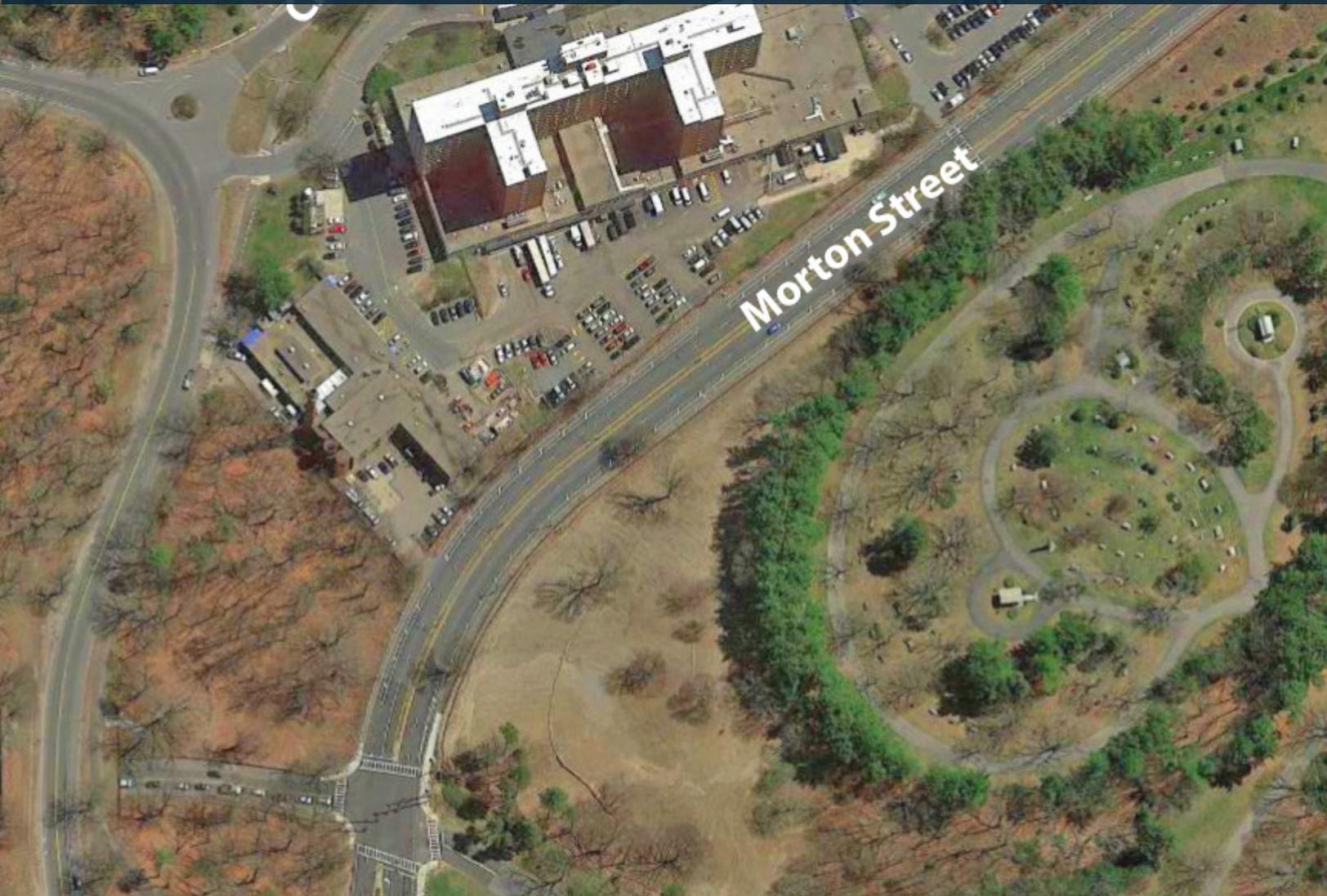
Sustainability: The goal for the Campus is to approach net zero in the design and operation of new facilities. Strategies might include: using renewables for energy generation and/or adding a micro-grid; incorporating energy-efficiency and natural lighting; adding green or solar roofs; water efficient appliances and fixtures; rain water capture and reuse features; and xeriscaping, to reduce or eliminate the need for supplemental water from irrigation. In addition, a sustainable location for the project is essential; ensuring future users can replace car trips to the site with walking or biking trips, and transit use, will reduce the carbon footprint.



Campus Amenities: Future development should consider: publicly accessible bathrooms (and water fountains); a centralized campus management structure to address maintenance issues and provide a point of contact for neighborhood relations. In addition, clear security protocols need to be implemented to address any incidents that arise.

2

INTRODUCTION



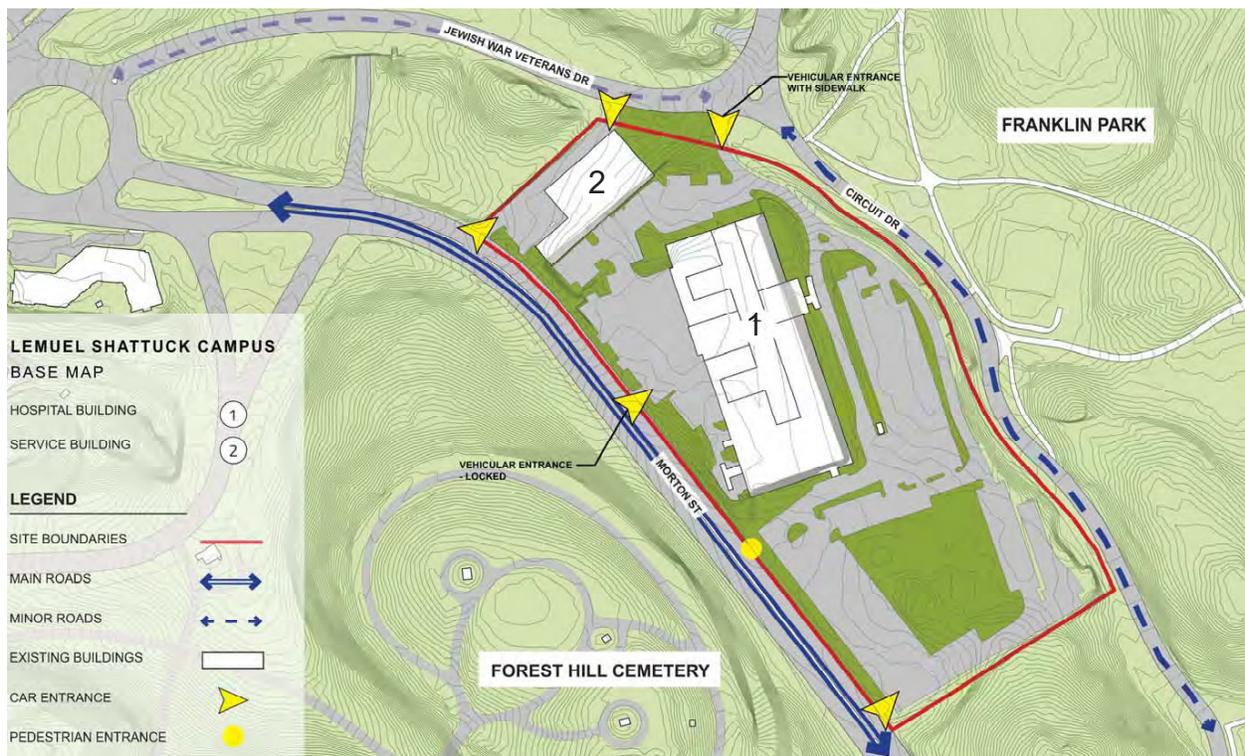
INTRODUCTION

The Lemuel Shattuck Hospital, located on the Shattuck Campus at Morton Street, is operated by the Department of Public Health (DPH) and serves as a critical safety net hospital providing medical treatment to many of the most vulnerable populations in the Commonwealth. The buildings on the Campus were built in the 1950s and have extensive physical plant deficiencies. **Since the time when these structures were built, medical treatment delivery has significantly evolved.** The Main Hospital building, which provides inpatient and outpatient medical treatment for the Department of Public Health (DPH), the Department of Mental Health (DMH), the Department of Corrections (DOC), has physical characteristics that make it cost prohibitive to renovate for continued use as a hospital. As a result, the Commonwealth is relocating most of the existing medical hospital services, including 260 inpatient beds and certain outpatient services to the Newton Pavil-

ion building, formerly owned by Boston Medical Center, in Boston's South End in 2022. The Personnel Building was recently demolished, and the Service Building houses not only the Campus heating plant, but also vendor-operated 24/7-hour shelter beds. In their current form, the other buildings on-site are beyond their useful life, and will likely need to be demolished. In addition to the hospital's medical services, five private providers provide critical behavioral health and emergency shelter services to thousands of people each year. Those private providers are not moving with the hospital services.

After the hospital services move, the Shattuck Campus at Morton Street site will be substantially underutilized. The planning process for the future use of the Campus, summarized in this Vision Plan, aims to identify future uses of the Campus with minimal service disruption. The process was designed to recognize the historic

Below: Existing Conditions site map.



The process was designed to:

- *recognize historic purpose of the property;*
- *consider the legislative constraints from the initial property conveyance to create the Shattuck Hospital;*
- *understand current uses, and anticipate future needs, and*
- ***solicit community input.***

purpose of the property, consider the legislative constraints from the initial property conveyance to create the Shattuck Hospital, understand current uses, anticipate future needs, and solicit community input. Recommendations in this Plan take into consideration qualitative and quantitative data collected throughout a year-long planning process.

Purpose of the Plan

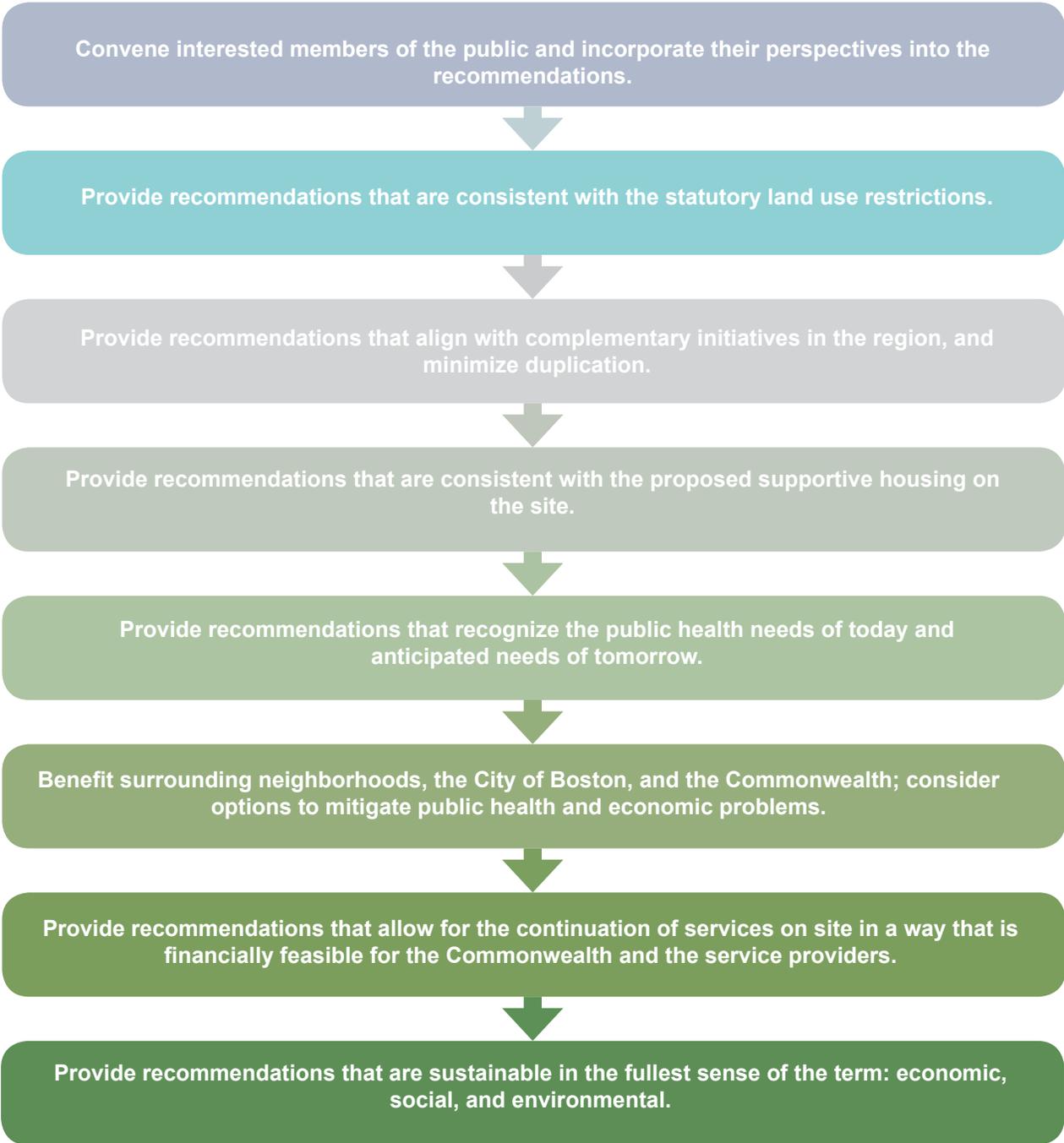
The purpose of this Vision Plan is to establish a consensus vision for the future use of the Shattuck Campus at Morton Street for public health purposes, consistent with the statutory and deed use restrictions.¹ The Health Resources In Action consultant team facilitated a planning process to understand current public health needs, solicit input and feedback from community members, develop a vision for the future program at the site, determine Planning Principles, and outline Design Goals. This process and the resulting vision are documented in this plan.

Process

To identify the future use of the Campus, the Commonwealth has completed a process that included 7 meetings with a Community Advisory Board (CAB), 3 community-wide public meetings, and outreach at various community events.

For oversight and guidance with the planning, representatives of the Commonwealth's Executive Office of Health and Human Services (EO-HHS), the Division of Capital Asset Management and Maintenance (DCAMM), the Department of Mental Health (DMH) and the Department of Public Health (DPH) comprised a State Agency Executive Team (SAET). The Commonwealth contracted with Health Resources in Action (HRiA) to work with the SAET to establish and facilitate a planning process as well as recommendations that reflect the values and interests of the Commonwealth.

Values and Interests for Shattuck Campus at Morton Street



This Vision Plan provides programmatic and design parameters and guidance, informed through a community engagement process, to the Commonwealth and a private partner about redevelopment potential of the site. It includes:

- An overview of the planning process;
- A summary of key findings from a health and services needs assessment;
- A summary of the existing conditions;
- Recommendations for a program and service model; and,
- Illustrative ideas, project principles and design goals.

Asset Management Board Role and Process

The State plans to enter into a long-term lease with a developer who will partner with a service provider for the redevelopment of the Campus. The development team will be selected through a competitive RFP process. The authority to enter into a long-term lease will come through a process overseen by the State Asset Management Board (AMB), a five-member body that

is authorized to review projects and approve leases of up to 99 years. The AMB also authorizes the RFP and developer selection process (per Massachusetts General Laws Chapter 7B). Advance Notice for all meetings are posted on the DCAMM website, at the Secretary of State's Office, and with the Executive Office of Administration and Finance. The following represents a typical process for a proposed project. The project team may:

- Present key updates on potential proposed projects for informational purposes only;
- Submit a Preliminary Project Proposal; approval of a Preliminary Project Proposal requires a vote by the AMB;
- Submit a Final Project Proposal; approval of a Final Project Proposal requires a vote by the AMB.

The AMB requires a public hearing prior to the Final Project Proposal. Following approval of the Final Project Proposal, a Request for Proposals (RFP) can occur. The RFP process includes a competitive developer selection for project completion. The AMB Board members include the Commissioner of DCAMM, the Inspector General, and three members appointed by the Governor.

Below: Image from Community Meeting One, September 2018.



Overview: Campus History and Current Uses

Built in the 1950s the Lemuel Shattuck Hospital was named for Lemuel Shattuck, a Boston bookseller and publisher who helped create the first Board of Public Health in the country. The land was transferred to the Commonwealth in 1949 to address critical public health challenges facing Boston and the region. In its early years, it treated chronic diseases such as polio and cancer. Later, pulmonary therapies and rehabilitation medicine moved to the forefront. Today, the Shattuck Hospital treats patients with complex physical, emotional and social needs, especially those with multiple diagnoses—with an emphasis in the treatment areas of HIV, Tuberculosis, mental health, and substance use disorders.

Current Services and Patient Population

Lemuel Shattuck Hospital (LSH) is one of the four DPH-operated hospitals statewide and delivers both medical and psychiatric care to patients requiring multi-disciplinary treatment and support. LSH provides long term care services for a clientele diverse in age, race, diagnoses and treatment needs. The populations served at LSH are often low income or living in poverty, uninsured or under-insured, homeless or without stable housing, justice involved, and living with co-occurring medical and behavioral conditions and/or substance use disorders. The facility is unique within the Massachusetts public health system in that it houses inpatient medical/surgical beds operated by the Department of Public Health (DPH), some in conjunction with the Department of Corrections (DOC), as well as psychiatric beds operated by the Department of Mental Health (DMH), all in the same hospital building. These services will be moving to a new site in Boston's South End in 2022. In addition to the hospital's medical services, five private providers provide critical be-

havioral health and emergency shelter services to thousands of people each year. Those providers – Victory Programs, Pine Street Inn, Bay Cove Human Services, Health Care Resource Centers and High Point Detox – run eight programs on Campus. They operate independently but many collaborate with each other and benefit from being co-located with like services on Campus. These service providers are not moving to the new South End site. The Campus currently serves thousands of adults, particularly people with complex medical, behavioral health and housing needs. Many people who receive services at the Campus are on MassHealth and at risk of homelessness. The Commonwealth is committed to working to ensure that the current services provided by private agencies are maintained within the region with minimum disruption. A list of the current service providers that are not moving to the South End can be found in the Appendix.

Location

The Shattuck Campus at Morton Street is 13 +/- acres, abutting 485 acres of open space in the center of Boston. Neighboring Franklin Park is part of Frederick Law Olmsted's Emerald Necklace and is Boston's largest park. When the property was transferred to the State from the City of Boston, the property was, and remains, statutorily deeded for public health purposes consistent with the statutory and deed use restrictions.² It is just over ½ mile (0.6 miles) from the Forest Hills MBTA station and is accessible by the numbers 21, 31 and 16 MBTA bus service. The location provides a unique opportunity to integrate property development with existing and additional green and open space.



Above: Shattuck Campus at Morton Street.

Planning Parameters and Concurrent Initiatives

Prior to commencing the Shattuck Campus at Morton Street Vision Plan, the Commonwealth proposed leasing up to 2 acres of land for a term of up to 99 years for the development of supportive housing. At that point in 2018, the Commonwealth and the City of Boston envi-

sioned the concept of siting a supportive housing development on a portion of the Shattuck Campus. The decision to move the Commonwealth's public health hospital to the Newton Pavilion occurred shortly thereafter. After receiving public feedback, the Commonwealth decided to delay further planning on the supportive housing project until it concluded the broader Vision Plan to align and integrate the supportive housing initiative with the overall plans and goals for the remainder of the Campus. Given this, the Shattuck

Campus planning project has several parameters that the final recommendations must incorporate. They include:

- Ensure that the **Campus will continue to be used for public health purposes consistent with the statutory and deed use restrictions;**³
- Minimize disruption in the delivery of critical services currently being provided at the Campus by the private vendor organizations;
- Plan for a minimum of 75 to 100 supportive housing units on the site;

- Provide recommendations that are **economically feasible**;
- Engage a variety of community stakeholders to inform recommendations;
- Provide necessary **flexibility** to the Commonwealth in the next phase of implementation.

To make redevelopment financially feasible, the Commonwealth articulated a desire to enter a public-private partnership for the future use of the Campus. The recommendations that emerged from the planning process and reflected in this Vision Plan will inform and guide the Request for Proposals (RFP).

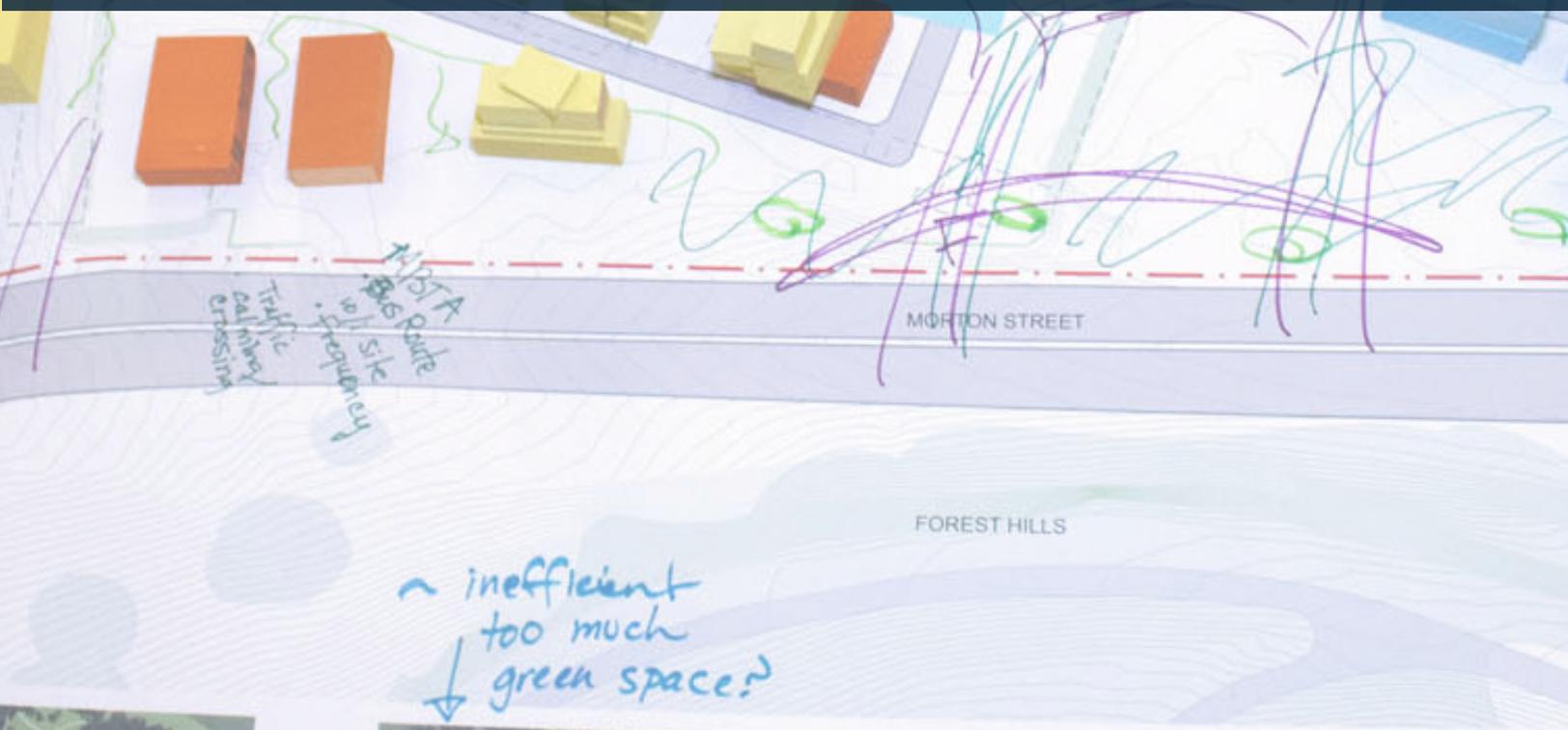
Endnotes

- 1 Chapter 770 of the Special Acts of 1949.
- 2 Ibid
- 3 Ibid



3

PLANNING PROCESS



COURTYARD



CAMPUS



TOWN SQUARE

...were developed by discussion and exploration of options and ideas for future of the Shelburne Campus. These scenarios do not represent the opinion or official position of the Executive Office of Health and Human Services (EOHHS) or the Division of Capital

COMPREHENSIVE PLANNING PROCESS

To inform the recommendations described in the Vision Plan, the Commonwealth engaged in a comprehensive planning process which included the following elements:



Convened and regularly consulted with a 20-member Community Advisory Board, reflective of a variety of community perspectives and areas of expertise.



Conducted a Health Needs and Services Assessment.



Facilitated and incorporated feedback from participants at three well attended community meetings.



Met with and solicited input from current Shattuck Campus service provider vendors.

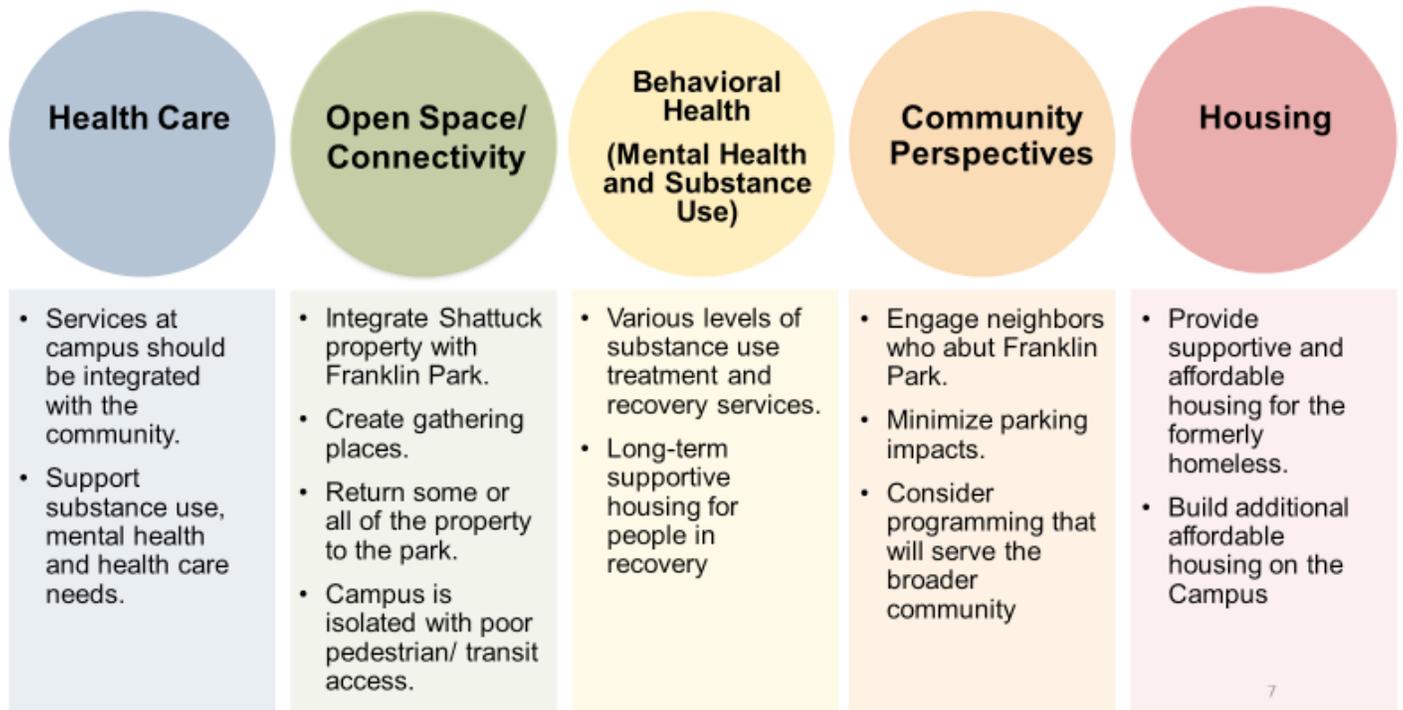


Researched relevant public-private partnership and program models nationally, to better understand programmatic and financing opportunities.



Generated a proposed program and service model.

Overview of Perspectives



Community Engagement

The Commonwealth recognizes that there are a wide variety of perspectives and opinions about how the Shattuck Campus might best be used in the future. As such, the goal of the planning process was to understand the varied perspectives and arrive at common goals and principles to meet the needs of a cross-section of the perspectives.

The different perspectives include:

- Health care and behavioral health stakeholders** including current service providers; people who have used services at the Shattuck Campus and other regional behavioral health programs; experts in health care and behavioral health services and systems; City officials, and advocates;

- Housing stakeholders** including low-income housing providers, supportive housing providers, City officials, advocates and formerly homeless residents;
- Green and open space stakeholders** including advocates for Franklin Park and the Emerald Necklace, neighbors and City officials; and,
- A variety of other neighbors and community members**, including representatives of nearby neighborhood associations, representatives of faith-based communities.

The planning process was structured to engage and solicit input from a cross-section of stakeholders to identify and build upon areas of agreement to inform a vision for the Campus.

Below: Image from Community Meeting Three, June 2019.



Below: Image from Community Meeting One, September 2018.



Vision

The Commonwealth has articulated a vision for the future of the Campus to provide guidance and direction about the types of programs and services required to meet identified public health needs and design elements to create a healthy Campus environment.

To achieve this vision, the Commonwealth – in collaboration with (a) private partner(s) - will provide a continuum of mental health and substance use services, permanent supportive housing, emergency shelter and wrap-around supportive services for those in the behavioral health system. Key to the success of this mod-

el is identifying a private partner, with a complimentary mission, to work with the Commonwealth to develop the Campus.

The Commonwealth seeks to create a healing environment on the future Campus that takes advantage of, and integrates with, the unique location adjacent to Franklin Park, while providing community programming, and fostering social connectivity for clients and the broader community. This vision includes redeveloping the Campus into a community-integrated setting that would provide a continuum of behavioral health and health care services, a minimum

*The **vision** for the new Shattuck Campus is to create an **innovative and person-centered Campus**, designed to promote health, reduce barriers to treatment and **integrate care across the physical and behavioral health and housing systems**. The Campus is located in a setting that prioritizes connections with the natural environment and is **compatible with neighboring Franklin Park**.*

of 75-100 units of supportive housing and other complementary services. The services provided may continue or expand on the specific types of programs currently provided at the Campus, as well as new services.

Redevelopment of the campus is expected to be implemented through a long-term lease of the property to a partner, who the Commonwealth anticipates would be responsible for design, permitting, leasing, and construction of the project and ongoing management of the site.

Community-Informed Approach

There were many opportunities for residents and other stakeholders to share their thoughts about future uses of the Shattuck Campus. Qualitative data was collected prior to the beginning of the Shattuck Campus planning process -- at a series of public meetings sponsored by DCAMM, for the proposal to use 2-acres of the 13+/- acre Shattuck Campus for supportive housing, held in the spring of 2018 (April and May) -- as well as throughout the planning process itself.

- Comments were collected at the Boston Caribbean Festival in Franklin Park (August 2018) - spoke to over 100 people, collected 90 comments;
- Community meeting 1 (September 2018) - about 70 participants;
- Community Meeting 2 (January 2019) - about 110 participants;
- Community 3 (June 2019) - about 140 participants;

- Seven Community Advisory Board (CAB) meetings;
- Key informant interviews with the current Shattuck Campus service providers (not moving the South End in 2022);
- Meetings and conversations with various community stakeholders (i.e. local housing developments, neighborhood and faith-based groups).

The twenty-member Community Advisory Board (CAB) played an essential role in the year-long planning process. Members of the CAB were invited to participate by the State Agency Executive Team (SAET) based on their professional and community expertise and/or lived experiences. In addition to representing a diverse cross-section of professional sectors and areas of interest, the CAB also had diverse neighborhood and demographic representation. Participation in the CAB was voluntary. Members advised the Commonwealth and HRiA on the community engagement process, served as a liaison to their communities about the planning process, and provided feedback and insight at

Developing A Unified Vision

Create a vision for the Campus and guiding principles that take all of the perspectives into account and meet the planning goals.





key points throughout the process. CAB members and their personal or professional affiliation are listed in the table below. Where two names are listed, organizations asked, and the Commonwealth agreed, that more than one person could represent the group by attending CAB meetings.

Left: Boston Caribbean Festival in Franklin Park (August 2018)

Community Advisory Board Member	Affiliation
Kathy Brown / Lincoln Larmond	Boston Tenants Coalition
Danielle Cerny	Stonybrook Neighborhood Association
Zack DeClerk	Jamaica Plain resident and person in recovery
Louis Elisa	Garrison Trotter Neighborhood Association
Steve Fox / Desmond Murphy	South End Forum
Jerome Frazier	Grove Hall commercial property owner
Peggy Johnson	Commonwealth Care
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Sue Sullivan	Newmarket Business Association
Janna Cohen-Rosenthal / Mike Carpentier	Franklin Park Coalition
Mark St. John	BACHome Mayor's Advisory Council on Homelessness
Chris Cook	City of Boston Chief Environment, Energy and Open Space, Commissioner, Parks and Recreation
Sheila Dillion	City of Boston, Chief Housing, Department of Neighborhood Development
Jen Tracey / Rita Nieves	City of Boston, Office of Recovery Services
Keith Williams	City of Boston, Office of Civic Engagement
Liana Poston	State Representative Liz Malia's office
Ethan Smith	State Senator Chang-Diaz's office

*Each opportunity for feedback from the CAB, and the larger community, continued to **build upon, refine and strengthen key themes and ideas.***

COMMUNITY MEETING #1

In Community Meeting 1 (September 2018: Visioning), participants reviewed preliminary health needs data and met other participants in small groups to discuss the vision for the Shattuck campus and future services in relation to the following perspectives: Health Care and Behavioral Health; Housing; Open Space & Connectivity; Neighborhood Considerations. Each table formulated a vision for the Campus. Overarching themes from this early visioning exercise helped guide the subsequent planning process; these included the following.

- Integration both physically, with the Campus, Franklin Park and neighboring communities, including Forest Hills, as well as more intentionally integrated systems/services to support those receiving care at the Campus;
- An interest in continuing to provide behavioral health and health care services at the Campus;
- Affirmation of the Commonwealth's commitment to provide supportive housing on-site; and,
- Improving access to the Campus.



COMMUNITY MEETING #2

At Community Meeting 2 (January 2019: Understand Programming & Site Options), facilitators provided an overview of health-related programs and service gaps including recommendations for a model that integrates supportive housing, mental health and substance use disorder services, wrap-around support, other community programming, and open space. Building off the themes identified in Community Meeting 1 and the health needs data, participants explored the relationship between buildings and open space in an exercise that was intended to help facilitate discussion and consider integration with Franklin Park, adjacency to Morton Street, and impact on neighborhoods.

Among the outcomes of Community Meeting 2 was affirmation among most participants for supportive housing, behavioral health and health care programming. In addition, Community Meeting 2 yielded discussions and emerging design guidance for the site and connectivity to nearby communities including recommendations about Campus edge conditions, vehicular, bike and pedestrian access, and building and landscape principles. Some participants felt that baseline assumption of the exercise -- that the Commonwealth will develop the Campus -- didn't allow for space for discussion about making the Campus primarily green space and/or seeking alternate sites for development. This feedback informed discussions at the Community Advisory Board that resulted in Design Goals and Planning Principles.

Below: Image from Community Meeting Two, January 2019.



Below: Image from Community Meeting Three, June 2019.



COMMUNITY MEETING #3

At Community Meeting 3 (June 2019: Feedback on Vision, Guiding Principles & Design Goals), facilitators presented the overarching Campus Vision, including a program/service model, Guiding Principles and Design Goals. At five stations, participants provided feedback on elements of the Vision Plan including the programmatic vision, service model, and design themes.

During the yearlong Shattuck planning process, three community meetings, seven CAB meetings, and five interviews with current Campus service providers were conducted. Residents were also engaged through at a Shattuck Partners 5K run and the Franklin Park Caribbean Festival. Across all these engagements, the goal of the Commonwealth was to consider identified health-related needs and identify solutions that meet a cross-section of perspectives and the stated planning goals. Several themes emerged from the community engagement process.

Most participants affirmed the recommendation for the future use of the Shattuck Campus for health-related services, including mental health and substance use disorder services.

Residents throughout the community engagement process suggested that the Shattuck Campus continue to provide critical health care and behavioral health services to community residents. Specific suggestions about how to do this varied. Many community members who suggested that the Shattuck site be used to deliver healthcare services to the community stressed that this should include both physical and behavioral health services. Suggestions for mental health services included counseling and case management services, medication services, and peer and other support group programs. Numerous participants who supported health services on the campus also reported that substance use disorder services should be offered, like those currently on the Campus. Suggestions for substance use disorder services included detox, longer-term recovery services and long-term housing for individuals leaving detox.

Preserving and maximizing use of the green space is critical to community members. Given the location of the Shattuck Campus at the edge of Franklin Park and that the Campus was once part of the park, thoughtfully and intentionally integrating green space into the design of the future of the Shattuck Campus is critical. Throughout the community engagement process, there were many community members advocating for landscape principles that reflected Frederick Law Olmsted’s original approach to the Park design, as well as a significant number of people advocating to the Commonwealth to return the Campus to Franklin Park/Emerald Necklace.

Community members shared several ideas about how to better integrate the Campus with Franklin Park including: developing trails to connect the Campus with the Park and adding green space and/or gardens on site for the benefit of the people receiving services at the Campus as well as community members. As one participant noted in a Community Meeting: “We have the opportunity to do something different with neighborhood involvement that incorporates both the Park and DPH.” Another echoed this theme, saying “Park land is a public health purpose for people living in urban areas.”

Housing (both supportive and other affordable units) was among the most common suggested uses for the Shattuck Campus.

Community members participating in data gathering events identified affordable housing, supportive housing, and health-related services (including mental health and recovery services) as potential uses for the Shattuck Campus. Across all the community conversations, residents stressed the need for more affordable housing in the area. The rising cost of housing and gentrification were mentioned by residents as contributing to the shortage of affordable housing and rising rates of homelessness in the community. As one person stated, “housing is reaching a crisis point in Boston. This one piece of land is available and identified for public health purposes.” There were a wide variety of suggestions about how to best incorporate housing on the site including: recommendations for low-rise structures with communal spaces and integrated with the surrounding parkland. Many residents specifically stated that high-end or luxury housing should not be built on the site, noting that would not qualify as meeting the statutory designation that the land be used for public health purposes. At all the community engagement discussions, participants voiced support for supportive housing, noting the high and rising number of homeless people in Boston and the lack of affordable options. As one person stated, “Boston has a great need for supportive housing.” Another participant shared a personal example, saying “I was once homeless. I got housing, got sober, got hope and turned my life around. Others could benefit too.”

Community members support a program model that includes services beyond healthcare and housing for both future Shattuck Campus service recipients as well as community members.

Additional suggestions from community residents include services and facilities that promote physical activity, support education, and provide opportunities for workforce development. Many people, including the Shattuck Campus service providers that are not moving the South End, suggested that adding job training and workforce development services are essential to supporting the formerly homeless and those in the behavioral health system as they re-integrate into our communities. People on Campus and in surrounding neighborhoods would benefit if the future service model integrated workforce and job training elements into a program model with the supportive housing and health care services.

Community members stressed the importance of integrating the Shattuck site with Franklin Park and surrounding neighborhoods.

Residents shared that there should be “synergy” and “connection” between the buildings on the campus and Franklin Park as well as nearby communities like Forest Hills. Residents stressed the importance of ensuring that whatever is built on the site is reflective of the local community and meets their needs. As one person stated, “not us and them,” Another participant described a desire for “more permeable edges to the Campus,” a common recommendation. Participants suggested landscaping that integrates the buildings with the park, using pathways to reinforce connections, maximizing green space, and not using physical barriers like fences.

Site design, maintenance, and safety considerations were commonly discussed in community conversations.

Some residents mentioned the importance of ensuring that buildings on the site are of high quality and good design. As one person stated, “a well-designed building could increase public acceptance.” Many people emphasized that the design meet state and local sustainable development goals and that buildings be LEED-certifiable. Participants stressed the need to attend to traffic and safety issues in the area, specifically high traffic speeds and the unsafe bus stops on Morton Street. A key part of ensuring integration and connectivity, according to participants, is transportation. More frequent and safer bus transportation was mentioned often, as was reducing parking and encouraging active and public transit, adding a bike station and considering that primary vehicular access to the site come from Morton Street.

On-going engagement of the community in conversations and decision-making is critical.

Engagement of community residents in conversations and decision-making about the future use of the site was described as critical.

Across all the community engagement discussions, participants stressed the importance of ensuring that discussions and decisions about the future use of the Shattuck campus reflect the needs and desires of residents, especially those in the immediate community. When asked about the greatest opportunity presented by the Shattuck campus planning process, participants most often mentioned the opportunity to engage the community, using words such as “engage,” or “create a shared vision of success.” Following the year-long planning process, several members of the Community Advisory Board noted that the CAB represented a cross-section of perspectives and was useful in that it allowed for productive discussion of critical issues and members were able to communicate key information back to their constituencies. Several members requested that the Commonwealth consider engaging with (a) Community Advisory Board – this one or one with new membership – at various points during the remainder of the redevelopment process.

Request For Information

In Spring 2019, after having identified a preliminary programmatic vision for the Campus, the Commonwealth issued a Request for Information (RFI). The goal of the RFI was to solicit feedback on the direction of the preliminary vision and to:

- Identify potential private partners and funding sources;
- Solicit information and ideas about the types of programs/services that potential partners are interested in bringing to the site;
- Provide broad notice about the opportunity on the Shattuck Campus site; and,
- Inform the Vision Plan and the development of a Request for Proposals (RFP).

The Commonwealth used information collected through the RFI to understand the potential models and partnerships that could be created to deliver on the vision. Participation in the RFI process is not a requirement for the expected Request for Proposals (RFP) process; any interested partner may respond to the RFP. Through the planning process, the Commonwealth de-

veloped a series of requirements for a complimentary partnership.

- Proposed services or programs serve a public health purpose consistent with the statutory and deed use restrictions;¹
- A commitment to collaborate to serve the public health needs of the community and Commonwealth at large;
- Partnership plans align with the Planning Principles and Design Goals of the Vision Planning process;
- Partnership allows for privately-run services and programs to remain on the Campus after the Hospital services relocate;
- Partner(s) comply with all local, state and federal requirements;
- Partner(s) is selected to participate through a competitive procurement process as determined by the Commonwealth;
- Partner(s) is willing to explore, develop and entertain new ideas;
- Partner(s) have the desire and resources for a long-term partnership.

Public Private Partnership

 <p>Proposed services or programs serve a public health purpose, as required by the statutory land use and deed</p>	 <p>Partner(s) comply with all local, state and federal requirements</p>
 <p>A commitment to collaborate to serve the public health needs of the community and Commonwealth at large</p>	 <p>Partner(s) is selected to participate through a competitive procurement process as determined by the Commonwealth</p>
 <p>Partnership plans align with the Planning Principles and Design Goals of the Master Planning process</p>	 <p>Partner(s) is willing to explore, develop and entertain new ideas</p>
 <p>Partnership allows for privately-run services and programs to remain on the Campus after the Hospital services relocate</p>	 <p>Partner(s) have the desire and resources for a long-term partnership</p>

Request for Information Respondents

RESPONDENTS	Current Shattuck Campus Services
Ascension	
Bay Cove Human Services	X
Boston Medical Center	
Health Care Resource Centers / BayMark Health Systems	X
Pine Street Inn	X
St. Francis House, Inc.	
Uphams Corner Health Committee	
Victory Programs	X

Eight organizations responded to the RFI, four of whom are currently providing services on the Shattuck Campus.

The responses provided useful information to the Commonwealth that affirmed the direction set out in the Campus Vision including that there is a need for both the proposed program/service model as well as for potential partners for both service delivery and for a Master Developer/Partner. Respondents described a range of integrated behavioral health, health care and

housing programs/services that would meet the identified health and service needs, as well as other complementary services that would support the stabilization of people on-site, as well as those in surrounding communities. Respondents also identified a range of financing mechanisms to support both construction and service delivery costs.

All the respondents were aligned with the requirement to use the Campus for public health purposes and with the programmatic principles identified through the planning process including a commitment to maintain existing services, a willingness and interest to explore partnerships, strong clinical and housing partners,

complementary program/service ideas, and a commitment to integrating with Franklin Park, adding open/green space on Campus, improving accessibility and sustainable development.

Overview: Services Suggested By RFI Respondents To Fulfill Campus Vision

CATEGORY OF SERVICE	SAMPLE SERVICES
Integrated Behavioral Health & Health Care	<p>Comprehensive substance use and co-occurring disorder care*, urgent psychiatric care, Medication-Assisted Treatment*</p> <p>Outpatient services including primary care, behavioral health, case management, medical and referral services, mental health counseling*</p>
Housing	Supportive housing, Emergency shelter beds*, Mixed-use/mixed-income housing
Other Complementary Ideas	Health center, Vocational training, Education/employment center, Social center, Spiritual center, Community kitchen, Wellness Center, Gardening, Social enterprise space, Food pantry / grocery store

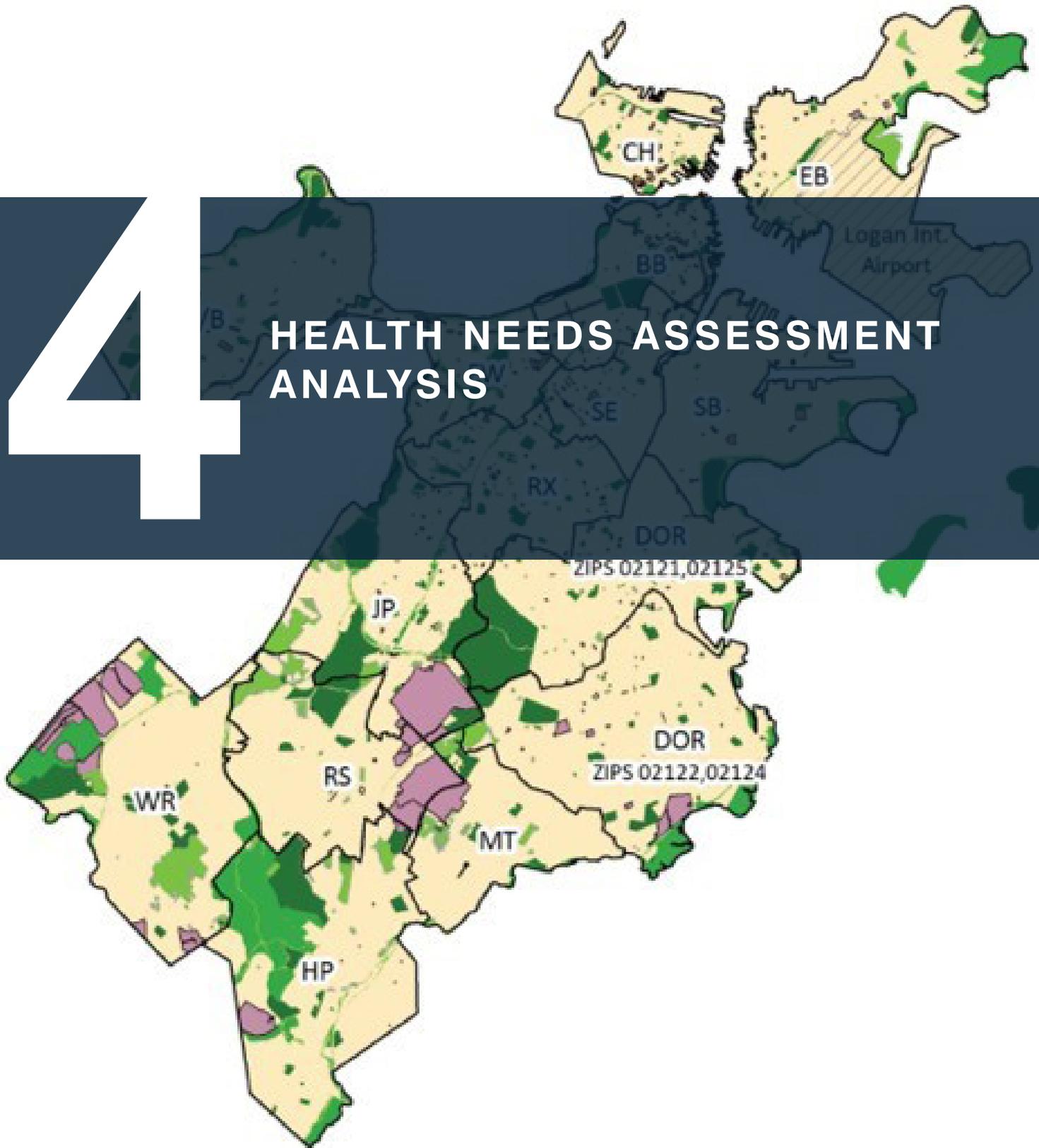
*currently provided at the Shattuck Campus

Endnotes

- 1 Chapter 770 of the Special Acts of 1949.

4

HEALTH NEEDS ASSESSMENT ANALYSIS



ANALYSIS & CONTEXT

Health Needs and Services Assessment

HRiA conducted an assessment to examine the current health status of the area, understand program and service gaps in the region, and identify ways in which the land at the Shattuck Campus might mitigate current and future public health needs. This assessment examines:

- Key health issues and risk factors for the area and various subpopulations and geographic sectors and/or populations that are disproportionately affected by existing and emerging health concerns and social issues;
- The service landscape and gaps, with a focus on the populations currently being served at the Shattuck Campus; and,
- Strategic opportunities for the future of the Shattuck Campus.

Because the current services and programs at the Shattuck Campus provide essential behavioral health, housing and health care services,

those are core areas of which the assessment focuses. However, given that the broader community has interests and needs beyond those topical areas, other issues were explored as well, to provide a more complete picture of the variety of service gaps and potential opportunities at the Shattuck Campus.

Process and Methods

Secondary data from surveillance systems, organizations, and agencies and qualitative information collected from community members and stakeholders were analyzed to provide a summary report describing the area's health needs and assets, and strategic opportunities for the future. The qualitative data gathered is analyzed thematically; HRiA team members examined and coded data for similarities and differences across responses. A secondary data

Health Needs & Services Assessment:

- Examines key health issue for the area and various subpopulations that are **disproportionately affected by existing and emerging health concerns;**
- Examines the service landscape and gaps, with a **focus on the current Shattuck Campus population;**
- Strategic opportunities for the future of **Shattuck Campus.**

review complements the information gathered qualitatively and helps to complete a profile of the public health needs and existing services among those served on the Shattuck Campus, as well the existing needs in Boston, the region, and the Commonwealth as a whole.

Qualitative Data

This summary includes themes from several opportunities for residents and other stakeholders to share their perspectives on the future uses of the Shattuck Campus. The data shared was collected through

- Three public meetings sponsored by DCAMM for the proposal to use 2-acres of the 13+/- acre Shattuck Campus for supportive housing, held in the spring of 2018 (April and May);
- Comments collected from about 100 people at the Caribbean Festival in Franklin Park (August 2018);
- Three Shattuck Campus planning community meetings (September 2018, January 2019 and June 2019); and, input provided at (7) meetings of the Community Advisory Board (August, October and December 2018 and February, April, May and June 2019).

HRiA also attended community meetings related to supportive housing in Jamaica Plain, met with nearby residents of a local community development corporation, and had discussions with experts and organizations providing health care and housing services in the region.

HRiA also had structured conversations with key leaders at each of the current Shattuck vendor programs. Using a semi-structured interview guide, HRiA aimed to understand the services provided, within the context of the broader public health services landscape, to identify potential gaps in services should a future Shattuck Campus not have space available to the existing vendors. Conversations focused on existing services, as well as understanding

what future services might look like, given the changing public health landscape. Furthermore, HRiA discussed physical plant considerations with the current vendors, to understand how new buildings and spaces on the Campus might support their services.

Quantitative Data

Secondary data provided information about social and economic indicators, as well as health behaviors and health outcomes in Boston, surrounding communities and Massachusetts. Data sources included: the U.S. Census Bureau, American Community Surveys, the Centers for Medicare and Medicaid Services, the Behavioral Risk Factor Surveillance System, the Youth Risk Behavior Surveillance System, the American Medical Association, the Federal Bureau of Investigation, the Massachusetts Department of Public Health, Boston's Joint 2019 Community Health Needs Assessment, the Boston Public Health Commission, the Health of Boston Report, the Massachusetts Substance Use Helpline and the Boston Behavioral Risk Factor Survey, among many others.

Services Landscape

To better understand the existing services landscape, HRiA reviewed relevant reports and spoke to several experts, including members of the Community Advisory Board with topical expertise. Reports from the Center of Health Information and Analysis, the Massachusetts Health Policy Commission, the city of Boston (Office of Recovery Services and Department of Neighborhood Development) and the Blue Cross Blue Shield of Massachusetts Foundation, among many others, provided essential information in the areas of substance use disorder, mental health and housing/homelessness.

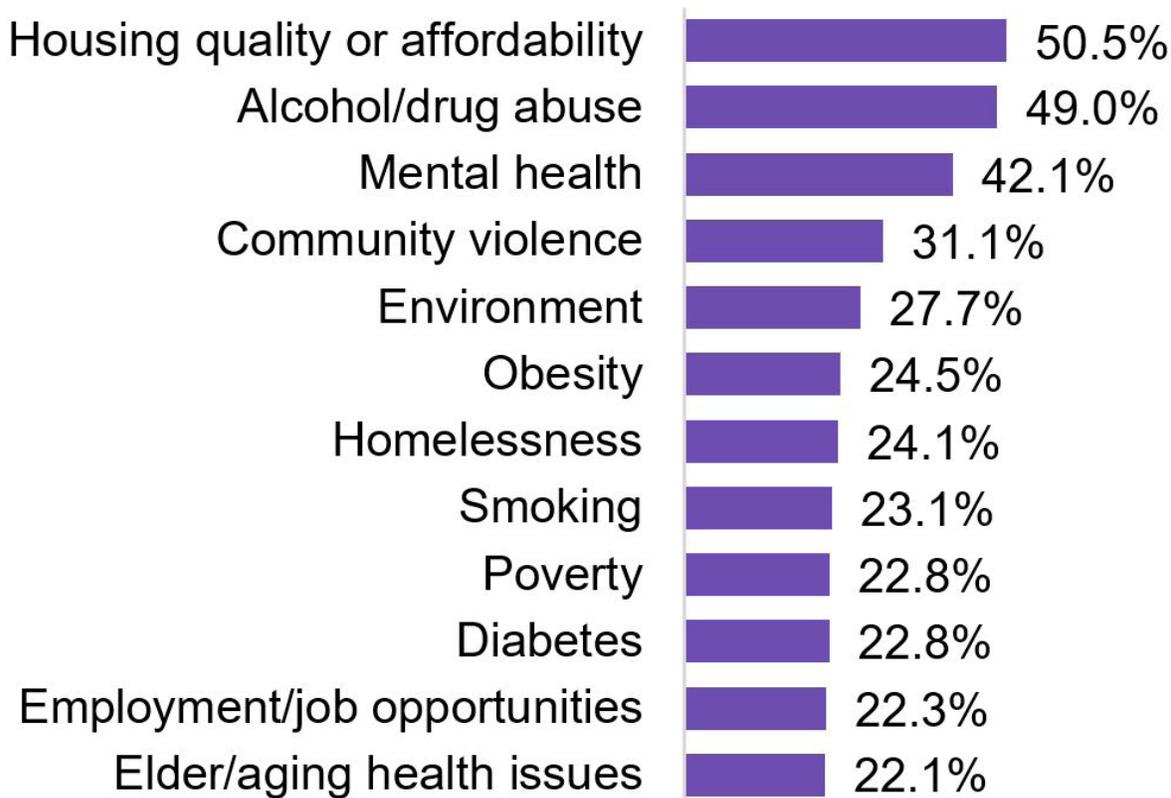
Community Perceptions and Health Priorities

Concurrent to the Shattuck Campus planning process was the 2019 Boston CHNA-CHIP Collaborative, a new initiative created by many stakeholders-- community organizations, health centers, community development corporations, hospitals, and the Boston Public Health Commission. These groups are collaborating on the first large-scale collaborative city-wide Community Health Needs Assessment (CHNA) and Community Health Improvement Planning (CHIP) process. Notably, health-related concerns that were identified as most pressing among CHNA participants were housing, substance use disorder and mental health, community violence, the environment (including

air quality and effects of climate change), and chronic conditions and their related risk factors. Many of these concerns align with the priorities that have emerged through the Shattuck Campus planning process.

Understanding perceptions of the residents related to health is important because it provides insight into lived experiences, including key health concerns, facilitators, and barriers to addressing health conditions. As seen in the graph below, the top community health concerns among over 2,000 Boston CHNA survey respondents were housing quality or affordability (51%) and alcohol/drug abuse (49%),

Below: Percent Boston CHNA Survey Respondents Reporting Top Most Important Concerns in Their Community or Neighborhood That Affect Their Community's Health (N=2,053), 2019



DATA SOURCE: Boston CHNA Community Survey, 2019

followed by mental health (42%) and community violence (31%); these were also the top concerns by neighborhood, race/ethnicity, age group, gender, and sexual orientation, with the addition of chronic diseases and related behaviors as well as the environment. In the context

of the Shattuck Campus planning, it is useful to understand those community perceptions of health by neighborhood; the data in the table below shows that amongst people living in neighborhoods that abut the Shattuck Campus, substance use disorder, housing quality/affordability, mental health and homeless are all within the top five concerns.

Below: Leading Causes of Mortality in Boston, by Race/Ethnicity, Age-Adjusted Rate per 100,000 Residents, 2014-2016 Combined

Rank As Cause of Mortality	Population			
	Asian	Black	Latino	White
1	Cancer (127.0)	Cancer (175.3)	Cancer (109.4)	Cancer (173.1)
2	Heart Disease (64.6)	Heart Disease (133.9)	Heart Disease (87.8)	Heart Disease (149.3)
3	Cerebrovascular Diseases (21.5)	Accidents (38.3)	Accidents (41.6)	Accidents (56.5)
4	Alzheimer's Disease (18.1)	Cerebrovascular Diseases (39.9)	Diabetes (25.1)	Chronic Lower Respiratory Diseases (32.7)
5	Hypertension/ Renal Disease (16.1)	Diabetes (38.6)	Cerebrovascular Diseases (20.2)	Cerebrovascular Diseases (26.6)

DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Death Files, 2014-2016 Combined

DATA ANALYSIS: Boston Public Health Commission, Research and Evaluation Office

Through an online survey, small group discussions with residents and organizational staff across the city, and a large inclusive prioritization meeting with residents, leaders, and staff from organizations across sectors, the Boston CHNA-CHIP Collaborative identified four priorities for collaborative action. The final priorities selected were:

- **Housing** (including affordability, quality, homelessness, ownership, gentrification, and displacement);
- **Financial Security and Mobility** (including jobs, employment, income, education, and workforce training);
- **Behavioral Health** (including mental health and substance use disorder);
- **Accessing Services** (including health care, childcare and social services).

These themes were similar to those that emerged during the Shattuck planning community engagement process.

Health Care and Housing Landscape

In Massachusetts and across the country, preventable health conditions continue to increase, and health inequities based on race, income, and geography are a persistent challenge. Spending on chronic conditions such as heart

disease, diabetes, hypertension, and asthma – many of which are preventable – currently accounts for 86% of national health care expenditures.¹

It is important to recognize that multiple factors affect health, and there is a dynamic relationship between people and their environments. Where and how we live, work, play, and learn are interconnected factors that are critical to consider. That is, not only do genes and lifestyle behaviors affect health, **but health is also influenced by more upstream factors such as employment status and housing.**

In Massachusetts, sixteen Accountable Care Organizations (ACOs) and two Managed Care Organizations (MCOs) – networks of physicians, hospitals and other health care providers – have been selected by the Commonwealth to provide integrated health care for their Medicaid patients with the goals of improving health and containing costs.² In this context, there is an increasing recognition of the impacts of social factors on health outcomes and incentives within the health system to address social determinants – like housing. Over 900,000 MassHealth members and 4,500 primary care providers will be part of these ACOs, which will restructure the current fee-for-service payment system by integrating their efforts with community-based health and social service organizations to improve behavioral health, long-term support and health-related social needs for MassHealth members³.

Massachusetts is amid a multi-layered housing stability crisis which affects many people, but especially low-income residents, seniors, and communities of color.

MassHealth is also making changes within the behavioral health system, specifically to improve health outcomes and quality of life for individuals with serious mental illness (SMI). MassHealth is restructuring to align integrated behavioral and physical health care with the Department of Mental Health Services through the creation of Behavioral Health Community Partners (BH CPs) to coordinate care across medical, behavioral, disability and social service needs for its most vulnerable members with serious mental illness and/or addictions.⁴ Long-Term Services and Supports Community Partners (LTSS CPs) provide certain member with complex LTSS needs, such as children and adults with physical and developmental disabilities and brain injuries.

Similarly, a redesigned DMH Adult Community Clinical Services (ACCS) program promotes the integration with the broader healthcare system. The program can deliver evidence based, clinically strengthened interventions, and support access to services to assist with competitive employment.

It is within these complex system changes that the Shattuck Campus, which currently serves many MassHealth members and DMH clients, is being redeveloped.

Looking towards the future, the Shattuck will be operating in a world in which:

- Health care and social services are more intentionally collaborating --- especially around health and housing --- through Accountable Care Organization implementation
- Health care and behavioral health systems are integrated
- Health systems are looking to expand behavioral health services to respond to increasing demand and expectations from Commonwealth.

As the health system is undergoing significant transformation, **Massachusetts is amid a multi-layered housing stability crisis which affects many people, but especially low-income residents, seniors, and communities of color.**⁵ Key characteristics of housing stability, including affordability, quality, support services to protect tenancy and availability, impact the short and long-term health outcomes of individuals.⁶ Without the foundation of stable housing, medical treatments can be temporary and costly fixes that do not result in improved health outcomes. Housing instability can be a driver in high health care utilization and costs. Linkages between housing and various health behaviors, environmental factors and risks exist.

In the future, Shattuck will be operating in a world in which:



Health care and social services are more intentionally collaborating --- especially regarding health and housing --- through Accountable Care Organization implementation;



Health care and behavioral health systems are better integrated;



Health systems are looking to expand behavioral health services to respond to increasing demand and expectations from the Commonwealth.

The housing crisis is particularly acute among those in the behavioral health system. Lack of access to low-threshold, affordable, and stable housing for individuals with behavioral health conditions impedes treatment and recovery. Without stable housing, those with the highest behavioral health needs end up admitted to the emergency department or an inpatient unit when their condition could have been managed in a less intensive setting. This exacerbates upstream capacity issues such as emergency department overcrowding and backlogs for inpatient beds.⁷ As such, health care has a significant role in partnering with housing partners for solutions that achieve the goals of each sector to meet its ACO (cost and health) goals. Successful interventions require partnerships among health care, housing, community and public health partners, among others.

Substance use and mental health disorders have a substantial impact on the health of Massachusetts residents

The opioid epidemic continues to impact individuals, families and communities across Massachusetts. Massachusetts ranks amongst the top 10 states with the highest rates of drug overdose deaths involving opioids⁸ and eleven percent of Bostonians have a substance use disorder (SUD).⁹ In 2017, one Bostonian died every 48 hours due from opioid overdose.¹⁰ Beyond the personal costs associated with increasing substance use disorder rates, substance use disorder is estimated to cost society \$442 billion each year in health care costs, lost productivity, and criminal justice costs.¹¹

Substance Use Disorder Cost To Society:



Public Health Needs and Services Data and Gaps

The following is a summary of key data, gaps and themes extracted from the Shattuck Campus Health Needs and Services Assessment.

Moreover, SUD and mental health diagnoses are often co-occurring, meaning people need care from multiple systems. In Massachusetts, over half of DPH substance use service clients report a history of mental health treatment.¹²

More than half of Massachusetts adults who tried to find help for mental health or substance use said they had difficulty finding treatment.

1 in 3

gave up seeking help entirely



1 in 8

went to the emergency room for treatment



Current systems are not person-centered and are difficult to navigate; finding treatment can be challenging

While the numbers of people in need of services continue to rise, the health care and behavioral health systems present many barriers to people trying to access services. And, some groups have more challenges seeking care than others. The behavioral health system, including SUD and mental health treatment, is currently not integrated with the rest of the health care system, making early intervention and person-centered treatment challenging. There are long wait times for outpatient mental health and SUD treatment, regardless of insurance type, and there is an inadequate supply of evidence-based treatment modalities, including medication-assisted treatment. More than half of Massachusetts adults who tried to find help for mental health or substance use said they had difficulty finding treatment. More than one-third gave up seeking help entirely and 1 in 8 went to the emergency room for treatment.¹³

Current services at the Shattuck Campus are critical to the public health landscape

Five private provider organizations run eight programs at the Shattuck Campus and will not be moving with the Shattuck Hospital to the South End. Thousands of unique clients, particularly people with complex medical, behavioral health and housing needs, receive services from these organizations. These private provider-run programs play a critical role in the behavioral health service landscape, providing substance use and mental health services, as well as shelter programs. When Long Island closed in 2014, the Campus became more essential as the regional system lost both emergency shelter and behavioral health treatment beds. If the future Shattuck Campus were not to plan for these types of services, the gap in behavioral health services in the City and the region would further increase. Future development should account for the continuity of these vital services, with minimal disruption at the Shattuck Campus. Furthermore, current service providers described benefits of being co-located with the hospital and other like-services because the

people being served at the Shattuck have complex medical needs and are often challenging to reach. The programs utilize other services on-site at the Campus to fill specific client needs that cannot be filled by a single program alone and would like the future Campus to have a comprehensive array of integrated services to best support patients.

The availability of specific levels of substance use disorder services and the need for each type at any given point in time, is difficult to assess. For years, individuals and families reported long wait times and difficulty accessing CSS and TSS services.¹⁴ As of October 2019, there were 5% more CSS (988) and TSS (382) beds than ATS beds (1,309) statewide¹⁵. Over 1000 new Licensed Beds/Programs/Homes have been added since 2015¹⁶¹⁷ and the Commonwealth continues to make investments to improve systems, address payment challenges and increase access to care.

Inpatient Detoxification, or Acute Treatment Services (ATS) is the first step toward recovery for people who need medical management or who will go through withdrawal. Detox services provide 3-5 days of 24-hour care and monitoring for withdrawal. Medical management might be needed. Inpatient detoxification allows a patient to be closely monitored and given medication to manage withdrawal. Six (6) programs are within a 5-mile radius of Shattuck Campus; one (1) of these programs – Andrew House - is currently at the Shattuck Campus. High Point Detox, also located at the Shattuck Campus, is a Section 35 Women’s Addiction Treatment program for women civilly committed with services that include detoxification and clinical stabilization. In 2019, with permission from the Commonwealth, the facility will also begin accepting referrals from community-based programs.

Clinical Stabilization/Step down (CSS) are “step down” services that offer 24-hour treatment for people who need a safe and structured setting to support their recovery after detoxification. Services include nursing support, case management, education and counsel-

ing, and aftercare planning. These programs help to bridge services between detoxification and rehabilitation programs. One (1) program is within a 5-mile radius of Shattuck Campus.

Transitional Support Services (TSS) provides up to 30 days of residential services for people who need a safe and structured setting to support their recovery after detoxification. These programs are designed to help those who need services between acute treatment and residential rehabilitation, outpatient or other aftercare. There are very few of these programs statewide. Two are within a 5-mile radius of Shattuck Campus; one (1) of these programs – Women’s Hope -- is currently at the Shattuck Campus.

Medication-Assisted Treatment (MAT) is an effective outpatient, evidence-based treatment option that helps reduce cravings for opioids or alcohol and reduces withdrawal symptoms. MAT programs provide medication, like methadone, buprenorphine, and injectable naltrexone. They also provide other medical and support services. All MAT medications require supervision by a licensed professional or program. Treatment can be short-term or long-term. Some programs offer outpatient detox or short-term MAT services. Some inpatient programs offer MAT that is continued after the patient leaves the treatment program (and becomes outpatient). In the Commonwealth, MAT providers are heavily concentrated in the most densely populated areas of the state and the majority are clustered in eastern Massachusetts. There are 5 Methadone Clinics in Boston.¹⁸ Health Care Resource Center provides MAT at the Shattuck Campus. Almost 80% of active patients at HRCC live in Boston (21% Dorchester; 13% Jamaica Plain; 10% Roxbury; 8% Roslindale; 7% Mattapan).¹⁹

Counseling and Outpatient Services provides assessment and treatment for adults and adolescents, their families, and/or their partners who are affected by addiction. Services are in a community-based setting. Counseling and therapy usually happen up to 3 times per week. The goal is to help people gain and maintain skills for recovery. Services can be for individuals, groups, and families. Forty-four (44) programs are within a 5-mile radius of Shattuck Campus; One (1) of these programs, operated by the Pine Street Inn, is located at the Shattuck Campus (Pine Street Inn and hopeFound merged in 2012).

Geography

Boston’s South End has a high concentration of behavioral and homeless services. Unintentional opioid overdose rates are highest in the South End, which is more than twice the rate compared to Boston overall (277.6 patient encounters per 100,000 population). In 2017, Boston Medical Center (BMC) had both the highest proportion of opioid-related ED discharges and the greatest absolute volume of ED discharges.²⁰ Two of the five OTP methadone treatment facilities in Boston are in zipcode 02118 (South End).

Behavioral health and homeless services are expensive to operate and difficult to site

All the vendor programs expressed concern that – should a future version of the Shattuck Campus be planned without space for these services – they will be unable to relocate to another place in Boston. Programs raised concerns about the challenges with getting community support for siting programs that serve people with behavioral health diagnoses and are homeless or housing unstable. Most of the programs have experience trying to open programs in other parts of Boston and noted that they were delayed for years before being operational due to permitting challenges. Some programs noted that reimbursement rates, rent in Boston, and the high cost of providing quality services to clients, makes operating their programs very challenging. Many noted being unable or unwilling to expand their services – despite the demand – because they are unable to cover the cost of providing the services. In this context, all the programs expressed that: should space be available in the future on site, that planning for phased-in construction and minimal disruption of services, is essential.

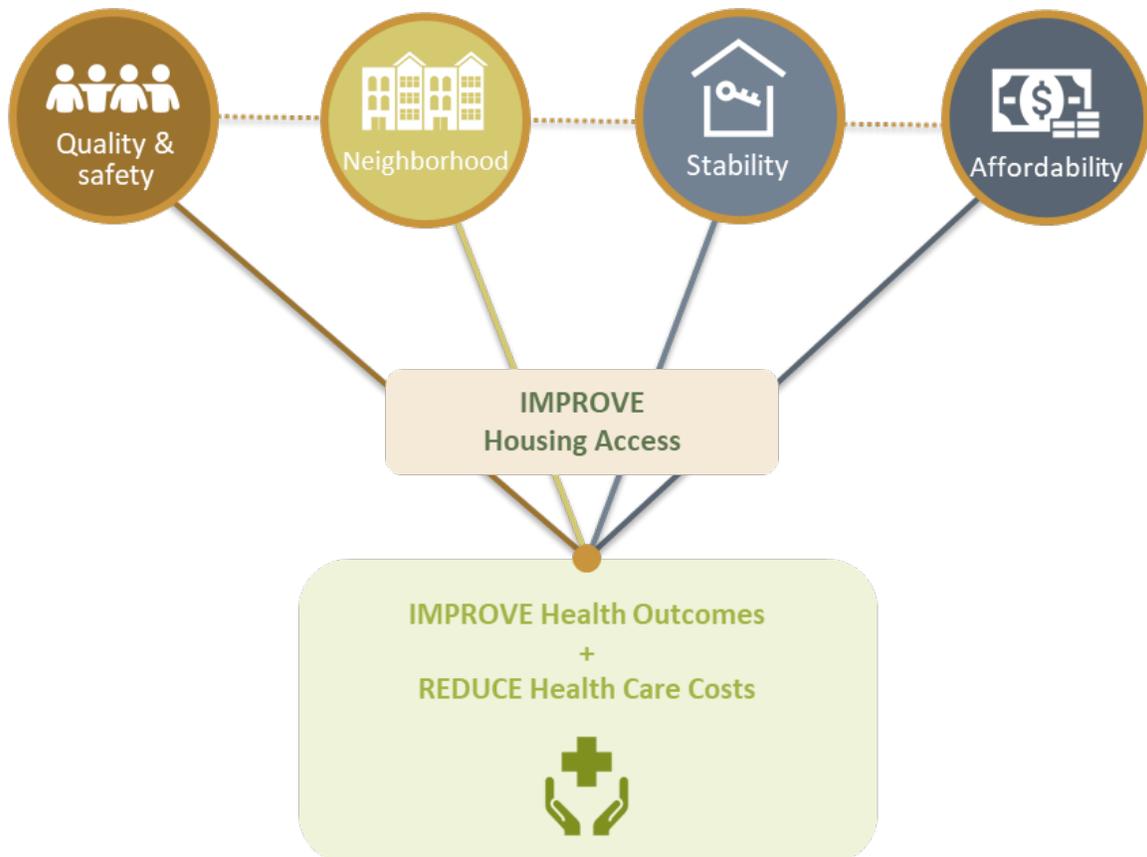
Behavioral health and homeless services are expensive to operate and difficult to site.

Access to safe, affordable, stable housing matters for health

There are four pathways to connecting housing and health: stability, affordability, quality and safety, and neighborhood.²¹ Improving housing access across these pathways will lead to improved health outcomes and reduced health care costs, particularly among chronically homeless people.²² In 2018, there were over 6,000 residents that were counted as homelessness or housing unstable in Boston and over 17,000 in Massachusetts.²³ These data may not account for residents who are temporarily without a permanent address and are staying with friends or in their car. Among those identified,

most homeless residents were staying in emergency shelters (5,427 individuals), followed by transitional shelters (598 individuals), and unsheltered housing (163 individuals). Among this homeless population, four in ten homeless residents identified as Black (45.1%), 36.1% as white, and 17.0% as two or more races. More than 35% identified as Latino (any race).

The Four Pathways Connecting Housing & Health:



Homeless Individuals in Boston, 2018

	Sheltered			Total	Percent of Total
	Emergency Shelter	Transitional Housing	Unsheltered		
American Indian or Alaska Native	13	4	0	17	0.3%
Asian	45	3	5	53	0.9%
Black	2,566	188	36	2,790	45.1%
Native Hawaiian or Other Pacific Islander	38	3	0	41	0.7%
White	1,913	251	70	2,234	36.1%
Multi-race	852	149	52	1,053	17.0%
Total	5,427	598	163	6,188	
Latino	2,079	103	8	2,190	35.4%
Not Latino	3,348	495	155	3,998	64.6%
Total	5,427	598	163	6,188	

DATA SOURCE: U.S. Department of Housing and Urban Development, Continuums of Care, HUD 2018 Continuum of Care Homeless Assistance Programs Homeless Populations and Sub Populations, 2018

NOTE: Safe Haven programs are included in the Transitional Housing category

The City of Boston has steadily increased the number of housing units for homeless individuals by targeting resources and committing to new investments. Despite considerable progress in the last few years, the demand for shelter services has increased.

Lack of access to affordable and stable housing is a compounding issue for individuals struggling with a behavioral health condition in Massachusetts.²⁴ People navigating the behavioral health systems are often homeless or housing unstable which makes their health conditions difficult to treat. Clients leaving intensive treatment settings who do not

have adequate housing to support their recovery have a significantly higher risk of relapse²⁵ and people who are chronically homeless face substantially higher morbidity in terms of both physical and mental health and increased mortality.^{26 27}

Supportive housing is a critical strategy for addressing chronic homelessness, and there isn't enough of it

There are 12 homeless shelters in Boston for individuals, providing approximately 1,850 beds. Four shelters serve both men and women, 4 shelters serve only men, and 4 shelters serve only women. 1,067 of the 1,850 beds for homeless men and women are in zip codes 02118 and 02119 (South End / Roxbury).²⁸

The Pine Street Inn (PSI) Shattuck Shelter serves 125 men (130 during winter overflow) per night in its low barrier emergency homeless shelter.

stabilizing people in recovery. Several of the Shattuck vendors operate supportive housing, and all identified a shortage of supportive housing units as a significant barrier to keeping people that are in the behavioral health system stable and healthy. Program leaders noted that low-threshold housing is necessary because many people in the behavioral health system are actively using substances, have CORIs, or other barriers that prohibit them from accessing other types of housing. In Eastern Massachusetts, there is an identified need for 4,354 units of permanent supportive housing for chronically homeless individuals, homeless families, and people with SUD and mental health condi-



4,354 units
of permanent
supportive housing needed
in Eastern Massachusetts

In addition to clean, safe shelter – Pine Street Inn Shattuck Shelter provides access to veteran services, specialized housing placement for chronically homeless guests, workforce development programs, mental health counseling and case management, and rapid re-housing services. Boston Health Care for the Homeless also operates a health clinic on-site. Given the homelessness needs, the city, region and state cannot lose the 125 beds provided by PSI for emergency shelter services.

tions.²⁹ New research shows there is approximately \$11,000+ annual savings per person in public health care costs after chronically homeless adults move into supportive housing.³⁰

However, **nearly all the current Shattuck service providers interviewed, including Pine Street Inn, discussed permanent supportive housing (PSH) as the core strategy to eliminating chronic homelessness and**

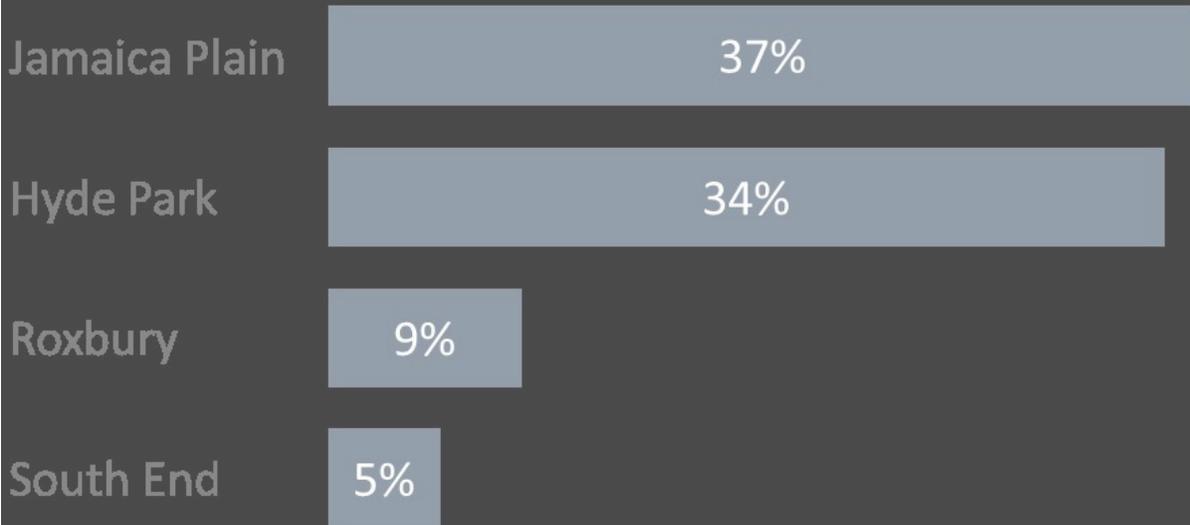
Annual savings opportunity
after chronically homeless adults
move into supportive housing:



\$11,000+
per person
in public health care costs

Percentages of land consisting of open space by neighborhood

Jamaica Plain (37%) and Roxbury (34%) having the highest percentages and the South End (5%) and Roxbury (9%) have the lowest.



People receiving services at the Campus and neighboring communities would benefit from added green and open space at the Shattuck Campus, and improved integration with Franklin Park

Green and open spaces promote mental and physical health. People who live in areas with more green space have less anxiety, stress and depression, and greater well-being compared to those with less green space.³¹ Furthermore, the natural and built environment of parks, playgrounds, recreation centers, and walking paths support physical activity by providing places for people to engage in exercise and active play.³²

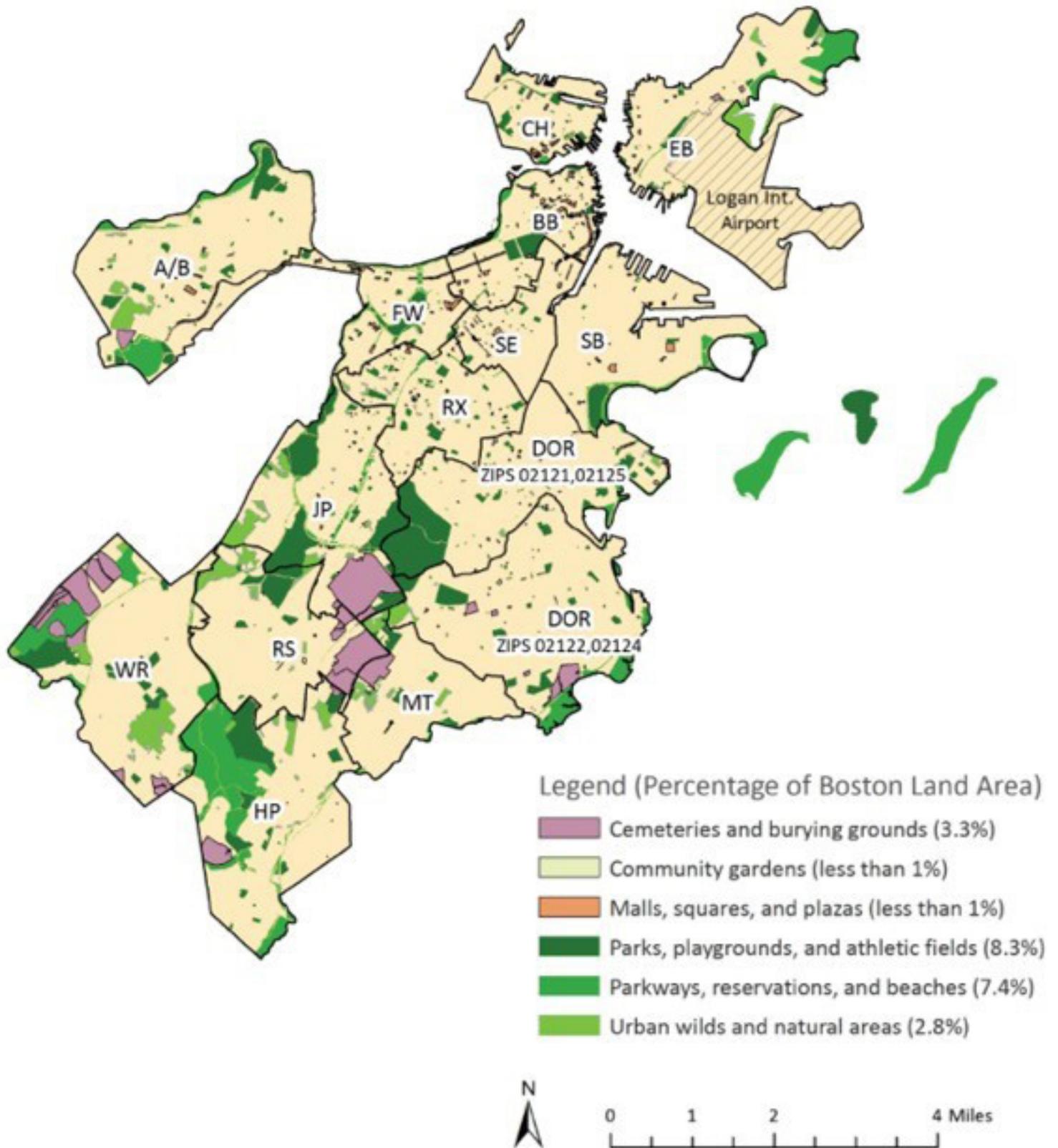
Approximately 21% percent of Boston neighborhoods, excluding the Harbor Islands and including ponds and reservoirs, are open space, consisting of cemeteries and burying grounds; community gardens; malls, squares, and plazas; parks, playgrounds and athletic fields; parkway, reservations, and beaches; and urban wilds and nature areas.³³ Jamaica Plain (37%) and Hyde Park (34%) have the highest percent-

ages of land consisting of open space, while the South End (5%) and Roxbury (9%) have the least.³⁴

The Shattuck Campus sits between the Forest Hills Cemetery and Franklin Park, a 485-acre park designed by Frederick Law Olmsted. Established in 1885, Franklin Park includes a woodland preserve, recreational areas, the Franklin Park Zoo, White Stadium, a golf course and open space.³⁵

Some evidence from the United Kingdom shows that access to or views of open space can improve patient recovery times and the amount of medication that some patients require. And, individuals who live closer to open space seem to be more effective in managing major life issues, coping with poverty, and performing better in cognitive tasks.³⁶ The proximity of Shattuck Campus to Franklin Park is a great asset and there is ample opportunity to redevelop the Campus to increase access to green and open space.

General Open Space by Type and Neighborhood, 2017

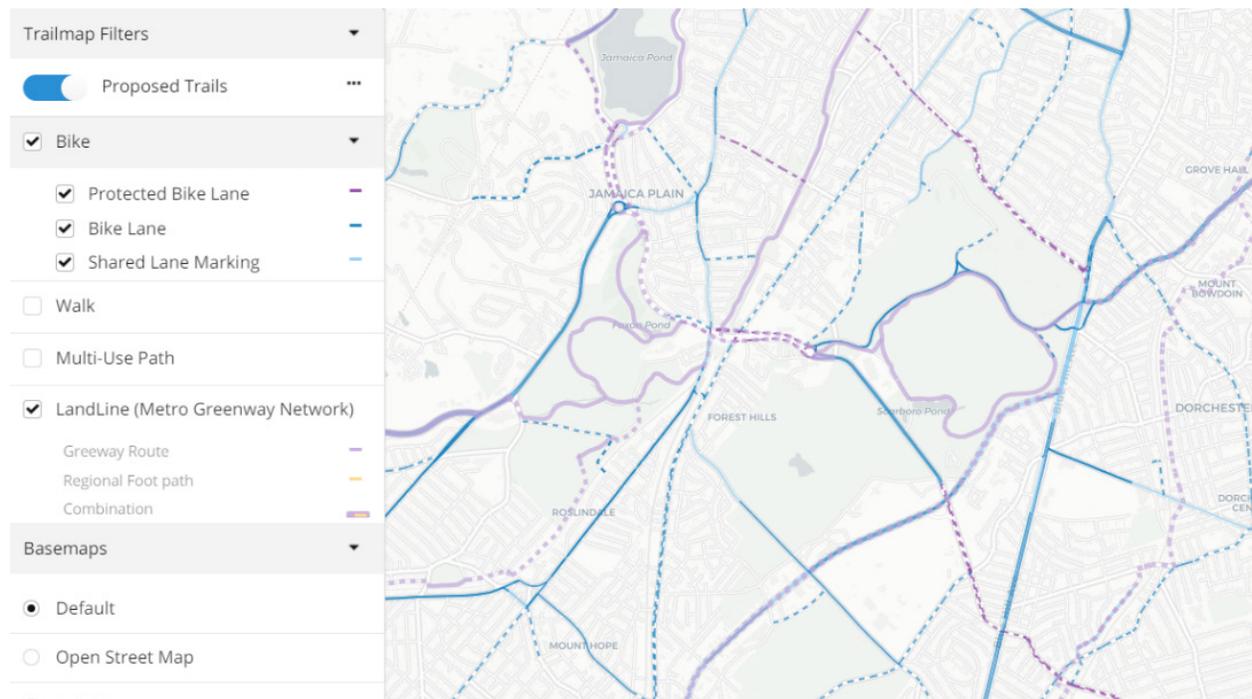


Improved pedestrian and bike connections near and through the Shattuck Campus can provide needed connections from Morton Street to Forest Hills, and to Franklin Park

Residents in subsidized-cost housing often have complex needs that necessitate a variety of supportive services. Transportation access is integral to these residents being able to connect with those services as well as key destinations such as work, grocery stores, child care, and medical services.³⁷ Given that many of the people who access services at the Shattuck Campus rely on public transportation and that there will be supportive housing on site, planning for improved access to the site is important.

Six of the eight programs are in-patient and operate 24 hours/day, some staff arrive at and leave the Campus at hours when public transportation is not running. Some of the programs own vans that they use to transport clients between program sites. However, most people that access services at the Shattuck Campus – and many staff – arrive by means other than a car. The Department of Public Health currently runs a shuttle from offsite surplus parking site and to Forest Hills MBTA station, and to Shattuck Campus. The Campus is 0.6 miles to Forest Hills T Station. Current MBTA bus service includes the #16 bus via Jewish War Veterans Pkwy and the #21 and #31 buses on Morton Street. Bike path connections are planned from Forest Hills to Franklin Park.

MAPC Proposed Bike Trails for Improved Connectivity near Shattuck Campus



Walkability. The Walk Score walkability index ranges from 0 to 100, based on walking routes to local destinations such as grocery stores, parks, schools, and store outlets. While Boston has an overall walk score of 81, the Shattuck Campus currently has a walk score of 39.³⁸ It is understood that to increase walkability at the site, substantial access improvements will be required, including bike and pedestrian infrastructure.

Public transportation. Over a third of Metro Boston jobs (37%) are within a half-mile of an MBTA transit or commuter rail station.³⁹ The Shattuck Campus is within a 15-minute walking distance of the Forest Hills T station with access to both the MBTA Orange Line and the Needham Commuter Rail Line. Eight MBTA bus lines stop within a half-mile of the Shattuck Campus (16, 21, 31, 32, 34, 36, 38, 195).⁴⁰ 34% of Boston residents do not own a car and 42% of Boston residents want mobility and open space improvements in their neighborhood.⁴¹

Bike trails. There are bike trails that run along the edge of the Shattuck Campus and through Franklin Park. However, connectivity between existing bike lanes is inadequate; according to some community members, leaving the site on bike and heading towards Forest Hills, specifically on Morton Street can be quite dangerous. Proposed bike lanes – seen on the map from the Metropolitan Area Planning Council's Trail Map⁴² -- would improve connectivity. The dotted lines indicate a proposed route. Pedestrian and bike connections and greenways in this area and across Boston will improve access to open space, transit and jobs, promote active recreation and improve climate change resilience.⁴³

Opportunities at the Shattuck Campus

Future development at the Shattuck Campus can address systems and service gaps as well as incorporate design elements that will meet the needs of future Campus clients and people that live nearby. The following are specific opportunities in which – and in partnership with the Commonwealth – a private partner can build upon in order to achieve the articulated Campus Vision:

Capitalize on recent health system transformations and the shift towards more integrated models of care.

In a dynamic and changing health care environment, health care and social services across Massachusetts are more intentionally collaborating at the intersection of health and housing. Furthermore, health systems are looking to expand and better integrate behavioral health services to respond to increasing demand and expectations from both patients and policymakers. Health systems in Boston and across the country are looking at ways to invest in the communities they serve to lift residents, help create career pathways for low-income, minority, and hard-to-employ populations; and begin to transform neighborhoods.⁴⁴ Within this context, there is an opportunity to create a Campus that meets current public health needs but leads the region in a service delivery model that is unlike the current disparate model in that it is collaborative, integrated and person-centered.

Address an urgent public health crisis by continuing to serve the population currently receiving services from private provider organizations at the Shattuck today and maintaining critical health care and behavioral health services in an integrated model; while providing housing to address a critical health determinant.

The Commonwealth must continue to address the urgent behavioral health crises facing our state by continuing to serve the chronically homeless and behavioral health population currently receiving services at the Shattuck today. There is an opportunity to increase the quality of care and improve outcomes by designing a person-centered Campus that integrates medical and behavioral health care and has the advantage of co-location of key services.

Enhance the quality of care and improve outcomes by designing a person-centered Campus that integrates medical and behavioral health care and has the advantage of the co-location of key services.

Many programs noted that step-down programs are critical as people navigate through the continuum of care on the path to recovery. The ability to stay in recovery can be impacted by the difficult transition periods between programs. Future programs should have both co-located treatment across the continuum of care with case management and an ability to connect people to low-barrier shelter and supportive housing. Programs that integrate opportunities for job training and workforce development for clients and members of the surrounding community on the site could help to achieve a more holistic approach to long-term recovery and stabilization. Partnerships with nearby organizations may also help promote career pathways for people receiving services at the Shattuck Campus. Future use of the site can build upon assets to address current and future needs, provide a healing environment with access to green and open spaces for people receiving services on-site as well as the broader community, and enhance integration and connectivity with Franklin Park and surrounding communities.

A thoughtful building and landscape design will provide a healing environment with access to green and open spaces for people receiving services on-site and the broader community; thoughtful design can contribute to the goal of increasing access to permanent supportive housing while more holistically serving the public health needs of the region.

Endnotes

- 1 Prevention and Wellness Trust Fund Fact Sheet. (2016). Retrieved December 2, 2019, from <http://www.bchuman services.net/library/2016/07/DPH-Overall-PWTF-One-Pager-June-2016.pdf>
- 2 Full list of MassHealth ACOs and MCOs. (n.d.). Retrieved December 2, 2019, from <https://www.mass.gov/service-details/full-list-of-masshealth-acos-and-mcos>
- 3 MassHealth Partners with 18 Health Care Organizations to Improve Health Care Outcomes for Members. (n.d.). Retrieved December 2, 2019, from <https://www.mass.gov/news/masshealth-partners-with-18-health-care-organizations-to-improve-health-care-outcomes-for>
- 4 MassHealth Community Partners (CP) Program: Information for Providers. (n.d.). Retrieved December 2, 2019, from <https://www.mass.gov/guides/masshealth-community-partners-cp-program-information-for-providers>
- 5 Blemur, & Janice. (n.d.). *Facing The Massachusetts Housing Crisis*.
- 6 Shaw, M. (2004). Housing and Public Health. *Annual Review of Public Health*, 25(1), 397–418. <https://doi.org/10.1146/annurev.publhealth.25.101802.123036>
- 7 Anthony, S., Boozang, P., Chu, B., Striar, A., & Health, M. (2019). *READY FOR REFORM: BEHAVIORAL HEALTH CARE IN MASSACHUSETTS ABOUT BLUE CROSS BLUE SHIELD OF MASSACHUSETTS FOUNDATION ABOUT MANATT HEALTH*.
- 8 Massachusetts Opioid Summary | National Institute on Drug Abuse (NIDA). (n.d.). Retrieved December 2, 2019, from <https://www.drugabuse.gov/opioid-summaries-by-state/massachusetts-opioid-summary>
- 9 *ACCESS TO SUBSTANCE USE DISORDER TREATMENT IN MASSACHUSETTS*. (2015). Retrieved December 2, 2019, from <https://www.mass.gov/files/documents/2016/08/nr/csac-access-to-substance-use-disorder-treatment-in-mass.pdf>
- 10 *Number of Opioid-Related Overdose Deaths, All Intents by City/Town 2013-2017*. (2018).
- 11 Time for a Change | Surgeon General’s Report on Alcohol, Drugs, and Health. (n.d.). Retrieved December 2, 2019, from <https://addiction.surgeongeneral.gov/vision-future/time-for-a-change>
- 12 *Massachusetts State Health Assessment*. (2017). Retrieved from www.mass.gov/dph/2017statehealthassessment
- 13 Anthony, S., Boozang, P., Chu, B., Striar, A., & Health, M. (2019). *READY FOR REFORM: BEHAVIORAL HEALTH CARE IN MASSACHUSETTS ABOUT BLUE CROSS BLUE SHIELD OF MASSACHUSETTS FOUNDATION ABOUT MANATT HEALTH*.
- 14 2018 Massachusetts Health Reform Survey | The Blue Cross Blue Shield of Massachusetts Foundation. (n.d.). Retrieved December 2, 2019, from <https://bluecrossmafoundation.org/publication/2018-massachusetts-health-reform-survey>
- 15 *ACCESS TO SUBSTANCE USE DISORDER TREATMENT IN MASSACHUSETTS*. (2015). Retrieved December 2, 2019, from <https://www.mass.gov/files/documents/2016/08/nr/csac-access-to-substance-use-disorder-treatment-in-mass.pdf>
- 16 Department of Public Health Bureau of Substance Use Services internal data. 2019
- 17 *Commonwealth of Massachusetts Special Commission to Investigate and Study State Licensed Addiction Treatment Centers*. (2016).
- 18 Baker-Polito Administration to Fund 26 New Programs to Help People with Substance Use and Mental Health Disorders | Mass.gov. (n.d.). Retrieved December 2, 2019, from <https://www.mass.gov/news/baker-polito-administration-to-fund-26-new-programs-to-help-people-with-substance-use-and>
- 19 Methadone Clinics - Massachusetts - Opiate Addiction & Treatment Resource. (n.d.). Retrieved December 2, 2019, from http://www.opiateaddictionresource.com/treatment/methadone_clinic_directory/ma_clinics
- 20 Demographic data provided to HRiA from HRCR December 2018.
- 21 *Opioid-Related Acute Hospital Utilization in Massachusetts*. (2019). Retrieved from https://www.mass.gov/files/documents/2019/06/25/HPC%20Opioid-Related%20Acute%20Hospital%20Utilization%20Chartpack_June%202019.pdf
- 22 Ibid
- 23 Sadowski, L. S., Kee, R. A., Vanderweele, T. J., & Buchanan, D. (2009b). Effect of a housing and case management program on emergency department visits and hospitalizations among chronically ill homeless adults a randomized trial. *JAMA - Journal of the American Medical Association*, 301(17), 1771–1778. <https://doi.org/10.1001/jama.2009.561>
- 24 Department of Neighborhood Development City of Boston 38th Annual Homeless Census. (2018). Retrieved December 3, 2019, from https://docs.google.com/document/d/1JABLFH6gdFKYfR9_qyE_0VMV64YlyO5LQS55tAhqK7o/edit

25 Ibid

26 *Massachusetts State Health Assessment*. (2017). Retrieved from www.mass.gov/dph/2017statehealthassessment

27 Maness, D. L., & Khan, M. (2014). Care of the homeless: an overview. *American Family Physician*, 89(8), 634–640. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/24784122>

28 Auerswald, C. L., Lin, J. S., & Parriott, A. (2016). Six-year mortality in a street-recruited cohort of homeless youth in San Francisco, California. *PeerJ*, 2016(4). <https://doi.org/10.7717/peerj.1909>

29 Individual Shelters in Greater Boston. (n.d.). Retrieved December 3, 2019, from Massachusetts Coalition for the Homeless website: <http://mahomeless.org/individual-shelters-in-greater-boston>

30 The total number also includes youth, adults with intellectual/developmental disabilities, prison/jail releasees, and persons who are aging. Eastern Mass includes all counties east of Worcester, namely Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth and Suffolk Counties. Data from the Corporation for Supportive Housing 2016 data and updated the information as to population for 2017 and then allocated it proportionately as to county.

31 Estimating Cost Reductions Associated with the Community Support Program for People Experiencing Chronic Homelessness | The Blue Cross Blue Shield of Massachusetts Foundation. (n.d.). Retrieved December 3, 2019, from <https://bluecrossmafoundation.org/publication/estimating-cost-reductions-associated-community-support-program-people-experiencing>

32 Barton, J., & Rogerson, M. (2017). The importance of greenspace for mental health. *BJPsych. International*, 14(4), 79–81. <https://doi.org/10.1192/s2056474000002051>

33 Health of Boston 2016-2017 Retrieved from: http://www.bphc.org/healthdata/health-of-boston-report/Documents/_HOB_16-17_FINAL_SINGLE%20PAGES-Revised%20Feb%202019.pdf

34 Health of Boston 2016-2017 Retrieved from: http://www.bphc.org/healthdata/health-of-boston-report/Documents/_HOB_16-17_FINAL_SINGLE%20PAGES-Revised%20Feb%202019.pdf

35 Ibid

36 Franklin Park | Boston.gov. (n.d.). Retrieved December 3, 2019, from <https://www.boston.gov/parks/franklin-park>

37 *Ecotherapy - the green agenda for mental health*. (2007). Retrieved December 3, 2019, from <https://www.mind.org.uk/media/273470/ecotherapy.pdf>

38 *Affordable Housing and Transportation How Two Sectors Join Forces to Support Low-Income Populations*. (n.d.). Retrieved from <https://nationalcenterformobilitymanagement.org/wp-content/uploads/2014/08/3.-Info-Brief-Housing-and-Transportation-Partnerships-FINAL.pdf>

39 Get Your Walk Score. (n.d.). Retrieved December 3, 2019, from <https://www.walkscore.com/>

40 Carlson, K. (2018). The Transportation Dividend: Transit Investments and the Massachusetts Economy — A Better City. Retrieved December 3, 2019, from <https://www.abettercity.org/news-and-events/blog/the-transportation-dividend-transit-investments-and-the-massachusetts-economy>

41 Transit Near Me. (n.d.). Retrieved December 3, 2019, from Massachusetts Bay Transit Authority website: <https://www.mbta.com/transit-near-me>

42 City of Boston Go Boston 2030. (n.d.). Retrieved December 3, 2019, from <https://www.boston.gov/transportation/go-boston-2030>, City of Boston Imagine Boston 2030. (n.d.). Retrieved December 3, 2019, from <https://www.boston.gov/civic-engagement/imagine-boston-2030>

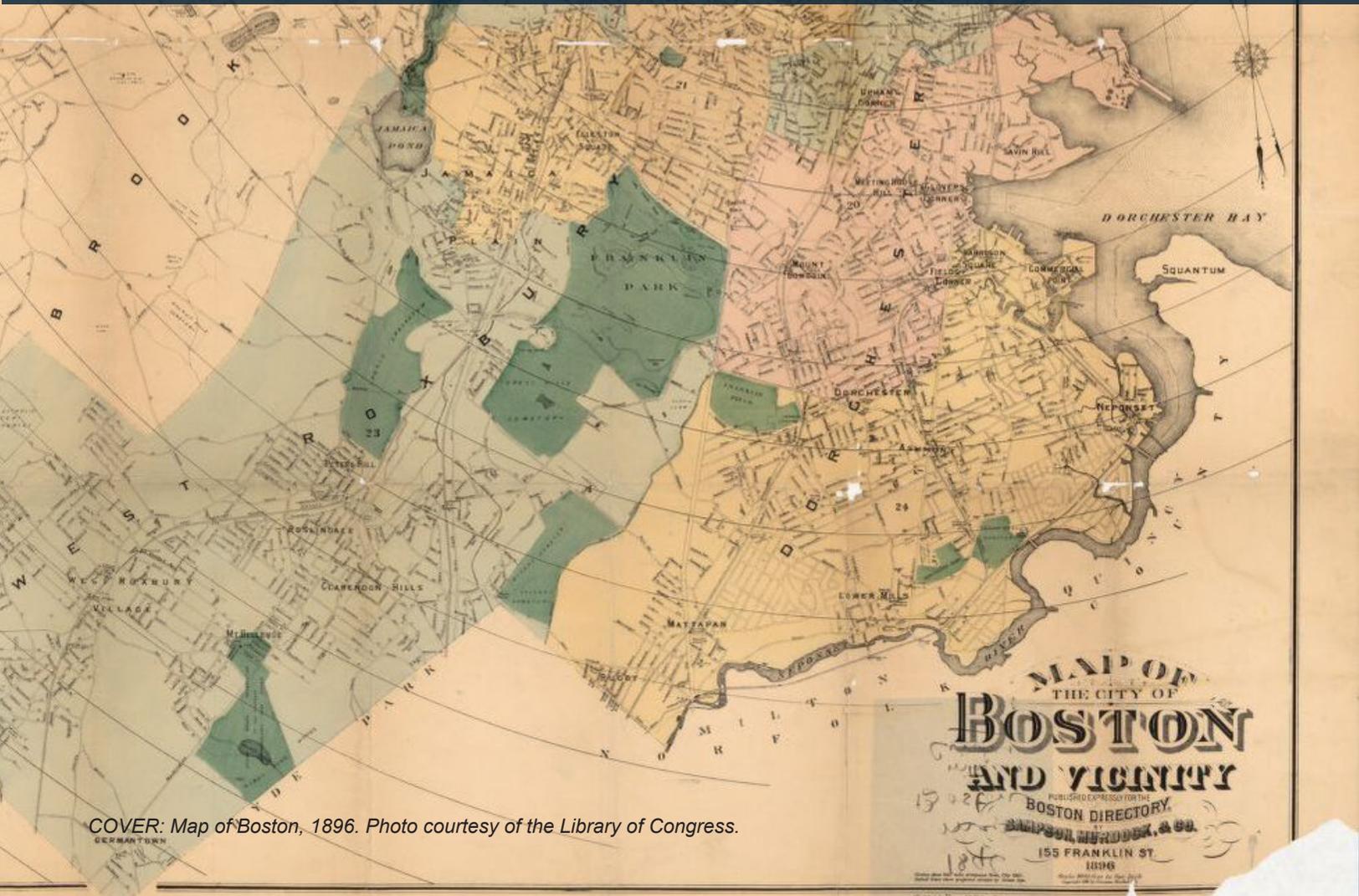
43 Trailmap: Metro Boston’s Regional Walking and Cycling Map. (n.d.). Retrieved December 3, 2019, from Metropolitan Area Planning Council website: <https://trailmap.mapc.org/>

44 Emerald Network. (n.d.). Retrieved December 3, 2019, from <https://www.emeraldnetwork.info/>



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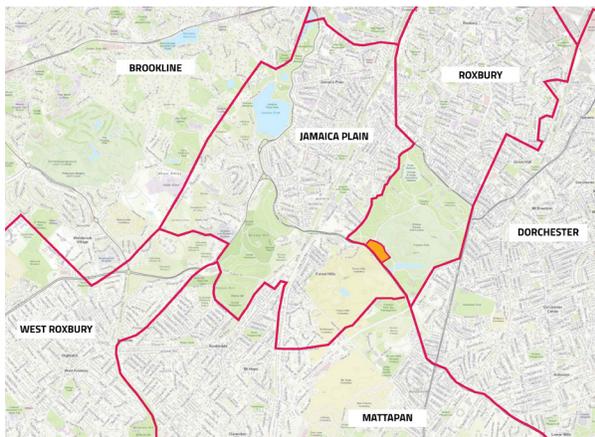
EXISTING CONDITIONS OVERVIEW



COVER: Map of Boston, 1896. Photo courtesy of the Library of Congress.

EXISTING CONDITIONS OVERVIEW

This section encompasses a broad view of existing conditions at the Shattuck Campus at Morton Street. It starts with the location of and context of the Shattuck Campus, with a review of history and the cultural legacy of two pioneers, Lemuel Shattuck and Frederick Law Olmsted. Their work and legacy have informed the development of the Shattuck and its environs. The physical conditions of the site, buildings, infrastructure and nearby surroundings, are discussed. The planning context for the future of the Shattuck Campus is considered with an examination of sustainability and resilience issues, along with the regulatory framework, and spatial needs for the retention of existing services and supportive housing.



Above: Shattuck Campus location. McCabe Enterprises Team.

The Shattuck Campus Site and Context

The Shattuck Campus is located at 170 Morton Street, 0.6 miles east of the Forest Hills MBTA station. Morton Street is part of Frederick Law Olmsted's Emerald Necklace. The Shattuck Campus is surrounded on three sides by Frank-

lin Park. On the south side of Morton Street, opposite the Shattuck Campus, is Forest Hill Cemetery, a historic 275-acre cemetery. The Campus was formed when the City of Boston transferred 13+/- acres of land on Morton Street to the Commonwealth for public health purposes consistent with the statutory and deed use restrictions.¹ To meet the public health needs of the time, the Commonwealth created a campus and hospital, per Special Acts of 1949.

The site stretches for over a quarter mile (1,384.92 feet) along Morton Street (the westerly bound). The Campus boundary facing Circuit Drive extends for a similar distance of 1,350.43 feet (the easterly bound). The perimeter boundary of the Shattuck Campus is set back from Circuit Drive at least twenty feet, and in places the boundary is thirty feet or more from the edge of Circuit Drive. Much of this space includes substantial topographic change. The northerly boundary of the site extends 298.06 feet, and the southerly boundary measures 458.15 feet.

The Shattuck Campus on Morton Street is located in an "in between" area amongst several neighborhoods. The US Postal Service lists the address in Jamaica Plain. The City of Boston Planning and Development Agency places the Shattuck Campus in the Mattapan neighborhood for zoning. And, residents in other neighborhoods, such as Grove Hall and Dorchester are connected to the Shattuck. In addition, historically, the Campus has been a part of both the Roxbury neighborhood, and the West Roxbury neighborhood.

Today, the Shattuck Campus on Morton Street provides physical and behavioral health services, serves as the hospital unit for the Department of Corrections, provides space for a range of addiction and substance use disorder services, including detox and residential rehabilitation, and a 125-bed homeless shelter.

Endnotes

- 1 Chapter 770 of the Special Acts of 1949.

6

PLANNING CONTEXT



PLANNING CONTEXT

Policy and Regulatory & Program Background

For any project and site such as the Shattuck Campus, it is important to assess existing conditions and needs, and to also understand the larger planning context. The Shattuck Campus is a Commonwealth asset and provides services to residents of Boston and eastern Massachusetts; the Shattuck Campus is a regional resource. A review of prior state, regional and city plans and studies highlights priority issues and the larger planning context for redevelopment of the Shattuck Campus.

Prior Plans & Studies

Massachusetts' Energy, Climate Change and Greenhouse Gas - Policies & Plans

In 2008, the Massachusetts legislature enacted the Global Warming Solutions Act (GWSA), which established a long-term goal of reducing emissions by 80% from the 1990 baseline, by 2050 for the Commonwealth. Governor Baker and the New England Governors with the Premiers of the Eastern Canadian provinces endorsed a 2030 green house gas (GHG) emissions reduction goal of 35% to 45% by 2030 as a milestone towards reaching the 80% reduced emissions goal of the GWSA. Essentially, the Commonwealth's goals are to reduce, electrify, and decarbonize.

The Massachusetts Clean Energy and Climate Plan for 2020 – 2015 Update (CECP) focuses on four sectors, namely buildings, transportation, electricity, and other sources – to lower GHG emissions and advance the Commonwealth's progress towards emission goal targets. Within the building sector, the State is focused on advanced building energy codes; smart growth to help reduce vehicle miles traveled; and tree retention and planting; as well as appliance and product standards, and developing a mature market for renewable thermal technologies. The smart growth goals are furthered in part by the Commonwealth's Sustainable Development Principles.

Implications for the Shattuck Campus

Executive Order 484 requires new State projects to be twenty percent (20%) more efficient than the Massachusetts State Building Code; the policy also requires LEED Silver rating, and a smart location. Currently, the Shattuck Campus is relying on a gas-powered generation system for district steam heating. Both the CECP and Executive Order 484 are advocating for clean energy sources for buildings, including use of cold-climate air source heat pumps, geo-thermal and solar-thermal systems.

The CECP's smart growth strategy addresses emissions generated by both the building and transportation sectors. The goal is to reduce the number and distance of vehicle trips through smart growth and smart siting of facilities. The Shattuck Campus, in its urbanized location, with proximity to the MBTA's Forest Hills Station, with both subway and commuter rail services, is an example of smart location siting.

The CECP intends for the Commonwealth to enhance vehicle efficiency and decrease the use of carbon based fuels, as well as to plant and retain trees to reduce heating and cooling loads.

How might this impact redevelopment of Shattuck at Morton Street? For the future Shattuck Campus, this would likely mean incorporating electric vehicle charging stations in the parking areas; reducing parking to encourage commuting by transit, bicycling and walking; improving bike and pedestrian access; operating electric-powered shuttles to connect with nearby transit hubs, such as Forest Hills or Morton Street on the Fairmount Line; and greening the Shattuck Campus with additional trees.

The Commonwealth's Sustainable Development Principles which can be found in the Appendix, help inform smart siting, which advances the policies and goals of the CECP.

Transportation Plans

The Shattuck Campus is accessed today primarily via Circuit Drive, a local roadway within the City of Boston's street network. Morton Street runs along the campus' western edge and is a state road and is governed by the plans and policies of MassDOT. Public transit is operated by the Massachusetts Bay Transportation Authority, the MBTA, which is a regional transit agency operated by the Commonwealth. Access and connectivity improvements for the Shattuck Campus, consequently, will need to be aligned with statewide transportation planning goals and may require inclusion in statewide plans.

There are several key plans that inform and affect transportation investments. Included are the Long Range Transportation Plan, which is created by the Boston Region Metropolitan Planning Organization (or Boston MPO, for short). The Boston MPO covers 97 cities and towns encompassing 1,360 square miles. It is staffed by the Central Transportation Planning Service (CTPS) and governed by a regional board. The Boston MPO prepares the Long Range Transportation Plan (LRTP) and the Transportation Improvement Plan (TIP).

SUSTAINABLE DEVELOPMENT PRINCIPLES

1. Concentrate Development and Mix Uses
2. Advance Equity
3. Make Efficient Decisions
4. Protect Land and Ecosystems
5. Use Natural Resources Wisely
6. Expand Housing Opportunities
7. Provide Transportation Choice
8. Increase Job and Business Opportunities
9. Promote Clean Energy
10. Plan Regionally

The regional planning agency, Metropolitan Area Planning Commission (MAPC), is a partner and participant in the formation of both the LRTP and the TIP. MassDOT and CTPS also undertake planning on specific issues, such as pedestrian plans and project or place-specific plans for a specific roadway or component of the transit or rail systems.

Destination 2040 – the Long Range Transportation Plan

Destination 2040 is the Boston region’s Long Range Transportation Plan, which was adopted in August 2019. The LRTP is created by the Boston MPO to guide investment and provide a vision for the future of the transportation system in the Boston metropolitan region. The LRTP is reviewed every four years and can be amended, taking into consideration changing conditions and travel demand forecasts, and must be fiscally constrained. Destination 2040 defines the region’s needs and establishes the broad framework which informs federal and state transportation investments. The new LRTP, Destination 2040, incorporates performance-based planning and programming for the first time. Resiliency in the context of climate change is another key factor incorporated into the new LRTP.

How might this impact redevelopment of Shattuck at Morton Street? The Destination 2040 vision is for: “a modern, well-maintained transportation system that supports a sustainable, healthy, livable and economically vibrant region. To achieve this vision, the transportation system must be safe and resilient; incorporate emerging technologies; provide equitable access, excellent mobility; and varied transportation options” for the Boston region. Destination 2040 has six key goals namely safety; system preservation and modernization; capacity management and

mobility; transportation equity; clean air/sustainable communities; and economic vitality. Each will need to be considered throughout redevelopment.

Congestion in the Commonwealth, Report to the Governor, 2019

MassDOT in August 2019 released a year-long study with Cambridge Systematics responding to Governor Baker’s directive to analyze when, where and why roadway congestion is getting worse in the Commonwealth.

The top ten key findings of the Congestion Report are:

1. Congestion is bad because the economy is good.
2. The worst congestion in the Commonwealth occurs in Greater Boston.
3. Congestion can and does occur at various times and locations throughout the Commonwealth.
4. Many roadways are now congested outside of peak periods.
5. Congestion worsened between 2013 and 2018.
6. Changes in travel time on an average day do not capture the severity of the problem.
7. Massachusetts has reached a tipping point with respect to congestion.
8. Many commuting corridors have become unreliable, with lengthy trips on bad days.
9. Congestion has worsened to the point where it reduces access to jobs.
10. We should be worried about congestion on local roads, too.

Two types of congestion were identified. The first type, non-recurring congestion, stems from incidents, such as significant weather

events, vehicular accidents or breakdowns, special events and road work. The second type is recurring congestion, which is the congestion and delay that drivers expect to experience on a daily basis. Recurring congestion is attributable to land use, economic activity and travel patterns influenced by socio-economic demographic factors.

The Morton Street-Gallivan Boulevard corridor east of Blue Hill Avenue to Morrissey Avenue was identified as one of the nine most consistently congested corridors in the Commonwealth. The congestion problem along this section of Morton Street is particularly acute during the hours of 8 am and 9 am and 2 pm to 3 pm. The 2019 Congestion Report identified four key policy priorities to guide addressing congestion problems. They are reliability; accessibility; sustainability; and equity. The ten recommended next steps to tackle congestion are:

1. Address local and regional bottlenecks where feasible.
2. Actively manage state and local roadway operations.
3. Reinvent bus transit at both the MBTA and Regional Transit Authorities.
4. Increase MBTA capacity and ridership.
5. Work with employers to give commuters more options.
6. Create infrastructure to support shared travel modes.
7. Increase remote work and telecommuting.
8. Produce more affordable housing, especially near transit.
9. Encourage growth in less congested Gateway Cities.
10. Investigate the feasibility of congestion pricing mechanisms that make sense for Massachusetts, particularly managed lanes.

How might this impact redevelopment of Shattuck at Morton Street? One of the nine leading consistently congested corridors in the Commonwealth is Morton Street-Gallivan Boulevard, about one mile east of the Campus. This congestion bottleneck impacts the Shattuck Campus on Morton Street, particularly patients and staff traveling to the campus whether by car from Dorchester or from Southeast Expressway (one of the top five congested corridors) or by transit. Bus Route 31 is particularly impacted, since this bus route includes travel east of Blue Hill Avenue along Morton Street.

The action steps recommended to help address congestion issues should inform future planning and reuse of the Shattuck Campus on Morton Street. Specifically, working with future users and employers at the Shattuck Campus to encourage providing options and incentives for workers to use transit, walk or bike to work. This may require the redevelopment of the Shattuck Campus on Morton Street to work with partners to create infrastructure to support shared travel modes to the campus, such as enhanced pedestrian and bicyclist access, new paths, continuation of the shuttle connecting the Campus with Forest Hills, and/or supporting better bus services. Development of supportive housing at the Shattuck Campus would further the action step of producing more affordable housing in proximity to transit.

Transportation Improvement Program (TIP)

The TIP is a program of transportation improvements that will occur over a five-year period based on the goals and projects listed in the LRTP. The TIP is fiscally constrained, which means that the MPO can only include projects for which funds are expected to be available. It programs all transit and roadway projects that are receiving federal-aid funds, as well as any project that is considered regionally significant from an air quality perspective. The TIP is updated on an annual basis.

The current Boston Region MPO TIP was adopted by the Boston MPO in May 2019 and covers federal fiscal years 2020-2024. The current TIP programs \$1.2 billion for highway-related improvements and \$3.1 billion for transit. The current TIP also includes 47 regional target projects, which entails 26 complete street projects, 5 major infrastructure projects; 11 intersection projects; 4 bike network and pedestrian connection projects and 1 community transportation project supporting first and last mile connections.

How might this impact redevelopment of Shattuck at Morton Street? There are no projects in the TIP that explicitly affect the Shattuck Campus' immediate transportation network. However, in the future transportation projects such as roadway-related improvements or an extension of bicycle and pedestrian paths will need to be listed in the TIP. Projects on the Boston region's TIP are subsequently incorporated into the statewide TIP (or STIP) issued by MassDOT.

The process for getting a project incorporated in the TIP entails a formal application, typically advanced by the host municipality, that must be submitted in late November.

Capital Improvement Plan

MassDOT has issued its 2019-2024 Capital Improvement Plan (CIP) for transportation investments across the Commonwealth, including roadways, aviation, rail, and transit. The CIP plan is for a five-year period and updated annually. These investments use state and federal funds to pay for long-term improvements to the transportation system.

How might this impact redevelopment of Shattuck at Morton Street? Although there are not any specific projects that directly affect the Shattuck Campus in the current CIP, there are four projects relating to MBTA improvements at the Forest Hills station. Three of which are aimed at increasing reliability, including \$10 million for Forest Hills station improvements. There is also another \$22.6 million programmed for access improvements which explicitly includes the Forest Hills MBTA station in the 2020-2024 CIP.

Roxbury Dorchester Mattapan Transit Study

In 2012, MassDOT engaged the Roxbury, Dorchester and Mattapan communities in a planning study to address transit needs. Roxbury, Dorchester and Mattapan (RDM) are neighborhoods with a heavy reliance on transit, especially buses. RDM residents identified nine critical issues affecting transit usage, which are: on-time performance; service frequency; travel time to downtown; fare collection; customer information; disconnect between policy and actions; traffic congestion; and overcrowding.

How might this impact redevelopment of Shattuck at Morton Street? The RDM Transit Study made several recommendations that are relevant to the Shattuck Cam-

pus. Pertinent short-term recommendations include improving access to Charlie Card vending machines; assessing performance of intra-party agreements for snow removal at bus stops; and ensuring that the City of Boston signal redesign includes provisions for buses. Neighborhood residents noted that there are few locations with Charlie Card availability, unlike suburban communities. This points to a potential need for locating a Charlie Card vending machine at the Shattuck Campus to serve both staff and patients.

Mid-term recommendations called for increasing frequency on the number 16, 19 and 21 bus lines. The 16 bus route runs along Circuit Drive with a bus stop at the Shattuck Campus. The 21 bus route runs along Morton Street with a stop at the Shattuck Campus. A second recommendation called for improving stop spacing on non-key routes, which would affect both routes 16 and 21. A third recommendation urged integration of fare policy and bus routing with the new Fairmount Line.

Implementation of many of the recommendations in the Roxbury-Dorchester-Mattapan Transit Study and plan would be advantageous for the future of the Shattuck Campus, particularly increased frequency of bus routes 16 and 21. As the MBTA considers adjusting the number of bus stops on these two routes, it will be important for EOHHS and DCAMM to collaborate and ensure continued presence of well-sited bus stops that are convenient to the Shattuck Campus and are well maintained. Better integration of the bus fare structure and service with the new Fairmount line will be beneficial for the Campus. Locating a Charlie Card vending machine on t Campus could facilitate a more multi-modal approach for work and patient trips to the campus.

Regional Plans

The Shattuck Campus is part of the Boston metropolitan region. The regional planning agency serving Boston and the surrounding one-hundred cities and towns is the Metropolitan Area Planning Commission (MAPC). MAPC’s mission is to promote smart growth and regional collaboration. In 2008, MAPC adopted a plan with 2030 as the horizon, called MetroFutures, with 65 specific goals addressing six broader goal statements focused on: sustainable growth patterns; housing choices; healthy communities; regional prosperity; transportation choices; and healthy environment.

In the past year, MAPC has embarked on a participatory process to prepare a new regional plan for 2050, named MetroCommon, which builds upon the work of MetroFutures. The broad goals of the draft MetroCommon long-range regional plan follow. Each of these goal statements are deepened with more specific policy statements and objectives.

- Getting Around the Region. Traveling around Metro Boston is safe, affordable, convenient and enjoyable.
- Homes for All. All residents of Metro Boston have places to live that meet their needs and that they can afford.
- A Climate-Resilient Region. Metro Boston is prepared for – and resilient to – the impacts of climate change.
- A Net Zero Carbon Region. The Metro Boston region is highly energy efficient and has reduced its greenhouse gas (GHG) emissions to net zero.
- Dynamic and Representative Governments. Local governments and regional agencies have the capacity and resources to deliver the services and supports our residents deserve, and to maintain and invest in our built and natural environments.

- **A Healthy Environment.** Greater Boston's air, water, land and other natural resources are clean and protected – for us and for the rest of the ecosystem.
- **Economic Security.** Everyone has the financial resources to meet their needs and to live fulfilling lives.
- **Economic Prosperity.** Greater Boston's economy benefits all in the region.
- **Healthy and Safe Neighborhoods.** We are safe, healthy, and connected to one another.
- **Thriving Arts, Culture, and Heritage.** Greater Boston is full of unique places and experiences that bring joy and foster diversity and social cohesion.

How might this impact redevelopment of Shattuck at Morton Street? A key priority of MetroCommon is Homes for All. The regional plan calls for homelessness to become essentially nonexistent. MetroCommon calls for a range of available housing to be provided for Boston area residents throughout their lifetime, including unforeseen circumstances, at prices that correspond to residents' income levels. Another priority is Healthy and Safe Neighborhoods. MetroCommon advocates for reducing the rates of chronic diseases, mental health and substance use disorders through enhanced public health initiatives and investments. Equally important is the objective for people in the region to have access to affordable stigma-free mental health, addiction treatment and support networks.

These goal and policy statements support the creation of supportive housing for persons who are chronically homeless

and persons in need of behavioral health and recovery services.

MetroCommon calls for a net zero carbon region, with all new construction and major renovation projects meeting zero emission standards for heating, cooling and electricity needs by 2030. This suggests that any new construction and renovation activities at the Shattuck Campus should incorporate net zero energy design strategies to be aligned with this regional planning goal.

City of Boston Plans

Imagine Boston is the City of Boston's master plan, the first in many years establishing a vision and goals for 2030. The planning included a high degree of public engagement. Starting in 2015, the City launched the Imagine Boston plan in 2017 with five goals. The overarching goals are to:

- Encourage affordability, reduce displacement and improve quality of life;
- Increase access to opportunity;
- Drive inclusive economic growth;
- Promote a healthy environment and prepare for climate change; and
- Invest in open space, arts and culture, transportation and infrastructure.

The plan points out that Bostonians have a shared vision for their neighborhoods – housing that is affordable at different income levels; reliable, safe transportation; and vibrant main streets.

In addition to setting forth the five overarching goals, Imagine Boston emphasizes five geographic arenas to take actions and direct

growth. They are enhancing neighborhoods; encouraging a mixed-use core; expanding neighborhoods; creating a waterfront for future generations and generating networks of opportunity along the Fairmount Corridor, which is approximately one mile east of the Shattuck Campus.

Within the umbrella of the five overarching goals and arenas for action, Imagine Boston identifies ten initiatives, which build and expand upon some of the City’s existing plans, policies and pilot programs for more concentrated action to advance Imagine Boston’s goals for 2030. These initiatives address housing; health and safety; education; economy; energy and environment; open space; transportation; technology; arts and culture; land use and planning. Imagine Boston specifies objectives within the rubric of the ten initiatives, including the following which are relevant to the future of the Shattuck Campus:

- Work to increase overall housing;
- Create and preserve affordable housing;
- Link housing with transportation improvements;
- Create a more integrated system of care;
- Work to improve access to mental health and substance abuse health services;
- Support Boston’s homeless populations, including programs such as Housing First;
- Prioritize community partnerships;
- Make neighborhoods healthier places to live;
- Support “carbon neutral, climate-ready” neighborhoods;
- Invest in Boston’s largest park, Franklin Park.

How might this impact redevelopment of Shattuck at Morton Street? With respect to the Franklin Park, which surrounds the Shattuck Campus on three sides, Imagine Boston recommends enhancing Franklin Park as a keystone park in the geographical heart of the city; boosting programming and creating more clear entrances; building on current efforts to activate the edge of the park to strengthen connections to local communities; and to couple investment with implementation of the recent master plan for Harambee Park.

Imagine Boston as the comprehensive master plan, is the overarching plan for the City of Boston. As a large City, Boston has developed a number of subject and neighborhood-based plans to inform and guide policies and programs in the City of Boston. The relevant plans to the future of the Shattuck Campus are noted in the following table.

Relevant City of Boston Plans

PLANS	OVERVIEW
Imagine Boston 2030	Comprehensive master plan for the City of Boston prepared in 2015-2017.
Boston Public Health Commission's 2015-2018 Strategic Plan	This plan identifies five high-level goals driving the work of the Public Health Commission, namely strategic leadership; health equity to build citywide capacity to effectively address racial and ethnic inequities; informatics & surveillance; high performing public health programs; and workforce development.
Climate Action Plan, 2019 Update	The 2019 Update outlines Boston's 5-year work plan to reach carbon-neutrality and cut car emissions. Specifically, Boston intends to require net zero carbon buildings for all affordable housing receiving City funds by 2030, strengthen green building requirements for all new construction; and develop a plan to decarbonize existing buildings. Boston is prioritizing active transportation investments and sustainable parking. The plan also calls for renewable energy and a plan for deployment of carbon-neutral district energy micro-grid systems.
Franklin Park Master Plan	The Boston Parks Department selected a consultant team to help develop the Franklin Park Master Plan in April 2019. Franklin Park master planning and public engagement is anticipated in 2019-2020.
Go Boston 2030 – Vision and Action Plan	Go Boston is the City's transportation master plan, with three principles – equity, economic opportunity, and climate responsiveness – underpinning the vision for all residents to better and more equitable travel choices, where efficient transportation networks foster economic opportunity, and where Boston has taken steps for climate change, and whether traveling by transit, bike, foot or car all Bostonians will be able to access all parts of the City reliably and safely. A Go Boston project is a multi-use path extending from the southwest corridor to the Blue Hills, traversing the edge of Franklin Park and Morton Street. Go Boston also calls for smarter signal technology along Morton Street.
Greenovate, 2014	Greenovate is Boston's community-wide climate action plan and update aiming to reduce green house gas emissions by 25% below 2005 levels and 80% by 2050 and plans to create a more sustainable city addressing social equity, economic development, public health and safety.
Health of Boston, 2016-2017	The Health of Boston report provides descriptive data on the health status of Bostonians and factors influencing health.
Housing A Changing City, Boston 2030	Housing Plan adopted in 2014 calling for 53,000 new units of housing within Boston by 2030, including 6,500 new affordable housing units, of which 1,700 will be for extremely low-income residents.

PLANS	OVERVIEW
Housing A Changing City, Boston 2030 – 2018 Update	Housing Plan increases the number of new housing units needed by 2030 to 69,000 given Boston’s growing population, including 15,820 income-restricted long-term affordable units.
Long Island Master Plan	The City of Boston has retained a consultant team for development of a master plan for a recovery campus on Long Island. The Mayor has announced that the plan will entail services requiring 500 beds. The Long Island Master Plan is in development and has not been released.
Mattapan Economic Development Initiative	The Mattapan Economic Development Initiative (MEDI) developed with the community by the BRA in 2006 established five broad strategies. They are: business expansion and new business recruitment; increase residential density along commercial corridors through mixed-use development; enhance Mattapan’s accessibility and build upon MBTA improvements; develop incentives for redevelopment in Mattapan’s commercial areas; and institute a MEDI implementation team.
Open Space and Recreation Plan 2015-2021	The Open Space & Recreation Plan (OSRP) is a prerequisite plan to enable eligibility for state park and LAWCON funding and must be updated every 5 years and approved by DCR. The 2015-2021 OSRP for Franklin Park specifically calls for: increased neighborhood partnerships; focus on rehabilitation of basic infrastructure including paths, drainage systems, site furnishings as well as soils and plant health; implementation of Franklin Park Maintenance Yard master plan; oversee water quality assessment and treatment plan for Scarborough Pond; facilitate constituency coordination for programming, maintenance and fundraising; and respond as needed to neighborhood needs for recreation and picnic tables. The OSRP Open Space Inventory lists Morton Street as a parkway.
Plan: Mattapan	Plan Mattapan was launched in October 2018 by BPDA with the themes of preserve, enhance, grow. The neighborhood planning process is underway with completion in 2020. Major topic areas are open space/ climate resilience; jobs and business; arts/ culture/ community; housing; transportation and mobility; and public realm improvements.
Plan JP-Rox	The geographic focus of Plan JP-Rox stretches from Jackson Square along Columbus Avenue to Eggleston Square and along the Washington Street corridor south to Forest Hills, taking in portions of Jamaica Plain and Roxbury. The Plan calls for improved connections to large anchor open spaces, like Franklin Park; better east-west connections with Franklin Park, and wayfinding and signage towards Franklin Park. The Plan highlights the MOU between the City and MBTA for redevelopment of a minimum of 8 acres at the Arborway for housing with 50% affordable units, youth recreation, and mixed-use development.
Vision Zero	The goal of Vision Zero is to eliminate fatalities and serious accidents due to traffic crashes by 2030. To achieve this goal Boston aims to reduce speeds, build safer streets, tackle distracted driving and engage Bostonians to improve safety.
Zero Waste Boston	Zero Waste Boston’s has established a goal of increasing the commercial and residential recycling rates from the current 25% to 40% by 2025; 50% by 2030; 80% by 2035 and 90% in 2050. Four strategies, namely: (1) reduce and reuse; (2) increase composting; (3) recycle more and recycle right; and (4) inspire innovation are being pursued to reach goals.

Regulatory Context

Prior to commencement of major renovations or construction, it is useful to understand the regulatory context. The Shattuck Campus is located wholly within the City of Boston. The Shattuck Campus is owned by the Commonwealth of Massachusetts and is under the control of and operated by the Department of Public Health. Depending upon the uses of the future redevelopment of the Shattuck Campus, the extent of the regulatory review will vary. It is possible that proposed redevelopment could require a MEPA review, historic reviews, and possibly local zoning. Discussion of each of these three regulatory reviews follow.

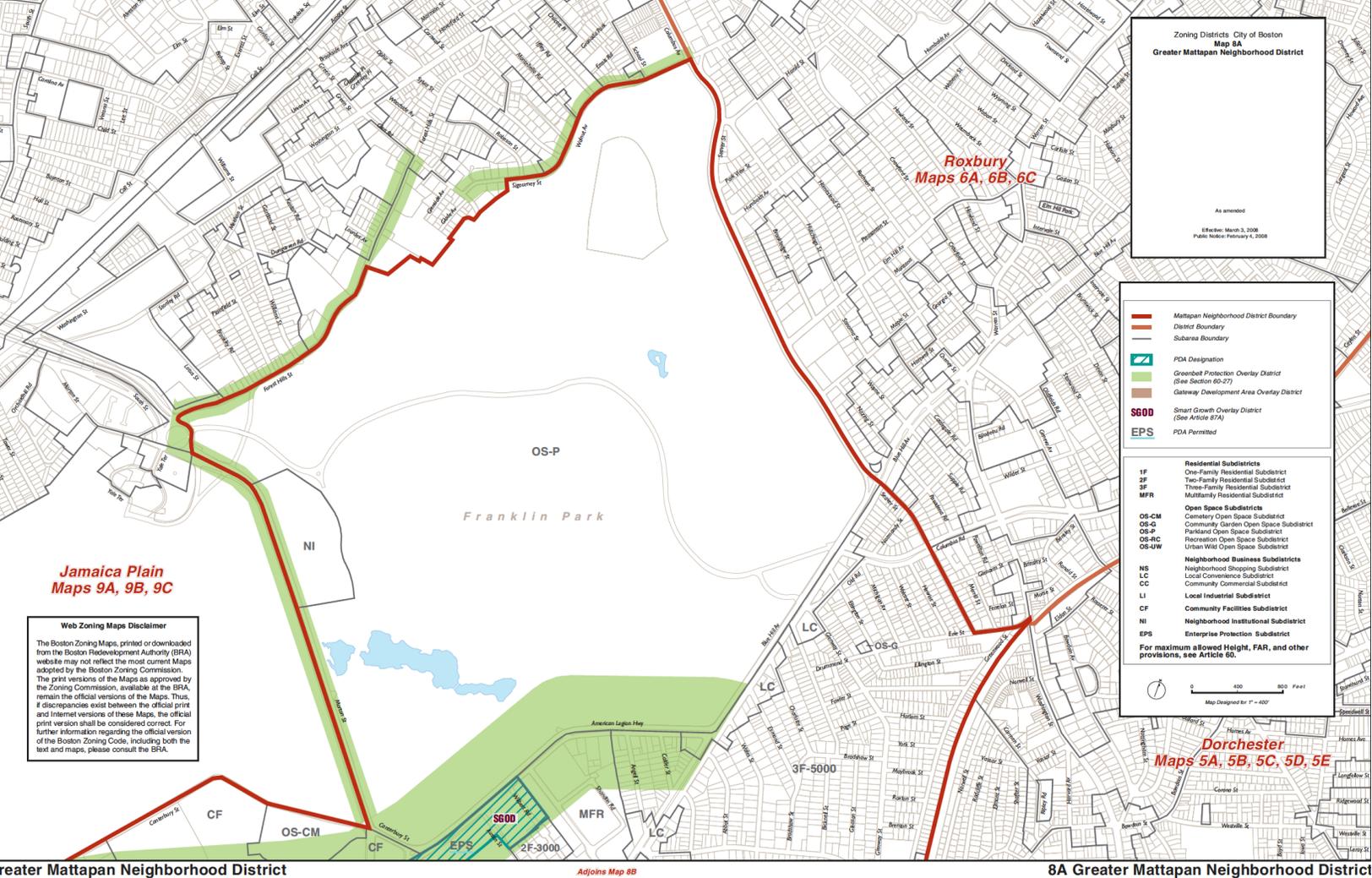
MEPA

Commonwealth projects exceeding certain thresholds are reviewed through the environmental review and consultation process required by the Massachusetts Environmental Protection Act (MEPA). The Executive Office of Environmental Affairs' MEPA Office oversees the energy and environmental review and consultation process required by MEPA.

It is important to note that MEPA review is not a permitting process. MEPA does not approve or deny projects. It is a review and consultation process of potential environmental impacts and prospective feasible mitigation approaches that is open for public comment and input. The MEPA office of the Executive Office of Environmental Affairs administers the review and consultation process.

Historic Review

DCAMM files Project Notification Forms with the Massachusetts Historical Commission (MHC) for all major projects. Although the Shattuck Campus is not an historic resource, it is surrounded by National Register and State-Register-listed historic properties, namely Franklin Park, the Emerald Necklace, and Morton Street as part of the metropolitan parkway system. In addition, Franklin Park and the Emerald Necklace are both designated as City of Boston landmarks. Any consultation with MHC will include Boston Landmarks Commission.



Below: Greater Mattapan Neighborhood District Zoning Map (8A) for the Shattuck Campus area.
 Source: Boston Planning and Development Authority.

Zoning

The Commonwealth is generally exempt from municipal zoning when its property is being used for essential governmental functions. A 1949 restriction requires future redevelopment of the Shattuck Campus to be used for public health purpose consistent with the statutory and deed use restrictions.¹ Typically, the Commonwealth works closely with the City on projects of this scale and character, and therefore anticipates a collaborative process with opportunity for public input.

The Shattuck Campus is located within the Greater Mattapan Neighborhood Zoning District. It is zoned Neighborhood Institutional, NI, as noted in the figure below. A wide range of uses are allowed within the Neighborhood Institutional sub-district and are detailed in the table on the facing page. There is also the Greenbelt Protection Overlay District at the end of the Shattuck Campus along the Morton Street edge.

Permitted Uses in the Neighborhood Institutional Zone within the Greater Mattapan Neighborhood District

Note: uses listed below may/may not be permitted, as the future use will also need to serve a public health purpose consistent with the statutory and deed use restriction.²

ALLOWED USES IN NI DISTRICT	CONDITIONAL USES IN NI DISTRICT
<ul style="list-style-type: none"> • ATM • Post Office • Adult education center • Community center • Day Care Center • Day care center, elderly • Library • Places of worship • Art gallery • Museum • Public Art, display space • Elementary or secondary school • Kindergarten • Fitness Center or Gymnasium • Health Care Clinic • Clinical Laboratory • Hospital (less than 50,000 sf) • Nursing or Convalescent Home (<50,000 sf)) • Bed and Breakfast • Open space • Fire station • Police Station • Research laboratory • Group residence, limited* • Animal hospital • Cafeteria (accessory use) • Cultural use (accessory use) • Family day care home (accessory use) • Accessory home occupation • Accessory keeping of laboratory animals • Accessory offices • Accessory outdoor café • Accessory parking • Accessory personnel quarters • Accessory printing • Accessory professional office in a dwelling • Accessory services incidental to educational uses other than college or university use • Accessory storage of flammable liquids and gases (Small) • Accessory storage or transfer of waste • Accessory swimming pool or tennis court 	<ul style="list-style-type: none"> • Studios, arts • Studios, production • Theatre • Ticket sales • College or university • Professional school • Trade school • Private club not serving alcohol • Mortuary chapel • Health Care Custodial Care • Health Care Group care residence, general • Grounds for sports, private • Open space, recreational building • Automatic telephone exchange telecommunications data distribution center • Courthouse • Hospitals or Nursing or Convalescent homes – 50,000 sf or more • Outdoor pay phone • Sub-station • Congregate living complex • Transitional housing or homeless shelter • Cannabis establishment • Pawnshop* • Body art establishment* • Check cashing business • Container redemption center • Storage of Dumpsters • Airport related remote parking • Bus servicing or storage (accessory use) • Dormitory (accessory use) • Accessory services for apartment and hotel residents • Accessory storage of flammable liquids and gases (Large) • Accessory truck servicing or storage • Ancillary use <p style="text-align: right;">Source: Boston Zoning Ordinance, Article 60.</p>

Program Context

The Shattuck Hospital uses and services are moving in 2022 to the Newton Pavilion in Boston’s South End. This includes services operated by the state Department of Public Health, the Department of Mental Health and the Department of Corrections. In addition to these state-operated medical and psychiatric services, the Shattuck Campus also houses vendor-provided services that serve persons in recovery, persons needing mental health services as well as a homeless shelter. This section reviews the existing conditions of the services provided by vendors on the Shattuck Campus. It is anticipated that these services will remain operating within the region.

Existing Services

Currently, there are five vendors, nonprofit and for-profit, occupying approximately 60,759 SF of space and serving persons on the Shattuck Campus. The space occupied by vendors does not include the lobby, reception and security area of the hospital where people arrive, the laundry services, and kitchen and food preparation area for the hospital as well as general circulation areas, which comprise 130,800 SF. Vendors currently rely on shared services operated by the state within the Shattuck Hospital including laundry, food services, security, heat and utilities, and the medical health clinic.

Existing Vendor Program Space at Shattuck Campus

VENDOR/ PROGRAM	EXISTING SPACE PER PROGRAM (NET SF)	GROSS SPACE (SF)	BEDS
LARC	6,549	9,600	24
Women's Hope	6,549	9,600	32
Pine Street Inn Shelter	21,262	20,710	125
PSI: Men's Stabilization Program	11,451	19,200	54
Andrew House	6,152	9,600	32
Gill Mental Health Clinic	1,006	2,000	n/a
Health Care Resource Centers	1,665	2,200	n/a
High Point Detox	6,125	9,600	32
TOTAL	60,759	82,510	1,243

Source: MA DPH and Shattuck Hospital.

The 60,759 SF is net space used for program, excluding circulation space as well as shared services. The estimated gross space used by vendors, inclusive of circulation but excluding shared services is 82,510 SF, as noted in the table.

During interviews with program vendors, they all indicated the need for additional space and cited concerns regarding crowded conditions. Examples include insufficient space for private one-on-one counseling services and the inability to run large group sessions. Site visit observations further confirmed work and program conditions and the need for more and better designed space.

The vendors are: Bay Cove Human Services, Health Care Resource Centers, High Point Detox, the Pine Street Inn, and Victory Programs. Bay Cove operates two programs, Andrew House and the Gill Mental Health Clinic. Health Care Resource Centers operates a methadone-assisted treatment center. High Point Detox operates a 32-bed detox center. Pine Street Inn operates two programs. One is 54 bed men's stabilization program. The second Pine Street Inn program is the 125-bed men's emergency shelter with overflow capacity up to 130 beds. Victory Programs operates the Living and Recovering Community (LARC) program which has 24 beds and the Women's Hope program with 32-beds.

Plans for the continuation of the existing services offered by vendors at the Shattuck Hospital are needed.

Any new construction or substantial rehabilitation at the Shattuck Campus needs to incorporate flexibility so that the buildings can incorporate building standards, new technologies, best practices for zero emissions goals and changing practices as to utilities and services, and the program needs for services today and in the future.

Endnotes

- 1 Chapter 770 of the Special Acts of 1949.
- 2 Ibid

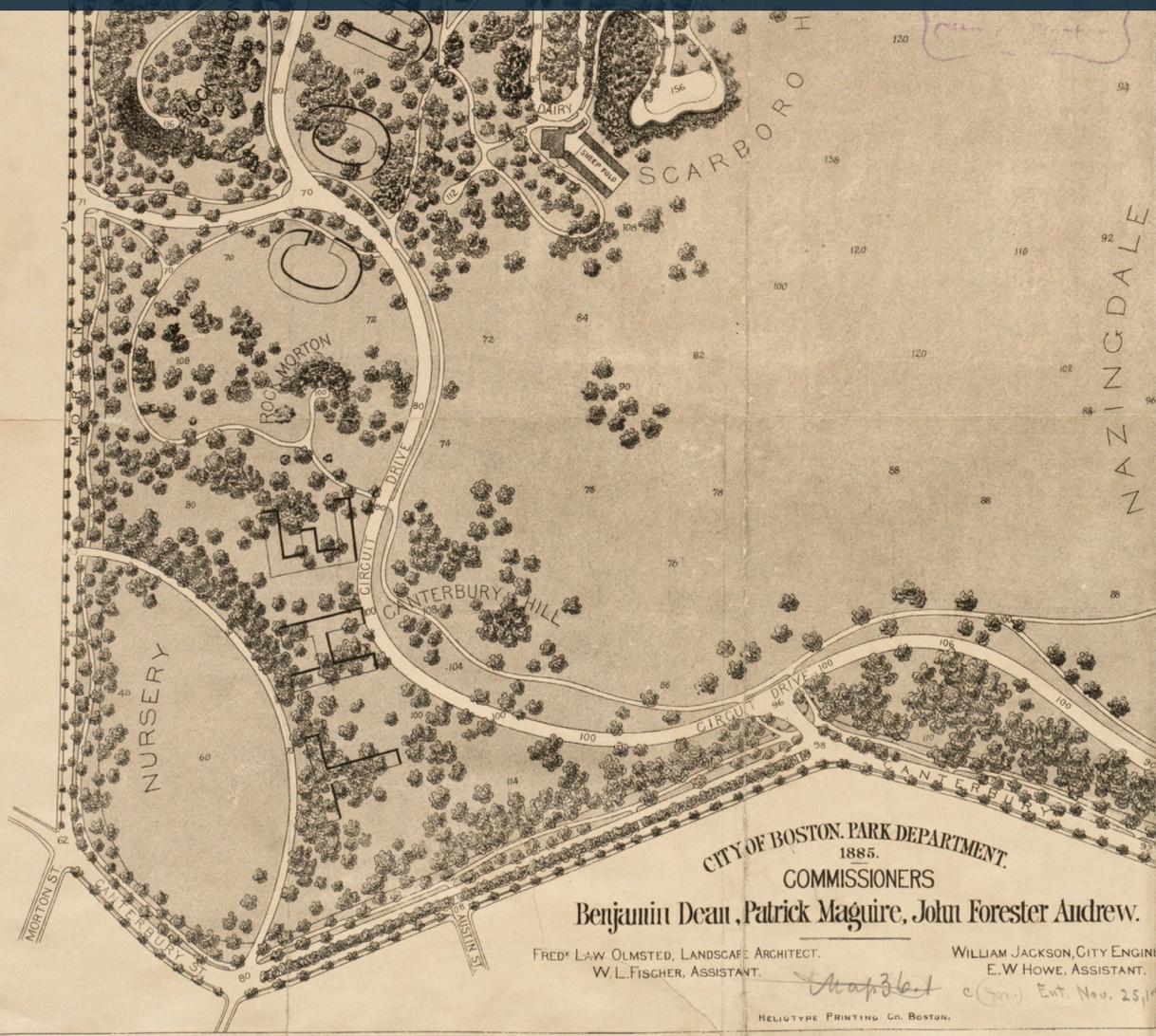
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HISTORY & CULTURAL CONTEXT



HISTORY & CULTURAL CONTEXT

Franklin Park, Olmsted & Shattuck

Understanding the history and cultural context for the Shattuck Campus contributes to the understanding of people and places. This chapter explores the history and development of the geography of Boston where the Shattuck Campus is located. It also examines the role and lives of Frederick Law Olmsted, well-known in the field of American landscape architecture and Lemuel Shattuck, well-known in the field of public health in Massachusetts. Their work informed and contributed to the setting and eventual development of the Shattuck Campus.

History

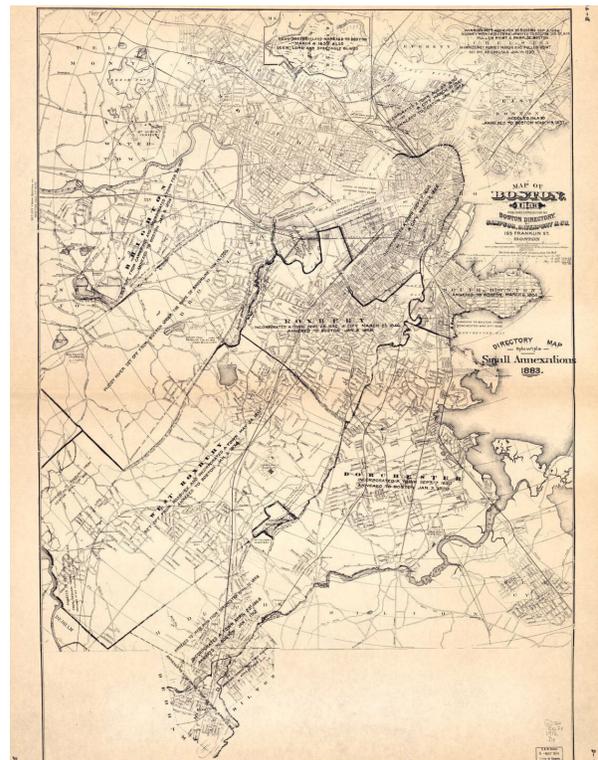
The chronicles of the physical growth of the City of Boston are intertwined with the history of the site of the Shattuck Campus at Morton Street. The land where the hospital and Shattuck campus are today was once farmlands in the Town of Roxbury in the early nineteenth century. In 1851, West Roxbury petitioned and succeeded from withdrawing from the Town of Roxbury, forming its own Town as a part of Norfolk County with the northern border being Seaver Street. Before the area surrounding the Shattuck Campus became part of the City of Boston, the Boston City Council, at the urging of prominent citizens, had identified land beyond the municipal boundaries of Boston to be used for city parks, including what they then described as West Roxbury Park.

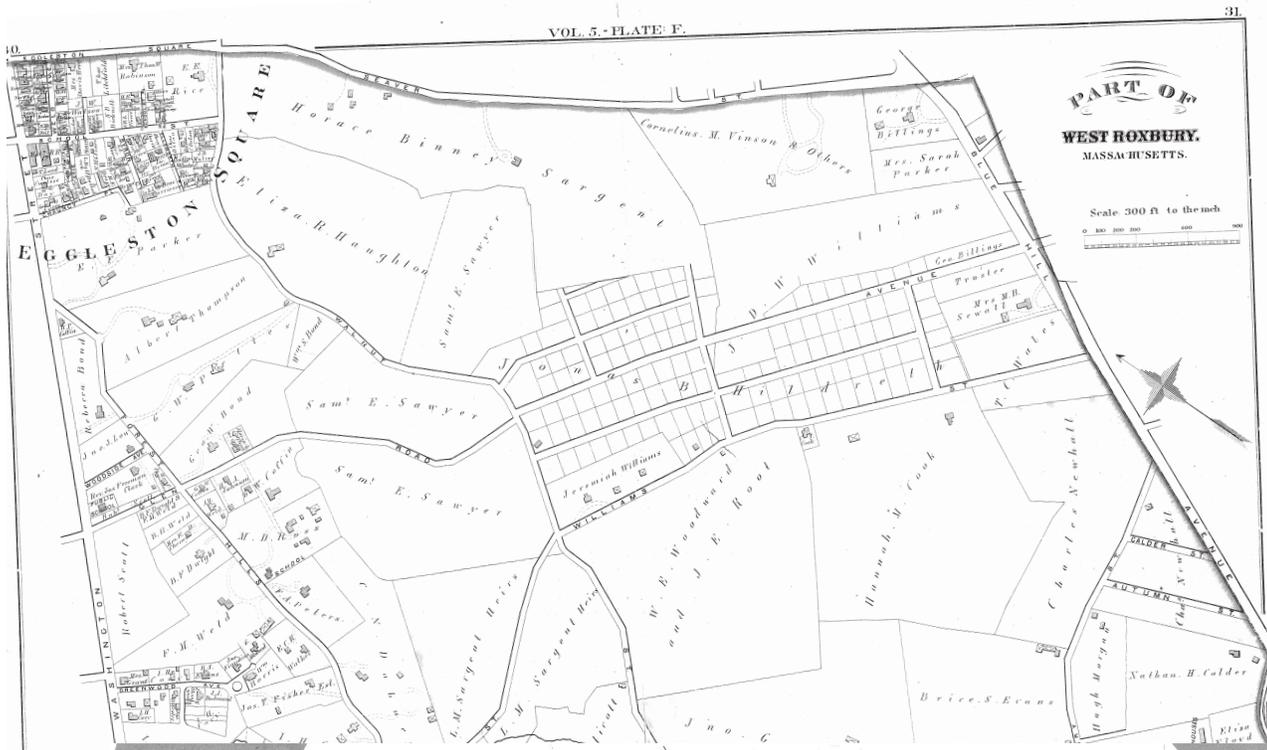
In 1874, Boston annexed all of the Town of West Roxbury into the City of Boston. Shortly afterward, the City of Boston had acquired the land for what was then known as West Roxbury Park. In 1882, the Board of Alderman for the City of Boston, acting as the trustees of the Franklin Fund, recommended the use of the centennial

earnings of the Franklin Fund that would come available in 1891-1992 be used for the acquisition of the lands for West Roxbury Park. In honor of Benjamin Franklin, with the funds from the Franklin Fund, the park was renamed Franklin Park in 1885.

Frederick Law Olmsted, a pioneer of landscape architecture in America, began working with the Boston Park Commissioners in 1878. Olmsted's work to design Franklin Park began in 1886 and continued for over the next decade through 1896. Several parks, towns, and cities across America were designed by Olmsted throughout his career.

Below: Annexation Map, 1883. Source: Boston Planning & Development Agency.





Above: West Roxbury Atlas, 1874. Source: Suffolk County Registry of Deeds.

In 1949, the Massachusetts General Court enacted legislation, Chapter 770 of the Special Acts of 1949, authorizing the City to transfer up to fifteen acres to the Commonwealth for public health purposes. The Commonwealth constructed the campus, including a hospital and related facilities to address chronic diseases. According to the survey, the land transferred to the Commonwealth was 12.98 acres (which can be found in the Appendix).

In subsequent years, the state legislature appropriated design and construction funds. The 600-bed Shattuck Hospital was created to serve persons with chronic diseases, a nurses home, outpatient department and other facilities. The Lemuel Shattuck Hospital opened in 1954, including a separate twelve-story nurses building.

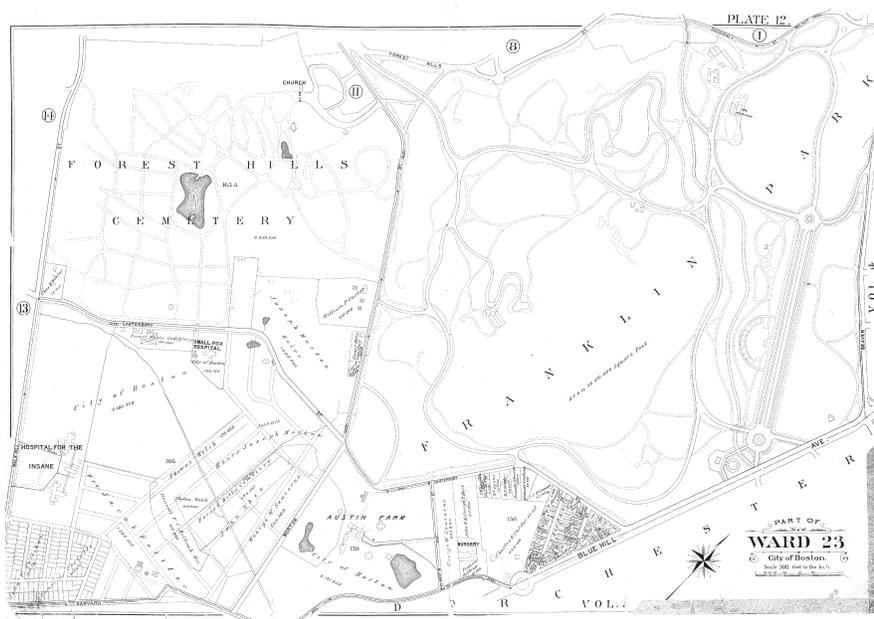
The hospital and Shattuck Campus at Morton Street have a distinguished history of public health care and services for some of the Commonwealth's most vulnerable residents. The Shattuck Hospital is a teaching hospital which collaborates with Harvard, Tufts, and Boston University College of Medicine. The Shattuck School for Licensed Practical Nursing provided education and training for nurses until it closed in 2000.

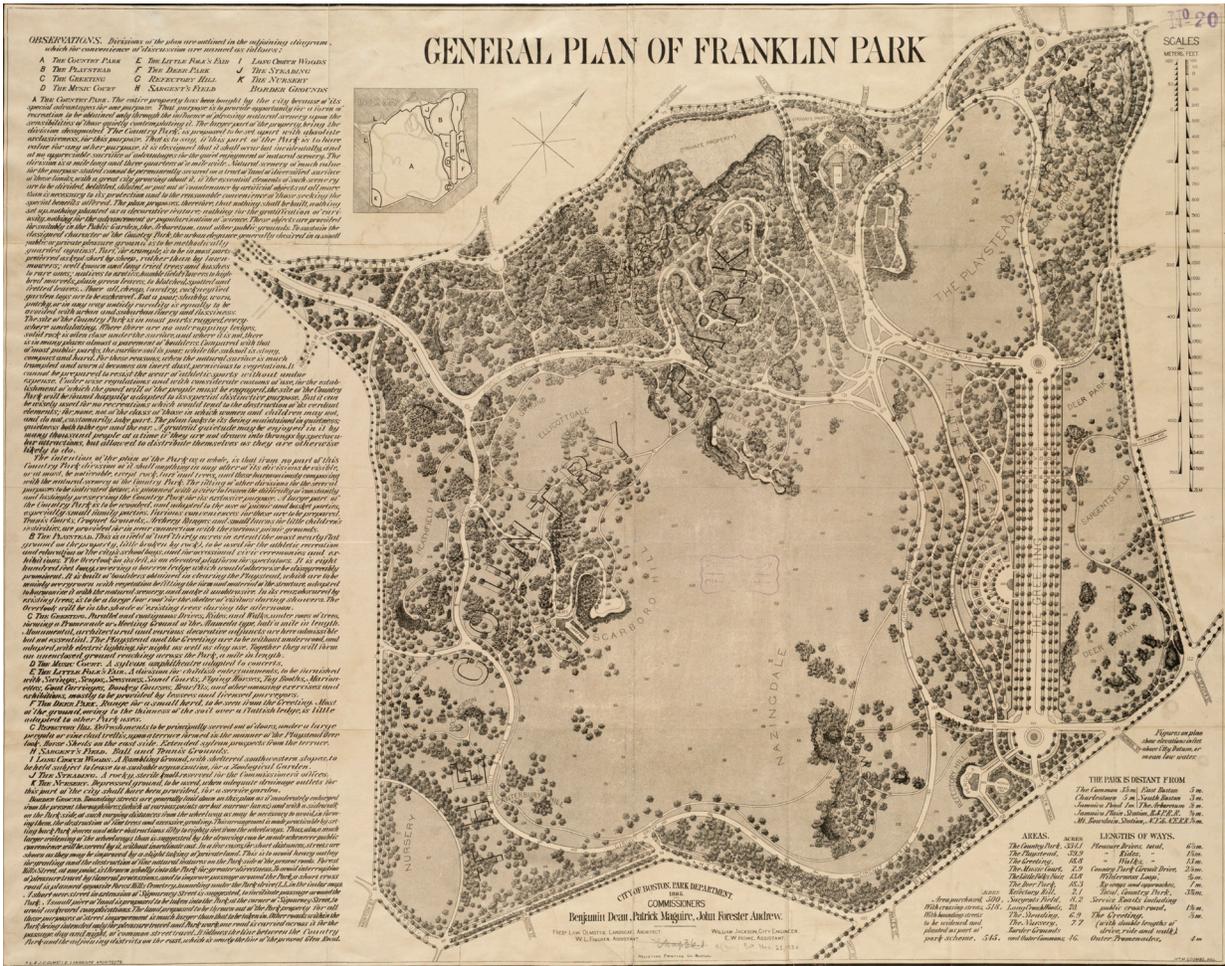
An on-site day care center serving staff and neighborhood residents was founded by the local chapter of the National Council of Jewish Women in 1969 at the campus. It was renamed in 1989 as the Shattuck Center for Day Care. It continued to operate in the nurses/personnel building until it was closed in 2013 and the building was demolished.

In addition, the site has historically been used to meet the immediate medical needs of the Commonwealth.

- The first dedicated HIV unit in New England opened at the Shattuck in 1984.
- The medical facilities operated by the Department of Corrections at the Shattuck were a result of a successful pilot project funded by the federal Law Enforcement Assistance Administration, that was then funded and institutionalized by the Commonwealth.
- The shelter opened on the campus in response to Boston's crisis and growing homeless population in 1983.
- A TB unit was opened in 1988 after new outbreaks of tuberculosis.

*Right: West Roxbury Atlas, 1896.
Source: Suffolk County Registry of Deeds.*





Above: Plan for Franklin Park, c.1885. Source: Norman B. Leventhal Map Center Collection, Boston Public Library.

- The public detox unit opened at the Shattuck in 1991.
- Vendors, including nonprofit organizations, providing extended treatment for substance use disorders were located on the campus throughout the past three decades; several vendors were located on the campus after the closure of services on Long Island.
- In 2017, continuing with the public health mission and track record of innovation and addressing health crises at the Shattuck Campus, the Commonwealth initiated a planning process to locate supportive housing on the Shattuck Campus site, for persons facing chronic homelessness, who often also have other chronic illnesses. This need for supportive housing is in response to the crisis of homelessness and severe lack of affordable housing in Boston and eastern Massachusetts. In addition, health

care providers have identified housing as a prerequisite for health and wellness, particularly for vulnerable and at-risk populations.

- In 2018, the Executive Office of Health and Human Services announced that the Shattuck Hospital with the state-operated medical units, namely Department of Corrections, Department of Mental Health, and the Department of Public Health's medical services would be relocating from the Shattuck Campus on Morton Street to the Newton Pavilion building in Boston's South End.

In the past sixty-five years, the mission of the Shattuck Campus has evolved to meet the changing and continuing public health needs of the Commonwealth's residents, particularly with chronic illnesses, including substance use disorder services and recovery.

Cultural Legacy: Shattuck and Olmsted

The work of two notable pioneers in the nineteenth century, Lemuel Shattuck and Frederick Law Olmsted, have significantly contributed to and framed the development and use of the Shattuck Campus at Morton Street site.

Lemuel Shattuck (1793-1859) was a teacher, merchant, statistician, Boston City Councilor, and State Representative in the Massachusetts General Court. Lemuel Shattuck served as the commission chair and principal author of the "General Plan for the Promotion of Public and Personal Health, 'The Sanitary Survey of 1850,'" which was authorized by the state legislature. This was a seminal and widely influential document that laid the groundwork for establishing the Massachusetts State Board of Health in 1869. The report was republished at its centennial when the American Public Health Association met in Boston, and is now commonly referred to as the Shattuck Report. Many of the report's principles to this day, inform and

guide the practice of public health. The hospital and campus at the Shattuck Campus at Morton Street is named after Lemuel Shattuck.

Frederick Law Olmsted (1822-1903) was a journalist, social critic, public administrator, and park designer, who became well-known in the field of landscape architecture. Frederick Law Olmsted served as Executive Secretary of the US Sanitary Commission from 1861 to 1863. Olmsted undertook numerous commissions to design landscapes, parks and park systems, as well as town and city plans; his work includes Franklin Park and the Emerald Necklace. In addition to park design, Olmsted designed residential communities, most notably Riverside, Illinois, and several mental health asylums, including McLean in nearby Belmont, Massachusetts, and Buffalo State and Hudson Valley Psychiatric Hospitals in New York. Olmsted's philosophy and approach to landscape design was and continues to be widely influential. The Shattuck Campus at Morton Street is surrounded on three-sides by Franklin Park.

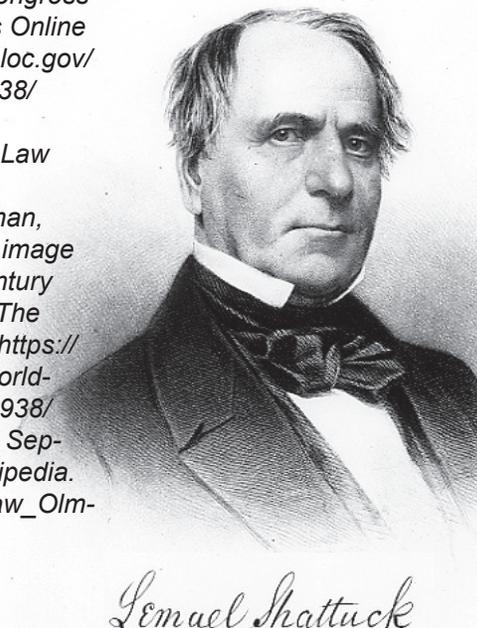
Although Olmsted was born nearly thirty years after Lemuel Shattuck, he contributed to the advancement of the nineteenth century reform

Right: Lemuel Shattuck.

Source: Library of Congress Prints & Photographs Online Catalog, <https://www.loc.gov/pictures/item/98519338/>

Far Right: Frederick Law Olmsted.

Source: James Notman, Boston; engraving of image later published in Century Magazine (source) - The World's Work, 1903: <https://archive.org/stream/world-work06gard#page/3938/mode/2up> Accessed September 19, 2019, [wikipedia.org/wiki/Frederick_Law_Olmsted](https://www.wikipedia.org/wiki/Frederick_Law_Olmsted)



Lemuel Shattuck



movements for better sanitary conditions, public health and parks.

Shattuck, as a statistician and advocate for better vital records, used a data-based approach to advocate for better health and hygiene. Olmsted, nine-years following the issuance of the Shattuck Report, became the executive of the US Sanitary Commission and similarly applied a data-base approach for surveying soldiers.

Both Shattuck and Olmsted cared about open spaces, landscape, and how each can integrate with towns and cities. The Shattuck Report advocates:

*that open spaces be reserved, in cities and villages, for public walks; that wide streets be laid out; and that both be ornamented with trees. Such an arrangement would have a good effect upon the beauty and social enjoyments of the place; but it would have a greater effect upon its general sanitary condition. Vegetation would absorb much of the carbonic acid gas which is produced in so great superabundance in populous places, and thus render the air more fit for respiration. Open space also would afford to the artisan and the poorer classes the advantages of fresh air and exercise, in their occasional hours of leisure.*¹

Olmsted's design approach to parks was for persons from all walks of life to be able to experience the landscape and immerse themselves in the scenery. He viewed this as therapeutic and restorative.²

Shattuck and Olmsted adopted many of the premises of the miasmatic theory of health. They were both forerunners in linking experiencing nature to overall well-being. Numerous studies in the late twentieth century and twenty-first century have scientifically confirmed the healthful effects of nature to mental health and social connectedness and well-being.³

Olmsted valued the social and cultural advantages of the city. He sought to integrate restful and peaceful qualities of the landscape in urban

areas. He created hubs, such as large parks, preserves and working lands, that were connected by links which were vegetated corridors.⁴

Riverside in Illinois is a well-known example of an Olmsted designed residential community. Olmsted's design philosophy of incorporating curvilinear shapes, generous spaces, tree shading, green lawns, each integrating with the surrounding buildings, imply leisure, contemplativeness and tranquility. He used shaped green spaces to shield the houses from the direct view of those passing through the village, providing a landscape view to passers-by. A system of sidewalks and paths provide safe and pleasant access throughout the community.

Olmsted undertook the landscape design of some residential asylums. Olmsted believed that the grounds and surrounding lands should support recovery with plenty of open space, scenic vistas, fresh air and sunlight. Olmsted worked to advance the innovation of the cottage plan in the late nineteenth century to residential institutions – introducing smaller buildings and pastoral plantings.

Gazing at attractive vistas was thought to be curative. Olmsted incorporated soft edges into designs so that there was a continuous unfolding of new views as the user moved through the landscape, the town or the City, or as they gazed at the natural surroundings. Olmsted included what he termed as “pleasure grounds” in the design of park systems, as well as asylums. Pleasure grounds would include open spaces, trees, places to picnic, as well as contemplate. Historically, the pleasure grounds and landscape served as a permeable boundary between asylums and the nearby community.

Shattuck and Olmsted sought to advance health and well-being by integrating better sanitary conditions, open space, trees, fresh air, and sunlight into everyday life.



Above: Plan for Riverside, c. 1869.

Below: Olmsted/ Richardson; Complex in Buffalo (Originally the Buffalo State Asylum).

Source: <https://buffalo-niagaragardening.com/2013/09/24/see-new-landscape-design-at-richardson-olmsted-complex-in-buffalo-during-free-event/>



Endnotes

- 1 Shattuck Report, page 166.
- 2 Olmsted: The Genius Behind the Emerald Necklace.
- 3 Eisemann, Theodore S.
- 4 Olmsted Papers: FLO in Chicago.

8

SITE CONDITIONS



PHOTO: Franklin Park.

SHATTUCK CAMPUS SITE CONDITIONS

Summary of Existing Physical Conditions

The review of existing physical conditions of the Shattuck Campus at Morton Street includes five broad areas: natural features and landscape; buildings and the built environment; connectivity, access and transportation; utilities and infrastructure; and security and safety. The purpose is to provide a general overview of the project area and vicinity; convey an understanding of the physical conditions of the site, its assets and opportunities, and inform the future use of the Shattuck Campus to continue serving public health needs.

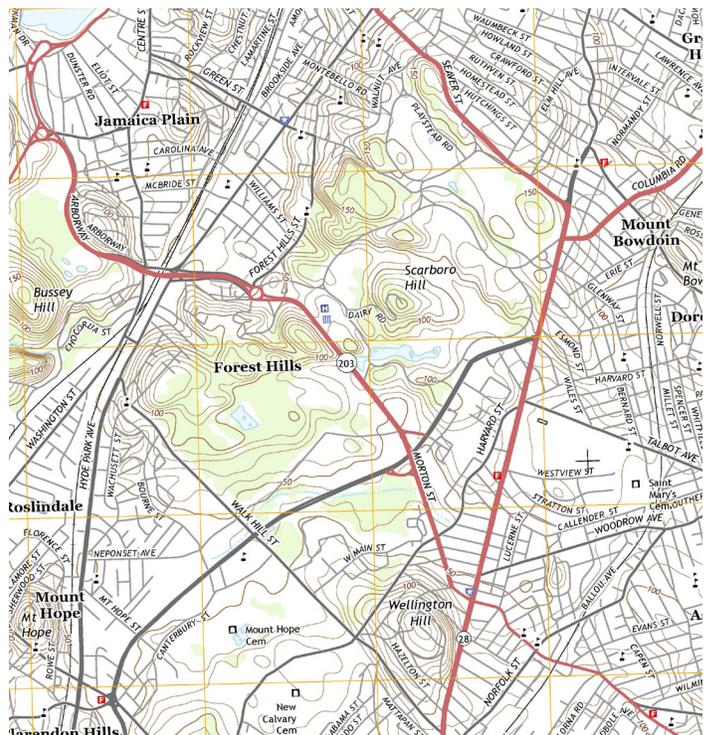
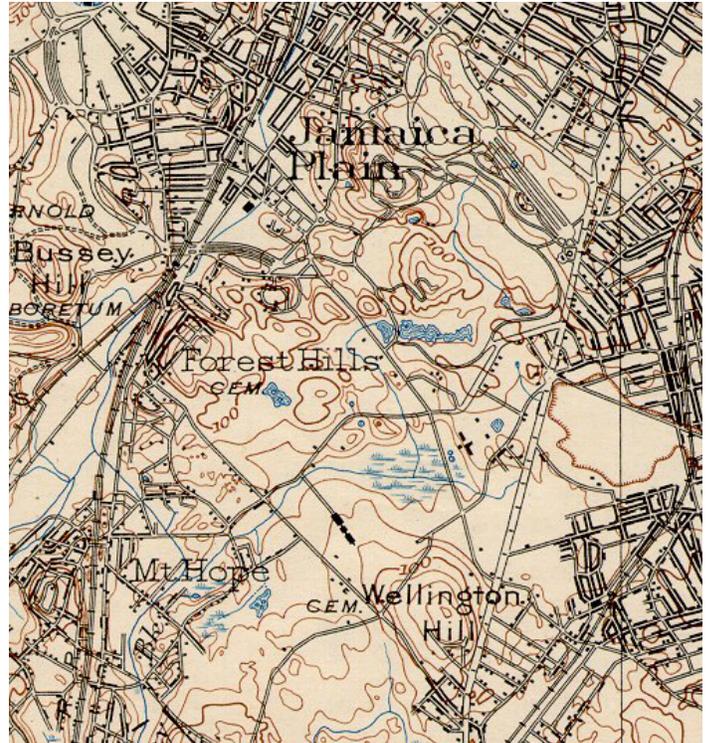
Site & Environment: Topography

The Shattuck Campus at Morton Street is situated at 80 feet above sea level. The entry to the site from Circuit Drive is on a gradual incline. The site topography is varied with a range exceeding 20 feet within the site. To the east of the site, located another 30 feet higher, are Morton Rock and Rock Milton. A review of the historic and present day US Geological Service topographic maps over the past century for Morton Street show the topography largely unchanged.

Top Right: 1903 USGS Topographic Map of the Morton Street Area.

Right: 2015 USGS Topographic Map of Shattuck Campus at Morton Street Vicinity.

Maps courtesy of USGS.



Natural Features

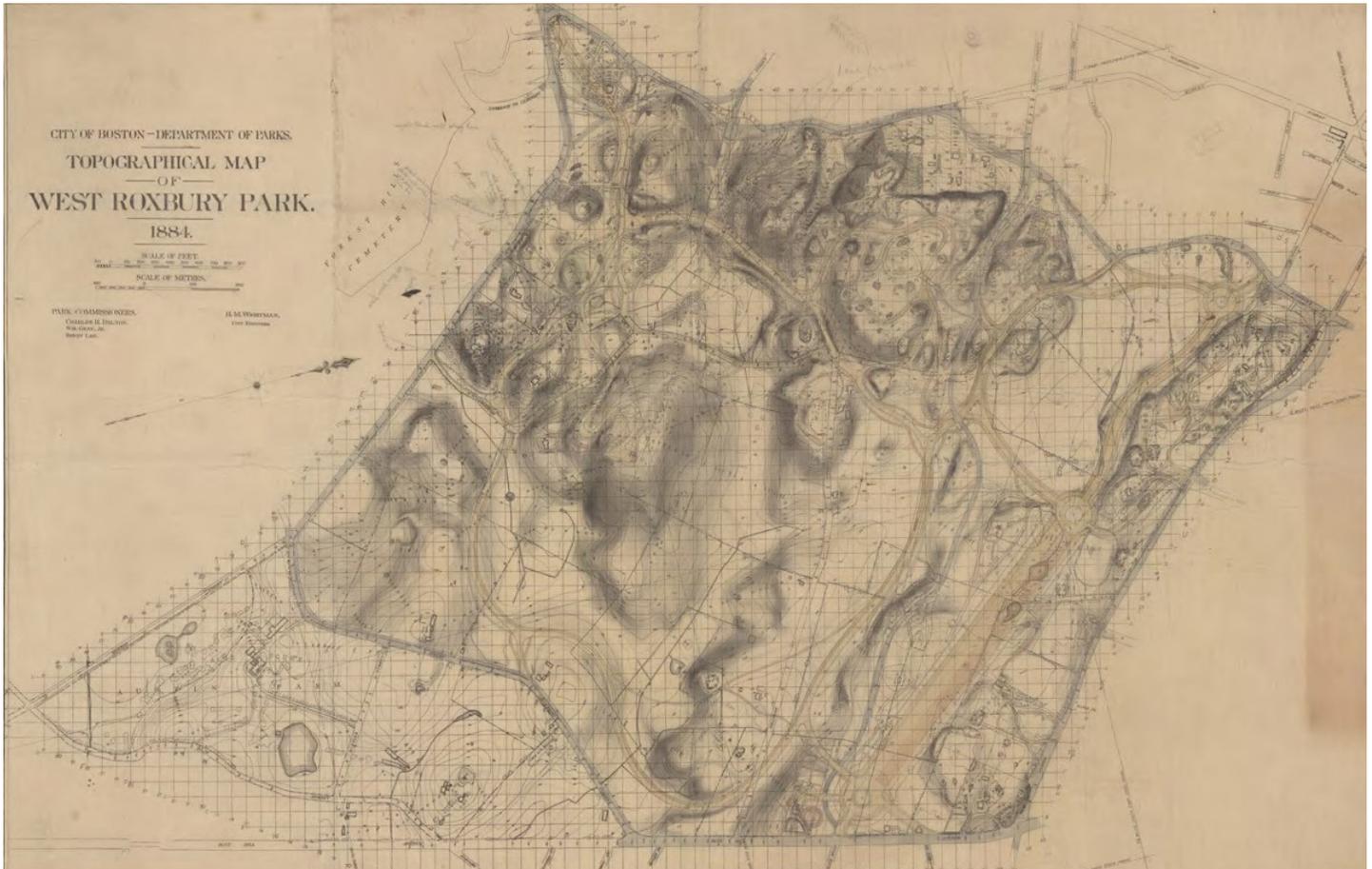
The natural land area of the Shattuck Campus at Morton Street is based on drumlins left behind from glacial flows within this region. In the 1950s, the site was altered in part, but evidence of the drumlin character is seen particularly on the eastern edges of the site.

To the north, across Circuit Drive, are wooded areas along with meadows, some of which is used for active recreation. At the southwest side

of the hospital building, there is a significant elevation change. At the northwestern edge and vehicular entrance to the Shattuck Campus from Circuit Drive, there is a wooded area.

The Shattuck Campus site has views to Franklin Park to the northeast, attributable in part to the higher elevation of the campus.

Below: 1884 Topography and Landforms of Shattuck Campus and Vicinity.



Flood Plain & Wetlands

The Shattuck Campus is situated in an area of minimal flood hazard, Zone X. The flood plain conditions, are described as a lack of risk as determined by the Federal Emergency Management Agency (FEMA), which is noted in the Firmette, depicted. There are no wetlands on the existing campus.

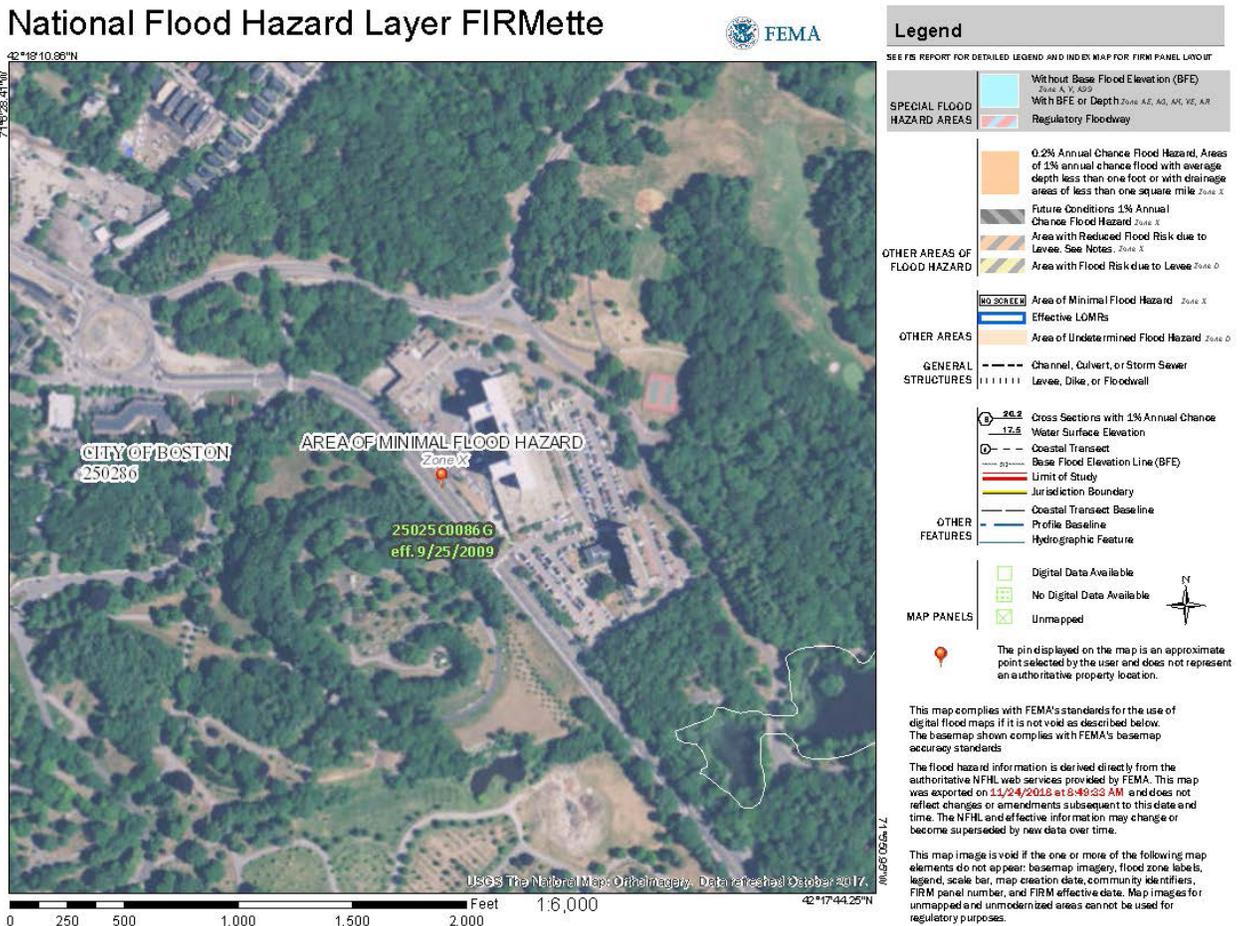
Water

The nearest body of water to the Shattuck Campus is Scarboro Pond. It is an artificial body of water constructed in 1893 as part of Olmsted's design. Originally, Scarboro Pond encompassed seven acres, but part of it was filled in 1935-36 when the meadow was redeveloped for the golf course. Currently Scarboro Pond consists of 6.1 acres of water.

It is considered an impaired water body due to the existence of non-native aquatic macrophytes. It has not been assessed as to fish consumption quality.

Scarboro Pond is considered to be part of the Stoney Brook Watershed. Stoney Brook is part of the Lower Charles River Watershed.

Right:
Flood Plain
Firmette.



Habitat

The Massachusetts Natural Heritage and Endangered Species Program has no identified priority habitats or habitats of endangered species within the Shattuck Campus site or adjoining Franklin Park and Forest Hill Cemetery areas.

Below: Wetland and Wetland Change Areas Map. Source: MGIS and MA Department of Environmental Protection.



Soils

The dominant underlying geology is the conglomerate Roxbury pudding stone, which is found within and beneath the drumlins. It is also evident in rock outcroppings. Eighty percent of the soils on the Shattuck Campus are classified as urban land with zero to fifteen percent slopes. On the northern edge of the site along Circuit Drive, four other soil types are found.

They are the:

- Charlton-Hollis-Rock outcrop complex, 8 to 15% slopes (approximately 8.1% of the land area);
- Charlton-Hollis-Rock outcrop complex 15 to 25% slopes (approximately 2.4% of the land area);
- Hollis-Rock outcrop-Charlton complex with zero to fifteen percent slopes (approximately 5.2% of the land area); and
- Canton fine sandy loam with 15 to 35% slopes (approximately 3.1% of the land area).

Below: Soils Map of the Shattuck Campus. Images courtesy of USDA, Natural Resource Conservation Service.



Landscape

The Shattuck Campus today is principally composed of hardscape and two large buildings. There is limited permeable surface on the campus. Some small planting and shrubbery areas are found along the approach to and at the front of the main hospital building. Planting strips including some with trees can be found dotting the large asphalt parking lot. The parking area has a small quantity of pole mounted lights. A small pocket park with trees is situated on the northwest edge of the site, outside the entrance to the homeless shelter.

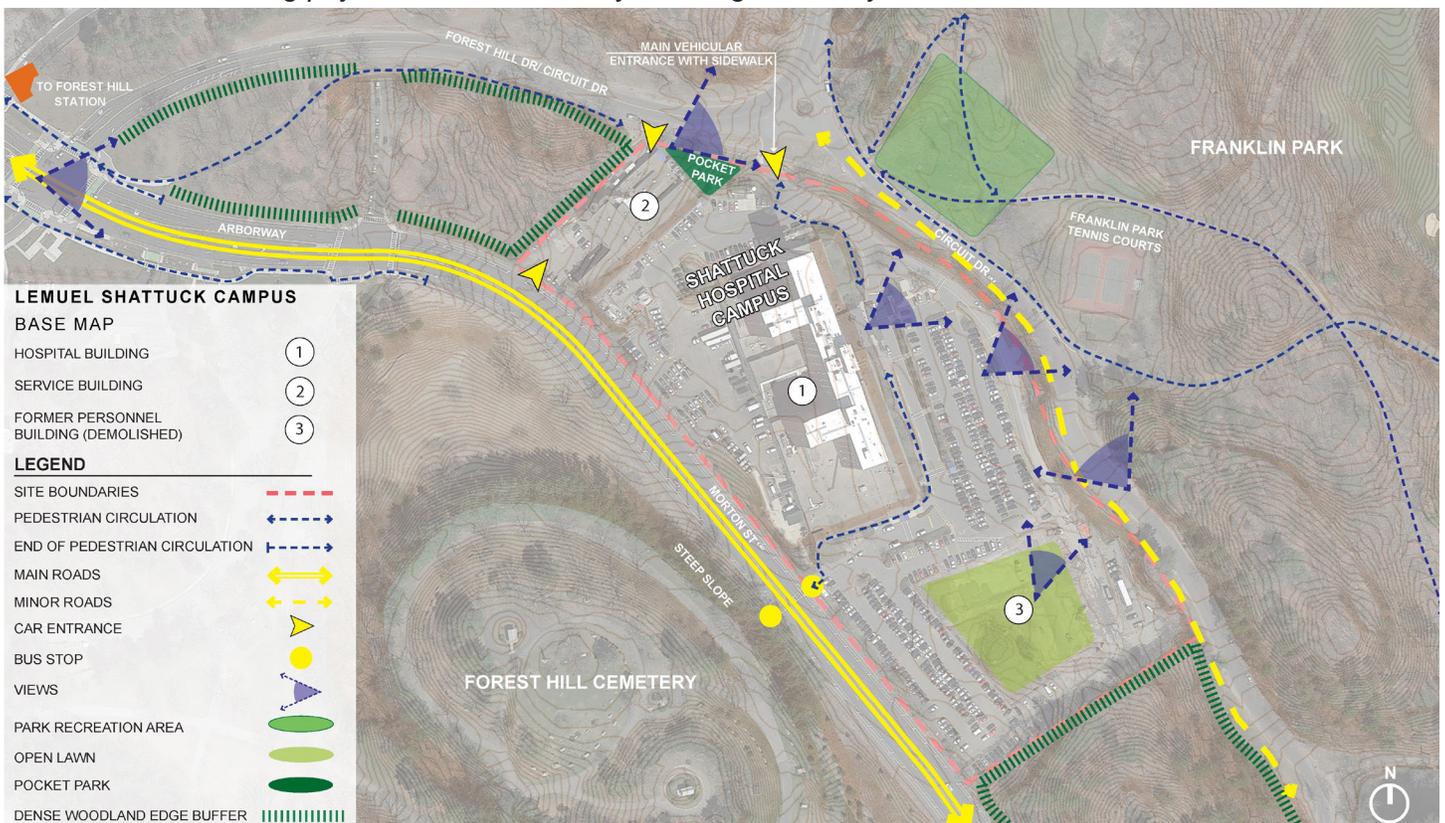
The eastern edge of the campus along Circuit Drive has a grassy incline ranging from 6 feet to 25 feet in width along perimeter of the parking lot and internal circulation route to the fence line. Within the grassy area, a variety of small trees are found. There are a few breaks in the

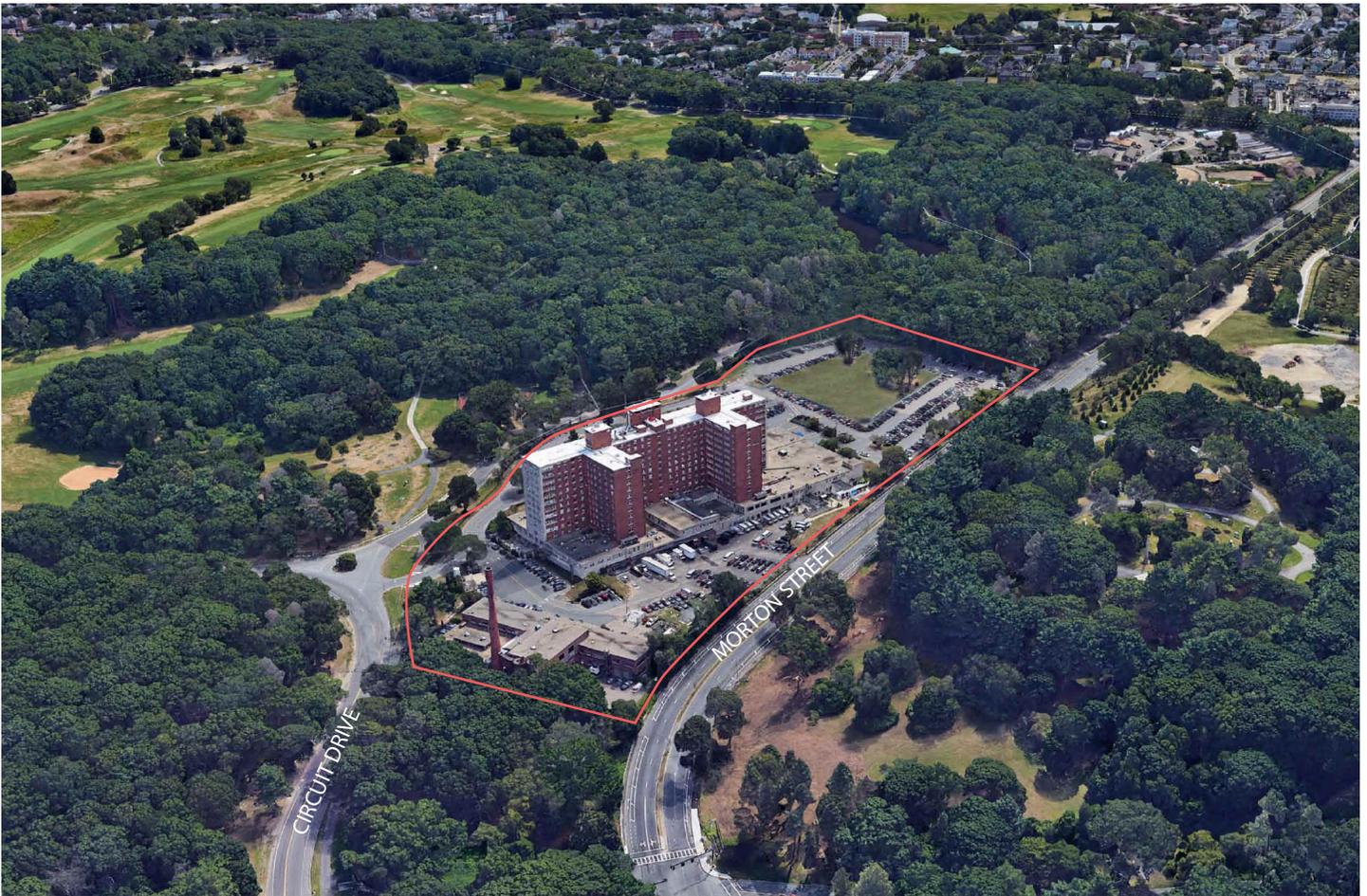
line of trees providing views into Franklin Park where the tennis courts and a softball field are situated. Circuit Drive on the eastern edge of the Shattuck Campus is an internal parkway within Franklin Park. It has been recently resurfaced and allows limited use by motor vehicles. This segment of Circuit Drive east of the small traffic circle is tree-lined, bucolic and used principally by bicyclists and walkers.

The southerly edge of the Shattuck Campus borders a woodland area with rugged and steep slopes to Morton Rock and Rock Milton. The campus perimeter chain link fence blocks access to Morton Rock.

The western edge of the Shattuck Campus is along Morton Street. Morton Street and its right-of-way are considered part of the metropolitan

Below: Existing physical conditions analysis. Image courtesy of HRiA Team.





ABOVE: Shattuck Campus site between Franklin Park and Forest Hills Cemetery. Image: GoogleMaps and HRiA Team.



LEFT: Stairs, Franklin Park. RIGHT: Sloped grade at western edge of Shattuck Campus. Images: HRiA Team.

park system listed on the state and National Registers of Historic Places. The Morton Street perimeter of the Shattuck Campus has a two- to three-foot high granite block wall in fair-to-poor condition that abuts the backside of a narrow sidewalk. The granite wall, while handsome, needs restoration, and some of the invasive plants removed. Beyond the granite perimeter wall on the campus is a narrow grassy area on an incline with trees. Within the Morton Street right-of-way, there is an undersized, painted bike path running parallel with the curb-line.

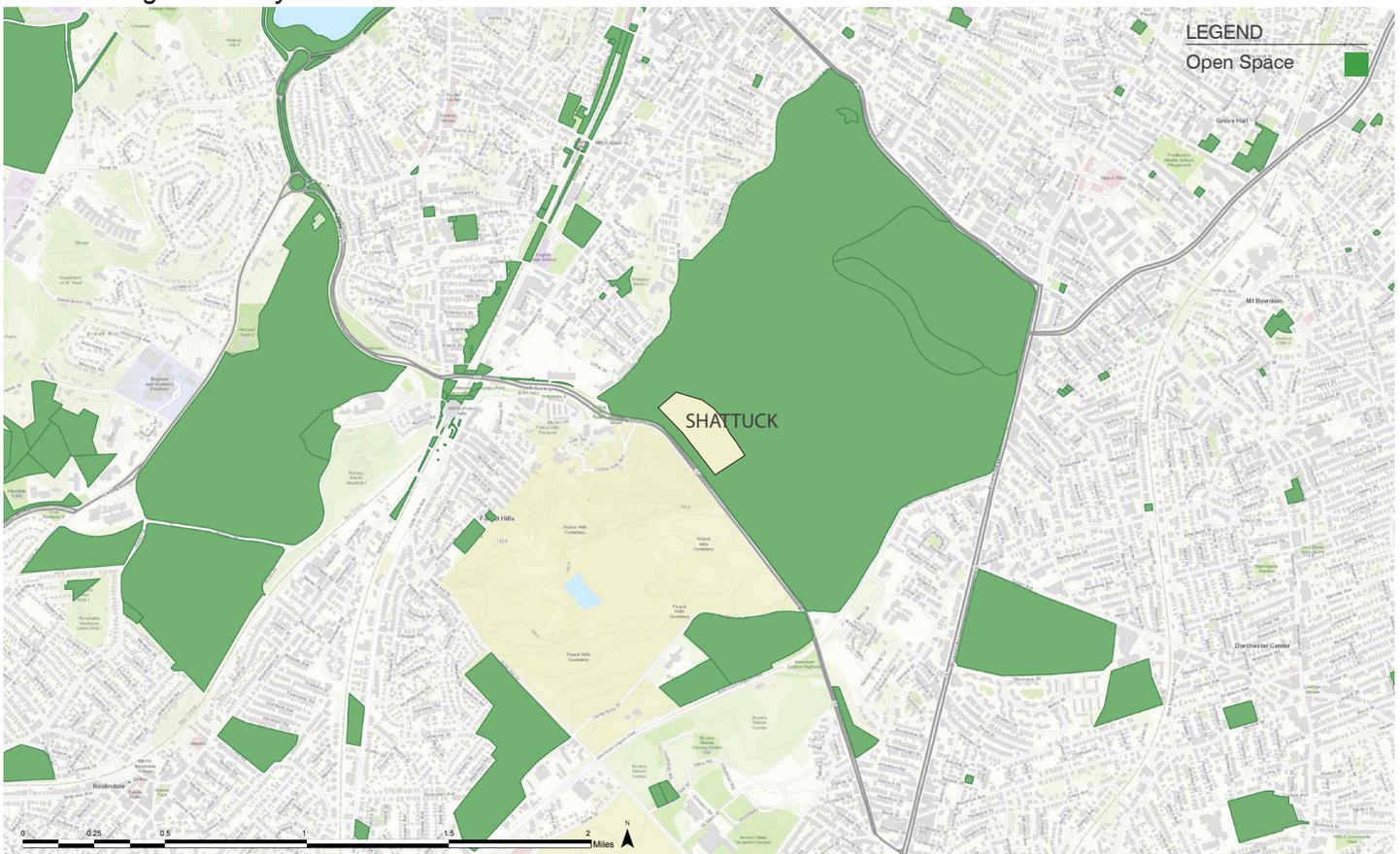
There are a few breaks in the granite wall. One narrow break provides pedestrian access to the bus stop. The other three breaks are for vehicles. All three breaks have chain-linked fence gates. Vehicular access from Morton Street is rarely used at present, except for access to the power building, which is near the southwestern edge of the site.

Just north of the campus site is a dense woodland edge that is part of Franklin Park. The Shattuck Campus is surrounded on three sides by Franklin Park. To the southerly side of Shattuck Campus, opposite Morton Street, is Forest Hills Cemetery. Forest Hills Cemetery has a romantic and picturesque landscape design.

The Shattuck Campus is situated at a higher elevation than the edges to the north, south and west. The elevation changes enable exceptional views into Franklin Park from the Campus.

The twelve-story Shattuck Hospital building is situated on one of the highest parts of the Shattuck Campus. Due to the building's height and siting, visitors to Franklin Park, including west-bound drivers along Circuit Drive can see the red-brick building protruding above Franklin Park's tree-line.

Below: Existing open space in the Shattuck Campus and Franklin Park area. Image courtesy of HRiA Team.





*Above: Existing stone perimeter wall along Morton Street edge of the Shattuck campus.
Below: Existing treatment at the entrance to the Shattuck Campus from Circuit Drive.*



Environment

This section examines environmental justice issues.

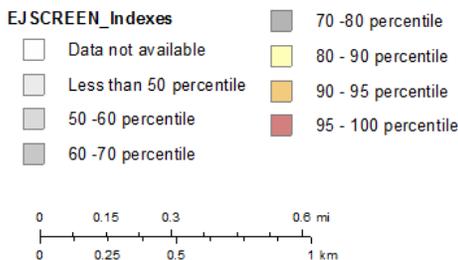
Environmental Justice

Environmental justice recognizes that communities of color and low-income communities have disproportionately experienced significant adverse impacts by uses and sites which have polluted air, water and land impairing health and wellbeing. Both Massachusetts and the US government have adopted policies regarding environmental justice.

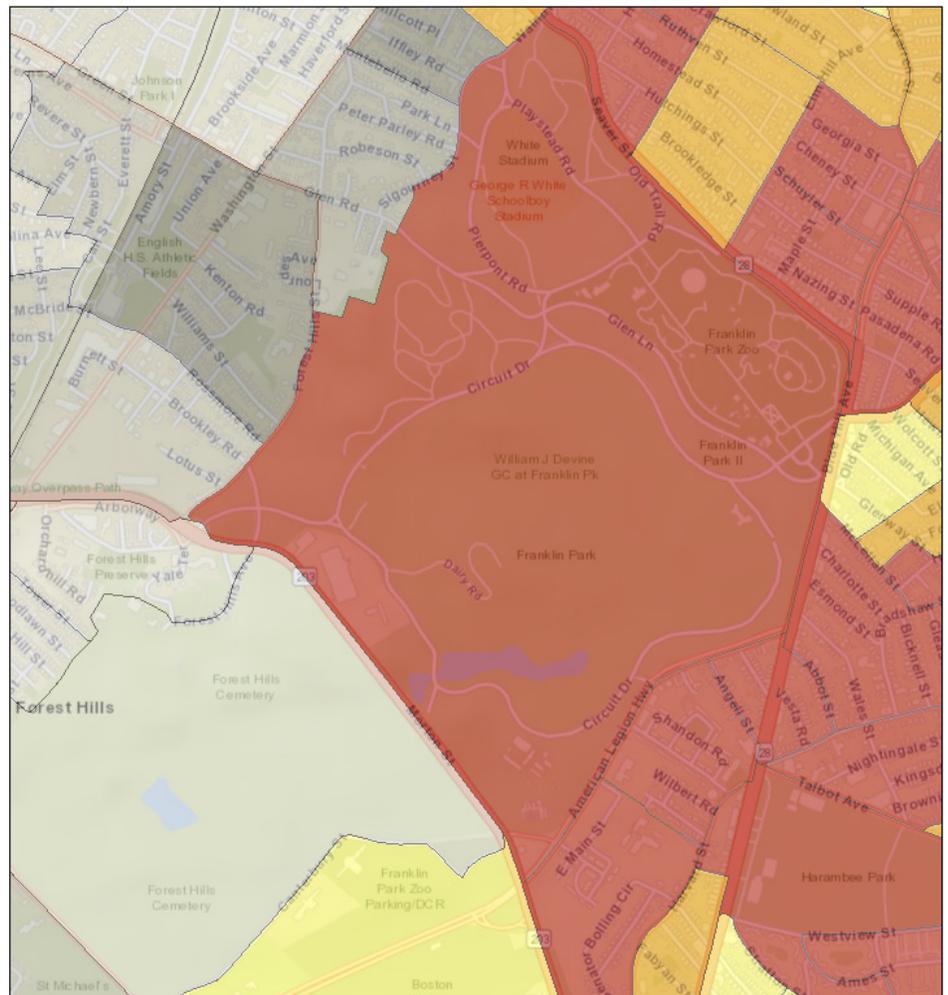
Massachusetts broadened the definition of environmental justice communities to include linguistic isolation. In 2017, Massachusetts updated its environmental justice policy to address climate change and energy issues. This policy states:

Environmental Justice is based on the principle that all people have a right to be protected from environmental hazards and to live in and enjoy a clean and healthful environment regardless of race, color, national origin, income, or English language proficiency. Environmental justice is the equal protection and meaningful involvement of all people and communities with respect to the development, implementation, and enforcement of energy, climate change, and environmental laws, regulations, and policies, and the equitable distribution of energy and environmental benefits and burdens.

Right: Environmental Justice Areas; Source: US Environmental Protection Agency.



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
EPA OEL, OEJ



The Shattuck Campus is located in an Environmental Justice area in accordance with both federal and state definitions based on the demographics of Census Tract (CT) 9803. CT 9803 is a sparsely populated census tract and home to the Shattuck Campus. It is designated as a federal Environmental Justice area and ranks in the 95th to 100th percentile nationally as to the combined number of communities of color and low-income residents. CT 9803 also meets the State definition of environmental justice area as to two criteria, the percentage of low income and percentage of minority residents.

The US Environmental Protection Agency (EPA) has identified several health-related measures that are often found to be high within environmental justice areas. The data for the Shattuck campus area as defined by CT 9803 indicate

that further investigation is warranted. Most of the indicators identify the Shattuck Campus in the 69 to 81 percentile ranking.

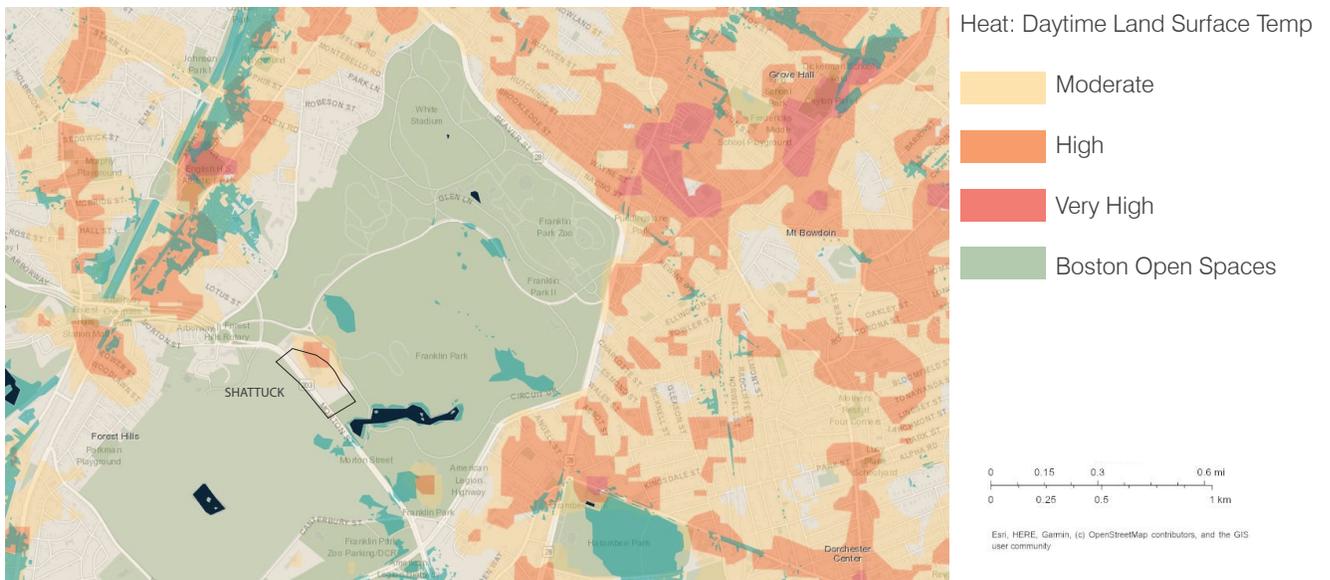
The screening results do not indicate that specific presence of one of the variables on the Shattuck campus. Many of the adjoining census tracts also have similar high percentile rankings.

Heat Island

A portion of the Shattuck Campus at Morton Street has been identified as a heat island based on mapping from Climate Ready Boston. The Shattuck Campus has both a moderate heat island exposure as depicted in yellow and a high heat island exposure as noted in orange. Heat island mapping indicates that there is an elevated land surface temperature averaging at least 1.25 degrees Fahrenheit above the daily mean temperature in Boston in June and July.

are associated with increased daytime temperatures and higher air pollution levels, which can affect human health by contributing to general discomfort, respiratory difficulties, heat cramps and exhaustion, non-fatal heat stroke, and heat-related mortality. Heat islands may also exacerbate the impact of heat waves. Sensitive populations, such as children, older adults, and those with existing health conditions, are at particular risk from these events.

Elevated temperatures from urban heat islands, particularly during the summer, can affect a community's environment and quality of life. According to the US EPA, urban heat islands



Above: Shattuck Campus and Heat Island Impacts. Images courtesy of Climate Ready Boston based on data from Metropolitan Area Planning Commission and the Trust for Public Land. (For educational purposes only, not for technical planning).

EXISTING BUILDINGS & LAND USE

Today, there are two buildings on the Shattuck Campus at Morton Street, the hospital building and the services/power building. The former personnel building, once known as the nurse's building, was demolished in 2017. In 2018, at the outset of the planning process, there were 572 parking spaces on the site. Since then, an additional area has been paved creating approximately 68 parking spaces.

The Hospital

The Lemuel Shattuck Hospital (LSH), is a twelve-story, 428,790 square foot, red-brick building, erected in 1954 to serve the public health needs of the state's most vulnerable and at-risk residents. The Shattuck Hospital is a 260-bed long-term care facility operated by the Commonwealth as a safety-net hospital. LSH serves persons who are often low income or living in poverty, uninsured and underinsured, the homeless, justice involved, and persons with co-occurring medical and behavioral conditions and/or substance use disorders.

The hospital houses beds and health services that are operated by three different state agencies – the Department of Public Health, the Department of Mental Health, and the Department of Corrections. In addition, services for addiction and substance use disorder are provided by private vendors, principally nonprofits, at the LSH. These services are currently provided by: Bay Cove Human Services, Health Care Resource Center, High Point, Pine Street Inn, and Victory Programs. Pine Street Inn also operates the 125-bed shelter in the power building. Approximately 700 people work at the Shattuck Campus. The state agency operated services, the medical and psychiatric hospital services, as well as the corrections services, will be relocated to the Newton Pavilion in Boston's South

End; the move is anticipated for the end of 2022. Over the past two decades, the State has commissioned several reports assessing the condition of the hospital building. Essentially, the hospital building is in need of substantial repair, including deferred maintenance. Most building systems are beyond their useful life. The building envelope requires semi-annual monitoring by a professional engineer, since there have been small lateral movements in the façade. A complete upgrade of the building envelope is needed. The floor-to-floor height of 9 feet 6 inches is significantly less than contemporary standards for health care and precludes effectively adding ventilation, mechanical, fire prevention and cooling upgrades, which are needed. The load limits on floors is below current standards, thus precluding the use of today's technology and equipment within the hospital complex.

Patient rooms are undersized. Best practices for providing high quality health care have changed over the past seventy years. The current floor layout of the hospital does not enable the efficient provision of services.

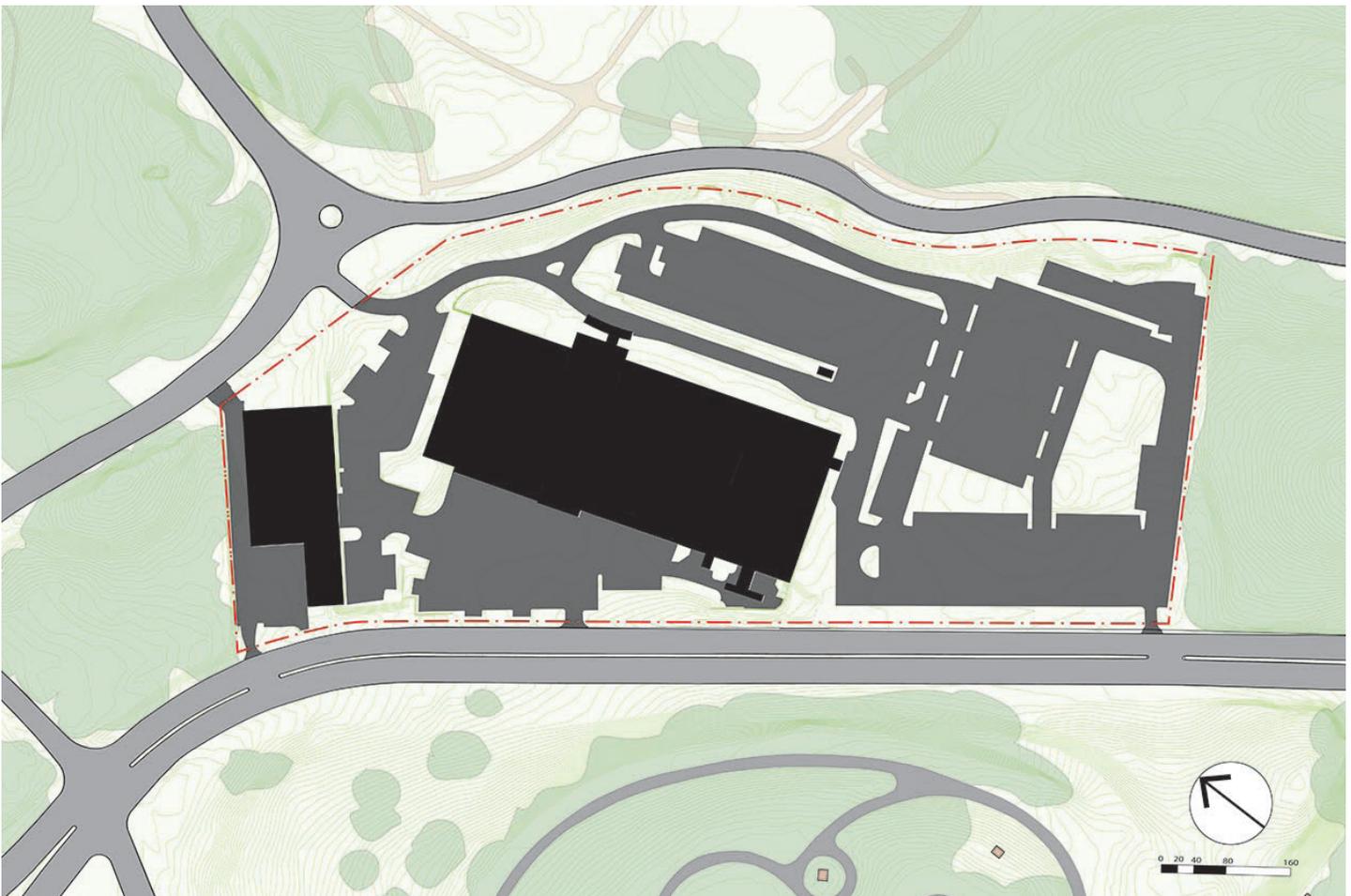
A building walk-through during this assignment found that most of the conditions and challenges previously reported remain. The hospital challenges and limitations impede effective delivery of needed health care and mental health services to some of the Commonwealth's most vulnerable residents. These physical conditions continue to need attention and remedy.

The Personnel Building (Nurse's Building)

The personnel building was situated southeasterly of the hospital building. It was a twelve-story building comprised of 106,172 SF. The personnel or nurses building was erected at the time the Hospital was constructed. Prior to its demolition in 2016-17, all but three floors were

vacant. The building had significant building envelope and structural deficiencies making building renovations cost prohibitive (exceeding the cost of new construction).

Future construction or significant regrading at the Shattuck Campus must plan to avoid the personnel building's foundation walls or anticipate removal of the foundation walls.



LEGEND

- Building
- Parking or Driveway
- Lot Line

Above: Extent of impervious area on existing Shattuck Campus including building footprints, parking areas and driveways. Image courtesy of the McCabe Enterprise Team.

The Power Plant Building

The services or power building is situated at the most northern portion of the site, closest to Forest Hills. It houses the power plant that produces steam heat for the entire campus. Approximately half of the services building is used by the Pine Street Inn to operate a 125-bed shelter for the homeless, with overflow capacity to serve another ten persons.

The brick power building has a 17,769 SF footprint with a total of 33,480 SF of usable space. The building envelope is deteriorated and in need of maintenance. However, the deterioration is less acute than the nearby hospital building on the campus.

The Built Environment

The built environment on the Shattuck Campus is comprised of two buildings, the hospital and

services/power building, the parking and service areas, as well as internal vehicular circulation routes. There are also sidewalks to access the entrances to the Hospital from the parking lots, although the sidewalks are mostly narrow and undersized. Over ninety percent of the site is impermeable, covered with buildings and paved surface areas, as depicted below.

In prior studies prepared for DCAMM, several items were identified.

- Specific challenges and needed improvements at the Shattuck Hospital building noted in prior studies include:
- HVAC systems need to be replaced.
- Low floor-to-ceiling heights make accommodation of modern, health care equipment and the appropriate electrical and ventilation systems extremely difficult, if not impossible.
- The building envelope needs to be replaced including windows.
- Code issues, such as seismic code compliance, will need to be addressed with a major renovation, adding additional costs to renovation.



Above: Shattuck Campus buildings (prior to the recent demolition of the Nurse's Building).

Land Use

The land use designation of the Shattuck Campus at Morton Street is Urban Public/ Institutional since health care uses are provided on site. Services are provided by public and non-profit providers.

The Shattuck Campus is surrounded on three-sides by Franklin Park and to the southwest across Morton Street, the Forest Hills Cemetery. Franklin Park is within a ten-minute walk of the Shattuck Campus, or approximately one-half mile. Within Franklin Park, there are many active

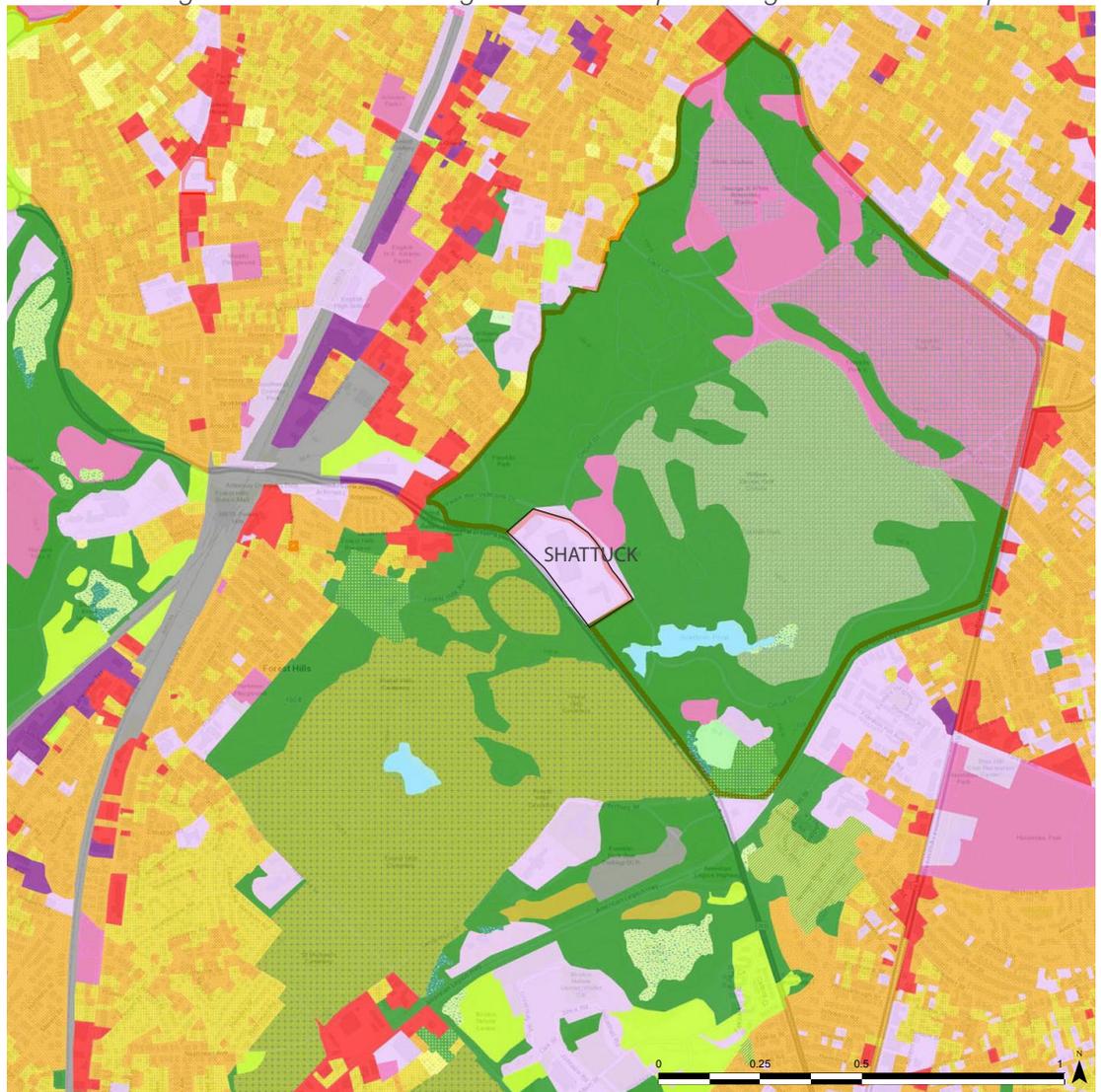
recreational options, including tennis courts, a softball field, a children's playground, and a public eighteen-hole golf course. The maintenance center and yard for Boston Parks is a half mile southeast of the site on Morton Street.

Other nearby Public/ Institutional land uses within a half-mile include the West Roxbury District Court, the Arborway MBTA yard and refueling station, and the Boston Pre-Release Center. Two charter schools are a ten-minute walk from the Shattuck Campus.

Below: Existing land uses surrounding Shattuck Campus. Image: McCabe Enterprise

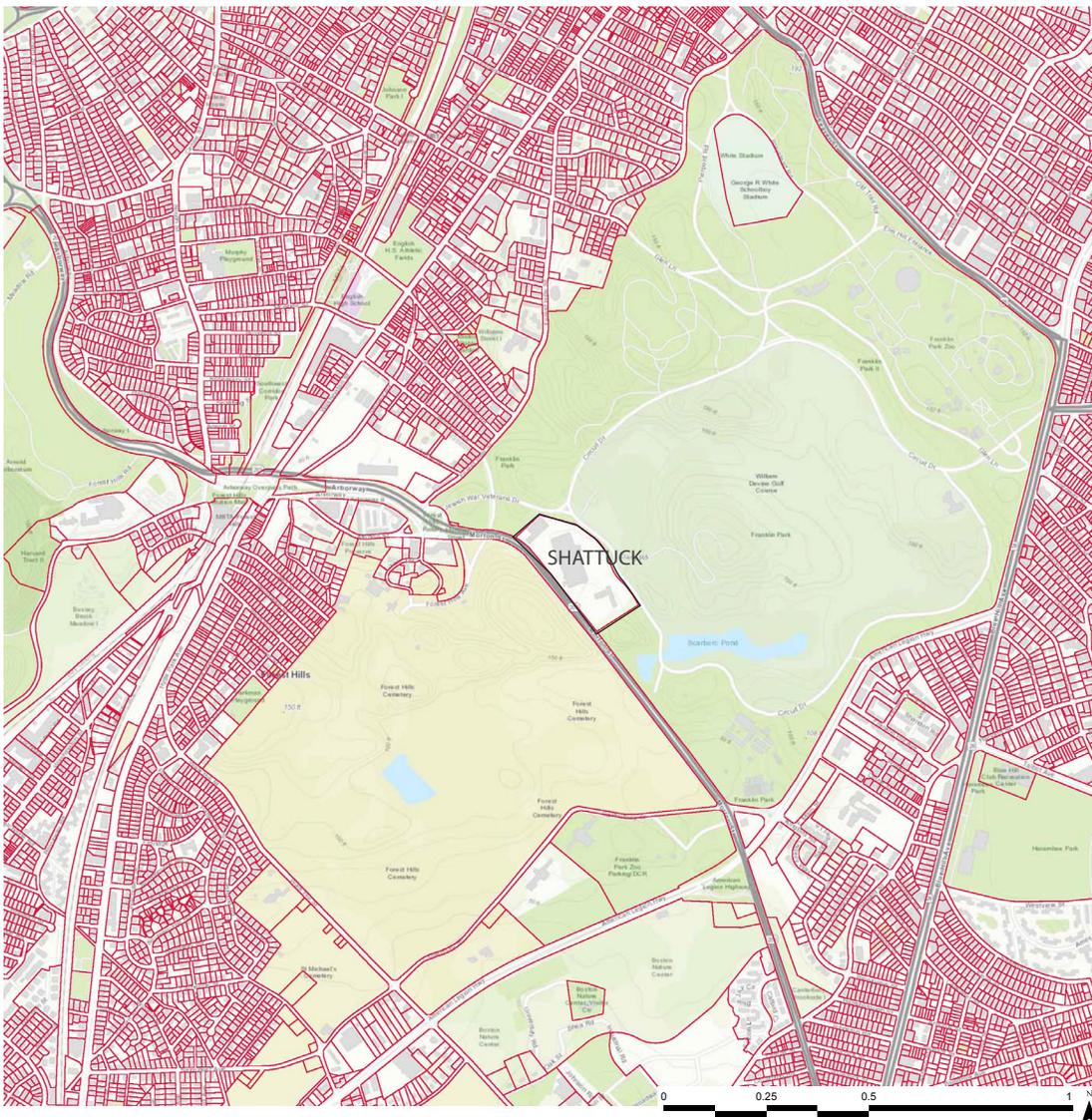
LEGEND

- Multi-Family Residential
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Very Low Density Residential
- Commercial
- Industrial
- Transportation
- Powerline/ Utility
- Mining
- Waste Disposal
- Junkyard
- Urban Public/ Institutional
- Participation Recreational
- Spectator Recreational
- Water-Based Recreational
- Marina
- Golf Course
- Cemetery
- Cropland
- Pasture
- Orchard
- Nursery
- Cranberry Bog
- Forest
- Brushland/Successional
- Forested Wetland
- Non-Forested Wetland
- Salt Water Wetland
- Saltwater Sandy Beach
- Water
- Open Land
- Transitional



Public/institutional land uses are the predominant land use within a half-mile of the Shattuck Campus followed by residential uses, including single-family homes, two- and three-families, condominiums and small and mid-size apartment buildings. There are commercial uses as well.

The Forest Hills MBTA station is the closest transportation hub offering bus, subway and train connections, as well as taxis. There is a commercial node that extends around Forest Hills with nearby restaurants and services. Also, the Blue Hill Avenue corridor offers retail and commercial services.



LEGEND

Parcel Lines



Left: Existing parcels surrounding Shattuck Campus. Image: McCabe Enterprise Team.

CONNECTIVITY, ACCESS & TRANSPORT

Access to the Shattuck Campus is currently provided by multiple transportation modes. Main vehicular access to the Campus is provided from Circuit Drive, also known as Jewish War Veterans Memorial Drive, on the northern side of the site. Three additional vehicular access driveways and a pedestrian access points are provided from Morton Street along the southern edge of the site; the vehicular access points are currently blocked off by fencing. Three bus routes, provided by the Massachusetts Bay Transportation Authority (MBTA), routes 16, 21 and 31, serve the site. Additionally, the MBTA Forest Hills Orange Line Station is located nearby with the Hospital providing a direct shuttle service between Forest Hills and the campus. Dedicated bike facilities are also provided on several neighboring streets. Additionally, a separated bike track has been recently installed along Morton Street; at present, the bike track stops before reaching the Shattuck Campus.

The following discussion provides additional details regarding the existing transportation services that provide access to the Shattuck Campus.

Below: Typical Section of Morton Street, looking southeast from Shattuck Hospital. Images courtesy of Pare Corp.



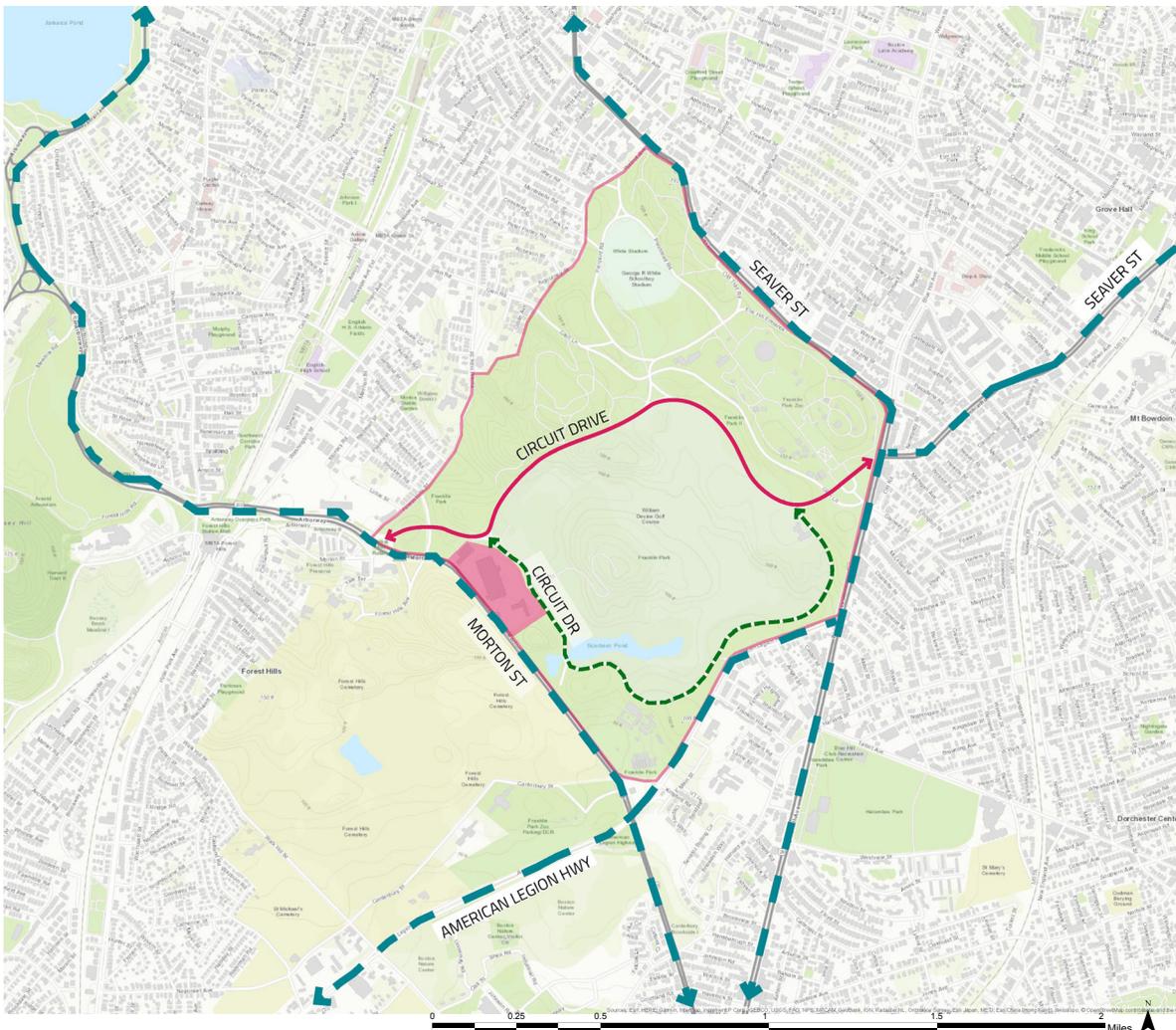
Roadway Network

Morton Street, which serves several access driveways along the southwest of the Shattuck Campus, is classified as an urban principal arterial. Morton Street, which also carries the State Route 203 designation, is under MassDOT jurisdiction. The Annual Average Daily Traffic (AADT) volume on Morton Street is 26,000 vehicle per day (vpd) according to MassDOT's on-line Roadway Inventory database (<https://gis.massdot.state.ma.us/roadinventory/>). Along the site, the roadway consists of two travel lanes with a bike lane in each direction. A raised grass median with overhead lighting separates the two directions of traffic. A narrow, approximately 2-3 feet wide, paved area is located on the northeast side of Morton Street. The area, although paved, is too narrow to allow pedestrian traffic and cannot be considered a sidewalk. Signing prohibiting pedestrian use of this area is also located along the roadway.

Below: Morton Street looking northwest from the Shattuck Campus. The narrow sidewalk with "no pedestrian" along the east side of the roadway can be seen. Images courtesy of Pare Corp.



Circuit Drive (Jewish War Veterans Drive) runs along the north side of the Shattuck Campus providing access to the site from Franklin Park. Circuit Drive runs in the east/west direction through Franklin Park, connecting Morton Street and Blue Hill Avenue. This is a park roadway and is classified as an urban minor arterial under the jurisdiction of the City of Boston. In the vicinity of the Campus, the roadway consists of one travel lane in each direction, a bike lane in each direction, and a parking lane along the southern side of the roadway. A walking path, separated from the roadway by a grass buffer, is also provided along on the south side of the roadway between the Campus and Morton Street.



Above: The intersection of the Shattuck Campus Main Entrance with Circuit Drive looking north. The excessive width of the intersection, faded striping and lack of safe pedestrian and bicycles access are problematic. Image courtesy of Pare Corp.

Existing Road Network

LEGEND	
Franklin Field North	
Shattuck Campus	
Major Arterials	
Park Roadway	
Park (Restricted)	

The Shattuck Campus Main Entrance is located off Circuit Drive, approximately 1,200 feet from Morton Street. The Campus entrance lies at the point where the east-west segment of Circuit Drive, which crosses the park, meets the south-west loop of Circuit Drive, which is a restricted access road. A landscaped island, a part of the original Olmsted plan, is located at the intersection of Circuit Drive at the campus entry, creating an unconventional intersection alignment. Additionally, the intersection striping has faded, adding to the potential for driver confusion when traversing the intersection. In general, the close proximity between the Campus driveway and Circuit Drive intersection presents a somewhat confusing intersection alignment with unclear intersection control and right-of-way.

Public Transit

Public transportation access is provided to the Shattuck Campus by the MBTA through bus and subway service. Bus service to the site is summarized in the table on the following page. As noted in the table above, the Route 16 bus stop is located on Circuit Drive near the Shattuck Campus driveway. A sidewalk is provided along the south side of Circuit Drive providing access the Campus and the eastbound bus stop. No sidewalk is located for the bus stop on the north side of Circuit Drive for the westbound bus stop. Additionally, no crosswalk is located across Circuit Drive to provide a connection between the north and side sides of Circuit Drive to connect the westbound bus stop to the Campus.



Top left: MBTA bus shelter located with the Shattuck Campus at Morton Street.



Top right: Shuttle stop located on the Shattuck Campus.

Right: The crosswalk across Morton Street at the MBTA bus stop looking south. Note the lack of wheelchair ramps at entering the crosswalk and at the Morton Street median.

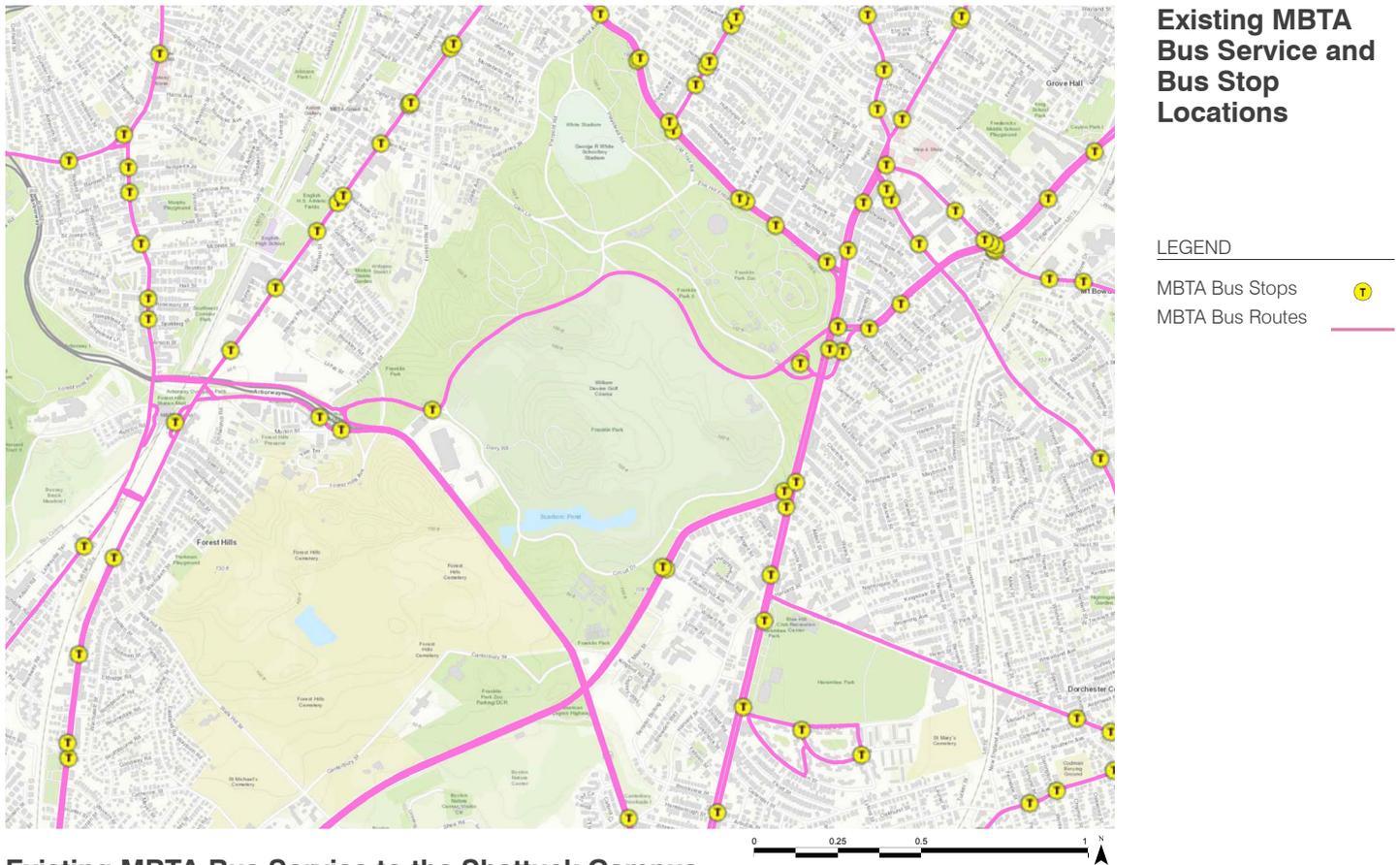


Images courtesy of Pare Corp.

Bus stops for Route 21 and 31 are located on Morton Street. A bus shelter is located on the north side of Morton Street within the Shattuck Campus property boundary. The bus stop on the south side of Morton Street is connected to the Campus by a marked crosswalk across Morton Street. The crosswalk does not comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) as accessible ramps are not provided at either end of the crosswalk or through the center median of Morton Street.

Additionally, the high vehicle speed, as a result of the street design, and the volume of Morton Street make this crossing movement difficult for pedestrians, particularly those with disabilities.

The Forest Hills MBTA Station is located approximately 0.6 miles to the west of the site and is approximately a 12-16 minute walk. Access between the two locations is provided through multiple transportation modes. Sidewalks and bike paths, recently constructed as part of the



Existing MBTA Bus Service to the Shattuck Campus

ROUTE NO.	BUS STOP LOCATION	ROUTE DESTINATIONS	SERVICE HEADWAYS
16	Jewish War Veterans Drive, at Shattuck Hospital	Forest Hills, Andrew Square, City Point, UMass Boston	15-30 min.
21	Morton Street, at Shattuck Hospital	Forest Hills, Morton Street, Ashmont	10-20 min.
31	Morton Street, at Shattuck Hospital	Forest Hills, Morton Street, Blue Avenue, Mattapan Square	5-10 min.

Casey Arborway Project, link the station area with the intersection of Circuit Drive and Morton Street, but stop short of access to the Shattuck Campus. MBTA bus routes 16, 21, and 31 each provide service between the Campus and Forest Hills. Additionally, Shattuck Hospital currently operates a direct shuttle between the Campus and Forest Hills. The shuttle operates Monday through Friday between 5:40 a.m. and 11:45 p.m. It should be noted that this specific shuttle is anticipated to stop operations when Shattuck Hospital is relocated to the South End in 2022.

Pedestrian & Bicycle Connectivity

As previously discussed, Morton Street is an urban principal arterial with over 26,000 vehicle trips per day. The high volume and high speed on Morton Street roadway, along with traffic congestion at the Morton Street and Circuit Drive intersection, present challenges to pedestrian and bicycle access to the Shattuck Campus site.

Along Circuit Drive, pedestrian and bicycle access at the northwest entry to the campus is currently hampered by a lack of clearly defined paths and a complex set of intersections and

site driveways. As previously pointed out, faded bike and roadway striping in this area make the area difficult to navigate. On Morton Street bicycle access is currently via an on-street bike lane that is not protected from roadway traffic, and is undersized compared to best practices.

Sidewalk access on the east side of Morton Street is discontinuous between Circuit drive and Cemetery Road to the south. Between Cemetery Road and the Shattuck Campus to the south, there is a narrow asphalt shoulder between the curb and historic stone perimeter wall that serves as the only means of pedestrian access along the east side of Morton Street. This shoulder is far less than 3 feet in width for most of this distance and is not universally accessible; it is interrupted by a light pole at one point which forces pedestrians to step off the curb into the bike lane in order to pass.

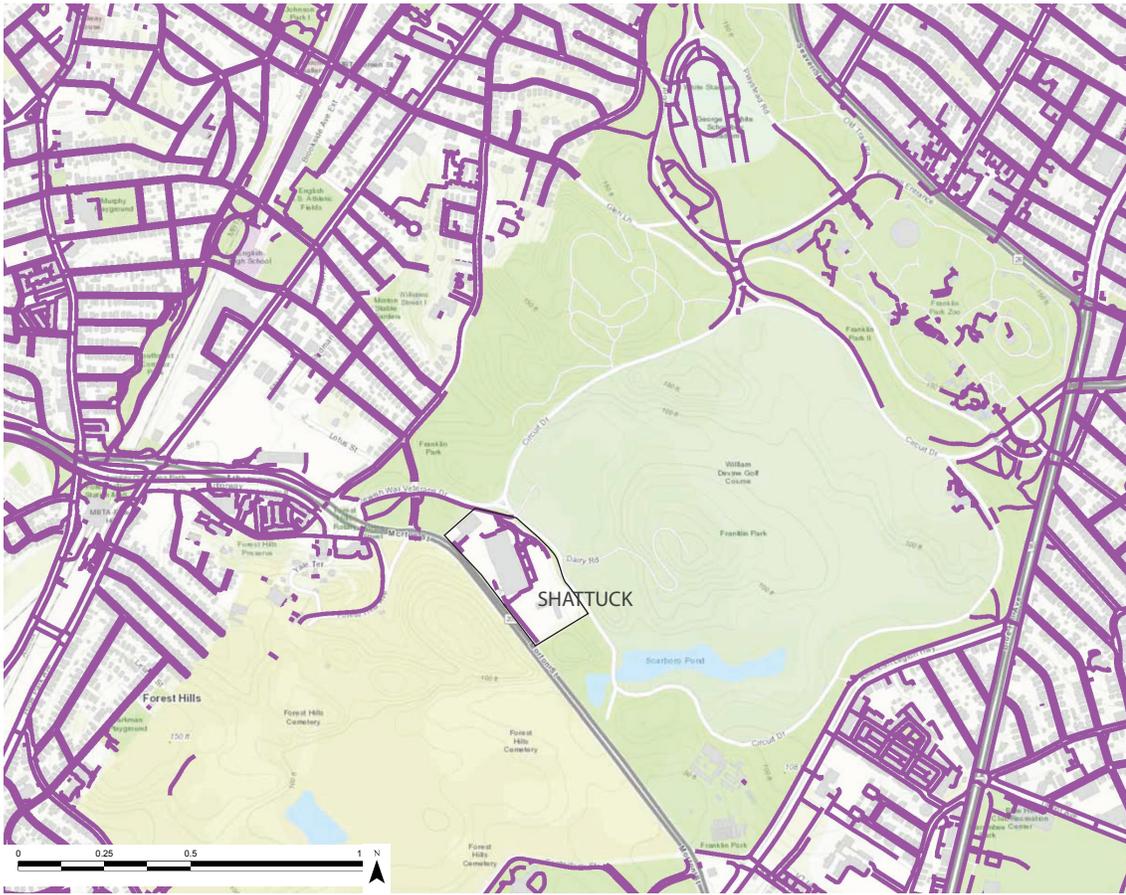
Sidewalk access on the west side of Morton Street extends south of the intersection with Forest Hills Avenue, ending approximately 250 feet short of the existing MBTA bus stop across from the Shattuck Hospital. Along this asphalt paved walk there are a number of obstacles impeding access, including trees, signs and light poles. From the point where the sidewalk ends to the bus stop, there is only a narrow, worn grass shoulder between the curb and the cemetery fence. Heading south from this point on Morton Street, there is no sidewalk on the east or west side of the street until the intersection of Canterbury Street on the south corner of Franklin Park.

Recent Morton Street Improvements

The recent Casey Arborway Project implemented complete streets improvements on Morton Street between Washington Street at Forest Hills Station and the northwest side of the intersection of Circuit Drive. These improvements include multi-modal access and traffic calming measures, and include lighting, signage, sidewalks, and a separated bike path. The sidewalk and bike path are separated from the roadway and from each other by a grass planting area. Improvements also included new crosswalks and accessibility improvements at intersections and crossings.



Above: Multi-modal improvements on Morton Street from Washington St to Circuit Drive include separate pedestrian and bicycle paths separated by a planting strip from the roadway and from each other.



Existing Pedestrian Sidewalks

LEGEND

Sidewalk Centerlines

Multi-Modal Access Improvements Are Needed



UTILITIES & INFRASTRUCTURE

Pare Corporation (Pare) has prepared this memorandum as part of the existing conditions study of the Lemuel Shattuck Hospital Campus utilities located at 160, 170, and 180 Morton Street, Boston. As part of the utility study, Pare reviewed site plans and surveys from past Pare projects with the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM), site studies prepared by others for DCAMM, and information provided by utility providers for the hospital campus. Pare also contacted campus staff and utility providers including Boston Water and Sewer Commission (BWSC), National Grid, and Eversource.

Water

The water distribution network on campus is a private utility system owned by Shattuck Hospital. The water transmission and distribution system in Morton Street belongs to BWSC and the Massachusetts Water Resources Authority (MWRA). Based on records provided by, and interviews with BWSC personnel, the campus is supplied by BWSC from a master meter at 160 Morton Street. The campus is fed from at least four separate connections from water mains on Morton Street. Three of the connections appear to be to BWSC water mains; the fourth connection may belong to MWRA; however, it is not entirely clear based on existing records. On campus piping appears to be a mix of 8-inch and 6-inch cast iron pipe that is at least 60 years old; however, there are discrepancies in the various historical records regarding material and pipe size. Of the four connections in the street, none (0) run directly to any buildings and instead feed a loop system around the campus. The main hospital building is served by a building-to-building connection from the 160 Morton Street building; however, the location of the ser-

vice has not been verified in this study. There are at least nine (9) fire hydrants on the campus connected to the loop system around the campus. The interior domestic piping is reported to be copper and is reported to be approximately 60 years old and in poor condition.

It is anticipated that there is adequate capacity in the street to serve a future redevelopment of the campus; however, the exact capacity would require an in-depth evaluation once the redevelopment plan is finalized. Given that the new development will likely be a substantial modification to the campus layout, it is likely that the existing infrastructure will not be reused or may require substantial modification to the existing piping and/or new connections to the public system in Morton Street. Future fire protection will be a significant factor in the adequacy of the existing pipe network on campus and in the street.

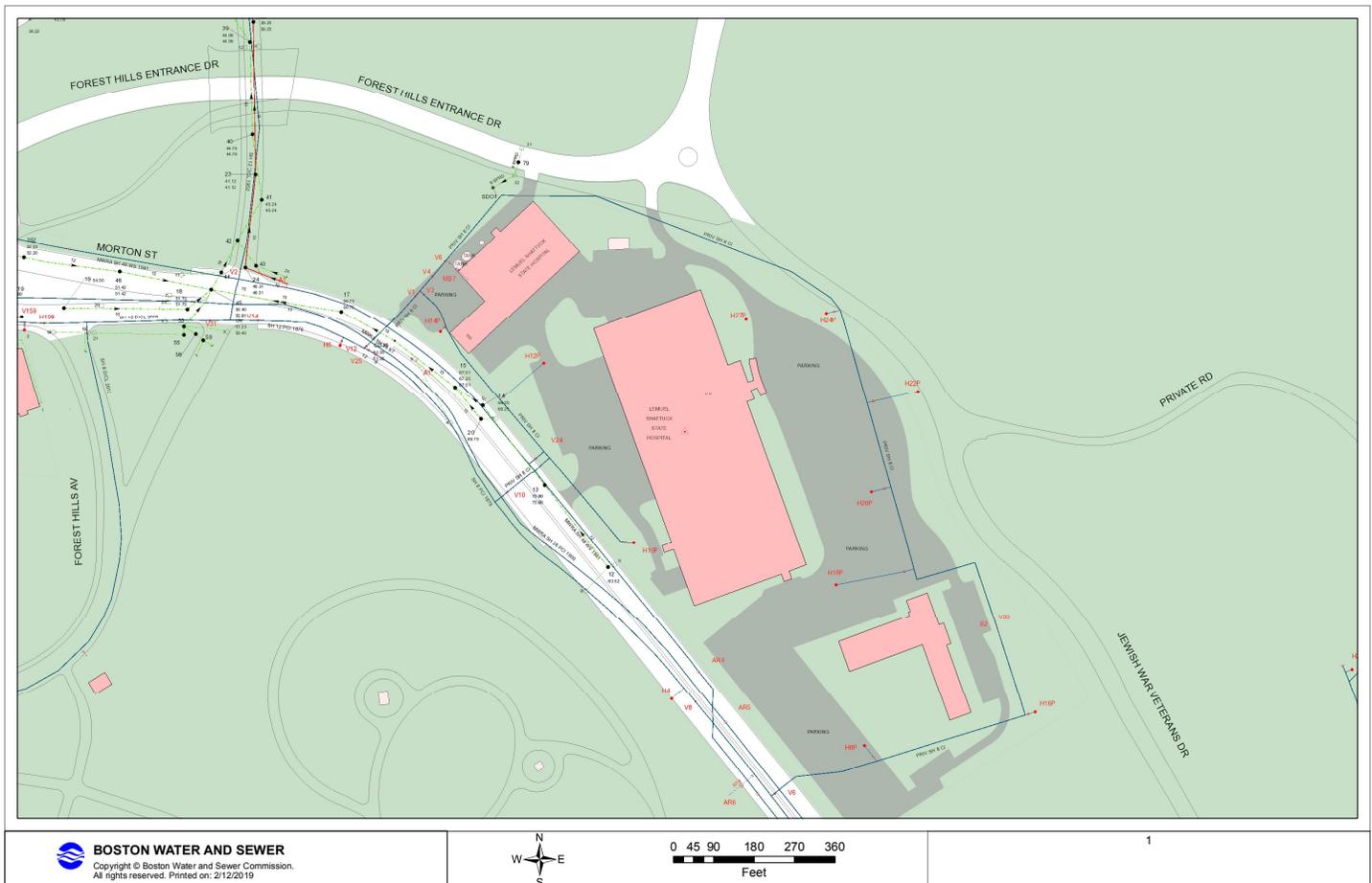
Sewer and Drainage

There may be upwards of twelve (12) sanitary sewer connections along the rear of the building facing Morton Street where sanitary sewer is tied into the system in Morton Street, based on various site plans reviewed.

The on-site sewer appears to be a mix of cast iron, vitrified clay, and PVC. Given that the new development will likely be a substantial modification to the campus layout, it is very unlikely that the existing sewer will be reused as part of the future redevelopment. More likely, new sewer will need to be installed on campus to the system in Morton Street. Furthermore, additional investigation will be needed as part of the redevelopment to identify the alignment, capacity and ownership of sewer in Morton Street.

There is extensive drainage around the property. Due to redevelopment, all drainage will likely be decommissioned and replaced with new drainage.

Below: Shattuck Campus Existing Water Service. Source: Boston Water and Sewer Commission.



Natural Gas

Utility maps provided by National Grid identify one gas service entering the property. The service enters at the north west side of the property and transitions from a 4-inch service to a 3-inch service as it enters the 160 Morton Street building. There appear to be no other services for the campus based on the maps provided by National Grid. The date of installation for this service is reported to be 1953.

Electric

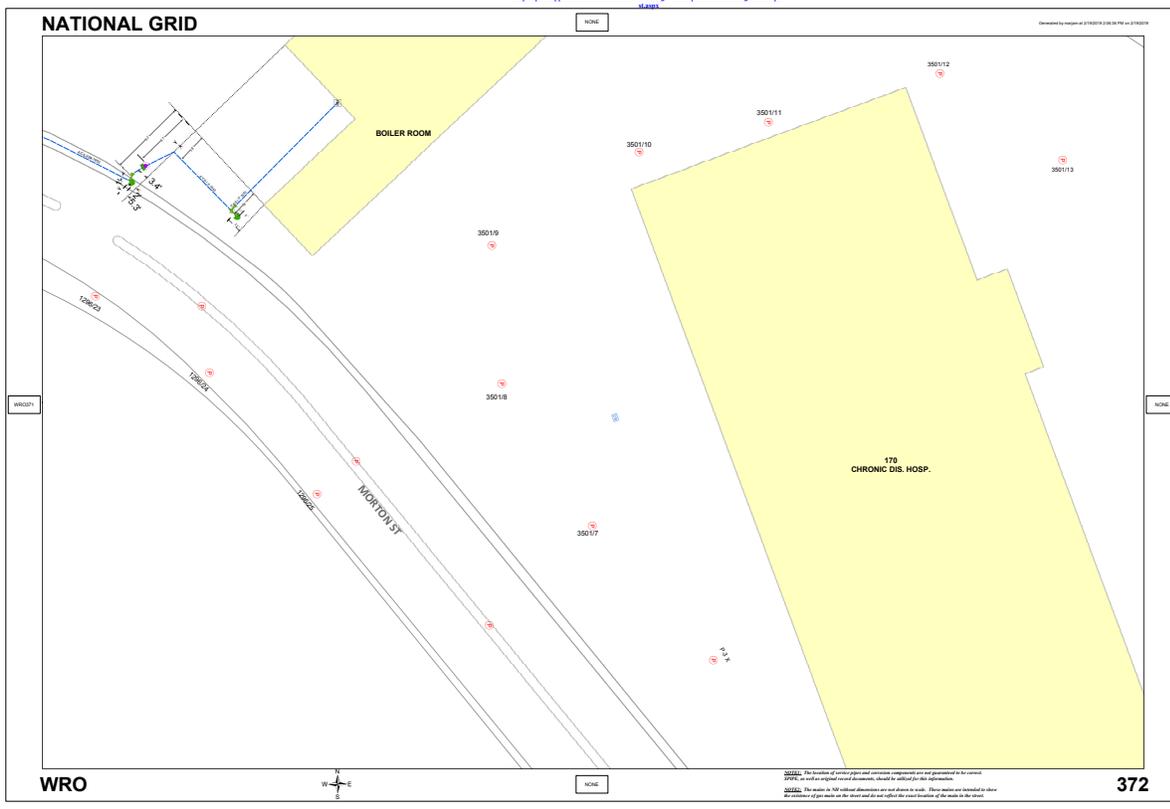
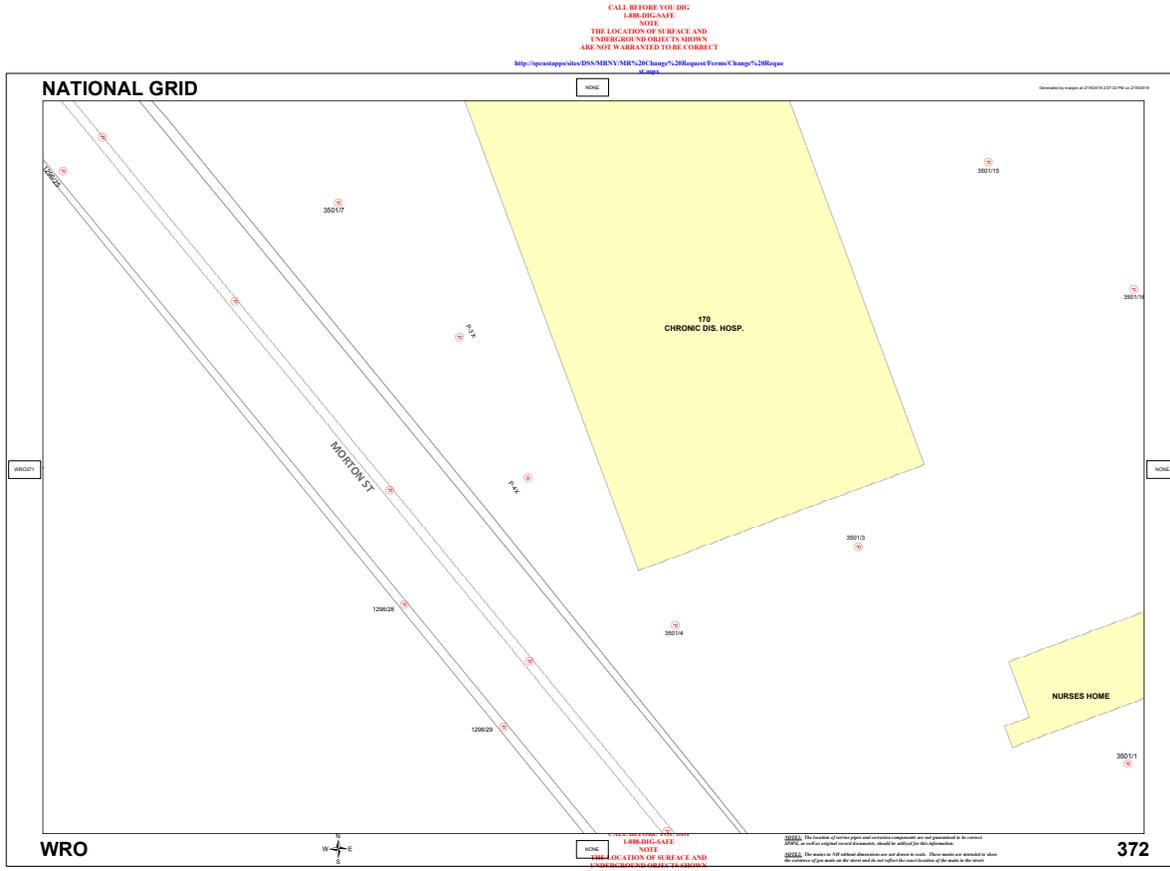
Eversource provides the electric service for the Campus through an underground service from Morton Street. The current Campus is supplied by two electrical services from two substations from Roslindale and Mattapan according to the Facilities Director.

Conclusions

The existing facility has a substantial utility load, which was likely even higher before the building at 180 Morton Street was demolished. In light of the current and historic utility loads, it is expected that there is substantial utility capacity in Morton Street to support a redevelopment of the site. However, future loads would need to be determined once the redevelopment plan is finalized, and then compared to capacity available from each utility provider.

It is not expected that much of the existing utility infrastructure will be reused as part of the redevelopment. Much of the utility infrastructure is original to facility, and therefore likely antiquated and unsuitable for reuse, necessitating removal or substantial modification to the infrastructure. It is likely that new utility connections will need to be made in Morton Street to support the redevelopment of the campus.

Below: Shattuck Campus Existing Gas Service. Source: National Grid.



SAFETY & SECURITY

Security and safety are key assumptions in operating a health care and residential facility. Patients, residents, staff, visitors and neighbors all seek and desire a safe, secure environment. The Shattuck Campus has a reputation for safety amongst patients and neighbors.

The Shattuck Campus has a layered security system. It starts with campus perimeter security and includes building access and unit access security controls.

Perimeter Security

Perimeter security consists of a chain-link fence running along four sides of the perimeter of the site, which defines the boundary of the Shattuck Campus and limits access to the Campus. The Morton Street side is also bounded by a perimeter 24- to 30-inch stone wall, which also limits access points. There are three curb cuts on Morton Street which provide opportunities for vehicular access. Each of these is gated with a chain link fence gate. All gates were closed during site visits to the campus. Access for trucks to the hospital's loading dock is via Morton Street, and requires a person to open and unlock the gate. The one break in both the stone wall and chain link fence barrier along Morton Street is the MBTA bus stop.

There is another interruption in the chain link fence perimeter barrier for 200 feet at the northern perimeter just west of Circuit Drive entrance to the Hospital. This break is at the entry and approach to the shelter for the homeless operated by the Pine Street Inn in the services/power building. This 200-foot perimeter section is marked by a series of large granite slabs creating a more porous boundary line that is more

welcoming, particularly to users and visitors to the shelter.

The primary vehicular access to the Shattuck Campus is from Circuit Drive, with an approach driveway up the incline. The hospital's location at the highest elevation of the site and the main entrance at the top of the 400-foot drive provides ample sight lines to see approaching vehicles, as well as pedestrians ambling up the abutting sidewalks. This is the sole vehicular exit for cars, as well.

Building Access

The main entry to the hospital building is from the approach drive. There is a drop-off area for shuttles and visitors at the entry. The main double-door entrance opens-up to a large lobby with access controls, and a security/ check-in desk staffed by uniform security staff. All building entrants must have a staff or patient identification, or temporary identification after checking in with security. Access to the elevators, stairways and first floor offices requires passage through controlled turnstiles. A secondary entrance and exit is located on the southern side of the hospital building.

For shelter staff and patrons, entry to the services/power building is through a front door with a separate entry from Circuit Drive. Persons arriving at the shelter are asked to check-in by shelter staff. There is also a side entrance from the parking area between the hospital building and the services/power building. This entry is typically used as a secondary or emergency exit to the shelter facility. The services/power building is connected to the hospital building by a below-ground tunnel, which is primarily used by staff.

Unit and Program Security

Most of the units and programs at the Shattuck Hospital have limited access and entry. Visitors typically need to signal arrival on the floor, before being allowed to enter locked units from the floor waiting area by the elevators, by program or security staff, depending upon the unit. Some units have higher security, such as the Corrections units. Security is provided to control both ingress and egress from the programs and units.

Uniformed Security Personnel

The Departments of Public Health (DPH) has uniformed security personnel, which have the same authority as state police officers. Uniformed officers serve as security personnel at the entrance to the hospital and patrol, typically by foot, the hospital and campus grounds. Campus security uniform officers provide security 24-hours a day, seven days a week. Uniformed officers are frequently asked to respond to situations by program staff with patients and visitors by providing a security presence to minimize and resolve potential issues.

Interviews with the nonprofit vendors at the Shattuck Campus all cited the benefits of having security personnel present and visible on the campus. Vendor executives found the presence of uniform security personnel an advantage with staff recruitment and retention. Program staff reported that the presence of uniformed security staff was a valuable resource when resolving incidents.

Medical patients in the Corrections units referred by local county jails require a police detail from the referring jail. In addition, the Department of Corrections provides additional security staff and protocols for the Corrections Medical units.

Other Security Measures

Contemporary health care facilities often require security for the secure storage and distribution of medications. Another major focus of modern security relates to information technology and cybersecurity. The state auditor in 2011 issued a report praising the IT security at the Shattuck Hospital. Previous building assessment reports have recommended improvements to the fire prevention system for the buildings at the Shattuck campus. Good security requires up-to-date fire prevention systems. These security needs – medication and drug storage, technology and cybersecurity, and fire prevention systems, were not reviewed as a part of this assignment.

9

PLANNING PRINCIPLES, DESIGN GOALS & PROGRAM



PRINCIPLES, DESIGN GOALS & PROGRAM

Overview

Beginning in the summer of 2018, the Commonwealth conducted a year-long, interactive planning process to determine the future vision for the Shattuck Campus at Morton Street. Moving forward, at regular intervals over the next phases of the redevelopment process, the Commonwealth will identify and promote opportunities for community members to provide guidance and feedback at key intervals. The Commonwealth will provide updated information on the redevelopment process on its website, and will continue to coordinate with co-occurring planning processes related to the Franklin Park Master Plan and the future of substance use disorder services at the Long Island Recovery Campus.

Recommendations

Led by consultant, Health Resources In Action, a Health Needs Assessment was completed; the assessment outlined key needs and gaps in healthcare services and housing within the Commonwealth. The data gathered and reviewed in the assessment and the themes and feedback provided throughout the year-long community engagement process, have informed the following set of recommendations. These recommendations are intended to inform the Request for Proposals (RFP), which is anticipated to be issued by the Commonwealth. The RFP process will include a competitive bidding process for a private partner, with a complimentary mission, to redevelop the Shattuck Campus.

Planning Principles

Through the Shattuck Campus planning community engagement process and with leadership from the Community Advisory Board, the planning principles, displayed on the facing page, have been developed throughout the planning process; these will inform the Request for Proposals for a private partner in the next phase of the process.

Design Goals

There is an opportunity to improve physical elements of the Campus to benefit people living at and/or receiving services on-site, and the surrounding communities, by:

- Adding and improving green and open space and better integrating the Campus with Franklin Park; and,
- Improving pedestrian and bike connections near and through the Shattuck Campus to provide needed connections from Morton Street to Forest Hills and to Franklin Park.

Design goals and strategies are listed in the following categories and are recommendations for future development; each was generated and refined with community input.

- Edges
- Buildings
- Landscape
- Campus Amenities
- Access: Bike & Pedestrian, Vehicular, Public Transportation
- Parking
- Energy & Sustainability

The goals and policies for each of these areas, along with community input, are discussed on the following pages.

Planning Principles for Shattuck Campus at Morton Street



- Integrate Shattuck Campus at Morton Street with Franklin Park;



- Improve access to neighborhoods with public transit, bike and pedestrian options;



- Increase green and open space;



- Align with local and state sustainable development goals and strategies;



- Seek partner(s) to implement a program/service model that reduces barriers to treatment, integrates care within and across the health care and housing systems, and increases the housing supply (a minimum of 75-100 units of permanent supportive housing).

DESIGN GOAL: SAFE & CONVENIENT MULTI-MODAL ACCESS

Bike & Pedestrian

Safe multi-modal access to the Shattuck Campus at Morton Street is a key need for those accessing services on the site, for staff providing the services, and for the community in general. Currently, bicycle and pedestrian access to the campus is difficult due to poor connectivity at the intersection of both Circuit Drive and Morton Street. As noted in the existing conditions, recent roadway improvements on the Arborway stop northwest of Circuit Drive, do not extend along Morton Street to the Campus. A complete streets approach to Campus development which incorporates multimodal access is essential.

Connectivity & Walkability

Redevelopment of the Campus should incorporate improved connections to the Forest Hills area for pedestrians and bicyclists. Throughout the planning process, several major themes developed around connectivity and safety; several users highlighted the poor existing conditions at Morton Street that are needed to improve safety. To this end, recent improvements to the right-of-way along Morton, closer to Forest Hills, have already incorporated traffic calming measures, which could naturally extend to the Shattuck Campus. In response to the current conditions, the planning team developed two potential cross sections that introduce walkability improvements on Morton Street. These improvements include protected multi-use paths, sidewalk extensions and the introduction of a median. While the exact configuration of the improvement has not been specified, bike and pedestrian improvements, consistent with best practices, included in the National Association

of Transportation Officials (NACTO) guidelines and the Massachusetts Separated Bike Lane Planning and Design Guide, should apply to Morton Street. The Historic Parkway Preservation Treatment Guidelines should also be consulted.

The inclusion of protected bike lanes and wide pathways for pedestrians is strongly recommended as a means of providing for multimodal safety along the Morton Street edge of the campus. The optimal location for pedestrian/ bicycle safety is adjacent to the parcel and will require ample room for a wider path.

To better serve those arriving via MBTA bus service, the street cross sections developed in the study recommend extending the existing sidewalk on the southbound side of Morton Street from the point where the paving ends to the bus stop and pedestrian crossing to the Campus. This added sidewalk will support safer access to the Campus. These improvements will require adjustments to the existing right-of-way.

Additionally, the cross sections developed in the study suggest introducing a median between north and south bound traffic on Morton Street to aid pedestrian crossings while supporting a parkway type atmosphere on Morton Street. As shown in Alternative A, a narrow median could include street lighting, while leaving ample roadway width for two lanes of traffic in each direction, and the potential for on-street parking spaces or an access lane along the campus edge. In Alternative B, two lanes of traffic in each direction with a wider planted median is possible, but without the on-street parking of Alternative A. In general, the introduction of the median was well received.

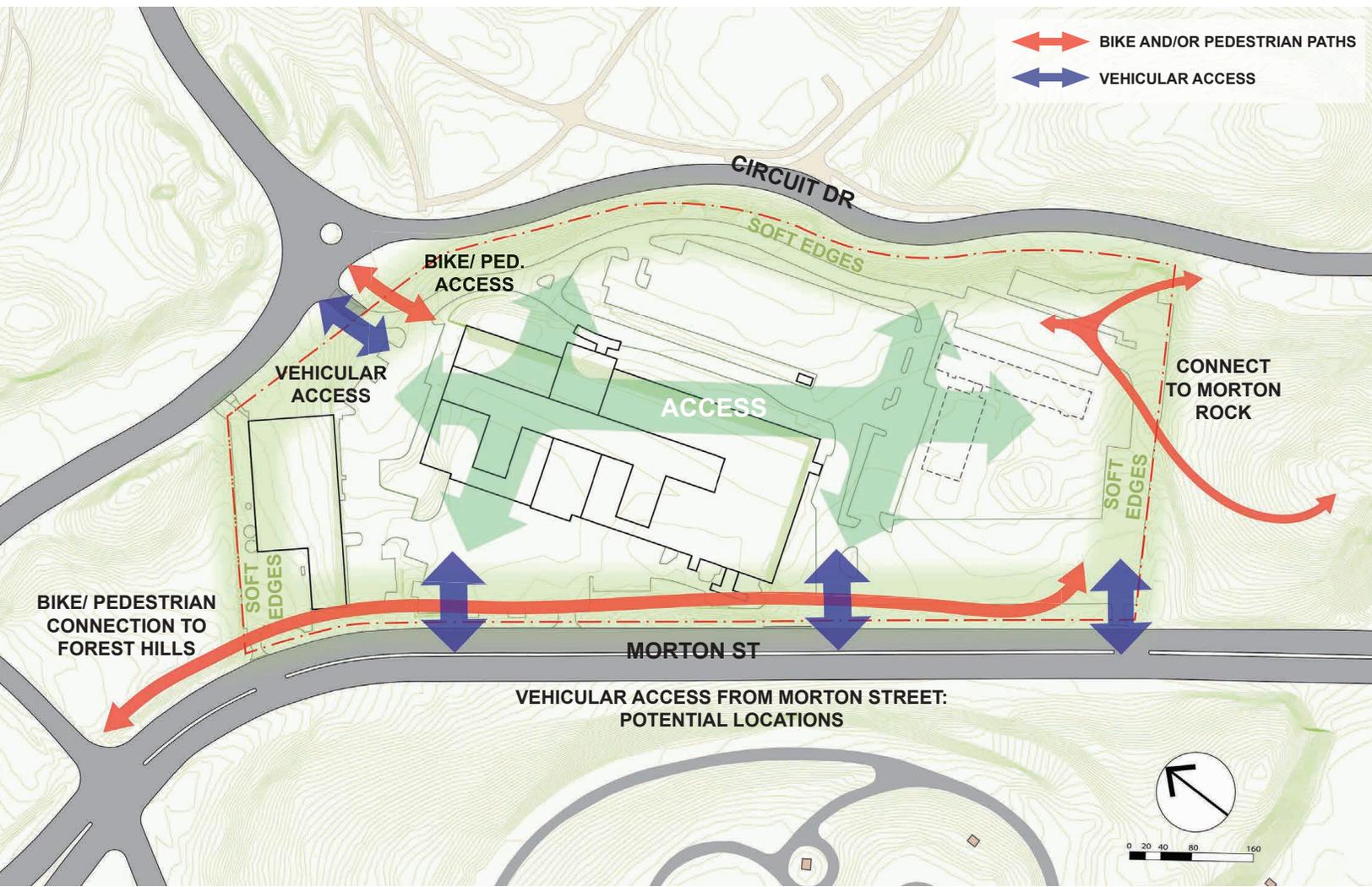
Campus Atmosphere

On the campus itself, walkability through and around the site should be a priority. The circulation network should be conceived as a campus setting, with pedestrian and bicycle paths between buildings in a way that is responsive to existing conditions and the natural topography of the site. The site should be universally accessible and materials for paths and walkways should be designed with universal access.

Implementation Considerations: Access & Connectivity

- Increase bike/ pedestrian access to the campus.
- Improve link to Forest Hills: include a multi-use path to site along Morton Street.
- Site should be universally accessible.
- Consider connecting to other park amenities such as Morton Rock.
- Consider incorporating Olmsted-like elements.





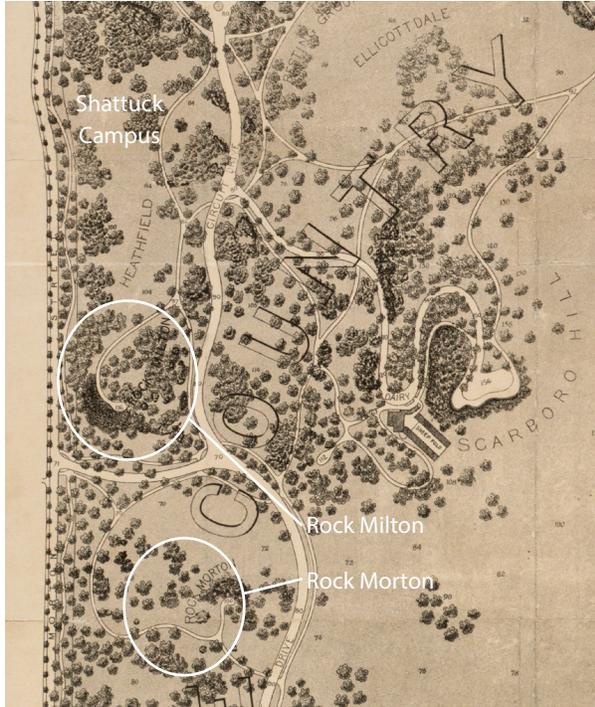
Above: Connectivity diagram for Shattuck Campus at Morton Street.

Park Connectivity

During the public process, the desire for better connectivity between the Shattuck Campus and Franklin Park was raised as a primary goal for redevelopment of the site. The Shattuck Campus should be visually and physically connected to the park, without fences or barriers. Pathways should provide easy pedestrian and bicycle connections between the Campus, Circuit Drive, and adjacent recreation areas at Ellicottdale. Reinstating historic path networks in the Campus plan that take advantage of the natural topography, using Olmsted’s approach, is strongly encouraged.

Rock Milton & Morton Rock

Reintegrating access to Rock Milton and Rock Morton, outcroppings to the south of the Campus area, was identified as a priority in the community process. Historic plans of Franklin Park show that there was originally connectivity from the campus that wound southward up to Rock Milton, as well as around Rock Milton to Rock Morton further south. Rock Morton provides an elevated vantage point with views to Scarborough Pond to the east. Providing public access to the south is strongly encouraged as a component of the new Campus plan.



Above: General Plan of Franklin Park, c. 1885, showing campus area and the Rocks Milton and Morton areas.

Vehicular & Public Transportation

A primary goal for site reuse is focused on multimodal strategies to minimize or eliminate impacts of vehicular use on the Campus. The Shattuck Campus sits within a heavily trafficked area that includes Morton Street and the Arborway, key arterials connecting to Forest Hills and Jamaica Plain; and Circuit Drive which connects the site with Blue Hill Avenue. As discussed in the existing conditions, multimodal site access will need to be carefully crafted to minimize impacts on existing road networks while prioritizing safe pedestrian and bicycle access to the site.

Reducing the number of cars on the campus, and with it the need for on-site parking, is a priority. The Campus is a unique site, surrounded by park space, full of places for people; the emphasis at the Shattuck Campus should reflect the focus on places for people, rather than automobiles. Site circulation should encourage connectivity: parking areas should be strategically placed to reduce impacts and support a pedestrian-focused campus atmosphere. On-street parking should be incorporated to promote traffic calming. Improvement of public transit, and implementation of a dedicated shuttle for the site are strongly encouraged to support this effort.

Vehicular Access

Primary vehicular access to the Campus is currently from Circuit Drive. To reduce impacts on the park, the design goals for Campus redevelopment recommend the main vehicular access to the Campus be from Morton Street, while secondary access remains on Circuit Drive. Refer to the diagram on the prior page for conceptual vehicular site access points. Campus reuse should incorporate best practices in transportation planning, including close coordination with the Department of Transportation and the City of Boston. Moving the primary entrance from Circuit Drive to Morton Street will likely require a new traffic signal to allow access from Morton Street onto the campus. This will be evaluated throughout the planning and development process.

Secondary access off Circuit Drive is anticipated as well. As part of the reuse plan it is strongly recommended that access to the campus at the existing Circuit Drive intersection be redesigned to incorporate improved pedestrian and bicycle safety, including near the existing bus stop.

Public Transportation

Public transportation access to the site is crucial for supportive housing residents, community members seeking access to services, and campus staff persons. In consultation with the MBTA, the location of bus stops and frequency of service should be reviewed and optimized for public access.

The bus stop along Morton Street has been discussed at several community meetings; the existing conditions may be unsafe and require improvement. In addition, it is challenging to cross Morton Street to gain access to Shattuck Campus. As discussed in the Existing Conditions section and in the Connectivity & Walkability section, additional sidewalks and improved crosswalks are needed to provide safe access between the campus and the MBTA bus stop on the southbound side of Morton Street. There are several potential improvements that could be made to better serve those that use the bus to arrive at the campus. A side access lane, an interior street or other configuration, which would result in a better location for the bus stop, are each potential options for improvement.

The Circuit Drive bus stops also need upgrading to incorporate sidewalks and crosswalks. Bus shelters, furnishings and signage should also be upgraded as part of the campus development. Introduction of an internal drive parallel to Morton Street, could provide a place for safe drop-off and pick-up of MBTA bus riders.

Campus Shuttle

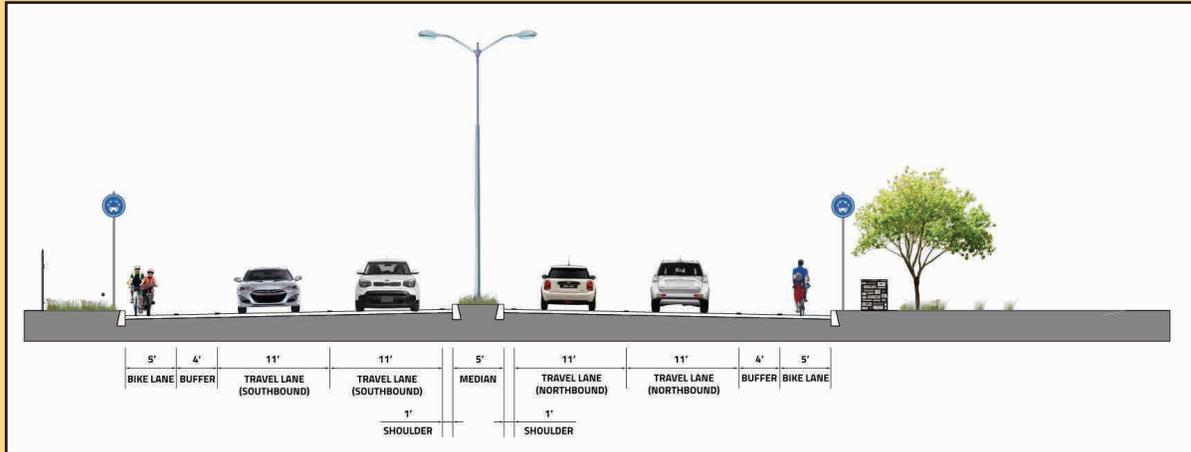
In addition to strengthening existing public transportation service to the Shattuck Campus, design goals for the campus include instituting a shuttle transportation system to facilitate access to and from Forest Hills Station, which is just over a half mile away (a 12-15 minute walk). Having a shuttle service that operates on a regular, frequent schedule is essential to providing access for site users – staff and those who do not have their own means of transportation. Providing shuttle service will also help minimize the number of vehicles on the campus.

The campus design goals also encourage the use of autonomous electric vehicles (AEVs) in the new plan. AEVs can provide on-call custom service, as well as regular routes. AEV shuttles are already in use on some college campuses and planned senior living centers. AEV shuttles can help meet sustainability goals on the campus.

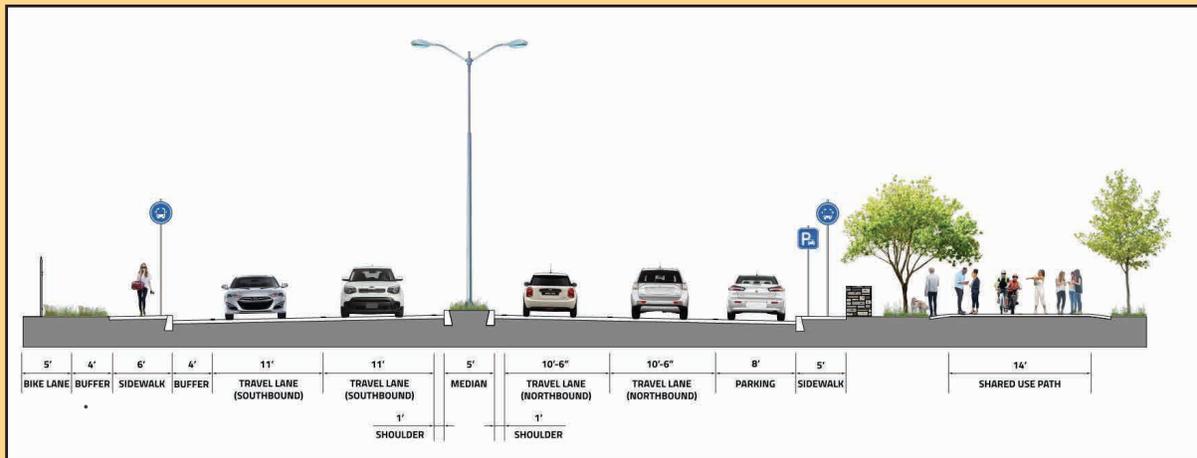
Stormwater

Best practices in stormwater management should be implemented on the Shattuck Campus in order to prevent site impacts on the surrounding park area. Site design for the campus should incorporate landscaping elements such as bioswales and rain gardens to reduce stormwater run-off and improve water quality. Permeable pavement should be used for paths and parking areas to reduce surface run-off and improve infiltration for removal of pollutants.

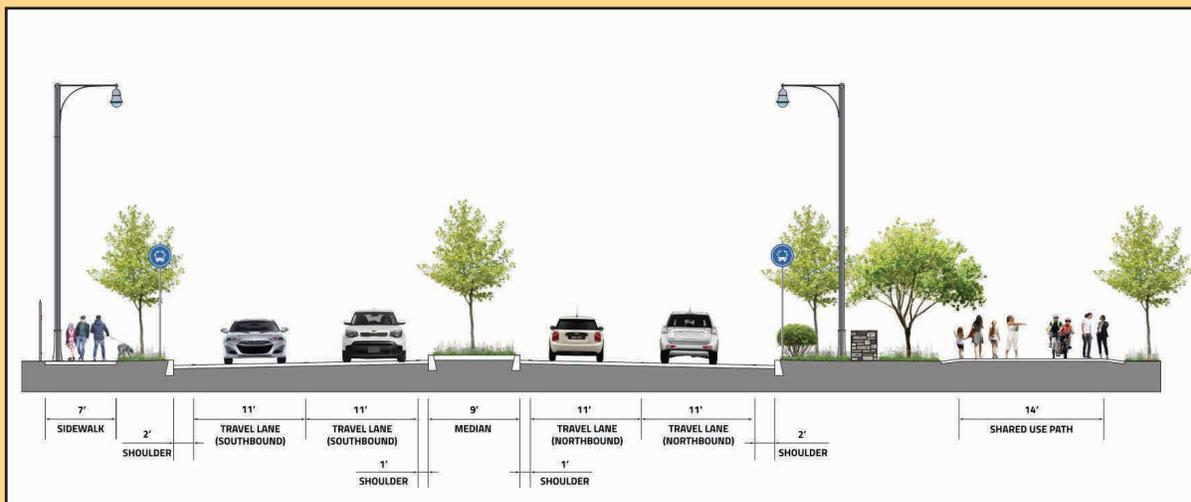
Morton Street Cross-Section



Existing Condition



Alternative A



Alternative B

DESIGN GOAL: REDUCE PARKING & ITS IMPACT

Parking Approach

A primary goal is to reduce parking and the subsequent impacts on the Shattuck Campus site and on the surrounding Franklin Park environment. In addition to developing a multi-modal approach, several strategies are strongly encouraged as part of site reuse and redevelopment including on-street parking, and use of topography to screen parking and manage stormwater.

Utilization of on-street parking where possible within the Campus is recommended as a strategy for reducing the impact that large open parking areas have. Additionally, integrating parking into the landscape is preferred over aggregating parking in large lots. To mitigate visual impact on the campus and surrounding park, and to reduce overall heat island effect from parking, use of trees and landscape planting areas within parking areas are strongly encouraged. The Campus setting, surrounded by the park, requires an approach parking that emphasizes parking reduction.

Use of Site Topography

One approach to parking that was highly favored in community discussions was the use of existing site topography to screen parking areas from view. There is a significant existing grade difference (approximately 13 feet) between the higher northeastern edge of the site abutting Franklin Park, and the lower Morton Street edge. Currently, the basement of the hospital, with a substantial footprint of over 85,000 SF, sits amid this grade change. Reuse plans for the Campus site could consider using this grade change to hide parking from view of the park. The full area of the existing basement footprint could potentially accommodate many vehicles.

Stormwater

Best practices in stormwater management should be implemented on the Shattuck Campus in order to prevent site impacts on the surrounding park area. Site design for the campus should incorporate landscaping elements such as bioswales and rain gardens to reduce stormwater run-off and improve water quality. Permeable pavement should be used for paths and parking areas to reduce surface run-off and improve infiltration for removal of pollutants. Stormwater management improvement will be consistent with local and State sustainable design requirements.



Implementation Considerations: Vehicular Access & Parking

VEHICULAR ACCESS:

- Modify existing entrance and intersections.
- Evaluate need for traffic signal at intersection of site driveway and Morton Street
- Consider improving bus access to site through use of access lane from Morton Street.
- Upgrade and relocate bus stops to improve site access; optimize service.
- Consider shuttle service to Forest Hills MBTA.

PARKING:

- Consider shuttle service to Forest Hills MBTA.
- Reduce parking on site & improve access to public transit.
- Integrate parking with landscape; screen parking, encourage on-street parking where possible.
- Consider podium buildings and existing landforms to reduce impact of parking.
- Incorporate landscaping elements to reduce stormwater run-off and improve water quality.
- Permeable pavement reduces surface runoff, storing it for slower discharge.

DESIGN GOAL: INCREASE LANDSCAPE AREA

Context

The Shattuck Campus at Morton Street is set within Franklin Park, which surrounds the Campus on three sides. Opposite the Shattuck Campus is the Forest Hills Cemetery, an active 275-acre park-like cemetery established in 1848 with mature trees. Franklin Park is the 527-acre crown jewel of the Emerald Necklace. It is one of Frederick Law Olmsted’s finest urban park designs. The landscape consists of wooded drumlins and open meadows. The character is often described as pastoral with elements of the picturesque, a design aesthetic found throughout Olmsted’s work.

Franklin Park was designed as a “country park.” In 1954, the City transferred the 13+/- acres of the Heathfield section of The Country Park to the Commonwealth to develop the Shattuck Campus and hospital facilities to meet current public health needs. Despite many alterations to Franklin Park, the park remains bucolic with much of Olmsted’s vision intact. This is the setting for the Shattuck Campus at Morton Street.

Landscape

Given the Shattuck Campus at Morton Street’s contextual location, Olmsted’s design philosophy should be used in the reuse and redevelopment plans. Olmsted’s design philosophy and approach often incorporate curvilinear forms and pathways, to convey a sense contemplativeness and tranquility .

Pathways and infrastructure for pedestrians and bicycles on the campus should be connected with paths extending through Franklin Park. A connection to Morton Rock, a geologic feature just east of the Shattuck campus should be de-

veloped. Olmsted’s approach to pathways was to lead park visitors from one space to the next by allowing glimpses of the next space through the trees. He designed pathways to provide a sequence of views which unfold as the user walks through, using natural features – turf and rock, trees, planting of shrubs, water and the occasional bridge or steps, taking advantage of the unique character of the site. The pathways would often lead visitors to a scenic vista that would appear only once you came upon it.

Olmsted preferred the use of native plant species and designed landscapes for long-term maintenance, using a primary palette of lawn and shade trees, with sparing use of flowering trees, perennials, and shrubs.

The redevelopment of the Shattuck Campus should incorporate spaces for solitary moments and passive recreation with more social spaces with public amenities, integrated with the buildings on site. Outdoor and indoor landscapes should include healing spaces and garden areas to support recovery.

Edges

The southwesterly edge of Franklin Park extends one mile from American Legion Highway northwest to Forest Hills Street. Of this one-mile stretch, a quarter-mile interval is the edge of the Shattuck Campus. The existing edge along Morton Street for both Franklin Park and the Shattuck Campus is bounded by a short, twenty-four to thirty-inch high stone wall set back a couple feet from the roadway. This stone wall extends around most of the perimeter of Franklin Park, augmented by stately mature trees. The interval with the Shattuck Campus edge along Morton Street has the historic wall, and only a few trees. Improvements should include a soft, porous vegetated edge.

Views of the redeveloped Shattuck Campus shall be visible from Morton Street. The other edges of the Shattuck Campus today are marked with black chain link fencing creating a hard edge and barrier. A more porous, softer edge, that opens up the vistas and views to Franklin Park is preferred along the park sides. The visual and physical connection with Franklin Park should be enhanced using an Olmstedian approach.

Implementation Considerations: Landscape Area

- Soft edges.
- No barriers.
- Enhance visual and physical connection to/ from park.
- Maintain visibility of program on Morton St. for community connection.
- Consider Olmsted design principles.
- Integrate with park and park paths.
- Incorporate spaces for passive recreation.
- Provide spaces and gardens to support recovery.
- Provide Morton Rock connection.



Community Input: Transportation

During Community Meeting Three, participants weighed in on key themes developed through the planning process and responded with feedback about things they liked, ideas for change, and items to be added.

Like	Change	Add
<ul style="list-style-type: none"> Protected bike lane Cycle track Sidewalks on both sides Soft edges Connectivity for housing not isolated Forest Hills shuttle needed Love hiding parking below building Like use of permeable paving and rain gardens Reduce amount of paving Parking under building/behind "hill" of Shattuck Underground parking Minimal surface parking: buildings can be taller if cars could be underground 	<ul style="list-style-type: none"> More Bike paths Footprint of Shattuck impeding access to paths, cluster services closer to Forest Hills Park access by foot on other side Permeable paving All vehicular deliveries access on Morton St., close off other access point Concern over traffic stacking at Circuit Drive/ Morton intersection Concern over traffic on Morton St. Parking on Morton is a problem No parking on Morton St. Speed limit reduction on Morton St. Concern over narrowing of Morton St., keep width Concern about adding traffic signal-impacting through traffic Concern over locating new signals on Morton St. Concern over left turns off Morton St. onto the site Relocate services to MBTA Arborway bus parcel 	<ul style="list-style-type: none"> Cycle track to separate from pedestrians Lighting for walk/ bike paths Security Safety first on campus Foot and pedestrian safety at crossings; possible flashing yellow lights at crossings? Morton St. more integrated-bus stops, crosswalks to improve pedestrian safety Expand the sidewalk on Morton St. (currently 2 ft wide w/pole in the middle) Add parking restrictions for employees to prevent them from parkign on Circuit Drive Shuttle - FREE Plan for EV charging Low parking ratio for supporting housing VFW Pkwy - offsite parking? Dropoff areas onsite 3 buses currently serve Morton more frequent service needed Electric bus and AEVs Morton St. as urban street, not highway (all addresses on Morton St.) Scattered buildings connected by gardens, parks, walkways (college campus)

General Comment Themes:

- Improved access for pedestrians and bikes is essential
- Pavement reduction is essential
- Morton Street improvements are needed
- Opening to park with services, connecting
- Improved convenience for public transportation e.g. shuttle connection to Forest Hills
- Pavement reduction is important; consider underground parking to allow for more green space
- Morton Street improvements are needed
- Improved access for pedestrians and bikes is essential
- Concern for increasing convenience to public transportation for Shattuck campus
- If there is a traffic analysis done, could you add looking at what if circuit driver was closed to through traffic?
- Drastically increase green space and decrease paved parking, fully underground parking
- Concentrate all buses along morton st away from the park, make a vehicular access on morton
- Add cycle tracks and separate pedestrian sidewalks to morton st and reduce width of driving lanes

Community Input: Landscape & Character

During Community Meeting Three, participants weighed in on key themes developed through the planning process and responded with feedback about things they liked, ideas for change, and items to be added.

Like	Change	Add
<ul style="list-style-type: none"> Minimal surface parking: buildings can be taller if cars could be underground Soft edges Connectivity for housing not isolated Maintain Olmsted design principles 	<ul style="list-style-type: none"> Park access by foot on either side Separate park and housing Return Shattuck site to parkland 	<ul style="list-style-type: none"> Morton St. as urban street, not highway (all addresses on Morton St.) More traffic illegible on Morton St. Scattered buildings connected by gardens, parks, walkways (college campus) Morton St. needs more integrated bus stops, crosswalks to improve pedestrian safety Limit light pollution (dark sky)

General Comment Themes:

- Maintain Olmsted design principles
- Incorporating more open, green space
- Give some or all land to Franklin Park
- Add family space e.g. playground, childcare center
- Integration of services and housing with Franklin Park
- I do not support community gardening in Park, but yes on Shattuck Campus
- Reconnections are needed
- Leave the landscape redesign for parks to the landscape architects and eco-architects, not developers
- If housing must be in park, maximize by building up on Morton St. side
- Keep the smaller buildings in order to keep nature. Keep the land in an estate
- Incorporate recommendations for community amenities (restrooms, community room)

DESIGN GOAL: BALANCE SCALE & CHARACTER OF BUILDINGS

Context

Future buildings on the Shattuck Campus should be integrated with the site’s topography and landscape. The topographic changes will enable the designer and builder of prospective buildings to utilize grade changes to hide or at minimum make less visible functions such as parking and services. High-quality design should be used with both materials and the color palette reflecting the natural environment and promoting a sense of welcome and healing.

Olmsted looked to the site context to inform plan layout and building siting. For institutional settings, Olmsted preferred appropriately scaled buildings with residents having windows with pleasant views. Access to open space, fresh air, and sunlight are key.

A variety of building types support the public health and housing uses that have been outlined as part of the vision for the campus. Supportive housing is often co-located in a mixed-use building, that incorporates wrap around services. Housing variety may take multiple forms. Health clinics and support spaces will need access to related services.

While each building on the Shattuck Campus may have a different use, each will need to reflect the Planning Principles and implement the Design Goals. Buildings within a campus setting are oriented to streets, public spaces and to one another, defining edges and making spaces between the buildings more legible. The “front-side” of one building will face the “front side” of another building, often with a public space in between. Pedestrian scaled buildings are not set back behind or within large parking lots, but instead incorporate good urban design practices that activate the ground floor and hide or eliminate parking.

Front entries are clear, and uses such as clinics, community services, offices and others at the ground level, provide ease of access, increase security and add vitality to the spaces adjacent.

Building Scale & Massing

Building scale and massing are important factors in developing a new plan for the Shattuck Campus. Reuse plans should consider buildings that are approximately six floors in height. Building designs with long, empty monolithic walls, especially at the ground level, should be avoided. To preserve a walkable campus atmosphere, building design and massing should balance scale and character of uses. Buildings that are scaled to reflect the multifamily residential aspect of the supportive housing on the site can break-up building massing with subtle changes in building form, for example.

Effort should be made to incorporate the landscape into the site, both as physical spaces and as views out to the park from buildings and spaces on the Campus. To promote the natural environment of the site as a place for wellness and healing, incorporation of group gathering spaces such as courtyards and balconies, is encouraged.



Implementation Considerations: Scale & Character of Buildings

- Balance scale and character of uses and building types.
- Integrate buildings with site and open space.
- Consider a 6-story maximum height.
- Use quality design and materials.



DESIGN GOAL: COMPATIBLE BUILDING DESIGN & MATERIALS

Context

An overall goal for Shattuck redevelopment plans is to create a walkable campus atmosphere that is compatible with Franklin Park and incorporates the natural setting as a way to promote health and well-being for clients, visitors, staff and the general public.

Building Materials

Materials used on the Shattuck Campus, whether for site improvements or building construction, should be of a high quality, and should be durable. To complement the natural setting of the adjacent Franklin Park, building materials and color palettes should be carefully selected to reflect or enhance the natural environment. Use of natural materials in the design of facades, such as wood, stone, brick or others, are strongly encouraged. To support sustainability goals on the site, locally sourced building materials, and building materials and components with longer lifecycle are encouraged. Selected materials will be consistent with materials required in sustainable best practices, such as Net Zero design.

Case Examples

A few examples of possible approaches to building massing, site relationships, materials and color are provided.

California State University, Northridge, CA
The California State University Performing Arts Center was included in examples for its use of large spans of glass on the façade which allows for interaction between interior and exterior spaces. It is also an example of a six-story building.



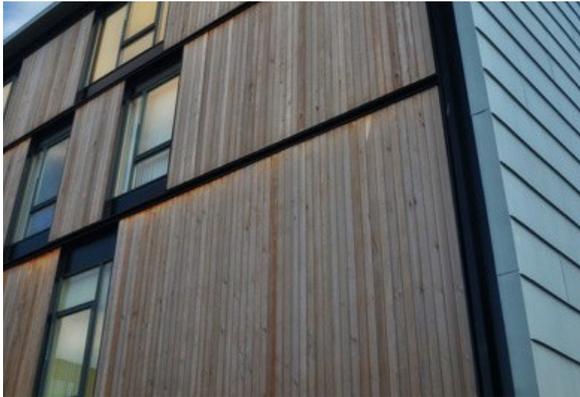
Above: California State University, Northridge CA



Above: Weld Hill Building, Arnold Arboretum

Sandy Road Clinic, Glasgow

The Sandy Road Clinic incorporates some of the program elements for the Shattuck Campus. The openness of the street level promotes awareness of the health-related program inside. The oak cladding on upper floors blends with the zing siding, and features oak louvers on the south façade to help mitigate heat gain. Additionally, the project integrates well with surrounding area by providing secure garden play spaces to the rear of the building.



Above: Sandy Road Clinic, Glasgow

Weld Hill Building, Arnold Arboretum

The Weld Hill Building, in the nearby Arnold Arboretum was constructed in 2011. The exterior of the building makes extensive use of wood cladding and stone. This wood surface integrates well with the surrounding wooded areas. The low, three-story building makes use of existing topography to reduce the overall impact of its height. It also features a long veranda which allows building occupants an opportunity to interact with the surrounding arboretum setting.



Above: Hebrew Senior Life, Dedham, MA

Implementation Considerations: Design & Materials

- Consider materials and color palettes that reflect the natural environment.
- Incorporate landscape in and around buildings.
- Consider buildings that are no more than six floors in height.

Hebrew Senior Life, Dedham, MA

Hebrew Senior Life at NewBridge on the Charles touches on several key building design principles.

- The building is less than six stories in height.
- While it is a large structure, the building massing is broken up into bays with porches and other details, that along with the variations in roofline heights, serve to reduce the overall impact of size and provide interest.
- The building makes use of natural wood materials and has an earth-tone color palette that is compatible with the surrounding natural environment.
- Landscape paths and plantings are well designed and help integrate the building with the surrounding natural environment.

Community Input: Building Scale & Character

During Community Meeting Three, participants weighed in on key themes developed through the planning process and responded with feedback about things they liked, ideas for change, and items to be added.

Like	Change	Add
<ul style="list-style-type: none"> Use of local materials Effort to improve on current brick and pavement 	<ul style="list-style-type: none"> Limit height to 6 to 7 stories including parking 	<ul style="list-style-type: none"> More live trees

General Comment Themes:

- Take down Shattuck
- Reuse and improve an existing built environment
- Saying the right things regarding integration with Franklin Park and Olmsted history - the questions is will the results reflect that
- Contiguous with park but retain public health use of the 13 acres with more green space than currently exists
- Emphasis on integration with park
- Double supportive housing to around 200 units, if feasible
- Include education of children. Invite the Shattuck preschool back into this process and back to their old home. They are in a temporary, much smaller space. Bring in a small elementary school (70-100 students) into the plan. Good for community building. Kids are good for mental health.

Community Input: Energy & Sustainability

During Community Meeting Three, participants weighed in on key themes developed through the planning process and responded with feedback about things they liked, ideas for change, and items to be added.

Like	Change	Add
<ul style="list-style-type: none"> • Permeable surface • Use of local materials • High water efficiency • Don't trade off costs for sustainability • Netzero energy • NetZero a must • Like NetZero • Public good 	<ul style="list-style-type: none"> • Require sustainable energy; local materials • Reduce Green House Gas • Amplify rainwater capture for gardening • Consider City sustainability requirements • Energy renewable • Define sustainability metrics • Use energy incentives • Return site to parkland • Relocate services to MBTA Arborway bus yard • Green space • Park sustainability 	<ul style="list-style-type: none"> • More live trees • Improve handicap access • LEED certifiable • High water efficiency • Stormwater drainage • Prevent impact on pond • Buildings study • Solar energy for transportation • Living buildings • Explore bio-mass • Mattapan Nature Center is NetZero • Buildings sustainable NetZero • Electric vehicles • Recycling models

General Comment Themes:

- All buildings - renewable energy sourced, net zero carbon, passive house standard
- Involve Mass Chapters of the US Green Bldg. Council (or similar experts) to development specs for RFP
- Use life-cycle cost analysis
- Electric shuttle bus
- Elimination of all fossil fuels
- Great that you list "NetZero design and operation goals" as a principle
- Sustainability, use of renewables, and net-zero should not be cut

DESIGN GOAL: ENERGY & SUSTAINABILITY

Context

Energy and sustainability are key issues for future redevelopment and reuse of the Shattuck Campus. The Commonwealth has developed Sustainable Development Principles to promote sustainability through integrated policies, programs, and investment addressing energy, housing, the environment, transportation, economic development and Public Health at the Shattuck Campus. The State seeks to advance sustainability and equitable development in accordance with the Sustainable Development Principles and other policies in partnership with local governments, businesses and nonprofit organizations.

The Commonwealth's sustainability policies seek to maximize energy efficiency, reduce greenhouse gas emissions, and reduce use of fossil fuels. Today, the Shattuck Campus is heated through a Campus or district-wide steam heat system powered by natural gas. In the future, the goal is to maximize energy efficiency and use of renewable energy on the Shattuck Campus. Energy strategies could include district energy as well as development of net zero buildings.

Renewable Energy

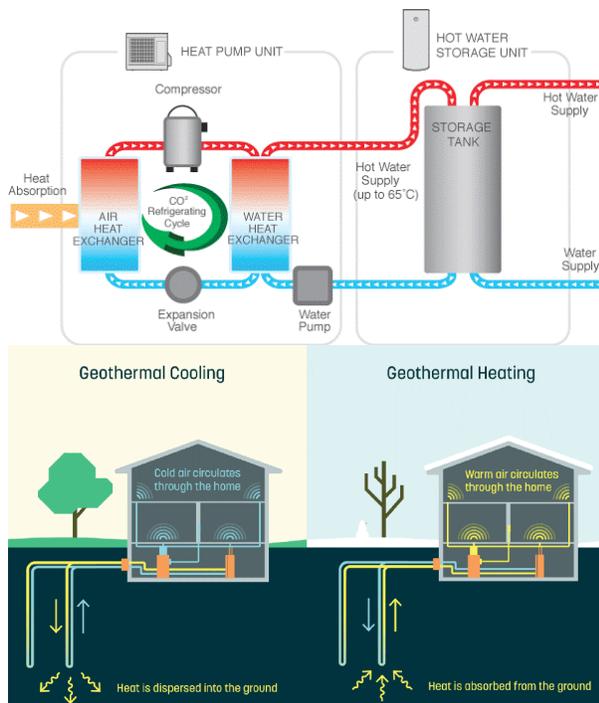
Renewable energy options for the Shattuck Campus include solar, photovoltaics and geothermal. Renewable energy is being used in a wide range of settings from streetlights and housing to larger-scale offices and government buildings. District energy, microgrids, and renewables (solar and geothermal) are all strategies that can be used to increase energy efficiency and reliability. Use of renewable energy reduces the long-term cost of energy for programs and services on the Shattuck Campus, and reduces carbon emissions providing an overall benefit.

Geothermal

Geothermal energy entails the use of a pump to draw heat from the ground. Pipes are laid in the soil and connect to a building; fluid circulates in the pipes and absorbs the heat from the surrounding soils. The heat is then pulled from the pipe by an electric compressor and heat exchanger and distributed throughout the building. During the summer cooling season, the opposite process occurs.

The system pulls the heat out of the building and discharges it into the ground via the piping system. In addition to capturing heat from deep in the ground, with any significant extension of wastewater collection lines, there is an opportunity to capture some of the waste heat generated as effluent and biosolids as they travel through the wastewater collection system. Some utilities and campus (or district) projects have started to capture this “waste heat” and use it as a source of energy. At minimum, the waste heat energy from the sewer collection system can be captured by a heat exchanger, which can be used to provide hot water to each building.

District energy is centrally generated and then



Implementation Considerations: Energy & Sustainability

- Incorporate energy-efficiency and natural lighting.
- Net Zero design and operation goal.
- Consider green roofs.
- Utilize water efficient appliances and fixtures where possible.
- Use rainwater capture and reuse as appropriate.
- Consider xeriscaping to reduce water needs.
- Site lighting should incorporate dark sky best practices.

shared amongst several buildings or even several blocks of a designated neighborhood or district, often using renewable energy. District energy can include both heating and cooling.

Left: Diagram of Geothermal Energy

Net Zero Buildings

A Net Zero Building is defined by the World Green Building Council (WorldGBC) as a building that is highly energy efficient and fully powered from on-site and/or off-site renewable energy sources. Net zero aims to not only use renewable energy but also reduce demand for energy and carbon-producing activities. The US Green Building Council (USGBC) which administers the Leadership in Energy and Environmental Design (LEED) certification system has articulated a pathway to Net Zero energy, water and waste.

New construction design and activities that are key to reaching Net Zero per USGBC include providing storage and collection of recyclables; optimization of energy performance; use of green power and carbon offsets; access to quality transit; outdoor and indoor water use reduction.

At minimum, energy saving products and appliances consistent with Executive Order 484 should be utilized in the future development of the Shattuck Campus buildings and facilities. These products include but are not limited to low-flush toilets; water-reducing shower-heads; and water-conserving appliances. Water saving methods, such as capturing ground water runoff and recycling gray water for irrigation, are beneficial. Xeriscaping, the use of native plants in the landscape, can help reduce water needs.



Above: Z-Home, Issaquah, WA



Above: Z-Home, Issaquah, WA

- In Net Zero Energy buildings more energy is produced by renewable sources, such as solar panels or geo-thermal, than consumed.
- South-facing courtyards provide passive solar heating, reducing energy needs.
- Water conservation technology helps reduce water usage 30%.
- Sustainable building products reduce carbon footprint. Low-toxin materials improve indoor air quality and health.

Solar

- Buildings built to a low-energy consumption standard reduce overall carbon footprint.
- “Sustainable model district” energy systems have lower operations costs and better energy delivery.
- Solar is a viable renewable energy source for residential uses.



Above: Solar array on homes, Vauban, Germany.



Above: Solar array on homes, Vauban, Germany.

Dark Sky Best Practices

Dark Sky Best Practices aim to reduce light pollution and protect the ability to see the night sky and stars. The International Dark Sky Association is the lead organization addressing dark sky best practices and certifying dark sky places – parks, reserves, sanctuaries, and communities. The US National Park Service has identified a six-point approach to minimizing light pollution. The six points are:

1. Light only Where you need it;
2. Light only When you need it;
3. Shield lights and direct them downward;
4. Use lamps with warmer color light;
5. Use less light; and
6. Use the most energy efficient lamps and fixtures

Amber-colored lights emit longer-wave lengths which are more protective to the eyes and minimize sky brightness. Blue lights are more susceptible to insects.

Sustainable development requires a holistic approach so that future redevelopment and reuse of the Shattuck campus meets the needs of the present without compromising the ability of future generations to meet their own needs -- the meaning of sustainability as defined by the United Nations World Commission on Environment and Development.

PROGRAM: SUPPORTIVE HOUSING & PUBLIC HEALTH SERVICES



Above: Blackburn Center with supportive housing and wrap around services; Portland, Oregon.

Program and Service

To meet the identified public health needs at the intersection of health care and housing, the Commonwealth should identify and work with (a) private partner(s) to provide a continuum of health care services including behavioral health (substance use disorder and mental health) and primary care, permanent supportive housing, an emergency shelter and wrap-around supportive services, as well as open space development that supports the public health uses. The recommended person-centered model will build off and supplement the current services pro-

vided at the Shattuck Campus today by private provider organizations. The model presents an innovative opportunity to integrate housing into the care continuum and is responsive to transformations in broader health care delivery systems, like the implementation of Accountable Care Organizations. Integration across primary care, behavioral health and housing services, as envisioned, may require both co-locating services and delivery system transformation by partner organizations. A private partner might propose a variation to this spectrum of integration.

Among the services that might be provided on the Campus are: Medication-Assisted Treatment (MAT), including counseling, medical and referral services, outpatient counseling, comprehensive substance use disorder and co-occurring disorder care, urgent psychiatric care, outpatient services including primary care, behavioral health, case management, community-based primary care and social services in clinical setting or home care approach, supportive housing, emergency shelter beds, mixed-use/mixed-income housing. A future partner might suggest or provide additional services not included here. A non-exhaustive list of those that may be complementary to the model described above include: vocational training, education/employment center, social center, spiritual center, community kitchen, wellness center, gardening, social enterprise space, or a food pantry. Further, the redevelopment provides an opportunity to leverage nearby organizations to forge innovative partnerships (e.g., job training and skill-building) that contribute to the continuum of services and programs available at the Campus.

ple who suffer from complex medical, mental and addiction disabilities whose conditions are very challenging and expensive to manage when the person is homeless. Supportive housing provides these individuals with the stability they need to get treatment and other services to support them. Permanent supportive housing tenants live in leased, independent apartments or shared living arrangements that are integrated into the community. Tenants have access to a broad range of comprehensive community-based services, including medical and mental health care, substance use disorder treatment, case management, vocational training, and life skills training. Housing First represents a shift toward “low-threshold” housing; by removing the barriers to housing, individuals are given an opportunity to deal with the complex health and life issues they face as tenants, understanding that not all people need the same services rather than a prescribed, linear system of care.¹ There are several types of permanent supportive housing.

- Purpose-built or single-site housing: Apartment buildings designed to primarily serve tenants who are formerly homeless or who have service needs, with the support services typically available on site

Permanent Supportive Housing

Permanent supportive housing (PSH) - also known as Housing First -- is targeted to peo-



Above: La Casa Permanent Supportive Housing, Washington DC



Above: La Casa Permanent Supportive Housing, Washington DC

List of Boston Continuum of Care Providers

Bay Cove Human Services	FamilyAid
Boston Housing Authority	HEARTH
Boston Rescue Mission	Heading Home
Boston Public Health Commission	HomeStart
Bridge over Troubled Waters	Kit Clark Senior Services
Casa Myrna	Metro Housing Boston
Eliot Human Services	Mass Housing and Shelter Alliance
New England Center and Home for Veterans	Pine Street Inn
Project Hope	St. Francis House
VA Boston	Victory Programs

- Scattered-site housing: People who are no longer experiencing homelessness lease apartments in private market or general affordable housing apartment buildings using rental subsidies. They can receive services from staff who can visit them in their homes as well as provide services in other settings.
- Unit set-asides: Affordable housing owners agree to lease a designated number or set of apartments to tenants who have exited homelessness or who have service needs,

The Boston Continuum of Care was home to, on average, 39% of the state’s chronically homeless population between 2015 and 2017. Massachusetts has a persistent shortage of PSH beds needed to house its chronic homeless population. The size of these shortages can vary from year-to-year and the shortfall poses a persistent obstacle for service providers and policymakers who seek to use PSH to serve the state’s chronically homeless population.³ The need for supportive housing for chronically homeless individuals, homeless families and people with mental health and substance use disorder in Eastern Massachusetts number 4,354 units and for Suffolk County 425 units.⁴

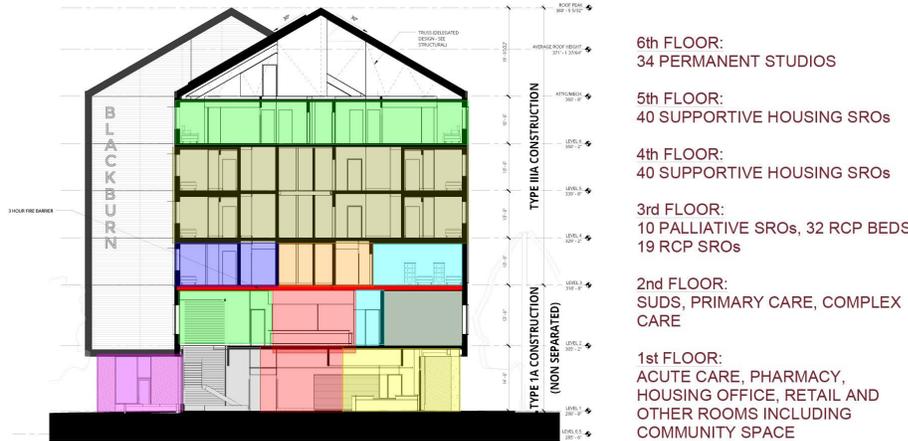
Of the 950 units of permanent supportive housing the city estimates it needs to end chronic homelessness in Boston, it estimates that 750 will become available through strict targeting of vacancies of existing permanent supportive housing units by utilizing its Coordinated Access System. Boston has a goal of developing 200 new Permanent Supportive Housing units focusing primarily on permanent supportive housing that offers 24/7 on-site support for people with major barriers to stability. The units must be “low-barrier” in that the requirements to become a tenant must not screen out the very individuals who need such housing options, including people with criminal histories, poor credit, prior evictions, mental illness, and active substance use disorder, among other factors that prevent them from gaining access to mainstream housing resources.

Of the total number of single adults with special needs and a disabling condition in the emergency shelter system in Boston in 2015, 39% of them had a mental health condition and 35% had a substance use disorder.⁵ PSH is an important tool for addressing the high costs associated with the chronically homeless population’s frequent use of emergency shelters and hospital emergency rooms, and for transitioning chronically homeless households out of shelters and into stable long-term housing, such as a rent-ed apartment. A Blue Cross Blue Shield Foundation report estimates \$11,000+ annual savings per person in public healthcare costs after chronically homeless adults move into supportive housing.⁶

BLACKBURN BUILDING USES

ACUTE CARE	TEAM 1	PALLIATIVE CARE
PHARMACY	TEAM 2	RCP
HOUSING OFFICE	TEAM 3	SUPPORTIVE HOUSING
RETAIL	TEAM 4	SROs PERMANENT STUDIOS

RCP: Recuperative Care Program
 SRO: Single room occupancy
 SUDS: Substance Use Disorder Services



Above: Section drawing of Blackburn Center in Portland, Oregon, illustrating wrap around services.

Endnotes

- 1 Massachusetts Housing and Shelter Alliance, <https://www.mhsa.net/PSH>
- 2 <https://www.cbpp.org/research/housing/supportive-housing-helps-vulnerable-people-live-and-thrive-in-the-community>
- 3 The Supply of Permanent Supportive Housing in Massachusetts: Comparing Availability to the Chronic Homeless Population. Nicholas Chiumenti. New England Public Policy Center and the Federal Reserve Bank of Boston. Policy Report 18-2. September 2018.
- 4 Based on CSH 2016 Analysis. Updated to 2017 based on American Community Survey data, 5 year estimates for 2016 and 2017. Prepared by Kathleen McCabe, AICP, McCabe Enterprises.
- 5 City of Boston’s Action Plan for Ending Homelessness, <https://www.boston.gov/sites/default/files/document-file-07-2017/action-plan-homelessness.pdf>
- 6 Blue Cross Blue Shield of Massachusetts Foundation.

Community Input: Program

During Community Meeting Three, participants weighed in on key themes developed through the planning process and responded with feedback about things they liked, ideas for change, and items to be added.

Like	Change	Add
<ul style="list-style-type: none"> • Recommendations • Doing well for community input 	<ul style="list-style-type: none"> • More than 100 supportive housing units (it's a large site) • Return Shattuck site to Franklin Park land • Relocate services to MBTA Arborway bus parcel • Use MBTA Arborway bus yard for Shattuck housing • Return Shattuck to Franklin Park • Don't just focus on single individuals for supportive housing • Adult care • Career Center • Health services for all • Mix of demographics: transitional and long-term; education 	<ul style="list-style-type: none"> • Add a thoughtful thorough assessment • Integrate the neighborhoods • More units of transitional housing • Family residential treatment • Ground rules • Sustainability • Less housing • Forest Hills neighborhood representation • Childcare center • More Q&A dialogue • Services should be included • Reclaim park • Public housing • No break in services during construction & transition

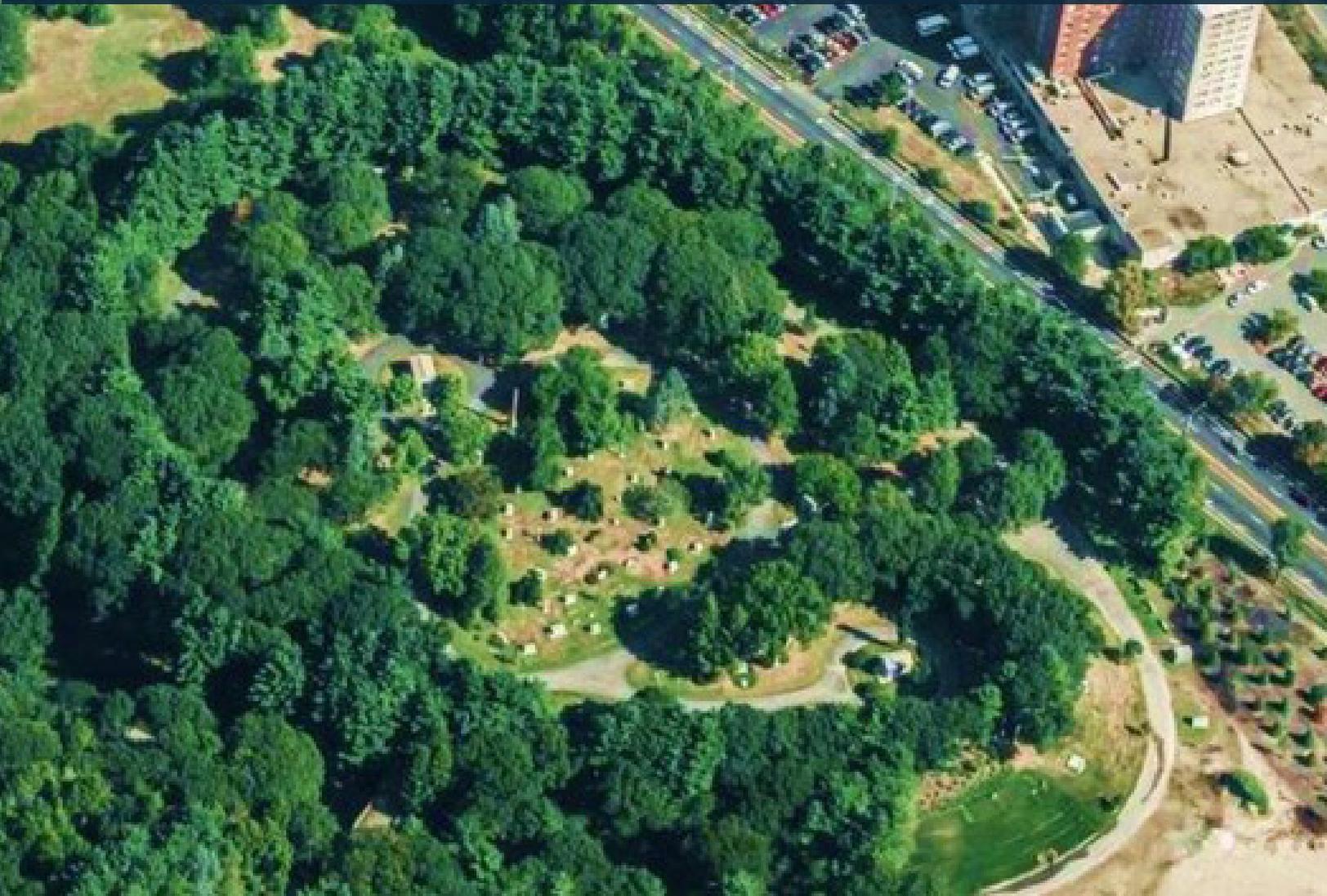
General Comment Themes:

- Working to help homeless population.
- Focus on desperately needed services to address opioid epidemic and collateral consequences. Integrating park space and housing for people w/ services. Increase transportation access.
- Supportive housing-the challenge of trying to locate this throughout Boston is enormous & nearly universally opposed when zoning variations requested. The most important piece of this proposal.
- Flow with park, services for our neighbors, and homes for people
- Integration with park, 100 units of supportive housing - a must, and retention of existing health and counseling services
- Permanent supportive housing and a continuum of services to get people to that point
- Focus on integration of both people & spaces
- Maintain services for vulnerable populations (medical and behavioral health diagnoses)
- Integration of services to clients. Diverse voices. Public health focus that seeks to address social determinants to health
- Family residential treatment
- Family spaces & ditto for children
- Not limiting focus to individuals who are homeless but an approach to family systems
- Chronic homelessness included in planning process



10

MOVING FORWARD



MOVING FORWARD

Next Steps

The information provided in this Vision Plan will inform the next phases of redevelopment at the Shattuck Campus.

As we wrap up the planning process for the Shattuck Morton Street campus, EOHHS and DCAMM are beginning to work toward implementation through campus redevelopment. Below are some key points regarding the redevelopment process:

- The State envisions that redevelopment will take place under a long-term lease with a developer who will partner with a service provider to implement the campus vision.
- The authority to enter into a long-term lease will come through a process overseen by the State Asset Management Board (AMB), a five-member body that is authorized to review projects and approve leases of up to 99 years.
- The development team will be selected through an open and competitive RFP process.
- The AMB authorizes the long-term lease subject to a competitive RFP and developer selection process. The AMB review process takes approximately 6-8 months and includes opportunities for public input. Our current estimate is that the RFP will be issued no earlier than the end of 2020.

Once a developer has been selected, the redevelopment project will be subject to applicable local, State, and Federal permitting review, including public meetings with the community and interested parties.

APPENDIX



APPENDIX 1
CASE STUDIES:
PUBLIC PRIVATE PARTNERSHIPS

CASE STUDIES

Public Private Partnerships (P3)

The integrated services model proposed for the Shattuck Campus at Morton Street is innovative. The planning team sought out comparable projects to review for programming, financing, and other key information. A search for case studies resulted in two immediately relevant examples of integrated services models. Additionally, the planning team reviewed a broader group of Public Private Partnership (P3) case studies.

Applicable Case Studies

Components of these two case studies illustrate the integrative services model in projects that entail partnerships to provide new physical surroundings for a comprehensive and integrated model of services and supportive housing. Both examples entail extensive partnerships. They are the Blackburn Center in Portland, Oregon and the Conway Center in Washington, DC.

An additional three examples highlight the types of public private partnerships referenced in this discussion of P3s, namely the Centre for Addiction and Mental Health P3 based in Toronto; the Michigan State University Biomedical Research Laboratory P3 in Grand Rapids; and the Mass Mental Health Center P3 in Boston. Over the next several pages, case studies of various public private partnerships are profiled.

Of note: while there are elements of many of these case studies that are relevant, there is not one that is entirely comparable to the vision outlined for the Shattuck Campus. Implementing the Shattuck Campus vision will require an innovative approach to both development and the operation of services.

Public Private Partnerships

Public private partnerships, or P3s for short, are an alternative approach to procuring and financing projects such as facilities and infrastructure or providing services. Collaboration between government, and the private sector – both for-profits and nonprofits – has occurred throughout history, and is a common way to complete projects. In the past sixty years, the term public private partnerships has become popularized, as governments often facing diminishing resources have sought to leverage the assets and expertise of other sectors.

Private sector access to equity and private financial markets is often a major impetus for the public sector's desire for a P3 relationship. P3 proponents cite the private sector's ability to nimbly execute and implement as a key advantage. The private sector is also viewed as able to accelerate innovation and the use of technology.

The public sector also brings expertise and valued capacities to the table in a public private partnership. These include the public trust and the power to convene and bring diverse constituencies together. The public sector can also offer creative financing with bonding, tax credits, or longer-term financial commitments. Forging partnerships between the public and private sectors can capitalize on the assets and attributes of both the public and private sectors.

TYPES OF PUBLIC PRIVATE PARTNERSHIPS

Public private partnerships take a variety of forms based on one or more of five different project elements: design; build; finance; operate; and maintain. The private sector can often take on one or more of these functions. Common roles are design-build; build-finance; design-build-finance-operate and maintain (DBFOM); and operate-maintain. In more traditional procurement approaches, the public sector procures each of these services separately and independently. In public-private partnerships, the applicable elements, such as design and construction or design, build, operate and maintain, may be bundled into a single procurement process.

The models highlighted in the table below do not explicitly address leasing which is often the role of the private sector developer. In some examples, the end user is the public sector partner, and sometimes the public sector is one of several end users. Sometimes the public sector retains a right to review specific end users, or defines a category of users, e.g., income-eligible families for affordable housing or biomedical users.

Different Approaches of Private Sector Engagement in P3 Agreements.

	Identify Needs	Propose Solution	Project Design	Project Financing	Construction	Operations/Maintenance	Ownership
Bid/ Build	Public Sector				Private Sector	Public Sector	
Design/ Build	Public Sector		Private Sector		Private Sector	Public Sector	
Design/ Build/ Finance	Public Sector	Private Sector				Public Sector	
Design/ Build/ Finance/ Operate/ Maintain	Public Sector	Private Sector					Public Sector

Source: Adapted from: Private Capital, Public Good by Sabel & Puentes.

Blackburn Center

PORTLAND, OR

Owner	Central City Concern
Project Cost	\$52 million
Size	117,000 SF Land area: 0.71 Acre (30,805 SF)
Model	Supportive Housing with Integrated Services
Use	Supportive Housing, Health Care Clinic, Pharmacy, Employment Services, Cafe
Status	Opened May 2019



Exterior rendering of the Blackburn Center.

The Blackburn Center is a newly constructed facility built and operated by Central City Concern of Portland, Oregon featuring supportive housing, health care services, a pharmacy, employment services and a café under one roof. Opening in 2019, the Blackburn Center focuses on recovery, mental health services, and primary care using an integrated services approach to health, wellness, and recovery focused on the whole person, along with case management.

Several different types of housing are included in the 175 residential units at the Blackburn Center. These include 34 units of permanent housing, 80 SROs – single room occupancy – units of supportive housing; 10 palliative care SROs; 19 recuperative care SROs; and 32 recuperative care beds.

The Blackburn Center is a transit-oriented-development project, with a MAX station (Portland's light rail service), across the street from the Blackburn Center, as well as several bus lines. In addition, 75 parking spaces are provided below ground on site.

Central City Concern (CCC), a 501(c)3, has been serving the Portland community for the past 40 years serving single adults and families addressing homelessness, poverty and addictions. CCC was founded as the Burnside Consortium, a partnership forged by the City of Portland and Multnomah County in 1979 to manage a National Institute of Alcoholism and Alcohol Abuse (NIAAA) public grant. Today, CCC has a staff of over 800 persons with a \$60 million budget serving over 13,000 individuals annually at multiple facilities.

CCC is a federally qualified community health center operating in the City of Portland. It has been recognized by the US Health Resources and Services Administration (HRSA) as a Health Center Quality Leader. CCC operates several (13+) health care/behavioral health, affordable housing and supportive housing facilities throughout the Portland region. Central City Concern is the building owner, operator and developer of the Blackburn Center. CCC has developed a continuum of services, affordable and supportive housing, and integrated health care and operates several social enterprises.

Funding for the Blackburn Center comes from multiple sources, including two of particular note. One is the Housing is Health Initiative with funds from six major health care operating systems in the Portland area. Additional funding is coming in part from a \$285.4 million affordable housing bond approved by the voters of Portland with a goal of creating and preserving 1300 units of affordable housing throughout the City.

The six competing health care systems made a \$21.6 million commitment to the Housing is Health Initiative, a partnership with Central City Concern. The health systems are: Adventist-Health Oregon (\$1.5 million); Care Oregon (\$4 million); Kaiser Permanente Northwest (\$4.0 million); Legacy Health (\$4.0 million); Oregon Health & Science University (\$4.0 million); and Providence Health & Services-Oregon (\$4.0 million). This initiative supports construction of 382 new housing units at three different locations, including the Blackburn Center (formerly known as the Eastside Center).

The origins of the innovative Housing is Health initiative originated with brainstorming to address Portland's housing crisis, particularly the problems of homelessness by two key leaders with a long-time working relationship, including the recently retired director of Central City Concern, Ed Blackburn, and the CEO of Legacy Health, Dr. George Brown. They invited the CEOs of Oregon's largest health-care organizations to discuss what could be done. Recognizing the housing crisis in Portland, each made financial commitments.

The policy framework established by the Affordable Care Act (ACA) which mandates providers undertake follow-up care on patient visits to maximize the chance of a positive outcome underpinned the Housing is Health Initiative. The ACA provides funding for health care for at-risk individuals, an expense hospital systems previously assumed. Many of the hospitals had undertaken Community Health Needs Assessments, which identified homelessness and housing availability as critical issues. In one assessment, homelessness was identified by 67.6% of survey respondents as the issue with the largest impact on overall quality of life in the Portland area.

In addition, to the pioneering investments from major health care systems for supportive housing and an integrative model of health, housing and services, and funds from the City's affordable housing bond fund, CCC utilized \$17.5 million of New Market Tax Credits (NMTC). The Blackburn Center's NMTCs were an allocation from LIIF, the Low Income Investment Fund, based in San Francisco. LIIF has a national orientation with a focus on programs and services helping people lift themselves from poverty.

Governmental partners providing funding for the Blackburn Center include: Portland Housing Bureau; Multnomah County; Oregon Housing and Community Services; Oregon Health Authority; Metro (regional government); Energy Trust of Oregon and Multnomah County. Additional support was also obtained from a range of private foundations, businesses and individual contributors.

The development of the Blackburn Center by CCC has been driven and informed by five guiding principles, which are:

1. Person Centered and Trauma Informed – We will design and deliver our services with a focus on what our customers want and need and within a framework that recognizes their personal history and current circumstances;
2. Integration and Innovation – We will design and deliver our services in an integrated and innovative manner that creates a seamless experience for our customers, reduces hand-offs, eliminates redundancies, and enables us to effectively support the whole well-being of our customers;



Exterior rendering of the Blackburn Center.

- Partnership and Collaboration – We will focus on what we do best and leverage and be responsive to community partners to enable us to serve our customers in the most effective and efficient manner while meeting our commitments to our partners;
- Diversity, Equity and Inclusion – We will design programs and hire staff to deliver services that are reflective of the populations and communities we serve, and we will create an environment that respects the diversity that our clients bring;
- Sustainability – We will design, deliver, and manage our services and assets in a manner that is operationally excellent, financially sustainable, meets our fiduciary, regulatory, and compliance requirements and enables us to provide quality services to as many people as possible.

The Blackburn Center was named after Central City Concern’s long-time director, Ed Blackburn, who retired after twenty-five years of service in 2018.

The Blackburn Center is the pacesetter example of an integrative services model to address the needs of the chronically homeless and persons with substance use disorders. It was developed by a single nonprofit developer.

BLACKBURN BUILDING USES

 ACUTE CARE	 TEAM 1	 PALLIATIVE CARE
 PHARMACY	 TEAM 2	 RCP
 HOUSING OFFICE	 TEAM 3	 SUPPORTIVE HOUSING
 RETAIL	 TEAM 4	 SROs PERMANENT STUDIOS

RCP: Recuperative Care Program
 SRO: Single room occupancy
 SUDS: Substance Use Disorder Services



- 6th FLOOR:**
34 PERMANENT STUDIOS
- 5th FLOOR:**
40 SUPPORTIVE HOUSING SROs
- 4th FLOOR:**
40 SUPPORTIVE HOUSING SROs
- 3rd FLOOR:**
10 PALLIATIVE SROs, 32 RCP BEDS, 19 RCP SROs
- 2nd FLOOR:**
SUDS, PRIMARY CARE, COMPLEX CARE
- 1st FLOOR:**
ACUTE CARE, PHARMACY, HOUSING OFFICE, RETAIL AND OTHER ROOMS INCLUDING COMMUNITY SPACE

Diagram of co-located uses in the Blackburn Center.

Conway Center

WASHINGTON, DC

Owner	So Others May Eat
Project Cost	\$90.1 million
Size	320,000 SF
Model	Supportive Housing with Integrated Services
Use	Supportive housing, health center; employment training services and administrative offices for SOME
Status	Open and operating
Partners	So Others May Eat (SOME) Unity Health

So Others May Eat, SOME, is the lead organization for the Conway Center, a 320,000 SF building that opened in 2018 with 182 units of supportive housing and a 37,000 SF (29 rooms) community medical and dental center operated by Unity Health. The Conway Center is located on Benning Road across from the Metro station in northeast Washington, DC.

So Others May Eat is an inter-faith, community-based organization founded in 1970 as a soup kitchen to address the needs of the homeless and poor in Washington, DC. SOME's services can be defined by three pillars -- emergency services, rebuilding, and stability programs. This includes emergency food, clothing and shelter, affordable housing, job training, addiction services, counseling for the poor, elderly, and persons with mental illnesses. Today, SOME is a leading community service organization serving 10,000 people annually.

SOME has an annual budget of \$35 million, with 47% of its revenues stemming from contributions. To build the Conway Center, SOME organized a capital campaign Building Hope, chaired by the retired CEO, William E. Conway, of the Carlyle Group, a major private investment firm.

The Conway Center features a range of supportive housing types, including 30 family units and 182 units for single adult males -- 79 efficiency apartments and 73 Single Room Occupancy (SRO) units. Fifteen percent of all housing units are fully accessible. The Conway Center also includes employment and training facilities, an after school programming area, SOME's administrative offices, and some limited retail space.

Unity Health is the health and dental clinic operator. Unity Health is a forty-year old health center with multiple sites throughout Washington DC, with an annual operating budget of \$100+ million. Unity Health began in its early years as a program -- Health Care for the Homeless, and then changed its name in 1987. Unity Health is a federally-qualified community health center.

SOME, in addition to its capital campaign, secured financing for the Conway Center from a wide range of sources. The DC Housing Authority (DCHA) provided 20 Housing Choice Vouchers and 142 local rent subsidy vouchers. The

project involves \$11.3 million of New Market Tax Credits (NMTC), plus Low Income Housing Tax Credits (LIHTC). LISC, the Local Initiatives Support Corporation, assisted with the LIHTC and provided a \$275,000 grant. The DC Housing Production Trust Fund provided support, and the DC district government provided tax exempt bonds and a bridge loan for the housing finance. The project uses a HUD 221(d)(4) taxable mortgage. The Healthy Futures Fund provides \$34.5 million of support for the Conway Center, in the form of project financing. The Healthy Futures Fund is a collaboration of LISC, JP Morgan, and the Kresge Foundation.

The Conway Center depicts a model with multiple non-profit, service providers collaborating, with a lead non-profit developer – So Others May Eat – to provide an integrative services model and build a new facility including supportive housing. SOME recruited a leading CEO to lead its capital campaign and make significant contributions. In addition, SOME tapped new sources of funding, such as the Healthy Futures Fund, along with the array of state and federal programs and tax credits. The services, development and fundraising models provide lessons for the future of the Shattuck Campus.



Rendering of SOME's Conway Center.



Rendering showing the Conway Center's green roof areas.

Centre for Addiction and Mental Health

TORONTO, ON

Owner	Centre for Addiction and Mental Health (CAMH)
Contract Value	\$685,000,000 approximately
Size	655,000 SF – new construction of 2 buildings plus
Model	Design, Build, Finance, & Maintain
Use	Mental Health Services, Research & Hospital
Status	Phase 1B is Completed, Open and Operating Phase 1C is under construction opening in 2020
Public Partners	Centre for Addiction and Mental Health (CAMH) Infrastructure Ontario Ontario Ministry of Health & Long-term Care
Private Partners	Plenary Health (CAMH 1C) <ul style="list-style-type: none"> • ENGIE Services. (facility management); • PCL Investments Canada Inc. (developer & constructor); • Plenary Group (Canada) Ltd. (developer & financial advisor); • Stantec Architecture Ltd. (design)

The Centre for Addiction and Mental Health (CAMH) is one of Canada’s premiere mental health research and addiction services hospital spearheading innovations in patient care, research and education about mental health diseases. CAMH serves over 37,000 distinct persons annually. Based in Toronto, CAMH has been undergoing a three-phase redevelopment and expansion project on its 27-acre Queen Street campus, which has housed a mental health program since 1850.

CAMH is a public hospital dedicated to addiction and mental health services, affiliated with the University of Toronto. The Ontario Health Services Restructuring Committee, an independent provincial-appointed committee, requested CAMH address four key mental health care issues, namely quality of care, access to care, fragmentation of services, and stigma. This prompted an internal review and a more comprehensive approach resulting in a massive three-phase building program which began with Phase 1A in 2005. CAMH’s expansion is part of Ontario’s BuildON program of infrastructure and capital facilities upgrades, the largest in the history of the province.

Phase 1A of CAMH’s redevelopment used a traditional approach to procurement, which occurred in 2005-2008. Phase 1B was completed in 2012 and utilized the alternative financing and procurement process entailing a public private partnership. Building upon the success of Phase 1B, CAMH opted to use the P3 alternative financing and procurement process working with Infrastructure Ontario for Phase 1C.

During Phase 1C two buildings encompassing 655,000 SF on CAMH’s Queen Street campus are being built. Facilities for 235 in-patient hospital beds, ambulatory care, the relocation of the emergency room for mental health services to the Queens Street site, research and educational facilities, plus site improvements – restoration of a heritage wall, parks and green space improvements to off-set heat island effects, are under construction with a substantial completion anticipated in spring 2020. CAMH’s Phase 1C’s is planned to achieve a Leadership in Energy and Environmental Design (LEED®) Gold certification.

Buildings are designed to be light, airy, secure and welcoming for both patient and public spaces, as part of CAMH's desire to reduce the stigma of mental illness. Therapeutic art installations are included. Integration with the existing community is planned through street-level retail to draw residents and visitors into CAMH's public spaces, while respecting patient privacy.

Phase 1B comprises three buildings and approximately 440,000 SF, which opened in 2012. A new addiction services center with a community focus to support increased collaboration was built following demolition of the former administration building. A critical care building featuring

an Intergenerational Patient and Family Wellness Resource Center, 110 beds for patients with complex mental illnesses, and a culinary-grade training kitchen was constructed. An Energy Center with upgraded HVAC was developed and came on-line as part of phase 1B. The contract price of phase 1B was \$293 million. Infrastructure Ontario reports the estimated value for money for phase 1B to be \$51.2 million.

As a part of the capital funding for the multi-phase expansion project, the CAMH Foundation raised \$200 million. There is a thirty-year agreement for the design, construction and maintenance of the Phase 1C with Plenary Health, the



Phase 1C of the new Centre for Addiction and Mental Health (CAMH) – Queen Street view, Toronto.

P3 lead private partner. Payments to the P3 private partner, Plenary Health, include monthly payments for maintenance by CAMH.

Infrastructure Ontario is a Crown agency, legislatively established in 2011, with a board of directors, which reports to the Ontario Ministry of Infrastructure through its Chair of the Board. Most Canadian provinces as well as the federal government have established dedicated offices with an expertise on alternative financing and procurement -- public private partnerships. Infrastructure Ontario has successfully procured and managed over one hundred major P3 projects. It has a track record of being 96 per cent on bud-

get to date for P3 projects, based on an external evaluator. Infrastructure Ontario has been named Agency of the Year for the Americas for three-consecutive years, 2016 to 2018, by Partnerships Bulletin, a UK publication.

The CAMH case study illustrates a P3 with a private-developer consortium working successfully with a public partner to build a new urban campus for mental health services. In this example, the private partner designs, builds, finances and maintains the campus buildings. CAMH, the public partner, is the end user of all campus buildings and the mental health service provider.



Model overlooking of CAMH's planned improvements.

Michigan State University's Grand Rapids Innovation Park

GRAND RAPIDS, MI

Owner	Michigan State University
Project Cost	Undisclosed
Size	211,000 SF building and 600 car parking garage
Model	Build-Finance-Maintain and final design
Use	Biomedical Research and Health Delivery
Status	Awarded, with construction breaking ground in fall 2019, with 2021 opening
Public Partners	Michigan State University's College of Human Medicine
Private Partners	Health Innovation Partners, a joint venture <ul style="list-style-type: none"> • Rockford Construction Company (local firm, construction, property management) • MB Real Estate (leasing) • Walsh Construction/ Walsh Investors (construction, finance)

In December 2018, the Michigan State University (MSU) Board of Trustees authorized a Public Private Partnership (P3) agreement to build a 211,000 SF biomedical research facility and a 600-car parking garage at the Grand Rapids Innovation Park with Health Innovation Partners. This P3 award represents the second phase of the Grand Rapids Innovation Park. Health Innovation Partners was awarded a long-term ground lease for four acres with the right to develop a third building at a future date.

The parking garage will be financed in part through a Tax Increment Financing (TIF) district. TIF in Michigan utilizes the aggregated incremental new tax revenues from the city and all other taxing districts. The land assembled by MSU has been vacant for more than three years. The new Phase 2 biomedical research building will be taxable, owned and managed by Health Innovation Partners.

The University as part of its P3 agreement with Health Innovation Partners, retains the right to review and approve all prospective tenants to sustain the focus on biomedical innovation and research. MSU also retains naming rights to the building and Grand Rapids Innovation Park complex. MSU also agreed to lease some of the space in the Phase 2 building.

Health Innovation Partners is a joint venture with Rockland Construction Company, a local Grand Rapids construction company with experience in new construction and property management; Walsh Construction, a large-scale experienced P3 developer, builder and financier based in Chicago; and MB Real Estate, a real estate advisory, leasing and property management firm, also headquartered in Chicago.

Michigan State University (MSU) is one of two major land-grant universities in the state. Grand Rapids is 75 miles west of East Lansing, the home of MSU.

Three major research universities in Michigan, including Michigan State University, have been partnering to locate life science-related projects in the downtowns of Michigan's legacy cities, including Grand Rapids, to attract new residential and retail users in close proximity to the life science investments. The joint initiative is known as the Uni-



versity Research Corridor. To date, the three schools have invested \$1.1 billion in new facilities throughout Michigan's urban areas.

MSU acquired over seven acres of land and buildings in the Grand Rapids downtown area, close to the interstate interchange that has become the Grand Rapids Innovation Park. Phase 1 began in 2013 with planning that resulted in the construction of a six-story 162,800 SF building by the University for research and development by MSU's College of Human Medicine. The first building opened in 2017 providing space for 44 health science research teams.

At the time, MSU considered a public private partnership arrangement for Phase 1, but opted for traditional debt financing of the building. At the time, Grand Rapids and MSU received a state transportation grant for roadway improvements for the site, as well as a \$1 million state of Michigan brownfields clean up grant. The university also received generous philanthropic support for the phase 1 building from the DeVos Foundation (\$10 million) which is

based in Grand Rapids and another \$5 million from Richard and Joan Secchia. Philanthropy supported at least 17% of the \$88.1 million phase 1 project costs.

The Phase 1 biomedical research building anchored the planned Grand Rapids Innovation Park, which is in close proximity to Grand Rapids' largest employer, Spectrum Health. This area is known as Medical Mile.

The MSU Grand Rapids Innovation Park case study illustrates a multi-phase P3 endeavor. In phase 2, the private sector consortium prepared the final design and construction documents, and built and financed the new building. The private partner is maintaining the building. They are also responsible for leasing and assembling different user-occupants in addition to the public partner, the MSU College of Human Medicine.



Proposed Phase 2 Building to be constructed by a Public Private Partnership for biomedical research.

Massachusetts Mental Health Center

BOSTON, MA

Owner	Commonwealth of Massachusetts – MA Department of Mental Health
Size	Phase 1: 76,640 SF Phase 2: 383,000 SF Phase 3: 182,500 sf of housing
Use	Phase 1: Mental health services facility and parking, and Fernwood Inn Phase 2: Bio-medical research facility with clinics, and innovation hub Phase 3: Affordable housing, child care center
Status	Operational and occupied
Public Partners	Massachusetts Department of Mental Health
Private Partners	Partners, Brigham & Women's Hospital Roxbury Tenants of Harvard

The Commonwealth of Massachusetts owned and the Department of Mental Health (DMH) operated an approximately 190,000 SF aging four-story brick building in need of serious repairs on a 2.61-acre parcel in the Longwood Medical Area of the City of Boston. This building was home to a DMH- operated mental health services facility. In 2004, the Commonwealth sought proposals inviting private developers to partner to redevelop this site and build new facilities for DMH services. The prospective offering generated extensive interest within the greater Boston real estate development community.

Brigham and Women's Hospital (BWH), part of the Partners HealthCare system, was the successful bidder in partnership with Roxbury Tenants of Harvard Association (RTH). BWH was the primary developer and entered into a long-term land lease with the Commonwealth for the DMH site.

Brigham & Women's Hospital (BWH), one of Boston's leading hospitals, employing over 18,000 persons, is an abutting property owner and highly desired the additional land to grow and expand in the LMA area where available land for buildings is scarce. Brigham and Women's Hospital and RTH had a previous history of collaboration. RTH's focus was on additional affordable housing for neighborhood families. RTH is a non-profit housing and human service organization founded by neighborhood residents in 1969. RTH was previously instrumental in developing the adjacent 13+ acre Mission Park development with 775 housing units, most of which are affordable.

Redevelopment of the site occurred over several years and phases. BWH, by agreement, was required to complete the new replacement space for Massachusetts Mental Health Center and the Fenwood Inn/ shelter, before starting construction of any other facilities. In Phase 1, BWH constructed and financed two buildings – the Massachusetts Mental Health Center (MMHC) and the Fenwood Inn/ shelter and supplied 50 parking spaces for Massachusetts Mental Health Center. A new 56,540 GSF building was erected on 12,311 SF lot on Binney Street owned by BWH for Massachusetts Mental Health Center. It opened in late 2011.



Mass Mental Health Center in the early 21st century at the time of the redevelopment RFP.

The Fenwood Inn/Shelter is an approximately 21,268 SF building constructed and financed by BWH on land leased from the Commonwealth for 95 years. The Fenwood Inn opened in new quarters in November 2011, at the same time as the new Massachusetts Mental Health Center. The Fenwood Inn is a short-term residential program for patients needing support from mental health services.

The Massachusetts Mental Health Center provides outpatient mental health services. The new building includes space for DMH administration, clinic and counseling services.

BWH is responsible for maintaining the Massachusetts Mental Health Center building. DMH reimburses BWH for maintenance and property management expenses. A unique feature of the development deal between the Commonwealth and Brigham & Women's Hospital was the creation and funding of an expendable trust for the Massachusetts Mental Health Center with initial funding of \$2.1

million from BWH. The intent of the expendable trust is for DMH expenses related to the Massachusetts Mental Health Center project.

The second phase of development focused on the private development by Brigham & Women's Hospital. It began with BWH demolishing the old Massachusetts Mental Health Center buildings and remediating the entire site. The state incurred no costs related to demolition or clean-up of the site.

Clearing the site enabled BWH to build a new 383,000 SF (approximate) transformative medicine building focused on research and clinical services, along with a 408-space underground parking garage on leased land from the Commonwealth. The Hale Transformative Medicine building is a LEED Gold certified building which opened in 2016. Innovative features include a 40,000 gallon cistern to capture and recycle stormwater, parking for electric cars with charging stations, and bicycles. The nearby co-generation plant produces stream heat for the Hale Transformative Medicine Building.



Redevelopment site plan by phase for Mass Mental site.

The third phase involved the development of the 182,500 SF (approximate) building known as Riverway Mosaic on the corner of the Riverway, Brookline Avenue, and Fenwood in Boston by Roxbury Tenants Association of Harvard (RTH). The RTH development features mixed income housing, including 42 market rate ownership units, 43 affordable home ownership units, and 60 affordable rental housing units for a total of 145 units. The complex also includes a day care center and outdoor children's playground serving residents and LMA-area workers.

Each of the three housing types (market-rate home ownership; affordable home ownership; and affordable rental housing) within the Riverway Mosaic building were separately financed. Funding for the affordable components of Riverway Mosaic entailed a \$2 million Linkage payment from BWH's new building. Linkage fees are legally required exaction fees levied by the City of Boston to mitigate the impacts of large-scale development. Boston collects a housing linkage fee and a jobs linkage fee from projects.

Other sources of funding for the affordable housing components include the City of Boston's Department of Neigh-

borhood Development (\$3 million); the Neighborhood Jobs Trust (\$1 million); MA Housing Partnership (\$2.1 million); LIHTC; and Boston Community Capital.

All three phases of the redevelopment of the Massachusetts Mental Health Center site in the Longwood Medical Area of Boston were completed in 2017 when the Riverway Mosaic project became fully occupied.

The Massachusetts Mental Health Center case study illustrates a complex, multi-phase P3 development deal. The phases are inter-dependent. All phases were essential for achieving the financing and necessary project economics and the desired community benefits. This case study highlights how the public user, the Commonwealth, worked with a private partner, Brigham & Women's Hospital, and a community-based organization with a successful development track record, Roxbury Tenants of Harvard, over a decade to realize the vision.



ABOVE LEFT: The New Mass Mental Health Center building.

ABOVE: The New Fenwood Inn on Binney Street.

LEFT: Playground at Riverway Mosaic residential building.



Case Study Findings

The Blackburn Center and Conway Center models demonstrate that an integrative services model with supportive housing, while innovative, can be constructed and successfully operated, often with partners, for the benefit of persons who are chronically homeless or suffering from substance use issues. Both the Blackburn and Conway Center conducted high-profile, robust capital campaigns which were essential for success. In addition, they tapped an extensive range of state and federal programs for funding and tax credits.

The private sector partner as discussed in the previous case studies can be an individual firm, either private or nonprofit, that invests, builds, operates and manages facilities with and for the public sector. Or, the private sector partner can be a consortium of private firms, each contributing their specialty, be it management, construction, design, energy, leasing, or building operations and maintenance.

The P3 case studies highlight different roles of the public and private sectors as to the end user of all or a portion of the building or campus. In the Centre for Addiction and Mental Health (CAMH) case study, the public sector, CAMH, is the sole user and occupant of the new campus. In the first phase of both the Michigan State University (MSU) and Mass Mental Health Center case studies, the end user is the public sector.

The MSU case study entails development of an urban campus with multiple buildings. While the first phase building is occupied solely by MSU, the second building is multi-tenanted. The private partner is responsible for leasing with tenants from the target audience of biomedical research. MSU in the P3 agreement has retained the right to review and approve all prospective tenants so that building maintains its biomedical research focus.

The Mass Mental Health Center case study is a three-phase project. In the second phase, the private partner – Brigham & Women's Hospital – is the private partner and sole end user. In the third phase, Roxbury-Tenants-of-Harvard function as the developer and lessor of affordable housing and commercial space for childcare, and the seller of condominium units, both market-rate and affordable homeownership.

In the Blackburn Center and Conway Center models, Central City Concern and So Others May Eat (SOME) assumed responsibility for leasing affordable supportive housing units. Central City Concern retained a real estate agent to lease space to a café operator within the Blackburn Center.

All the case studies illustrate how partnership is a key to success, including providing facilities and services for behavioral health and the chronically homeless.

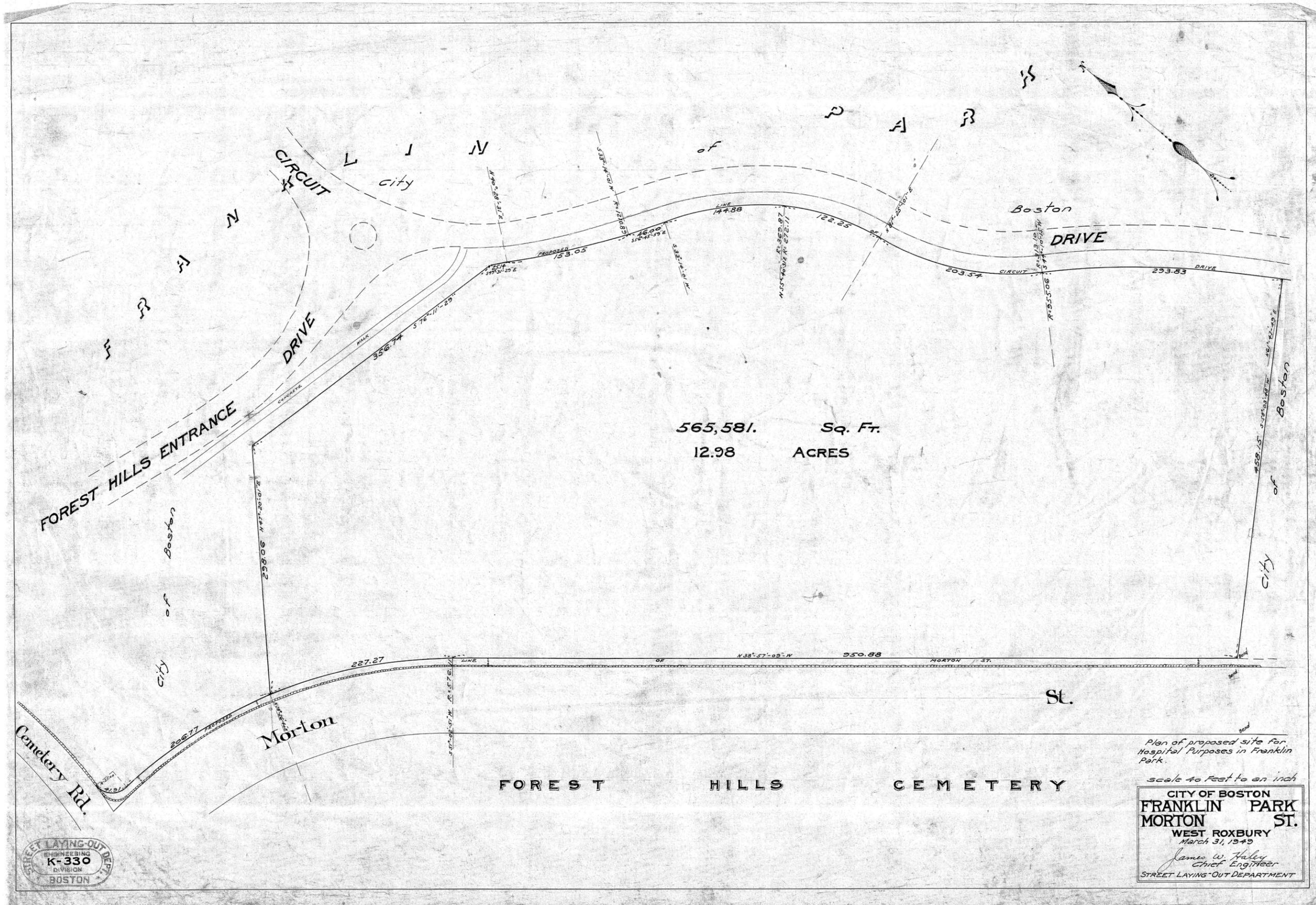
Overview of Public and Private Sector Roles.

	Public	Private
Conventional	Public offers individual contracts for design and construction; public operation and maintenance; public financing.	Different private companies win contracts for individual project stages.
Design-Build	Public offers a single contract for design and construction. Operation and maintenance remain public responsibility. Financing by public sector.	Single company (or single private consortium) responsible for project from design through construction.
Design-Build-Operate-Maintain (DBOM)	Public offers a single contract for the design, construction, operation and maintenance. Financing by public sector.	Private company (or single private consortium) responsible for the project from design through construction through operation and maintenance.
Design-Build-Finance-Operate-Maintain (DBFOM)	Public offers a single contract for the design, construction, operation and maintenance.	Private company (or single private consortium) responsible for the project from design through construction through operation and maintenance; with private financing for a fixed number of years.
Private Ownership	Public sells asset to private entity.	Private company responsible for all stages of project indefinitely; may be subject to regulations.

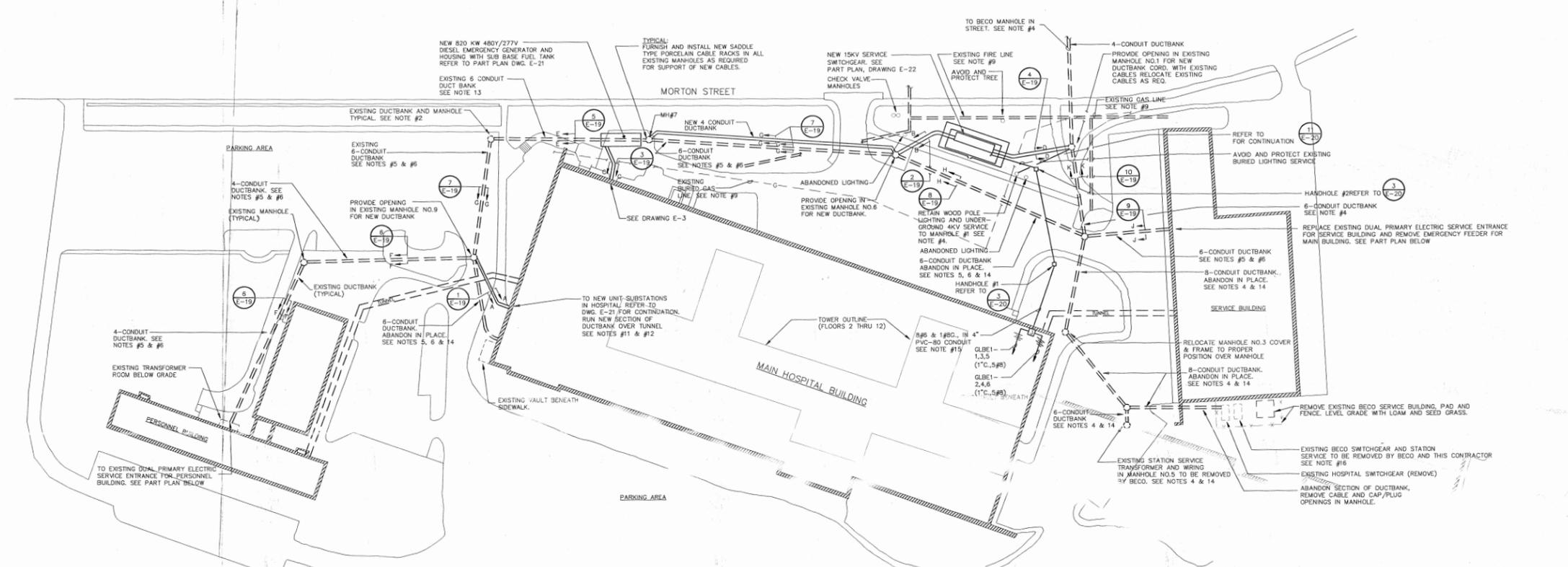
Source: Bi-Partisan Policy Center with some adaptations.

APPENDIX 2
SHATTUCK CAMPUS
REFERENCE PLANS

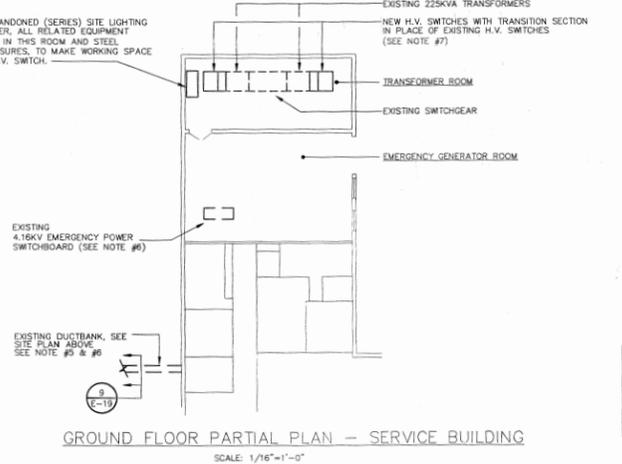
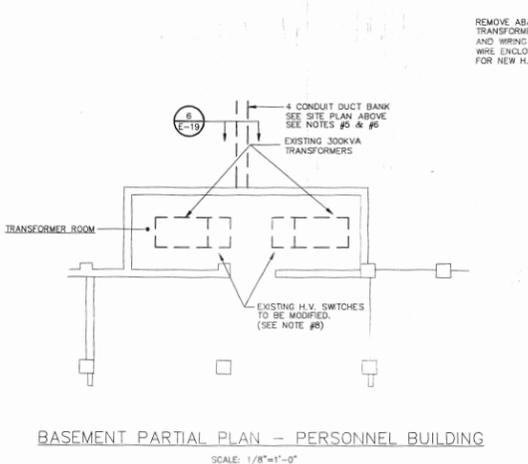
SURVEY OF SHATTUCK CAMPUS (1949)



SHATTUCK CAMPUS - ELECTRICAL SYSTEMS UPGRADE (1997)



- NOTES:**
- REFER TO ONE LINE ON DRAWING E-23 AND DEMOLITION NOTES AND RISERS ON DRAWING E-30 FOR ADDITIONAL WORK SCOPE INFORMATION.
 - THE EXISTING UNDERGROUND DUCT BANK AND MANHOLE SYSTEM SHALL BE RETAINED FOR NEW SERVICE WORK AS FOLLOWS. PROVIDE NEW DUCT BANK AS INDICATED. AS EXISTING CABLE IS REMOVED FOR REPLACEMENT, THE MANHOLES AND DUCTBANKS SHALL BE SWEEP WITH MANDREL AND BRUSHED CLEAN. PROVIDE ALL NECESSARY HARDWARE AND SUPPORT FOR NEW CABLE INSTALLATION THROUGH MANHOLES.
 - UTILITY COMPANY DUAL 13.8KV PRIMARY ELECTRIC SERVICE RELOCATION TO NEW SERVICE SWITCHGEAR AND REPLACEMENT OF THE DUAL 13.8KV DISTRIBUTION TO THE BUILDINGS (3) MUST BE PHASED BY CIRCUIT, TO MAINTAIN SERVICE TO ALL BUILDINGS. SEE PHASING REQUIREMENTS, DRAWING E-32.
 - THE EXISTING BECO 4.16KV UNDERGROUND SERVICE TO THE BECO STATION SERVICE BUILDING, VIA TRANSFORMER MOUNTED WITHIN MANHOLE NO.1 SHALL BE REMOVED BY BECO TO MANHOLE NO.1. BECO 4.16KV UNDERGROUND SERVICE VIA MANHOLE NO.1 TO POLE MOUNTED TRANSFORMER AND SITE LIGHTING IS TO BE MAINTAINED. THE EXISTING DUAL 13.8KV UNDERGROUND SERVICE TO THE EXISTING BECO SERVICE SWITCHGEAR IS TO BE RELOCATED TO THE NEW SERVICE SWITCHGEAR BY BECO ARRANGE, AND COORDINATE THIS WORK. ALSO SEE NOTES 10 AND 16.
 - REMOVE (COMMON) 13.8KV DUAL PRIMARY PROPERTY DISTRIBUTION FROM EXISTING OUTDOOR SERVICE SWITCHGEAR TO MAIN HOSPITAL, SERVICE AND PERSONNEL BUILDINGS. REPLACE WITH SEPARATE NEW DUAL DISTRIBUTION FEEDERS (2) TO EACH BUILDING FROM NEW SERVICE SWITCHGEAR. ALSO SEE NOTE #8 ABOVE.
 - REMOVE EXISTING EMERGENCY POWER 4.16KV FEEDER FROM THE EMERGENCY POWER SWITCHBOARD IN THE SERVICE BUILDING TO THE MAIN HOSPITAL BUILDING MAIN ELECTRIC ROOM. NOTE: 4.16KV EMERGENCY POWER FEEDER FOR THE PERSONNEL BUILDING SHALL BE MAINTAINED IN OPERATION.
 - IN SERVICE BUILDING, REPLACE EXISTING H.V. SWITCHES WITH NEW MEDIUM VOLTAGE LOAD INTERRUPTER SWITCHES (2) AND NEW TRANSITION SECTIONS, ADAPTED TO EXISTING SWITCHGEAR. SEE PHASING NOTES C AND D, DWG. E-32.
 - IN PERSONNEL BUILDING, REPLACE EXISTING LEAD CABLE POTHEADS WITH NEW LUG AND STRESS CONE CABLE TERMINATIONS WITHIN H.V. SWITCH HOUSINGS. SEE PHASING NOTES C AND D, DWG. E-32.
 - CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF UNDERGROUND UTILITIES IN THE AREAS OF THIS CONTRACT WORK (LOCATIONS SHOWN ARE APPROXIMATE) AND SHALL COORDINATE THE INSTALLATION OF GENERATOR AND 15KV SWITCHGEAR CONCRETE PADS AND NEW DUCTBANKS, HANDHOLES AND WIRING TO AVOID SAME. CONTRACTOR SHALL ARRANGE FOR A GAS COMPANY REPRESENTATIVE TO BE ON SITE WHEN EXCAVATION OCCURS NEAR GAS LINES, NOT ALL UTILITY LINES ARE SHOWN ON THIS DRAWING.
 - PRESENT BECO SERVICES FROM MORTON STREET CONSIST OF DUAL RADIAL 13.8KV PRIMARY TO BECO SWITCHGEAR AT THE SERVICE BUILDING AND A RADIAL 4.16KV PRIMARY TO POLE MOUNTED TRANSFORMER (SITE LIGHTING) AND TO BECO STATION SERVICE. PRESENT PROPERTY SERVICES FROM THE SERVICE BUILDING CONSIST OF DUAL 13.8KV PRIMARY COMMON TO ALL BUILDINGS AND RADIAL 4.16KV INDIVIDUAL EMERGENCY POWER FEEDERS TO THE PERSONNEL AND MAIN HOSPITAL BUILDINGS.
 - MAINTAIN NEW DUCTBANK 30" MINIMUM BURIED DEPTH OVER EXISTING TUNNEL. IF 30" DEPTH IS NOT AVAILABLE, RUN DUCTBANK TIGHT TO TOP OF TUNNEL ROOF. OBSERVE PROPER PRECAUTION WHILE EXCAVATING AT TUNNEL. ALSO SEE NOTE #12 BELOW.
 - EXISTING GROUND TRIPPODS (2) AT SOUTH END OF MAIN BUILDING MAY BE RE-USED FOR NEW SERVICE GROUND. EXERCISE CAUTION DURING THE INSTALLATION OF NEW DUCTBANK 17E-19. AVOID OR REPAIR DAMAGE TO THE GROUND SYSTEM. TEST FOR GROUND RESISTANCE, IN ACCORDANCE WITH MCO 250.04. PROVIDE ADDITIONAL GROUNDING AS REQUIRED, PER DETAIL 8/E-20. ALSO SEE SPECIFICATIONS.
 - MAINTAIN AND PROTECT EXISTING DUCT BANK AND WIRING DURING CONSTRUCTION OF NEW GENERATOR CONCRETE PAD AND FENCE.
 - EXISTING DUCTBANK SECTIONS AND MANHOLES THAT ARE NOT RE-USED FOR EITHER NEW OR RETAINED CABLE SHALL BE ABANDONED IN PLACE. REMOVE ALL ABANDONED CABLE AND SWEEP WITH MANDREL AND BRUSH CLEAN. PROVIDE WATERTIGHT DUCT SEAL AT BUILDING ENTRANCES.
 - BRANCH CIRCUIT WIRING BETWEEN ELECTRIC ROOM "GEN" AND HANDHOLE NO.2 AT 15KV SERVICE SWITCHGEAR, SHALL BE NO.8 AWG. BUNDLE WIRES WITH THE WRAP 3 FEET MAXIMUM ON CENTER THROUGH CONDUIT AND HANDHOLE NO.1, OR PROVIDE JACKETED MC CABLE. NO SPLICING ALLOWED IN HANDHOLE NO.1. SPLICING IN HANDHOLE NO.2, IF REQUIRED, SHALL BE WATER TIGHT.
 - BECO SHALL STRIP EXISTING SWITCHGEAR AT THE SERVICE BUILDING OF SALVAGEABLE COMPONENTS. ELECTRICAL CONTRACTOR SHALL REMOVE ABANDONED BECO SWITCHGEAR.



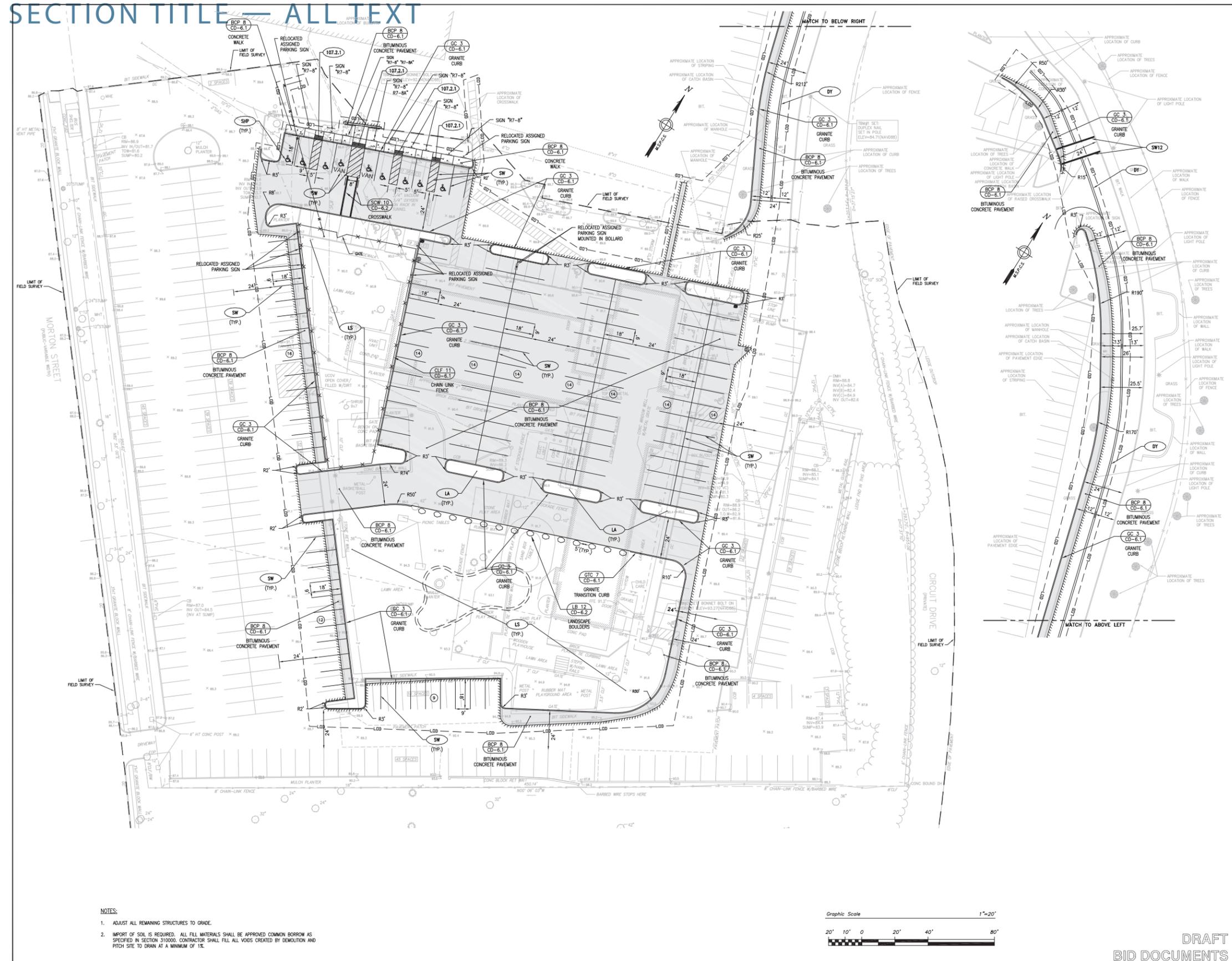
CAUTION:
LOCATE AND AVOID ALL EXISTING UNDERGROUND UTILITIES.
SEE NOTE #9

REVISIONS			PROJECT H942 DCI ELECTRICAL SYSTEMS UPGRADE LEWEL SHATTUCK HOSPITAL	
NO.	DESCRIPTION	DATE	THE COMMONWEALTH OF MASSACHUSETTS DIVISION OF CAPITAL PLANNING AND OPERATIONS	

		SITE PLAN	
		DRAWN: [Signature] CADD: P.B. CHECKED: S.K.	SCALE: 1"=40'-0" DATE: 3-14-97
DRAWING NO.		E-2	

SITE PLAN - PARKING AREA (2017)

SECTION TITLE — ALL TEXT





DCAMM

DIVISION OF CAPITAL ASSET
MANAGEMENT & MAINTENANCE

OFFICE OF PLANNING
DESIGN & CONSTRUCTION

McCormack Building
One Ashburton Place - Room 1500
Boston, MA 02108

617-727-4050
www.mass.gov/dcam



Project Name:
**DPH - LEMUEL
SHATTUCK HOSPITAL
PERSONNEL
BUILDING
DEMOLITION**
DCAMM Project Number
DPH 1402-HC1

Project Location
**170 MORTON STREET
JAMAICA PLAIN, MA
02130**

Project Architect

Project Consultant

PARE CORPORATION
MEMBER - CONTRACTORS NUMBER
101 BRIDGE ROAD, SUITE 200
FOXBURY, MA 01938
508-541-1755
 PARE Proj No.: 15001.03

Site Number: DPH00
 CAMIS Number: 551DPH0229
 Building Number: 551DPH0229
 Secretariat: Health and Human Services

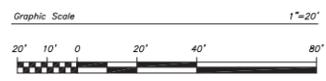
Original Issue Date
MARCH 2017

Revisions	No.	Description	Date

Plan Name:
**SITE
IMPROVEMENTS
PLAN**

Drawing Number:
CD-3.0
Drawing 5 of 23

- NOTES:**
- ADJUST ALL REMAINING STRUCTURES TO GRADE.
 - IMPORT OF SOIL IS REQUIRED. ALL FILL MATERIALS SHALL BE APPROVED COMMON BORROW AS SPECIFIED IN SECTION 310000. CONTRACTOR SHALL FILL ALL VOIDS CREATED BY DEMOLITION AND PITCH SITE TO DRAIN AT A MINIMUM OF 1%.



**DRAFT
BID DOCUMENTS**

APPENDIX 3 CITATIONS

List of Citations

Beveridge, Charles E. (January 1986). "The Seven 'S' of Olmsted Design." Accessed August 15, 2018, <http://www.olmsted.org/the-olmsted-legacy/olmsted-theory-and-design-principles/seven-s-of-olmsteds-design>

Beveridge, Charles E. (n.d.). "Designing a Middle-class Community Riverside, Illinois." Accessed September 20, 2019, <https://www.pbs.org/wned/frederick-law-olmsted/learn-more/designing-middle-class-community/>

Cramer, Sharon F. (n.d.). "The Richardson Olmsted Complex: Landscape's Contribution to Well-Being from the Nineteenth through the Twenty-First Centuries." Accessed August 15, 2018, <https://www.pbs.org/wned/frederick-law-olmsted/learn-more/richardson-olmsted-complex/>

Frederick Law Olmsted: The Genius Behind the Emerald Necklace (n.d.).

Gordon, Larry S. (n.d.). "Report of the Sanitary Commission of Massachusetts, 1850 / by Lemuel Shattuck and Others; with a Foreword by Charles-Edward Amory Winslow and Lemuel Shattuck (1793-1859)." Accessed September 29, 2018, www.sanitarions.org.

"Lemuel Shattuck (1793-1859): Prophet of American Public Health." (May 1959). *American Journal of Public Health: Nations Health*. 49(5): 676-677. Accessed September 29, 2018, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1372849/>

Lopez, Russ. (2017). "Public Health & Urban Planning: Intertwined Histories." In Hein, Carole, ed. (2017). Routledge Handbook of Planning History. New York: Taylor & Francis Group.

Martin, Justin. (2011). Genius of Place: The Life of Frederick

Law Olmsted. Philadelphia: Merloyd Lawrence Book.

Shattuck L. Report of the Sanitary Commission of Massachusetts, 1850. Cambridge: Harvard University Press; 1948 (Facsimile Reprint).

Sperber, Michael. (July-August, 2007). "Frederick Law Olmsted, Brief Life of the first psychoarchitect: 1822-1903." *Harvard Magazine*. Accessed August 15, 2018, <https://harvardmagazine.com/2007/07/frederick-law-olmsted.html>

Szczygiel, Bonj and Robert Hewitt. (2000). "Nineteenth-Century Medical Landscapes: John H. Rauch, Frederick Law Olmsted, and the Search for Salubrity." *Bulletin of the History of Medicine*. 74: 708-734. Accessed August 15, 2018, <http://hiddentruths.northwestern.edu/factors/Rauch/74.4szczygiel.pdf>

Winkelstein, Warren. (July 2008). "Lemuel Shattuck: Architect of American Public Health." *Epidemiology*: 19(4). Accessed September 29, 2018, https://journals.lww.com/epidem/Fulltext/2008/07000/Lemuel_Shattuck_Architect_of_American_Public.21.aspx#pdf-link

Zaitzevsky, Cynthia. (1992). *Frederick Law Olmsted and the Boston Park System*. Cambridge, MA: Belknap Press.

Ziff, Katherine. (2012). *Asylum on a Hill: History of a Healing Landscape*. Athens, OH: Ohio University Press.

APPENDIX 4
MASSACHUSETTS SUSTAINABLE
DEVELOPMENT PRINCIPLES

Sustainable Development Principles

The Commonwealth of Massachusetts shall care for the built and natural environment by promoting sustainable development through integrated energy and environment, housing and economic development, transportation and other policies, programs, investments, and regulations. The Commonwealth will encourage the coordination and cooperation of all agencies, invest public funds wisely in smart growth and equitable development, give priority to investments that will deliver good jobs and good wages, transit access, housing, and open space, in accordance with the following sustainable development principles. Furthermore, the Commonwealth shall seek to advance these principles in partnership with regional and municipal governments, non-profit organizations, business, and other stakeholders.



1. Concentrate Development and Mix Uses

Support the revitalization of city and town centers and neighborhoods by promoting development that is compact, conserves land, protects historic resources, and integrates uses. Encourage remediation and reuse of existing sites, structures, and infrastructure rather than new construction in undeveloped areas. Create pedestrian friendly districts and neighborhoods that mix commercial, civic, cultural, educational, and recreational activities with open spaces and homes.

2. Advance Equity

Promote equitable sharing of the benefits and burdens of development. Provide technical and strategic support for inclusive community planning and decision making to ensure social, economic, and environmental justice. Ensure that the interests of future generations are not compromised by today's decisions.



3. Make Efficient Decisions

Make regulatory and permitting processes for development clear, predictable, coordinated, and timely in accordance with smart growth and environmental stewardship.



4. Protect Land and Ecosystems

Protect and restore environmentally sensitive lands, natural resources, agricultural lands, critical habitats, wetlands and water resources, and cultural and historic landscapes. Increase the quantity, quality and accessibility of open spaces and recreational opportunities.



5. Use Natural Resources Wisely

Construct and promote developments, buildings, and infrastructure that conserve natural resources by reducing waste and pollution through efficient use of land, energy, water, and materials.



6. Expand Housing Opportunities

Support the construction and rehabilitation of homes to meet the needs of people of all abilities, income levels, and household types. Build homes near jobs, transit, and where services are available. Foster the development of housing, particularly multifamily and smaller single-family homes, in a way that is compatible with a community's character and vision and with providing new housing choices for people of all means.



7. Provide Transportation Choice

Maintain and expand transportation options that maximize mobility, reduce congestion, conserve fuel and improve air quality. Prioritize rail, bus, boat, rapid and surface transit, shared-vehicle and shared-ride services, bicycling, and walking. Invest strategically in existing and new passenger and freight transportation infrastructure that supports sound economic development consistent with smart growth objectives.



8. Increase Job and Business Opportunities

Attract businesses and jobs to locations near housing, infrastructure, and transportation options. Promote economic development in industry clusters. Expand access to education, training, and entrepreneurial opportunities. Support the growth of local businesses, including sustainable natural resource-based businesses, such as agriculture, forestry, clean energy technology, and fisheries.

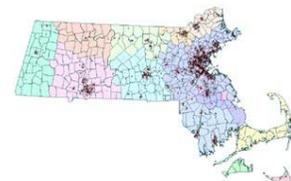


9. Promote Clean Energy

Maximize energy efficiency and renewable energy opportunities. Support energy conservation strategies, local clean power generation, distributed generation technologies, and innovative industries. Reduce greenhouse gas emissions and consumption of fossil fuels.

10. Plan Regionally

Support the development and implementation of local and regional, state and interstate plans that have broad public support and are consistent with these principles. Foster development projects, land and water conservation, transportation and housing that have a regional or multi-community benefit. Consider the long-term costs and benefits to the Commonwealth.





Health Resources in Action
Advancing Public Health and Medical Research



SHATTUCK
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