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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
DRAFT ENVIRONMENTAL IMPACT REPROT

PROJECT NAME	: Massachusetts General Hospital 2019 IMP Projects
PROJECT MUNICIPALITY	: Boston
PROJECT WATERSHED	: Charles River
EEA NUMBER	: 16012
PROJECT PROPONENT	: The Massachusetts General Hospital and The General Hospital Corporation
DATE NOTICED IN MONITOR	: May 10, 2021

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Draft Environmental Impact Report (DEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations. The Proponent may prepare and submit for review a Final Environmental Impact Report (FEIR).

Project Description

As described in the DEIR, the project consists of the redevelopment of an approximately 125,000 square foot (sf) area within the Massachusetts General Hospital (MGH) Main Campus. The area is generally bound by Parkman Street, Blossom Street, North Grove Street and Cambridge Street, in Boston. The project includes demolition of five existing buildings and a parking garage and the construction of a new Clinical Building consisting of approximately 1,050,450 sf of Gross Floor Area (GFA). A five-story podium will span the project site and is proposed to include surgical space, exam rooms, ambulatory outpatient support, infusion centers, operating rooms, and administrative space. Retail, restaurant and/or other active uses are proposed for the ground floor along Cambridge Street. The roof of the podium is proposed to

include a green roof in the form of accessible landscaped gardens. Above the podium will be two inpatient towers, one with seven floors and one with eight floors, with approximately 482 beds. The project includes two below-grade levels of administrative support space and a six story below-grade parking garage which will provide approximately 977 parking spaces (approximately 191 net new parking spaces). The building will also include space for a future headhouse for the MBTA Red line/Blue Line Connection. As facilitated by the project, MGH plans "back filling" work to convert 111 double beds into single beds in the existing Ellison Building and decommissioning of at least 253 existing beds in the Gray and White Buildings such that the net new inpatient capacity of the hospital will increase by only approximately 94 beds.

As described in the DEIR, moving several of the hospital's largest services into the new facility will free up significant space in existing buildings on the hospital campus, creating an opportunity for MGH to backfill approximately 83,000 sf of space for clinical, support, and/or administrative use, including options to expand programs in pediatric and adult inpatient mental health services, as well as expansion of the Substance Use Disorder Bridge Clinic.

Changes to the Project since the ENF

As originally proposed, the project included the construction of a second, seven-story Campus Services building consisting of 81,000 sf of administrative space, mechanical space, and support services and two below-grade stories. The construction of the Campus Services Building was determined to be not financially viable. With the removal of the building from the project, the mechanical systems that were proposed to be included within the Campus Services Building were relocated within the Clinical Building resulting in an increase in height of the western inpatient tower. The project square footage has decreased slightly, while the additional level on one inpatient tower has resulted in an increase of approximately 38 inpatient beds.

MGH has also determined that the discontinuance of North Anderson Street would better serve the hospital and public, which will allow the elimination of a curb cut along Cambridge Street. The proposed North Anderson Arcade will connect Cambridge Street and Parkman Street and provide a new main pedestrian entrance to the Main Campus on Cambridge Street. This change has also resulted in relocation of the parking garage entrances and the loading dock. The ground floor and two parking garage levels have also been rearranged to allow for space to provide for a MBTA headhouse within the building for a future station as part of the proposed Red-Blue Line Connector project. The allocation of this space, as well as circulation changes, has resulted in a decrease in the number of net new parking spaces from 349 spaces to 191 spaces.

There is now a differentiation in the height of the two towers to provide variety in height. The project now proposes to incorporate elements of the street-facing facades of Ruth Sleeper Hall (BOS.4159) at the northeast corner of the project's building on the corner of Blossom and Parkman streets. Three stories of the Blossom Street and Parkman Street facades will be reconstructed and incorporated into the project and will maintain their presence on this corner.

Project Site

The 125,000-sf site of the Clinical Building is generally bounded by Parkman Street to the north, Blossom Street to the east, Cambridge Street to the south, and North Grove Street to the west. North Anderson Street bisects the site in a north-south direction. The eastern portion of the site contains three masonry buildings (West End House, Ruth Sleeper Hall, and 25 North Anderson Street), a surface parking lot with stackers (132 car capacity), and a covered enclosure for parking up to 300 bicycles. The western portion of the site contains two masonry structures (Professional Office Building and Ambulatory Office Building) and an above-grade parking structure (622 spaces). All existing buildings will be demolished.

A portion of the project is located on Landlocked Tidelands approximately 1,500 feet (ft) east of the Charles River. The project site includes and is located adjacent to several resources listed in the Massachusetts Historical Commission's (MHC) *Inventory of Historic and Archaeological Assets of the Commonwealth* (the Inventory). The site is located close to the Massachusetts Bay Transportation Authority's (MBTA) Charles/MGH red line rapid transit station and several state-jurisdictional roadways. The site does not contain any wetland resource areas.

Environmental Impacts and Mitigation

Potential environmental impacts associated with the project include: creation of 0.26 acres of impervious area (2.83 total acres on the project site), generation of 5,446 new unadjusted average daily vehicle trips (adt) (33,391 total adt), an increase in water consumption of 34,300 gallons per day (gpd), and an increase in wastewater flow of 31,200 gpd.

Measures to avoid, minimize, and mitigate environmental impacts include: reuse of a previously developed site; designing the project to be certifiable at the gold level by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Program; stormwater management improvements; Transportation Demand Management (TDM) program; measures to improve the site's resiliency; and development of a Construction Management Plan to minimize construction-period impacts.

Jurisdiction and Permitting

The project is undergoing MEPA review and is subject to a mandatory EIR pursuant to Section 11.03(6)(a)(6) of the MEPA regulations because it requires Agency Actions and will generate 3,000 or more new adt. The project also exceeds the Environmental Notification Form (ENF) thresholds at 301 CMR 11.03(10)(b)(1) because it will result in the demolition of all or any exterior part of any Historical Structure listed in or located in any Historic District listed in the State Registrar of Historic Places or the Inventory of Historic and Archeological Assets of the Commonwealth.

The project requires a Determination of Need and Plan Approval from the Department of Public Health (DPH). It may require a Construction Access Permit from the Department of Conservation and Recreation (DCR)and a Construction Dewatering Permit from the Massachusetts Water Resources Authority (MWRA). The project is subject to the MEPA Greenhouse Gas Emissions Policy and Protocol (Policy). The project requires a Public Benefits

Determination in accordance with Section 13.02(1) of the Public Benefit Determination regulations at 301 CMR 13.00. According to the ENF, the Proponent may seek Financial Assistance in the form of Massachusetts Development Finance Agency bonds.

The project requires a National Pollutant Discharge Elimination System (NPDES) construction permit from the U.S. Environmental Protection Agency (EPA) and a Determination of No Hazard to Air Navigation from the Federal Aviation Administration (FAA). It will also be subject to review by several City of Boston agencies, including, but not limited to: Article 80 Large Project Review by the Boston Planning and Development Agency (BPDA), Institutional Master Plan (IMP) Approval and Zoning Map Amendment from the Boston Zoning Commission, Site Plan Review by the Boston Water and Sewer Commission (BWSC), design review by the Boston Civic Design Commission (BCDC), and review by the Boston Landmarks Commission pursuant to Article 85 of the Boston Zoning Code. An IMP Task Force, consisting of community members, was appointed to provide input to the BPDA during its review of the project. The Proponent will prepare and submit a Transportation Access Plan Agreement (TAPA) and a CMP in coordination with the Boston Transportation Department (BTD).

Because the project may seek Financial Assistance, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the DEIR

The DEIR included a detailed description of the proposed project and described changes to the project since the filing of the ENF. Comments from DCR request additional traffic count data and pedestrian mitigation measures. As detailed further below, DCR is requesting that the Proponent partner with DCR to address safety deficiencies at Charles Circle, particularly for pedestrians walking to and from the Longfellow Bridge on the north side of the intersection. Additionally, comments from the Department of Energy Resources (DOER) note that the proposal to utilize steam to supply supplemental space and water heating will result in additional GHG emissions than what has been assumed in the GHG analysis provided in the DEIR.

Alternatives Analysis

The DEIR included an expanded alternatives analysis which included a No-Build Alternative, Zoning Compliant Alternative, Renovation Alternative, ENF Alternative and the Preferred Alternative as described above. The alternatives analysis also included an evaluation of alternative sites for redevelopment within the Main Campus and offsite locations. The evaluation of alternative sites within the Main Campus identified 7 alternative development locations (See figure 3-1in the DEIR). However, these alternative sites were dismissed because they would result in one or more of the following: lack of connection to the core of the campus; significant disruption to existing operations; or floorplates not consistent with single, inpatient beds. As described in the DEIR the rationale for dismissing offsite locations was based on the Proponent's analysis, which determined that more clinical care and single inpatient beds as well as some additional parking to support this growth, are needed on the Main Campus. Additionally, there is need for the replacement of the Parkman Street and Fruit Street garages, which are approaching the end of their useful life and have been a topic of discussion with the

City of Boston for many years as part of plans to improve urban design along Cambridge Street. The parking spaces included in these garages are needed to support patients and visitors to the Main Campus, many of whom cannot utilize public transportation due to medical conditions or traveling from locations without access to transit, and therefore they must be replaced on the Main Campus. Given the need for single, inpatient beds directly connected to the Main Campus and for more clinical care space and parking to serve the Main Campus, construction at a location other than the Main Campus was determined to be infeasible. Moreover, an off-site facility would require duplicative basic services and administrative uses that already exist on the Main Campus. Therefore, off-site locations were dismissed.

The alternatives analysis provided conceptual plans for the Renovation Alternative. MGH assessed possible renovation of existing buildings to meet the needed number of single inpatient rooms and clinical needs space (see Figure 3-2 in the DEIR). However, current buildings are operating at essentially full capacity, and their renovation would not provide infrastructure capacity and large enough floorplates to accommodate the various clinical needs. Currently five buildings - White, Ellison, Blake, Gray Bigelow, and Lunder – provide inpatient care. Of the five, only Lunder predominantly houses single inpatient beds, while the others consist of a mix of beds or mostly doubles. White and Gray Bigelow have no ADA-compliant bathrooms and have only one bathroom per approximately 25 beds per floor, which was compliant with the requirements at the time of these buildings' construction. The Gray Bigelow and White buildings are also over 50 and 80 years old respectively, making them unsuitable for expansion and the provision of inpatient care. Converting these buildings to single inpatient beds will result in far fewer rooms available for treatment to meet current and future needs, significantly impacting the hospital's ability to care for patients. Moreover, renovating existing buildings would be an expensive and inefficient undertaking that would not provide the flexibility needed for future campus growth and centralization, and would significantly impact existing and future patient care during renovation and afterwards.

The DEIR included a table of potential environmental impacts (including building heights, traffic, parking, water usage, and wastewater generation) and conceptual plans for the No-Build Alternative, ENF Alternative and the Preferred Alternative. The ENF Alternative included the construction of a Clinical Building and Campus Services Building. The proposed Clinical Building would include approximately 1,035,000 sf of Gross Floor Area in approximately 12 above grade stories, containing approximately 456 inpatient beds, surgical services, examination/treatment rooms, imaging modalities, along with cardio-echo and stress-testing services, ambulatory outpatient operational support, infusion centers, operating rooms, and interventional and catheterization labs, as well as administrative space and a café. The ground floor was proposed to include retail or similar space. Below-grade, an approximately 1,100 space parking garage was proposed. The Clinical Building was located on the same site as the project (see Figure 3-3 in the DEIR). The Campus Services Building was proposed to include an approximately seven-story (with approximately two stories below grade) structure of approximately 81,000 sf of Gross Floor Area, which would have been constructed on the site north of Parkman Street. The Campus Services Building was proposed to include approximately 29,500 sf of administrative space, approximately 29,500 sf of mechanical space, and approximately 22,000 sf of support services space. As noted above, since the submission of the ENF, it has been determined that the construction of the Campus Services Building is not

financially viable. However, this alternative was included in the DEIR to provide a comparison to the Preferred Alternative. The ENF Alternative would have been larger (1,116,000 sf), would have more net new inpatient beds (203) create more impervious area (3.11 acres) vehicle trips (5,680 adt unadjusted/3,128 adt adjusted), more wastewater generation (88,400 gpd), and use more water (31,186 gpd) than the Preferred Alternative. The building, however, would have allowed for the height of the Clinical Building (220 ft) to be shorter since the mechanical systems for the Clinical Building would have been housed within the Campus Services Building.

The Preferred Alternative site had previously been identified for future development within MGH's 2006 Institutional Master Plan and has many benefits including that it is now largely undeveloped, primarily used for storage, parking and a bicycle storage structure, and that its development would create minimal disruption to the Main Campus and patient care. The Preferred Alternative allows for an increase in the number of single inpatient rooms and allows for space to develop the much-needed heart and cancer centers, as well as the ability to centralize services scattered across campus, increasing convenience and accessibility for patients and visitors. Renovating the existing buildings would also prevent MGH from attaining higher standards of resiliency and improving the public realm along Cambridge Street. The project affords the opportunity to build a resilient structure that will double as a disaster management shelter. Moreover, the project will positively add to the public realm, assisting in promoting the city's goal to enliven Cambridge Street and enhance multimodal access downtown through the allocation of space for the future Red Line/Blue Line connection.

Traffic/Transportation

The DEIR included a Traffic Impact and Access Study (TIAS) prepared in general conformance with the *EEA/MassDOT Guidelines for Transportation Impact Assessments*. I refer the Proponent to comments from DCR that reiterate traffic counts, data, and study area locations that should be included in the traffic analysis. As indicated in the DEIR, the TIAS was prepared based on the net-new square footage (927,000 sf) of the existing Main Campus including the addition of approximately 94 net new beds, new clinical space, and approximately 191 net new parking spaces. According to the DEIR, the project will generate approximately 5,446 new unadjusted adt or 2,996 new adjusted adt. The adjusted trip generation reflects credits for mode share based on the BTD guidelines for the project area and MGH's off-site/remote parking for employees. The DEIR indicated that trip generation was derived from the Institute of Transportation Engineer's (ITE) Trip Generation Manual (10th Edition) using Land Use Code (LUC) 610 (Hospital). The DEIR described MGH's existing TDM program to reduce single-occupancy-vehicle (SOV) trips and encourage alternative modes of travel to and from the site. The project will include amenities for pedestrians and bicyclists, including above- and below-ground pedestrian connections between buildings, secure bike storage, and sidewalks throughout the project site.

The project proposes to close the existing North Anderson Street, a one-way southbound roadway, to vehicular traffic. It will be replaced with an internal pedestrian connection on the ground floor of the project. As part of the project, North Anderson Street will be discontinued, and portions of Parkman Street will be vertically discontinued to allow for bridge and tunnel

connections back to the Main Campus. The project includes 977 parking space of which 191 are considered new. Parking will be located in a below-grade parking structure.

Traffic Operations

The TIAS included a capacity analysis conducted for the weekday morning and weekday evening peak periods for existing, 2028 No-Build, and 2028 Build conditions. Future conditions traffic volumes without the project (No-Build) include existing traffic, new traffic due to general background traffic growth, and traffic related to specific nearby development projects expected to be completed by the 2028 horizon year. The TIAS presents capacity analyses and a summary of average and 95th percentile vehicle queues for each intersection within the study area. Most of these intersections are under the jurisdiction of the City of Boston and some are currently experiencing congested conditions. According to the 2028 Future Build capacity analysis, these intersections are not expected to experience a significant change of levels of service (LOS) or delay during the weekday morning and afternoon peak hours. Notwithstanding, the Proponent has identified proposed improvements for these intersections and has committed to work with the City of Boston to address implementation. Specifically, the Proponent is considering widening of Parkman Street; reconfiguration of North Grove Street; traffic signal modifications at Cambridge Street at North Grove Street. The Study area intersection included in the TIAS consisted of the following intersections:

- Cambridge Street at Charles Circle/Storrow Drive westbound entrance ramp/Mass Eye and Ear (MEE) Lot entrance
- Cambridge Street at Longfellow Bridge outbound/Storrow Drive westbound exit ramp/MEE Lot exit
- Cambridge Street at Charles Street/Storrow Drive eastbound exit ramp/Longfellow Bridge inbound
- Cambridge Street at North Grove Street/Grove Street
- Cambridge Street at North Anderson Street/Anderson Street
- Cambridge Street at Blossom Street/Garden Street
- Cambridge Street at Charles River Plaza Parking Driveway / Boston Fire Dept. Driveway
- Cambridge Street at Joy Street
- Cambridge Street at Staniford Street/Temple Street
- Charles Street at Fruit Street
- Parkman Street at North Grove Street and Fruit Street
- Parkman Street at North Anderson Street and Wang Valet Loop
- Blossom Street at Parkman Street and Charles River Plaza Driveway (exit)
- Blossom Street at William Cardinal O'Connell Way
- Charles Street at Blossom Street
- Staniford Street at William Cardinal O'Connell Way

Transit

As described in the DEIR, approximately 79 percent of MGH employees at the Main Campus use public transportation, walk, or bicycle to work. The remaining 21 percent of

employees drive, carpool, are dropped-off, or take a taxicab or rideshare. Most staff who choose to drive must park off campus and rely on the Mass General Brigham shuttle service to get to the Main Campus. The DEIR includes a line haul analysis (i.e. passenger capacity analysis) of the MBTA Red Line by half-hour intervals for the 2028 No-Build and Build conditions. According to the DEIR, the MBTA's Focus40 initiative Red Line Systemwide Improvement Program (now called the Red Line Transformation) will replace and expand the existing Red Line fleet with new, greater capacity cars by 2023 and achieve more frequent headways. The headways[1] in the Red Line are expected to decrease from 4.5 minutes to 3.0 minutes and will be implemented by 2023. These reductions were incorporated as assumptions into the line haul analysis.

The line haul analysis was carried out to determine whether the addition of future ridership associated with the project will exceed the Red Line's policy capacity as defined by the MBTA's Service Delivery Policy, which measures acceptable levels of crowding on transit vehicles by mode and period, in any daily hour period. The passenger capacity analysis investigates the contribution of additional passenger demands to the Red Line segment between Central and Kendall/MIT Stations (the maximum load point on the segment north of the site) and to the segment between Downtown Crossing and South Station (the maximum load point south of the site).The analysis notes the following instances where volume to capacity ration (v/c) exceeds one (i.e. the number of passengers using the service exceeds the space available to provide an acceptable riding experience) along the Red Line under 2028 Build Conditions as compared to 2028 No-Build Conditions:

- Northbound service will exceed policy capacity in just one 30-minute period during the morning peak period, 6:30 a.m. to 9:00 a.m. Policy capacity is also exceeded just before morning peak service in the northbound direction. There are no exceedances during the evening peak service.

- Southbound service will exceed policy capacity in just one 30-minute period during the morning peak period, 6:30 a.m. to 9:00 a.m. Policy capacity is also exceeded just after morning peak service in the southbound direction, and just before evening peak service in the southbound direction. There are no exceedances during the evening peak service.

As described in MassDOT's comment letter, the project's expected Red Line trip generation does not generally cause any new exceedances of the passenger crowding thresholds. The exceedances currently experienced today and those expected with future no-build/background growth in ridership are addressed by the MBTA's planned introduction of new train cars and increased service frequency. The FEIR should supplement its transit capacity analysis to provide a scenario in which improvements to the Red Line are not completed or delayed. To the extent this planned improvement is not timed with the impacts of this project, the Proponent should address what additional mitigation measures may be warranted.

Parking

[1] Headway is the distance between vehicles in a transit system measured in time or space. The minimum headway is the shortest such distance or time achievable by a system without a reduction in the speed of vehicles.

The currently proposed parking supply for the project was defined by the need to restore displaced parking garage to serve existing hospital operations, the need to serve new clinical uses, site constraints, the need to accommodate the building's medical components, constructability, and the high cost to include underground parking. The DEIR indicates that all of these spaces will be allocated to patient/visitor use during peak daytime hours. Patients/visitors are expected to arrive and depart the Main Campus almost entirely by vehicle – similar to many other hospital facilities. Patients arriving and departing the Main Campus are often high acuity and require specialty care, and as such, vehicle travel is the preferred travel mode to increase the safety and comfort for these travelling patients. In addition, public transportation schedules and service areas, in particular the Commuter Rail, do not always work with appointment and staff schedules.

No new daytime employee parking will be accommodated in the proposed garage. As described in the DEIR, the proposed parking supply strikes a balance between providing adequate parking supply for users that rely on the parking, while ensuring that excess parking is not created on the Main Campus, which could have a negative impact on multimodal mobility.

Pedestrian and Bicycle Access

The DEIR addressed how the site would be made accessible and friendly to bicycles and pedestrians. The site design includes a continuous network of sidewalks connecting the various uses on site. The proposed pedestrian infrastructure will facilitate pedestrian travel for employees and visitors between the proposed and existing buildings while minimizing the number of single-occupant vehicle trips. Additionally, the project includes improvements to bicycle accommodations both on and off site to facilitate travel to and from the site by bicyclists. The FEIR should clarify which pedestrian/bicycle mitigation measures the Proponent will provide.

Transportation Demand Management

The DEIR includes a description of MGH's transportation demand management (TDM) initiatives, including:

- Continuation of an employee parking freeze. The parking spaces proposed in this project will serve patients and visitors;
- Shuttle services between the MGH campus and other MGH facilities, other hospitals in the Boston area, off-site health centers, off-site employee parking areas, and key transportation nodes in the area;
- Subsidized transit passes through the MBTA's Perq program;
- Membership in A Better City TMA, including use of a Guaranteed Ride Home program and ridematching services;
- Carpool and vanpool incentives;
- Bicycling incentives such as covered, secure bicycle parking and shower and locker facilities;
- Provision of Zipcars;
- Promotional events to incentivize use of alternative modes of transportation; and
- Designation of an on-site transportation coordinator to administer the TDM program.

The DEIR indicates that the effectiveness of these measures in reducing mobile source emissions and air pollutants associated with traffic generation are already reflected in the adjusted adt number assumed for the project.

Greenhouse Gas Emissions

This project is subject to review under the May 5, 2010 MEPA GHG Policy. The Policy requires projects to quantify carbon dioxide (CO_2) emissions and identify measures to avoid, minimize, or mitigate such emissions. The analysis should quantify the direct and indirect CO_2 emissions associated with the project's energy use (stationary sources) and transportation-related emissions (mobile sources). Direct emissions include on-site stationary sources, which typically emit GHGs by burning fossil fuel for heat, hot water, steam and other processes. Indirect emissions result from the consumption of energy, such as electricity, that is generated off-site by burning of fossil fuels, and from emissions associated with vehicle use by employees, vendors, customers and others.

Stationary Sources

The DEIR included a GHG emissions analysis that calculates and compares GHG emissions associated with: 1) a Base Case corresponding to the 9th Edition of the Massachusetts Building Code and 2) a Preferred Alternative that is intended to achieve greater reductions in energy use and GHG emissions than required by the Building Code. The 9th edition of the Building Code incorporates the building energy provisions of the International Energy Conservation Code (IECC) 2015, which references the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1-2013 standards. I note that the City of Boston is a designated Green Community under the provisions of the *Green Communities Act of 2008* and has adopted the Commonwealth of Massachusetts' Stretch Code (SC). Therefore, the project will be required to meet the applicable version of the SC in effect at the time of construction. The SC increases the energy efficiency code requirements for new construction (both residential and commercial) in municipalities that adopt it. Applicable code is Massachusetts Stretch Code (energy performance improvement of 10% over ASHRAE 90.1-2013-Appendix G) plus certain Massachusetts amendments including C405.3 and C405.4 (lighting), C405.10 (EV charging), and C406 (three additional efficiency measures).

The building is proposing to incorporate the following C406 measures:

- C406.3 – reduced lighting power density
- C406.7 – hot water from heat recovery chillers
- C406.9 – reduced air infiltration (confirmed with field testing)

As described in DOER's comment letter, the building is proposing an approximately 7 percent improvement in vertical envelope and reduced air infiltration per C406.9 (air infiltration of 0.25 cfm/sf at 75 Pa, or less, as verified by field testing).

The project is also incorporating efficient electrification strategies as follows:

- As a first source of heat, the project is incorporating electric heat recovery chillers (HRCs). HRCs use the chilled water loop as a heating source for the hot water loop. HRCs are also providing a source of heat for service water, in addition to space heating.
- As a second source of heat, the project is using air source heat pumps. The air source will be situated such that the contributing air is sourced from the ventilation exhaust which will have higher temperature than the ambient outside air, improving efficiency.

As described in DOER's comment letter, these two heating strategies are sufficient to handle about 85% of space heating loads. The project should be commended for this innovative approach. The balance of space heating is provided by Vicinity steam.[2] The service water heating is also taking advantage of the HRCs. In addition to providing a source of heat energy for space heating, the HRCs are also providing a source of heat for service water. The balance of water heating is provided by Vicinity district steam.

The GHG analysis indicates that the Base Case will generate approximately 13,877 tons per year (tpy) of stationary source GHG emissions. However, the Preferred Alternative is described as generating 15,807 tpy of GHG emissions, an approximately 1,932 tpy (13.9%) *increase*. This is because the Proponent attributes very low emissions to steam, meaning that the analysis results in an unexpected increase in emissions in the Preferred Alternative despite the greater use of efficient electrification strategies.

Comments from DOER note that, based on two years' of Vicinity operations data (2019 and 2020), the emissions rate of Vicinity steam is more accurately estimated at 193 lbs/MMBtu, rather than 16 lbs/MMBtu. In light of the additional emission associated with the use of steam, DOER recommends that the project maintain the envelope and electrification commitments described above and consider alternatives for supplemental heating to maintain the GHG gains from the project. DOER also indicates that certain corrections should be made to the Proponent's analysis. Namely, the Base Case, which describes a project that is compliant with the Building Code without mitigation measures, should be built using gas and 95% efficient boilers for space heating, water heating, and equipment (without steam or efficient electrification strategies).

The submission identifies about 10,000-sf as available for a possible solar set-aside which could potentially offset GHG emission of the project by 48 tpy. However, the project does not commit to 10,000-sf of solar readiness. This should be clarified in the FEIR.

Mobile Sources

Mobile source GHG emissions were calculated using the EPA MOVES emissions model and MassDEP guidelines for a mesoscale analysis of mobile source emissions. Emissions were calculated for the 2021 Existing, 2028 No Build and 2028 Build conditions. The 2028 Build condition exhibits an 138 tpy, or 3 percent, increase in GHG emission as compared to 2028 No-Build condition. This is due to the increase in vehicular traffic and subsequent increased delay times generated by the proposed project. The Build condition analysis accounts for the Proponent's extensive TDM program which is intended to decrease single occupancy vehicle use and increase alternative modes of transportation (i.e., transit, bicycling, walking), which in turn

[2] Vicinity is a commercial district energy supplier of steam.

reduce GHG emissions. As described in the DEIR, the GHG emission reduction from the TDM program is already reflected in the adjusted trip generation (adt) number assumed for the project. The mobile source analysis therefore shows an increase in emission in Build conditions as compared to No-Build conditions. The FEIR should consider what other measures could be taken to offset mobile source emissions associated with traffic generation from the project. For instance, additional traffic mitigation measures or an additional commitment to install solar PV could provide further offsets for mobile source emissions.

As described in the DEIR, the City of Boston recently issued a new Electric Vehicle Readiness Policy for New Developments. This new policy is directed at new projects that are subject to the Transportation Access Plan process; the City has increased EV requirements under this policy. The new EV Readiness Policy requires that 25 percent of the spaces be electric vehicle supply equipped (EVSE) on day one, and that the entire facility can be expanded to be 100 percent EVSE-ready in the future. MGH will comply with the City's new EV Readiness Policy. Accordingly, the project's electrical infrastructure is being sized to be 25 percent EVSE ready on day one and 100 percent EVSE ready in the future. MGH will work with BTD and define how these new requirements will be met in the TAPA process.

Adaptation and Resiliency

As described in the DEIR, the Proponent evaluated multiple future climate Representative Concentration Pathway (RCP) scenarios to understand the impacts of potential temperature rise in the Boston area due to climate change. Regardless of RCP scenario, all predictions indicate an increase in the number and frequency of hot (greater than 90°F) and extremely hot (greater than 100°F) days. Changes in future weather patterns are less predictable, but the Proponent anticipates longer periods of back-to-back hot and extremely hot days. The project is addressing the risk of temperature rise through several design measures including: increased cooling capacity, n+1 cooling plant resilience, emergency power back-up of the full cooling system, and improved building envelope performance (lower glazing solar heat gain coefficient [SHGC]). The project cooling plant is currently designed to meet the loads with outside air conditions of 97°F dry bulb/77°F wet bulb.

The project is currently being designed to meet a base flood elevation (BFE) of 20.6 feet Boston City Bay (BCB) with an additional one foot of freeboard, for a resulting design flood elevation of 21.6 feet BCB. This flood elevation is based on an 18-inch rainfall event coincident with future sea level rise, storm surge, and Charles River dam breaching. In addition to the flood water elevation, these design conditions include secondary impacts including expected disruption to the municipal stormwater and sewer systems, blockage of ground level building access points, and impacts to cross-connection between the project and connected campus buildings. The project is protecting itself from flood risk using flood resistant façade construction at the base of the building to the specified level, automated deployable flood barriers at building entries, and waterproof doors at below grade connecting tunnels. The project is adapting to the potential for sewer disruption by incorporating sewage storage tanks which will be located underground below the parking garage. The project is including an above grade bridge connection to the Main Entrance to allow for continued campus connectivity and access despite potential flooding blockage of the project's entrances.

While climate change has increased the risk of certain disruptive events, the project is being designed to provide 96 hours of island mode regardless of the increased risks related to climate change. For sustainable water management practices, MGH will adopt several strategies including collecting storm water, foundation drainage groundwater, and air handling unit condensate in cisterns for reuse as cooling tower make-up. Additionally, to reduce water consumption for the new project, MGH is planning to utilize low flow plumbing fixtures. Since the building use is for healthcare, concerns of infection control prevent the reuse/treatment of black and gray water. Moreover, except for green roof areas, there is limited landscaping requiring irrigation. Currently no irrigation of the green roofs has been proposed.

Air Quality

The DEIR notes that the 20 MW cogeneration plant previously described in the ENF is no longer being proposed. The DEIR describes how parking garage exhaust will be routed. The air from the garage levels will be exhausted via shafts that vent above ground level in two ways: first through horizontal louvered openings in the soffits[3] of the building overhangs (between fourteen and twenty feet above the sidewalk); and second through vertical louvers in the building façade at a minimum of six feet above the sidewalk.

The DEIR included a mesoscale analysis conducted to compare the air pollutants associated with the proposed project against the Commonwealth's State Implementation Plan (SIP). The SIP is created to track how the state intends to maintain compliance with National Ambient Air Quality Standards (NAAQS) or to plan for future emissions reductions to attain compliance. The results of the mesoscale analysis indicate that the project under 2028 Build conditions will result in a 3 percent increase of NOx and VOC emissions compared to 2028 No-Build condition due to a direct increase in vehicular traffic and increased delay times at area intersections attributable to the project. However, the DEIR indicates that the increase in emissions is less than one ton per year (tpy) of each pollutant, and does not exceed the NAAQS in total. As noted, the Proponent indicates that mobile source emissions, including NOx and VOC emissions, would be reduced by TDM measures but has not quantified the effectiveness of such measures. As noted above, the Proponent is working with the City of Boston to mitigate traffic impacts and are considering widening of Parkman Street; reconfiguration of North Grove Street; and traffic signal modifications at Cambridge Street at North Grove Street.

Landlocked Tidelands

Approximately 1.7 acres of the project site is located within landlocked tidelands that are subject to the provisions of *An Act Relative to Licensing Requirements for Certain Tidelands* and the Public Benefit Determination regulations (301 CMR 13.00). Consistent with Section 8 of the legislation, I must conduct a Public Benefit Review as part of the review of EIR projects located on tidelands. I will issue a Public Benefits Determination (PBD) within 30 days of the issuance of a Certificate on the Final Environmental Impact Report (FEIR).

[3] A soffit is an exterior or interior architectural feature, generally the horizontal, aloft underside of any construction element.

Section 3 of this Act requires that any project that is subject to MEPA review and proposes a new use or structure or modification of an existing use or structure within landlocked tidelands address the project's impacts on tidelands and groundwater, including "an explanation of the project's impact on the public's right to access, use and enjoy tidelands that are protected by chapter 91," and must "identify measures to avoid, minimize or mitigate any adverse impacts on such rights set forth herein." While the traditional public interests in fishing, fowling and direct waterfront access may be limited in the case of landlocked tidelands, the DEIR stated that the Proponent will redevelop this site to include following public benefits:

- The project will redevelop an existing developed site that currently includes paved parking, a parking garage, several underutilized buildings, as well as a small open space and North Anderson Street, into a new clinical building with ground floor retail, space for a future MBTA headhouse, a new arcade and improved sidewalks and publicly accessible open spaces.
- The development of the project site will benefit abutters and the surrounding community by transforming an underutilized urban site into an active, mixed-use property. The development of the site also aligns with the City of Boston's goals to enliven and enhance the public experience along Cambridge Street and improve multimodal circulation around and within the MGH Main Campus. The project will introduce a mix of uses on the ground floor along Cambridge Street including retail, and will redesign the space with movable outdoor seating to vivify the space and encourage better public engagement with the space. The project will also redesign North Grove, Blossom, Parkman, and Cambridge Streets to comply with the City's and BTD's Boston Complete Streets policies. Some of the reconfigurations will include sidewalk widening, plaza formations, new bike facilities, and landscaping, which will improve the pedestrian, bicycle and vehicular travel for abutters and the community.
- The redevelopment will convert this underutilized site into a vibrant mixed-use property, providing additional space for clinical needs, new retail space, public plazas, and better pedestrian circulation and navigation around and through the MGH Main Campus.

As indicated in the DEIR, the project site is not located within the City's Groundwater Conservation Overlay District, which Overlay District partly is intended to prevent the lowering and promote the restoration of groundwater levels in the City of Boston. Groundwater is anticipated to be present at depths ranging from 8 to 10 feet below ground surface, corresponding to about Elevation +5.6 to Elevation +9.3 on the BCB datum. Prior to the initiation of dewatering activities, instrumentation will be installed and monitored before, during, and after construction to document that dewatering procedures have minimum adverse effects on both adjacent structures and utilities. Should groundwater lowering be observed, a groundwater recharge system will be employed.

Stormwater

The project's stormwater management system will comply with MassDEP Stormwater Management Standards (SMS) to the maximum extent practicable. The proposed stormwater management system includes collection of the first 1.25-inches of precipitation for reuse and will decrease the amount and rate of stormwater runoff. As part of the system design, overflows from

the harvesting tank will be directed to subsurface infiltration systems (current target is an additional. 1.25-inches of equivalent volume) that will essentially double the managed volume of stormwater. The overall system will remove at least 65 percent of phosphorus. The project includes the following LID measures for stormwater quality and quantity control: select areas of permeable pavers, tree pit rain gardens, vegetated roof areas, a stormwater detention tank, and stormwater infiltration cells.

The project includes rainwater harvesting. Collected water from the project's rooftop will be used for mechanical equipment that has year-round demands. As such the rainwater harvesting system will reduce domestic water demand and reduce storm water runoff rates and volumes. Harvested rainwater also will be used to meet a portion of the cooling tower makeup water requirements. As currently planned, roof drainage from the project will be directed to an approximately 98,000-gallon rainwater harvesting tank located within the building. The primary use of the harvested water will be for mechanical systems. In the event the tanks are full and/or the runoff volume exceeds 1.25-inch equivalent, the system will have a bypass to a subsurface recharge system located outside the building footprints. The system will be designed to empty the tank over a 72-hour period. Based on preliminary data, approximately 44 pre-cast concrete chambers providing a volume of 98,000 gallons are planned to provide the required volume. The project is currently expected to require three new storm drain connections. It is expected there will be one storm drain connection to the proposed infiltration system located outside the building footprint. There are two proposed storm drain connections for the overflows from the two rainwater harvesting tanks. They are expected to connect to the existing 36-inch by 33-inch drain in Parkman Street.

Water and Wastewater

The project is expected to generate approximately 38,780 gpd of sanitary sewage. As part of the project, six buildings will be demolished. There is approximately 101,258 square feet (sf) of occupied space in those six buildings. These occupied spaces are predominantly office spaces and generate approximately 7,594 gpd (at 75 gpd per 1,000 sf) of sanitary sewage. Therefore, the net new sanitary sewage generation is expected to be 31,186 gpd (38,780 gpd proposed less 7,594 gpd existing to be demolished).

For sewer service the project site is served on Cambridge Street by a 15-inch sanitary sewer; on North Grove Street by a 30-inch by 36-inch combined sewer; on Parkman Street by a 12-inch sewer and a 15- inch sewer; on Blossom Street by a 16-inch combined sewer; and on North Anderson Street by an 18-inch by 24-inch sewer. For drainage the project site is served on Cambridge Street by two 12-inch drains; on North Grove Street by a 12-inch drain; on Parkman Street by a 33-inch by 33-inch drain and a 24-inch drain; and on North Anderson Street by an 18-inch by 18-inch drain.

Water demand for the project was calculated based upon an expected net new sewage generation rate of 31,186 gpd plus an additional 10 percent for consumption, system losses and other usage. The project's estimated net new water demand is approximately 34,305 gpd. The project will be served on Cambridge Street by 12-inch southern low pit cast iron water main which was rehabilitated in 1998, and a 12-inch southern low cast iron water main which was

rehabilitated in 1997; on North Grove Street by an 8-inch southern low ductile iron cement lined water main installed in 2008; on Parkman Street by a 12-inch southern low ductile iron cement lined main installed in 1981, and a 12-inch southern low ductile iron cement lined main installed in 1982; on Blossom Street by a 12-inch southern low ductile iron cement lined main installed in 1983; and on North Anderson Street by an 8-inch southern low ductile iron cement lined main installed in 2008.

The project is currently expected to require two new domestic water services. One proposed domestic water service will connect to the existing 12-inch water main on Cambridge Street and one domestic water service will connect to the existing 12-inch water main in Parkman Street. The project is expected to require two new fire protection service. As a measure to reduce domestic water consumption, the Proponent is targeting both rainwater harvesting and reduced water demand plumbing fixtures for the Project.
I refer the Proponent to additional permitting guidance provided in comment letters from BWSC and MWRA.

Cultural Resources

The project must complete the State Register Review consultation process with the MHC. The project includes demolition of all on-site structures, including Sleeper Hall (BOS.4159), West End Settlement House (BOS.4158), and the West End Tenement House (BOS.4156) which are listed in the MHC Inventory. MHC has determined that Sleeper Hall meets the criteria of eligibility for individual listing and that the West End Settlement and Tenement Houses meet the criteria of eligibility for listing in the National Register of Historic Places as contributing resources to a potential historic district. MHC has determined that the demolition of these structures will result in an "adverse effect."

As described above, the project proposes to incorporate elements of the street-facing facades of Ruth Sleeper Hall (BOS.4159) at the northeast corner of the project's building on the corner of Blossom and Parkman streets. Three stories of the Blossom Street and Parkman Street facades will be reconstructed and incorporated into the project. Comments from MHC indicate that retaining a facade of a building, but substantially demolishing the remainder of the historic building, does not minimize the adverse effect of demolition. Additionally, their comments note that rebuilding facades of historic buildings does not eliminate or minimize the adverse effects of demolition as the reconstruction does not meet the Secretary of the Interior's Standards as it would create a false sense of historical development. Comments from MHC request that MGH continue to explore alternatives to demolition, specifically the relocation of any or all three of the historic buildings to other sites within the old West End neighborhood. As noted by MHC, these three historic West End buildings are visible reminders of the vibrant community that was the West End neighborhood and their proposed demolition should be carefully and thoughtfully reconsidered.

Solid/Hazardous Waste

The Clinical Building site is regulated under M.G.L. c.21E and the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) due to the presence of oil and hazardous material

associated with the site's historic use as a gas station. The DEIR indicated the site has been remediated and has achieved a Permanent Solution with a Condition of No Significant Risk. The Proponent will conduct additional pre-characterization of soils prior to commencement of excavation. Prior to general excavation, site soils will be pre-characterized to the planned depth of excavation for off-site removal in accordance with current MassDEP policy. In addition, procurement of a temporary Groundwater Dewatering Discharge Permit from the MWRA and the BWSC will be required for pumping and discharge of site groundwater during construction activities.

The project is estimated to generate approximately 1,389 tons of solid waste per year. The Main Campus is subject to the Organic Waste Ban. Organic waste is separated and picked up every weekday. The DEIR identified several recycling initiatives. MGH started Raising Environmental Awareness League (REAL) in 2010 to focus on sustainability efforts across the hospital. Last year, the hospital recycled approximately 581 tons of cardboard, 612 tons of paper, 380 tons of food, 1,147 tons of construction waste and 849 tons of medical waste. MGH also sends about 34 tons of food waste to a dairy farm in Maine that in conjunction with cow manure produces electricity and liquid fertilizer for farmers. MGH is committed to buying products that can be recycled, and it works with vendors to set up programs in which companies take back used products and reduce packaging materials. In addition, through a Mass General Brigham-led program, MGH has been encouraging the purchase of preferred products, including reusable items and reprocessed single-use devices.

Construction Period Impacts

As described in the DEIR, construction of the proposed project is anticipated to begin in the second quarter of 2022 and will be completed as follows: third quarter of 2026 for the eastern portion of the building and the tunnel and a portion of the permanent bridge and the fourth quarter of 2029 for the western portion of the building and completion of the permanent bridge. Typical construction hours will be from 7:00 a.m. to 6:00 p.m., Monday through Friday, with most shifts ordinarily ending at 3:30 p.m. A CMP will be submitted to BTD for review and approval prior to issuance of a Building Permit. The CMP will include detailed information on specific construction mitigation measures and construction methodologies to minimize impacts to abutters and the local community. The CMP will also define truck routes which will assist in minimizing the impact of trucks on City and neighborhood streets.

As indicated in the DEIR, construction management and scheduling will minimize impacts on the surrounding environment and will include plans for construction worker commuting and parking, routing plans for trucking and deliveries, and the control of noise and dust. As the design of the project progresses, MGH will meet with BTD to discuss the specific location of barricades, the need for lane closures, pedestrian walkways, and truck queuing areas. Secure fencing, signage, and covered walkways may be employed to ensure the safety and efficiency of all pedestrian and vehicular traffic flows. In addition, sidewalk areas and walkways near construction activities will be well marked and lighted to protect pedestrians and ensure their safety. Public safety for pedestrians on abutting sidewalks will also include covered pedestrian walkways when appropriate. If required by BTD and the Boston Police Department, police details will be provided to facilitate traffic flow and equipment and trucks entering and

exiting the site. These measures will be incorporated into the CMP which will be submitted to BTD for approval prior to the commencement of construction work. Short-term air quality impacts from fugitive dust may be expected during demolition, excavation and the early phases of construction. Plans for controlling fugitive dust during demolition, excavation and construction include mechanical street sweeping, wetting portions of the site during periods of high wind, and careful removal of debris by covered trucks.

The DEIR indicates that the Proponent will encourage the contractor to utilize pollution controls on all heavy equipment. The contractor will proactively implement measures to minimize air quality impacts during construction. Specific measures will be taken to reduce diesel emissions including the use of equipment retrofitted with diesel emissions control devices. The Proponent will specify during the procurement of the subcontractors, that the majority of the heavy equipment operating on the site be retrofitted with diesel emissions control devices. The Proponent will develop a Construction Waste Management Plan (CWMP) intended to divert construction and demolition waste from landfills and to develop a waste management plan that results in the recycling /salvaging at least 90 percent by weight of total non-hazardous construction and demolition waste, not including land clearing and associated debris. Materials will be separated to the greatest extent possible with on-site labor. Waste management haulers shall be required to track and separate debris off-site at approved facilities. In an effort to minimize debris being generated at the site, the general contractor will prefabricate assemblies off-site and install, in a modular fashion, certain elements of the construction. The Proponent will comply with the Asbestos Regulations and will manage contaminated materials in accordance with federal, state and local regulations.

Conclusion

The DEIR included a detailed project description, identified baseline environmental conditions, and provided a transportation analysis and a GHG analysis. The following Scope identifies additional analysis and information that must be provided in the FEIR including information and analyses as requested by DCR and DOER in their comment letters.

Based on a review of the DEIR, consultation with State Agencies and a review of comment letters, I have determined that the DEIR is adequate notwithstanding aspects of the project that require additional description and analysis in the FEIR.

SCOPE

General

The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. The FEIR should include a comprehensive description of the project, quantify its impacts and clearly identify mitigation measures. It should include an analysis of the project that demonstrates that the Preferred Alternative includes all feasible means to avoid Damage to the Environment, or to the extent that Damage to the Environment cannot be avoided, that it includes measures to minimize and mitigate Damage to the Environment to the maximum extent practicable.

Project Description and Permitting

The FEIR should describe any changes to the project since the filing of the DEIR. It should include updated site plans, if applicable, for existing and post-development conditions at a legible scale. Conceptual plans should clearly identify with reasonable detail: all major project components (proposed buildings, access roads, etc.); areas of land alteration (new and previously disturbed); impervious areas; ownership of parcels including easement areas; pedestrian and bicycle accommodations; and stormwater and utility infrastructure.

The FEIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and a description of how the project will meet those standards. The FEIR should include a list of required Agency Permits, Financial Assistance, or other state approvals and provide an update on the status of each of these pending actions. The FEIR should provide and update on the federal and local review and permitting processes.

Traffic/Transportation

The FEIR should include a revised TIAS which provides an update on the traffic improvements that Proponent is considering (i.e. widening of Parkman Street; reconfiguration of North Grove Street; traffic signal modifications at Cambridge Street at North Grove Street). The TIAS should clarify which improvements are being proposed on/along State jurisdictional roadways and/or City roadways. The FEIR should identify any pedestrian improvements proposed and how they may improve pedestrian LOS within the project area. The FEIR should address comments from DCR dated June 9, 2021. I encourage the Proponent to meet with DCR prior to filing the FEIR to ensure that the FEIR is responsive to their comment letter. Specifically, DCR is requesting that the FEIR include Automatic Traffic Recorder Counts ("ATR") for the following locations:

- Each ramp to and from Charles Circle
- Storrow Drive between Charles and Leverett Circles
- Storrow Drive just east of Storrow Drive Tunnel
- Storrow Drive outbound on-ramp from Leverett Circle
- Charles Street between Charles Circle and Leverett Circle
- Longfellow Bridge, each direction
- Charles River Dam Road
- Memorial Drive just west of Wadsworth Street

As noted in DCR's comment letter, ATR counts should be conducted for 7 days, and collect volume, speed, and classification. The DEIR states that the projected increase in traffic volume would minimally affect the traffic operations at Leverett Circle. DCR requests that the FEIR include traffic data to assess this opinion. The traffic analysis should clarify which intersections are under State jurisdiction.

Comments from DCR also note that the Charles Circle has some safety deficiencies, particularly for pedestrians walking to and from the Longfellow Bridge on the north side of the

intersection. The proposed project will rely heavily on the pedestrian mode and nearly a quarter of those trips will pass through Charles Circle. Today, the pedestrian crossing of the Storrow Drive outbound off-ramps is not controlled by a pedestrian signal like the rest of the intersection. The Proponent should partner with DCR to consider safety improvements to this crosswalk. The FEIR should report on the results of this consultation and update mitigation commitments as appropriate.

The FEIR should propose a TDM monitoring plan so that such emissions reductions can be verified over time. The FEIR should address measures to be taken by the Proponent if TDM measures prove to be less effective than anticipated.

The FEIR should address whether the transit impacts documented in the DEIR would differ in the absence of planned improvements to the MBTA Red Line, and quantify to what extent the capacity exceedances would occur with or without the planned improvements under the 2028 No-Build and 2028 Build Conditions The FEIR should address what measures could be taken if planned improvements to the MBTA Red Line may not be timed with the impacts of the project. Given the project's reliance on pedestrian and bicycle access, the FEIR should address whether and to what extent improvements to pedestrian and bicycle accommodations will improve conditions at any of the study area intersections with a PLOS of F. The FEIR should explore additional measures to mitigate pedestrian and bicycle congestion and revise mitigation commitments as appropriate.

Air Quality

The FEIR should include a revised air quality analysis which incorporates air quality improvements, if any, associated with transportation roadway mitigation to be discussed with the City of Boston. Because the air quality analysis shows an increase in VOCs and NOx associated with the project as compared to No-Build conditions, the FEIR should address what additional measures could be taken to offset this increase in air pollutants.

Greenhouse Gas Emissions

The FEIR should include a revised GHG analysis which incorporates recommendations outlined in DOER's comment letter. Specifically, the GHG analysis should use the methodology outlined in DOER's letter for evaluating the GHG emission associated with the Base Case and the Proposed Case with mitigation measures including building envelope improvements and efficient electrification strategies; the Proposed Case should then compare the use of district energy systems (i.e. steam) versus other energy sources for supplemental heating. When calculating emissions, an emissions factor of 193 lbs/MMBtu should be assumed for use of steam. The FEIR should address the recommendations in DOER's comment letter for further improvements to the project. If recommendations are dismissed, the FEIR should explain why.

The FEIR should include a revised mobile source emissions analysis which incorporates emissions reductions associated with any of the proposed roadway improvement measures as applicable. The FEIR should also address what additional measures could be taken to offset the increase in mobile source emissions associated with the project, including additional traffic

mitigation measures or by increasing commitments to reduce stationary source emissions, for instance, through the expanded use of solar PV.

Landlocked Tidelands

The FEIR should include a revised PBD as applicable. In particular, the FEIR should address ways by which the project will seek to enhance public access to the waterfront (Charles River), for instance, through pedestrian/traffic improvements and signalization.

Stormwater and Climate

To the extent feasible, the FEIR should include more detailed stormwater management plans to address concerns raised in comments submitted by the CWRA including stormwater management plans, stormwater ultimate discharge points and supporting calculations. The FEIR should clarify whether the stormwater management system takes into account increased precipitation levels associated with climate change. The FEIR should clarify the sea level rise and precipitation assumptions underlying the project's choice of building elevation and floodproofing measures, and address whether this analysis takes into account the best available data on climate change.

Water/Wastewater

Comments from the MWRA state the need to ensure that the project's wastewater flow does not increase system surcharging or overflows in large storms. The FEIR should describe how the project will meet the 4:1 offset of the project's wastewater flow increase by removing stormwater and/or infiltration and inflow (I/I) from a hydraulically related system(s). The DEIR states that the project is expected to produce more than 15,000 gpd and that the Proponent will coordinate with BWSC to comply with this requirement. The FEIR should include information on the progress of this coordination and the I/I mitigation approach. The Proponent currently holds MWRA Sewer Use Discharge Permit #45005712, which includes the project site. The Proponent should indicate whether changes to this permit will be required as part of the project.

Cultural Resources

I refer the Proponent to comments from MHC which continue to request the Proponent evaluate alternatives to eliminate or minimize adverse impacts to historic resources (including moving historic buildings to face Cambridge Street and constructing new buildings behind them). The FEIR should include an update on this process and describe any measures that will be incorporated into the design to avoid, minimize, and mitigate adverse impacts to historic resources.

Mitigation and Draft Section 61 Findings

The FEIR should include a section that summarizes all proposed mitigation measures and provides draft Section 61 Findings for each State Agency Action. It should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

In order to ensure that all GHG emissions reduction measures adopted by the Proponent as the Preferred Alternative are actually constructed or performed by the Proponent, the Secretary requires proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. To the extent the project will take equivalent measures to achieve the identified reductions, I encourage the Proponent to commit to achieving the same level of GHG emissions identified in the mitigated (design) case expressed in volumetric terms (e.g., tpy). The GHG self-certification should provide a narrative description of any changes made to building design or TDM measures since the EIR. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the FEIR.

Responses to Comments

The FEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the FEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended, and shall not be construed, to enlarge the scope of the FEIR beyond what has been expressly identified in this certificate.

Circulation

The Proponent should circulate the FEIR to those parties who commented on the ENF, to any State and municipal agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. The FEIR submitted to the MEPA office should include a digital copy of the complete document. A copy of the FEIR should be made available for review in the West End Branch of the Boston Public.

K. Theoharides

June 16, 2021
Date

Kathleen A. Theoharides

Comments received:

06/09/2021 Charles River Watershed Association (CRWA)
06/09/2021 Boston Water and Sewer Commission (BWSC)
06/09/2021 Massachusetts Historical Commission (MHC)
06/09/2021 Massachusetts Water Resources Authority (MWRA)
06/14/2021 Massachusetts Department of Transportation (MassDOT)
06/15/2021 Department of Conservation and Recreation (DCR)
06/16/2021 Department of Energy Resources (DOER)

KAT/EFF/eff

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Jamey Tesler, Acting Secretary & CEO

massDOT
Massachusetts Department of Transportation

June 14, 2021

Kathleen Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: Boston: Massachusetts General Hospital 2019 IMP Projects – DEIR
(EEA #16012)

ATTN: MEPA Unit
Erin Flaherty

Dear Secretary Theoharides:

On behalf of the Massachusetts Department of Transportation, I am submitting comments regarding the Draft Environmental Impact Report for the Massachusetts General Hospital 2019 IMP Projects project in Boston as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please contact J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (857) 368-8862.

Sincerely,

David J. Mohler
Executive Director
Office of Transportation Planning

DJM/jll

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cc: Jonathan Gulliver, Administrator, Highway Division
Carrie Lavallee, P.E., Acting Chief Engineer, Highway Division
John McInerney, P.E., District 6 Highway Director
Neil Boudreau, Assistant Administrator of Traffic and Highway Safety
Boston Metropolitan Planning Organization
Boston Planning and Development Agency
Boston Transportation Department

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Jamey Tesler, Acting Secretary & CEO

massDOT
Massachusetts Department of Transportation

MEMORANDUM

TO: David Mohler, Executive Director
Office of Transportation Planning

FROM: J. Lionel Lucien, P.E, Manager
Public/Private Development Unit

DATE: June 14, 2021

RE: Boston – Massachusetts General Hospital 2019 IMP Projects – DEIR
(EEA #16012)

The Public/Private Development Unit (PPDU) has reviewed the Draft Environmental Impact Report (DEIR) for the proposed Massachusetts General Hospital (MGH) 2019 IMP Projects in Boston. The project involves the construction of an approximately 1.035 million square foot clinical building, including a 15,000 square foot retail/restaurant component, and an approximately 81,000 square foot campus services building with office, mechanical, and support services. Approximately 298,775 square feet of existing development will be demolished to allow for project construction.

The project is anticipated to generate 5,680 unadjusted new vehicle trips per day and includes provision for 346 parking spaces. When adjusted for mode share, the Project is expected to generate 3,128 new vehicle trips during an average weekday, with 220 trips during the weekday morning peak hour and 238 trips during the weekday evening peak hour. The Project is also expected to generate about 2,600 new daily transit trips, largely via the MBTA Red Line.

The DEIR includes a Transportation Impact Assessment (TIA) that is in general conformance with the current MassDOT/EOEEA *Transportation Impact Assessment Guidelines*. The DEIR provides a thorough analysis of the project's transportation impacts and identifies a comprehensive multimodal package of mitigation measures to help mitigate transportation impacts, improve traffic flow and transit access, and upgrade pedestrian access and safety in the area. Elements of the City of Boston's recent North Station Area Transportation Action Plan are also identified for potential implementation. MassDOT and the MBTA offer the following comments:

Traffic Operations

The TIA presents capacity analyses and a summary of average and 95th percentile vehicle queues for each intersection within the study area. Most of these intersections are under the jurisdiction of the City of Boston and some are currently experiencing congested conditions. According to the Future Build capacity analysis, these intersections are not

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expected to experience a significant change of levels of service (LOS) or delay during the weekday morning and afternoon peak hours. Notwithstanding, the Proponent has identified proposed improvements for these intersections and committed to work with the City of Boston to address implementation.

Public Transportation

The DEIR includes a line haul analysis of the MBTA Red Line by half-hour intervals for the 2028 No-Build and Build conditions. According to the DEIR, the MBTA's Focus40 initiative Red Line Systemwide Improvement Program (now called the Red Line Transformation) would replace and expand the existing Red Line fleet with new, greater capacity cars by 2023 and achieve more frequent headways. The headways on the Red Line are expected to decrease from 4.5 minutes to 3.0 minutes and would be implemented by 2023. These reductions were incorporated as assumptions into the line haul analysis.

The line haul analysis was carried out to find whether the addition of future No-Build and Build trips will exceed the Red Line's policy capacity as defined by the MBTA's Service Delivery Policy, which measures acceptable levels of crowding on transit vehicles by mode and period, in any daily hour period. The analysis notes the following instances where v/c exceeds one (i.e. the number of passengers using the service exceeds the space available to provide an acceptable riding experience) along the Red Line.

- Northbound service experiences policy capacity exceedances in just one 30-minute period during the morning peak period, 6:30 a.m. to 9:00 a.m. Policy capacity is also exceeded just before morning peak service in the northbound direction. There are no exceedances during the evening peak service.

- Southbound service experiences policy capacity exceedances in just one 30-minute period during the morning peak period, 6:30 a.m. to 9:00 a.m. Policy capacity is also exceeded just after morning peak service in the southbound direction, and just before evening peak service in the southbound direction. There are no exceedances during the evening peak service.

- At the maximum load point south of the site on the Red Line southbound, total demand is projected to exceed capacity for one 30-minute period of the day in the 2028 Build Condition, which is projected to exceed policy capacity without the Project in the 2028 No-Build Condition.

The Project's expected Red Line trip generation does not generally cause any new exceedances of the passenger crowding thresholds. The exceedances currently experienced today and those expected with future no-build/background growth in ridership are addressed by the MBTA's planned introduction of new train cars and increased service frequency.

Pedestrian and Bicycle Access

The Proponent has adequately addressed how the site would be made accessible and friendly to bicycles and pedestrians. The site design includes a continuous network of sidewalks connecting the various uses on site. The proposed pedestrian infrastructure will facilitate pedestrian travel for employees and visitors between the proposed and existing buildings while minimizing the number of single-occupant vehicle trips. Additionally, the Proponent would provide improvements to bicycle accommodations both on and off site to facilitate travel to and from the site by bicyclists. The DEIR includes a complete inventory of pedestrian and bicycle accommodations throughout the study area as well as those planned by the Proponent. The DEIR includes pedestrian LOS analysis and for the most part all movements are expected to operate at acceptable LOS, except for a few movements that would continue to operate at LOS F in the future Build conditions.

Transportation Demand Management

The DEIR includes a description of MGH's transportation demand management (TDM) initiatives, including:

- Continuation of an employee parking freeze. The parking spaces proposed in this project will serve patients and visitors;
- Shuttle services between the MGH campus and other MGH facilities, other hospitals in the Boston area, off-site health centers, off-site employee parking areas, and key transportation nodes in the area;
- Subsidized transit passes through the MBTA's Perq program;
- Membership in A Better City TMA, including use of a Guaranteed Ride Home program and ridematching services;
- Carpool and vanpool incentives;
- Bicycling incentives such as covered, secure bicycle parking and shower and locker facilities;
- Provision of Zipcars;
- Promotional events to incentivize use of alternative modes of transportation; and
- Designation of an on-site transportation coordinator to administer the TDM program.

MassDOT and the MBTA note the Proponent's support for the idea of a Red-Blue Line Connector although not included in the horizon year for this project. The connection would help create a new transfer point to the Red Line that would benefit the hospital's staff, patients, and visitors. To facilitate the implementation of this connection, MGH has agreed to allocate approximately 2,400 sf of the overall development space on the ground floor, and approximately 2,900 sf of usable parking areas to allow for a potential MBTA head house construction in the future. MassDOT and the MBTA appreciate the Proponent's willingness to contribute and help advance this idea and look forward to continuing this collaborative effort to improve mobility in the vicinity of the project.

The Proponent should continue consultation with appropriate MassDOT units regarding the preparation of the FEIR. If you have any questions regarding these comments, please contact me at *Lionel.Lucien@state.ma.us*.

a

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF
ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENERGY RESOURCES
100 CAMBRIDGE ST., SUITE 1020
BOSTON, MA 02114
Telephone: 617-626-7300
Facsimile: 617-727-0030

Charles D. Baker
Governor

Karyn E. Polito
Lt. Governor

Kathleen A. Theoharides
Secretary

Patrick C. Woodcock
Commissioner

16 June 2021

Kathleen Theoharides, Secretary
Executive Office of Energy & Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02114
Attn: MEPA Unit

RE: Clinical Building Project, Massachusetts General Hospital, Boston, Massachusetts, EEA #16012

Cc: Maggie McCarey, Director of Energy Efficiency, Department of Energy Resources
Patrick Woodcock, Commissioner, Department of Energy Resources

Dear Secretary Theoharides:

We've reviewed the Draft Environmental Impact Report (DEIR) for the above project. The proposed project consists of an approximately 1.2 million sf hospital building.

Executive Summary

The project is committing to measures which will significantly reduce emissions, including:

- Significantly improved envelope performance over code, including reduced air infiltration.
- Efficient electrification of space heating using heat recovery chillers for first stage and electric exhaust source heat pumps for second stage space heating. These two stages account for about 85% of space heating loads.
- Use of heat recovery chillers for a majority of service water.

The remaining supplemental space and water heating (and some equipment loads) are proposed to be provided with district steam. District steam reverses some of the gains provided by the mitigation measures described above due to increased emissions compared to on-site gas.

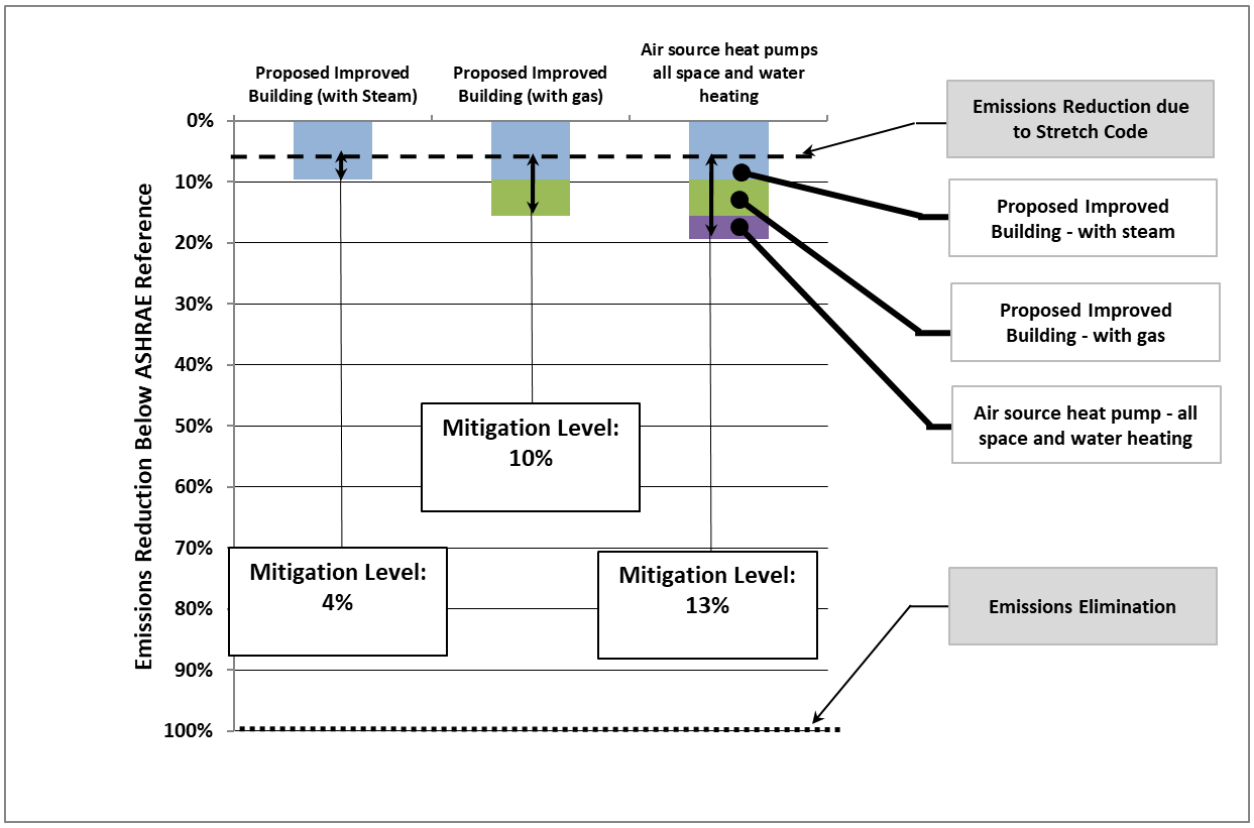
Mitigation Level

Current Mitigation Level is 4[1]%. Mitigation Level (ML) can be improved as follows:

- The currently proposed project, which includes significant building efficiency improvements beyond code, partial electrification, and district steam, has a Mitigation Level of 4%.

- Keeping the building and electrification strategy the same, and replacing district steam with on-site high efficiency gas boilers, would increase ML to 10%.

- If the future, Mitigation Level may be able to be improved further (to 13%) by using air source heat pumps for peak space and water heating with air source heat pumps. The DOER recognizes that this option may not be practical at this time.



[1] Mitigation Level is the GHG reduction in percent above and beyond what is required by building code, including Stretch Code if applicable. A Mitigation Level of 0% means the project has no mitigation.

Code and C406 Measures

Applicable code is Massachusetts Stretch Code (energy performance improvement of 10% over ASHRAE 90.1-2013-Appendix G) plus certain Massachusetts amendments including C405.3 and C405.4 (lighting), C405.10 (EV charging), and C406 (three additional efficiency measures).

The building is proposing to incorporate the following C406 measures:

- C406.3 – reduced lighting power density
- C406.7 – hot water from heat recovery chillers
- C406.9 – reduced air infiltration (confirmed with field testing)

Envelope, Heat Recovery, and Solar Gains_

The combination of quality envelope, heat recovery, and management of solar gains can result in significant reduction in heating (and cooling) thermal energy demand intensity (TEDI, units of kBtu/sf-yr). In addition to reduced utility costs and emissions, the value of a targeted focus on heating and cooling TEDI results in:

- Simplified space heating electrification;
- Reduction, and possible elimination, of perimeter heating systems;
- Improved resiliency;
- Reduced peak demands;
- Improved occupant comfort;
- Reduced maintenance.

Specific TEDI reduction strategies are:

- High-performance window and walls;
- Thermally broken windows and components to eliminate thermal bridges;
- Low air-infiltration;
- Ventilation heat recovery;
- Solar gain management via external shading and/or low solar heat gain coefficient (SHGC)

Buildings with curtain wall envelope require high performing windows and high performing opaque spandrels to achieve heating TEDI reductions. High performing windows and high performing opaque spandrels should be carefully evaluated if curtain-wall construction is considered.

The project is proposing to use higher than code envelope performance (vertical UA 7% higher performing than minimum) and is committing to C406.9 which requires lower than code air infiltration and confirmation of air infiltration with field testing. DOER commends the project for these envelope improvements.

The project is also making use of low solar heat gain coefficient windows and is evaluating external shading.

Taken together, the above strategies are anticipated to result greenhouse gas emissions reductions through reductions in heating and cooling TEDIs.

Summary of Vertical UA Performance and Air Infiltration Commitments

Below is a summary of key envelope commitments. The building is proposing a 7% improvement in vertical envelope and reduced air infiltration per C406.9 (air infiltration of 0.25 cfm/sf at 75 Pa, or less, as verified by field testing). Code roof assembly is proposed.

Building	Vertical UA		Roof R value		Air infiltration	
	Commitment	% Improvement over Code	Commitment	Code Requirement	Commitment	% Improvement over Code
Hospital	0.147	7.1%	R-30c.i.	R-30c.i.	0.25 cfm/sf at 75 Pa	Equal to code – C406.9

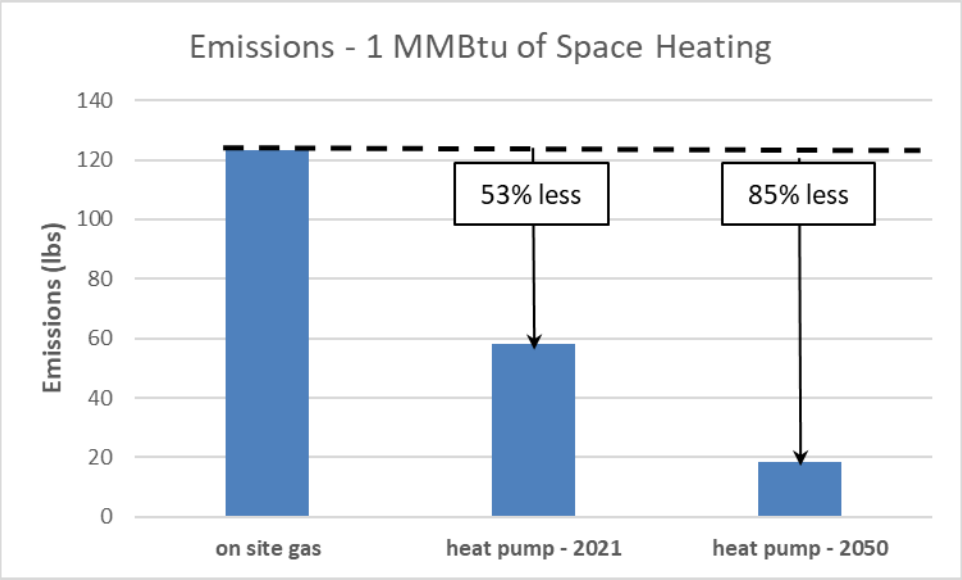
Electric Space and Service Water Heating

Efficient electrification and renewable thermal space and water heating entails the swapping of fossil fuels (natural gas, oil, and propane) or electric resistance systems with one or more of the following:

- Cold-climate air source heat pumps and variable refrigerant flow (VRF) for space heating;
- Air source heat pumps for water heating;
- Ground source heat pumps;
- Solar thermal.

Electrification of space and water heating is a key mitigation strategy with significant short- and long-term implications on GHG emissions. Massachusetts grid emissions rates continue to decline with the implementation of clean energy policies that increase renewable electricity sources. The implication is that efficient electric space and water heating with cold climate air source heat pump and VRF equipment have lower emissions than other fossil-fuel based heating options, including best-in-class (95% efficient) condensing gas equipment.

Currently, efficient electric heating has more than **50% lower emissions** in Massachusetts than condensing natural gas heating. By 2050, efficient electric heating is expected to have approximately **85% lower emissions** in Massachusetts than condensing natural gas heating. See illustration below.



The project is incorporating strategies which result in significant efficient electrification which should be recognized, as follows:

- As a first source of heat, the project is incorporating electric heat recovery chillers (HRCs). HRCs use the chilled water loop as a heating source for the hot water loop.

- As a second source of heat, the project is using air source heat pumps. The air source will be situated such that the contributing air is sourced from the ventilation exhaust which will have higher temperature than the ambient outside air, improving efficiency. (Herein, this is referred to as "exhaust source").

The above two strategies reduce space heating by 85%. DOER commends the project for this innovative approach.

The balance of space heating is provided by Vicinity district steam.

Service Water Heating

In this project, the service water heating is also taking advantage of the HRCs. In addition to providing a source of heat energy for space heating, the HRCs are also providing a source of heat for service water.

The above strategy reduces water heating by 63%. The project should be commended for this innovative approach.

The balance of water heating is provided by Vicinity district steam.

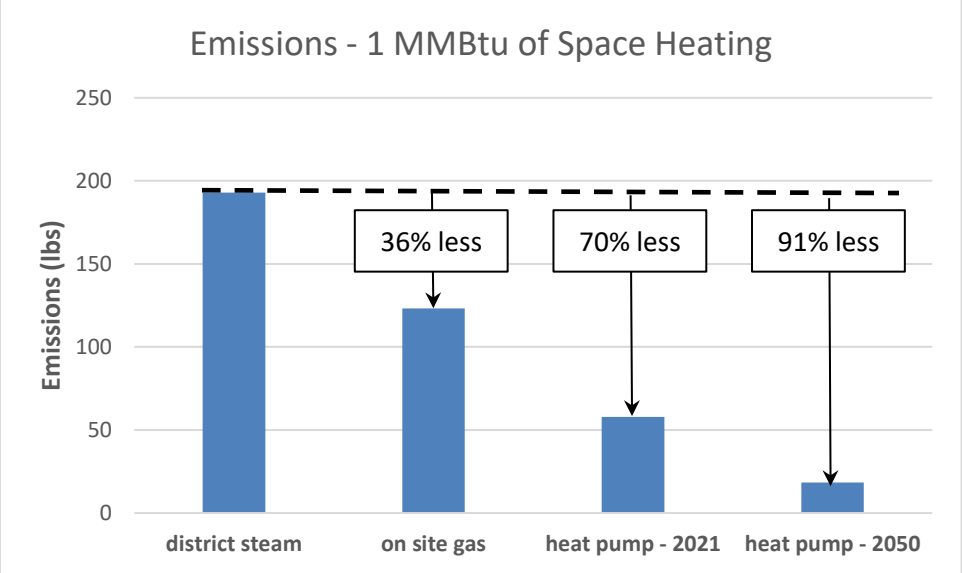
District Steam and Supplemental Heating

Vicinity district steam is proposed to be used to provide the balance of space and water heating otherwise not provided by HRCs and exhaust source heat pumps. In addition, Vicinity district steam is also being proposed for some equipment uses. (Together, these are referred to as "supplemental heating".)

The submission describes the emission rate of Vicinity steam as 16 lbs/MMBtu. The DOER has received two years' of Vicinity operations data (2019 and 2020) and, based on an analysis of this data, cannot verify this relatively low emission rate.

Using the data provided, the emissions rate of Vicinity steam that DOER can verify is 193 lbs/MMBtu

Vicinity steam increases emissions compared to other methods of heating, as illustrated below. (The illustration below builds on the illustration above, adding a comparison to district steam.) To provide the same space heating, for example, on site gas would have 36% less emissions, a heat pump (using 2021 grid emission rates) would have 70% less emissions, and a heat pump (using 2050 grid emission rates) would have 91% less emissions.



Baseline

In the submission, the code Baseline uses steam. This should be replaced with natural gas so that the code Baseline uses gas and electric only.

Solar PV

Rooftop solar can be a significant emissions reduction strategy. For that reason, we recommend that as much roof as possible be made permanently solar-ready for PV systems to be installed during initial construction, or, at some time in the future.

The submission identifies about 10,000-sf as available for a possible solar set-aside. However, the project does not commit to 10,000-sf of solar readiness. This should be clarified.

EV

Clarify the following commitments:

- The number of parking spaces that will be EV ready
- The number of parking spaces that will include EV equipment.

Notes and Recommendations:

We note the following:

1. Note that Section C406.9 (reduced air infiltration), committed to for this building, requires confirmation with whole building air infiltration testing conducted in accordance with ASTM E779 or ASTM E1827, verifying a maximum air leakage rate of 0.25 cfm/sf at 75 Pa. Note that for buildings larger than 250,000-sf, this section allows testing of a representative portion of the building, not less than 25,000-sf.

We recommend the following:

1. Revise the reported emissions for Baseline as described above using electricity and gas only. For the proposed, when calculating emissions for Vicinity district steam, use 193 lbs/MMBtu.

2. Maintain envelope and electrification commitments described above as these significantly reduce heating and cooling TEDIs and improve GHG mitigation level. Consider alternatives for supplemental heating to maintain the GHG gains from the project.

3. Clarify solar PV commitment and PV readiness commitment.

4. Clarify EV readiness and EV equipment commitment.

Sincerely,

Paul F. Ormond, P.E.
Energy Efficiency Engineer
Massachusetts Department of Energy Resources

Brendan Place
Clean Energy Engineer
Massachusetts Department of Energy Resources

Boston Water and Sewer Commission

980 Harrison Avenue
Boston, MA 02119-2540
617-989-7000

June 3, 2021

Secretary Kathleen A. Theoharides
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
Erin Flaherty No. 16012
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Mass General Hospital Clinical Building IMP and DPIR/DEIR

Dear Secretary Theoharides:

The Boston Water and Sewer Commission (Commission) has reviewed the Institutional Master Plan, the Draft Project Impact Report and the Draft Environmental Impact Report (IMP/DPIR/DEIR) for the above referenced Project (Project). The Project site is located in the Boston Proper neighborhood of the city. The location of the proposed Clinical Building is bounded by Parkman Street, Blossom Street, North Grove Street and Cambridge Street. The buildings and structures currently located on the Project site will be demolished to allow for construction of the Project, and the current uses in those buildings will be relocated.

The proposed Clinical Building will include approximately 1,050,000 square feet (sf) of Gross Floor Area in approximately 12 above grade stories. A five-story podium will span the Project site and is proposed to include surgical services, examination/treatment rooms, imaging modalities, along with cardio-echo and stress testing services, ambulatory outpatient operational support, infusion centers, operating rooms, and the interventional and catherterization labs, as well as administrative space and a café. Retail and restaurant space are proposed for the ground floor along Cambridge Street and bicycle parking will be provided on the lower level 1. Space will be reserved in the building for use by the MBTA for a headhouse for the future subway station to be part of the proposed Red-Blue Line Connector. The roof of the podium is proposed to include a green roof in the form of accessible landscaped gardens.

Above the podium will be two inpatient towers with approximately 482 beds. As facilitated by the Project, MGH plans to convert 111 double beds into singe beds in the Ellison Building and decommission at least 253 existing beds in the Gray and White Buildings such that the new net inpatient capacity for the hospital will increase by only approximately 94 beds. Thus, the total number of licensed hospital inpatient beds on the Main Campus will increase up to 1,137 licensed beds. A six story below-grade parking garage is proposed to include approximately 977 parking spaces, representing an increase of approximately 191 net new parking spaces, as the Project will involve the demolition of the Parkman Garage and other existing surface parking areas. As part of the Project, North Anderson Street will be discontinued, and portions of Parkman Street will be vertically discontinued to allow for bridge and tunnel connections back to the Main Campus.

Water, sewer, and storm drain service for the Project site is provided by the Boston Water and Sewer Commission.

According to the IMP/DPIR/DEIR the Project is expected to generate approximately 38,780 gallons per day (gpd) of sanitary sewage. As part of the Project, six buildings will be demolished. There is approximately 101,258 square feet (sf) of occupied space in those six buildings. These occupied spaces are predominantly office spaces and generate approximately 7,594 gpd (at 75 gpd per 1,000 sf) of sanitary sewage. Therefore, the net new sanitary sewage generation is expected to be 31,186 gpd (38,780 gpd proposed less 7,594 gpd existing to be demolished).

For sewer service the Project site is served on Cambridge Street by a 15-inch sanitary sewer; on North Grove Street by a 30-inch by 36-inch combined sewer; on Parkman Street by a 12-inch sewer and a 15-inch sewer; on Blossom Street by a 16-inch combined sewer; and on North Anderson Street by an 18-inch by 24-inch sewer.

For drainage the Project site is served on Cambridge Street by two 12-inch drains; on North Grove Street by a 12-inch drain; on Parkman Street by a 33-inch by 33-inch drain and a 24-inch drain; and on North Anderson Street by an 18-inch by 18-inch drain.

According to the IMP/DPIR/DEIR water demand for the Project is based upon an expected net new sewage generation rate of 31,186 gallons per day (gpd) plus an additional 10 percent for consumption, system losses and other usage. The Project's estimated net new water demand is approximately 34,305 gpd.

For water service the Project site is served on Cambridge Street by 12-inch southern low pit cast iron water main which was rehabilitated in 1998, and a 12-inch southern low cast iron water main which was rehabilitated in 1997; on North Grove Street by an 8-inch southern low ductile iron cement lined water main installed in 2008; on Parkman Street by a 12-inch southern low ductile iron cement lined main installed in 1981, and a 12-inch southern low ductile iron cement lined main installed in 1982; on Blossom Street by a 12-inch southern low ductile iron cement lined main installed in 1983; and on North Anderson Street by an 8-inch southern low ductile iron cement lined main installed in 2008.

The Project is currently expected to require two new domestic water services. One proposed domestic water service is expected to connect to the existing 12-inch water main on Cambridge Street and one domestic water service is currently expected to connect to the existing 12-inch water main in Parkman Street. The Project is expected to require two new fire protection service.

As a measure to reduce domestic water consumption, the Proponent is targeting both rainwater harvesting and reduced water demand plumbing fixtures for the Project. With regards to the rainwater harvesting, collected water will be used for mechanical equipment that has year-round demands. As such the rainwater harvesting system will reduce domestic water demand and reduce stormwater runoff rates and volumes. Harvested rainwater also will be used to meet a portion of the cooling tower makeup water requirements.

As currently planned, roof drainage from the Project will be directed to an approximately 98,000-gallon rainwater harvesting tank located within the building. The currently expected sizing of the stormwater management system will be based on a 1.25-inch equivalent volume in accordance with BWSC requirements. The overall system is expected to remove at least 65 percent of phosphorus. The primary use of the harvested water will be mechanical systems. In the event the tanks are full and/or the runoff

volume exceeds 1.25-inch equivalent, the system will have a bypass to a subsurface recharge system located outside the building footprints. The system will be designed to empty the tank over a 72-hour period. Based on preliminary data, approximately 44 pre-cast concrete chambers providing a volume of 98,000 gallons are planned to provide the required volume.

The Project is currently expected to require three new storm drain connections. It is expected there will be one storm drain connection to the proposed infiltration system located outside the building footprint. There are two proposed storm drain connections for the overflows from the two rainwater harvesting tanks. They are expected to connect to the existing 36-inch by 33-inch drain in Parkman Street.

The Commission has the following comments regarding the proposed Project:

General

1. The Proponent must submit a site plan and General Service Application to the Commission for the proposed Project. Prior to the initial phase of the site plan development, the Proponent should meet with the Commission's Design and Engineering Customer Services to review water main, sewer and storm drainage system availability and potential upgrades that could impact the Project's development.

2. The site plan must show the location of both public and private water mains, sewers and drains serving the Project site, as well as the locations of existing and proposed service connections.

3. Any new or relocated water mains, sewers and storm drains must be designed and constructed at the Proponent's expense. They must be designed and constructed in conformance with the Commission's design standards, Water Distribution System and Sewer Use Regulations, and Requirements for Site Plans.

4. The Proponent is advised that the Commission will not allow buildings to be constructed over any of its water lines. Also, any plans to build over Commission sewer or drain facilities are subject to review and approval by the Commission. The Project must be designed so that access, including vehicular access, to the Commission's water and sewer lines for the purpose of operation and maintenance is not inhibited.

5. With the site plan the Proponent must provide detailed estimates for water demand (including water required for landscape irrigation), wastewater generation, and stormwater runoff for the Project. The Proponent should provide separate estimates of peak and continuous maximum water demand for retail, irrigation and air-conditioning make-up water for the Project. Estimates should be based on full-site build-out of the Project.

6. It is the Proponent's responsibility to evaluate the capacity of the water and sewer system serving the Project site to determine if the systems are adequate to meet future Project demands. With the site plan, the Proponent must include a detailed capacity analysis for the water and sewer systems serving the Project site, as well as an analysis of the impact the Project will have on the Commission's systems and the MWRA's systems overall. The analysis should identify specific measures that will be implemented to offset the impacts of the anticipated flows on the Commission and MWRA sewer systems.

7. Developers of projects involving disturbances of land of one acre or more are required to obtain an NPDES General Permit for Construction from the Environmental Protection Agency (EPA). The Proponent is responsible for determining if such a permit is required and for obtaining the permit. If such a permit is required for the proposed Project, a copy of the Notice of Intent and any pollution prevention plan submitted to EPA pursuant to the permit must be provided to the Commission's Engineering Services Department prior to the commencement of construction.

8. A Total Maximum Daily Load (TMDL) for Nutrients has been established for the Lower Charles River Watershed by the Massachusetts Department of Environmental Protection (DEP). In order to achieve the reductions in phosphorus loadings required by the TMDL phosphorus concentrations in stormwater discharges to the lower Charles River from Boston must be reduced by 64%. To accomplish the necessary reductions in phosphorus the Commission requires developers of projects in the lower Charles River watershed to infiltrate stormwater discharging from impervious areas in accordance with DEP requirements. With the site plan the Proponent must submit a phosphorus reduction plan for the Project.

9. The design of the Project must comply with the City of Boston's Complete Streets Initiative, which requires incorporation of "green infrastructure" into street designs. Green infrastructure includes greenscapes, such as trees, shrubs, grasses and other landscape plantings, as well as rain gardens and vegetative swales, infiltration basins, and paving materials and permeable surfaces. The proponent must develop a maintenance plan for the proposed green infrastructure. For more information on the Complete Streets Initiative see the City's website at http://bostoncompletestreets.org/

10. Before the Proponent demolishes any existing structures the existing water, sewer and drain connections that won't be re-used must be cut and capped in accordance with Commission standards. The Proponent must complete a Termination Verification Approval Form for a Demolition Permit, available from the Commission.

Sewage/Drainage

11. During site plan review the Proponent will be required to provide detailed plans for the proposed rain harvesting system, bypass, subsurface recharge system and green rooftop.

12. The Department of Environmental Protection (DEP), in cooperation with the Massachusetts Water Resources Authority (MWRA) and its member communities are implementing a coordinated approach to flow control in the MWRA regional wastewater system, particularly the removal of extraneous clean water (e.g., infiltration/ inflow ("I/I")) in the system. Pursuant to the policy new developments with design flow exceeding 15,000 gpd of wastewater are subject to the Department of Environmental Protection's regulation 314 CMR 12.00, section 12.04(2)(d). This regulation requires all new sewer connections with design flows exceeding 15,000 gpd to mitigate the impacts of the development by removing four gallons of infiltration and inflow (I/I) for each new gallon of wastewater flow added. The Commission will require the Proponent to develop an inflow reduction plan consistent with the regulation. The 4:1 reduction should be addressed at least 90 days prior to activation of water service, and will be based on the estimated sewage generation provided with the Project site plan.

13. Oil traps are required on drainage systems discharging from enclosed parking garages. Discharges from the oil traps must be directed to a building sewer and must not be mixed with roof or other surface runoff. The requirements for oil traps are provided in the Commission's Requirements for Site Plans.

14. Grease traps will be required in any food service facility in the new development in accordance with the Commission's Sewer Use Regulations. The proponent is advised to consult with the Commission before preparing plans for food service facilities.

15. Sanitary sewage must be kept separate from stormwater at all times and separate sanitary sewer and storm drain service connections must be provided. Under no circumstances will stormwater be allowed to discharge to a sanitary sewer. The Commission requires that existing stormwater and sanitary sewer service connections, if any are to be re-used by the Project, be dye tested to confirm they are connected to the appropriate system.

16. The discharge of dewatering drainage to a sanitary sewer is prohibited by the Commission and the MWRA. The discharge of any dewatering drainage to the storm drainage system requires a Drainage Discharge Permit from the Commission. If the dewatering drainage is contaminated with petroleum products for example, the Proponent will be required to obtain a Remediation General Permit from the EPA for the discharge.

17. The Proponent must fully investigate methods for infiltrating stormwater on-site before the Commission will consider a request to discharge stormwater to the Commission's system. The site plan must indicate how storm drainage from roof tops and other impervious surfaces will be managed. All projects at or above 100,000 square feet of floor area are required to retain, on site, a volume of runoff equal to 1.25 inches of rainfall times the impervious area. A feasibility assessment for infiltrating stormwater on-site must be submitted with the site plan for the Project.

18. The Massachusetts Department of Environmental Protection (MassDEP) has established Performance Standards for Stormwater Management. The Standards address stormwater quality, quantity and recharge. In addition to Commission standards, the proposed Project will be required to meet MassDEP's Stormwater Management Standards.

19. In conjunction with the site plan and General Service Application the Proponent will be required to submit a Stormwater Pollution Prevention Plan. The plan must:

    - Specifically identify how the Project will comply with the Department of Environmental Protection's Performance Standards for Stormwater Management both during construction and after construction is complete.

    - Identify specific best management measures for controlling erosion and preventing the discharge of sediment, contaminated stormwater or construction debris to the Commission's drainage system when construction is underway.

    - Include a site map which shows, at a minimum, existing drainage patterns and areas used for storage or treatment of contaminated soils, groundwater or stormwater, and the location of major control or treatment structures to be utilized during construction.

20. The Commission requests that the Proponent install a permanent casting stating: "Don't Dump: Drains to Charles River" next to any new catch basin installed as part of the Project. The Proponent may contact the Commission's Operations Division for information regarding the purchase of the castings.

21. The Commission encourages the Proponent to explore additional opportunities for protecting stormwater quality by minimizing sanding and the use of deicing chemicals, pesticides and fertilizers.

Water

22. The Proponent is required to obtain a Hydrant Permit for use of any hydrant during construction of the Project. The water used from the hydrant must be metered. The Proponent should contact the Commission's Operations Department for information on obtaining a Hydrant Permit.

23. The Commission utilizes a Fixed Radio Meter Reading System to obtain water meter readings. Where a new water meter is needed, the Commission will provide a Meter Transmitter Unit (MTU) and connect the device to the meter. For information regarding the installation of MTUs, the Proponent should contact the Commission's Meter Installation Department.

24. The Proponent should explore opportunities for implementing water conservation measures in addition to those required by the State Plumbing Code. In particular the Proponent should consider indoor and outdoor landscaping which requires minimal use of water to maintain. If the Proponent plans to install in-ground sprinkler systems, the Commission recommends that timers, soil moisture indicators and rainfall sensors be installed. The use of sensor-operated faucets and toilets in common areas of buildings should also be considered.

Thank you for the opportunity to comment on this Project.

Yours truly,

John P. Sullivan, P.E.
Chief Engineer and Operations Officer

JPS/as
cc: Sally Mason Boemer, Mass General Hospital
Katherine Ronan, Mass. Water Resources Authority
Maura Zlody, Boston Environment Department
Phil Larocque, Boston Water and Sewer Commission

Charles River Watershed Association

June 9, 2021

Via Email

Erin Flaherty
Environmental Analyst, MEPA Office
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114
erin.flaherty@mass.gov

Re: Comments on Massachusetts General Hospital ("MGH") Draft Environmental Impact Report (EEA No. 16012)

Dear Ms. Flaherty:

Charles River Watershed Association ("CRWA") submits the following comments on the Draft Environmental Impact Report ("DEIR") for the Massachusetts General Hospital ("MGH") Clinical Building Project ("Project") located the corner of Blossom Street and Cambridge Street in Boston, Massachusetts filed with the MEPA Office on April 22, 2021. The Project consists of redevelopment of an approximately 125,000 square foot area generally bound by Parkman Street, Blossom Street, North Grove Street and Cambridge Street, in Boston. Specifically, the Project includes demolition of five existing buildings and a garage and the construction of a new Clinical Building consisting of approximately 1,050,450 sf of Gross Floor Area (GFA). The Project will create approximately 0.26 acres of new impervious surface resulting in a total impervious cover of 2.83 acres on site. A total of approximately 3,000 (adjusted) vehicle trips per day will be added to the area. The Project intends to install an additional 191 parking spaces for a total of 977 parking spaces. The Project is anticipated to increase water use by 34,300 gallons per day and generate approximately 31,200 gallons per day additional wastewater.

CRWA provided comments on the Environmental Notification Form ("ENF") in a letter dated May 3, 2019. We have reviewed the DEIR, including responses to our comments and other comments that were submitted. We are pleased to see the overall expanded level of detail included in the DEIR, as well as the Project's planning for climate change.

However, CRWA is disappointed that requested information on stormwater management, pollutant removal, Low Impact Development (LID), rainwater harvesting, infiltration, and drawings to address comments (including those comments numbered by the project proponent as MEPA.19, MEPA.43, MEPA.44, MEPA.46) will not be provided until the Boston Water and Sewer Commission ("BWSC") Site Plan Review process. This information should be provided as part of the MEPA process, in the form of a supplement to the DEIR, to allow for meaningful public input on the DEIR and to avoid iterative reviews during other federal, state, and/or local permitting steps.

For example, in the May 24, 2019 Certificate, the Secretary stated that "[t]he DEIR should describe the stormwater management system (including off-site connections and ultimate discharge points), address compliance with TMDL requirements, include plans at a legible scale, and describe BMPs proposed to retain and/or recharge stormwater on-site." (MEPA.43). The response provided in the DEIR states that "the proposed stormwater management system and measures that the Project is considering are described in Chapter 10. Stormwater Management is discussed in detail in Section 10.4."

However, Chapter 10 of the DEIR generally does not provide the information required by the Secretary, and not to the level of detail that would be necessary to allow for meaningful public comment. The DEIR explains the existing stormwater system off-site connections and ultimate discharge points (Section 10.4.1) and narratively presents anticipated connections to the BWSC drainage system but does not identify the proposed ultimate discharge point(s). Further, the DEIR very generally explains the stormwater management measures being *considered* (a combination of stormwater harvesting, re-use, and groundwater re-charge) and the expected outcomes associated with those measures. The DEIR states the project will comply with BWSC standards and with the Boston Complete Streets Guidelines but supporting information is preliminary and non-committal. Specific plans should be included as part of the DEIR and should not be postponed until BWSC Site Plan Review, as the proponent has indicated it intends to do in response to prior comments by CRWA, BWSC, and others. The DEIR states that the Project "will remove at least 65 percent phosphorus" but does not provide any supporting calculations. Documentation of compliance with the TMDL provisions, including mitigation for the increase in impervious cover, should be provided with the DEIR. Finally, the DEIR does not provide plans at a legible scale showing the proposed stormwater management system(s). This should be included.

The project proponent needs to provide more information to address these gaps as part of the DEIR in order to comply with the Secretary's ENF Certificate. The MEPA Office should require the project proponent to supplement the DEIR with this information so that meaningful input can be provided by the public and other entities.

Thank you for considering these comments.

Sincerely,

Janet Moonan, PE
Stormwater Program Director

The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

June 9, 2021

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
100 Cambridge Street
Boston, MA 02114

ATTN: Erin Flaherty, MEPA Office

RE: Massachusetts General Hospital (MGH) – 2019 IMP Projects, Boston (Downtown), MA;
MHC# RC. 66152; **EEA# 16012**

Dear Secretary Theoharides:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the Draft Environmental Impact Report (DEIR) submitted for the project referenced above and have the following comments.

Since the filing of the ENF, the MHC understands that the project has changed. The proposed project consists of the construction of the "Clinical Services Building" on the site bound by Parkman Street, Blossom Street, North Grove Street, and Cambridge Street. The "Clinical Services Building" consists of a five story podium that will span the project site. Above a five story podium, two towers are proposed. The western tower is proposed to be 7 floors over the podium and the eastern tower is proposed to be 8 floors over the podium. The DEIR states that the total height of the project will be 262 feet, not including mechanical penthouses and rooftop structures with heights of up to approximately 40 feet. The proposed project no longer includes the construction of the Campus Services Building.

The proposed project continues to propose the demolition of the three historic West End buildings: Sleeper Hall (24 Blossom Street/BOS.4159), historically known as the Winchell Elementary School, the West End Settlement House (16-18 Blossom Street/BOS.4158), and the West End Tenement House (25 North Anderson Street/BOS.4156). It is the opinion of MHC staff that the West End Settlement House, West End Tenement House, along with Sleeper Hall meet the criteria of eligibility for listing in the National Register of Historic Places as a contributing resources to a small historic district. These buildings are three of the few remaining buildings to have survived the destruction of the urban renewal program that leveled the vast majority of the West End neighborhood in the 1950s.

On May 14, 2019, the MHC determined that the proposed project will have an "adverse effect" (950 CMR 71.05(e) and 950 CMR 71.07(2)(b)(3)) on Sleeper Hall, the West End Settlement House, and the West End Tenement House through demolition of these historic buildings.

The MHC initiated its consultation process pursuant to 950 CMR 71.07(3) on May 14, 2019. The MHC requested that MGH explore alternatives that would eliminate or minimize the proposed demolitions,

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including but not limited to moving the historic brick buildings to face Cambridge Street and constructing the new building behind the historic buildings.

MHC staff have reviewed the alternatives described within the DEIR. None of these alternatives eliminate or minimize the proposed demolitions. The MHC would like to note that retaining a façade of a building, but substantially demolishing the remainder of the historic building, does not minimize the adverse effect of demolition. Additionally, rebuilding facades of historic buildings does not eliminate or minimize the adverse effects of demolition as the reconstruction does not meet the Secretary of the Interior's Standards as it would create a false sense of historical development.

The MHC requests that MGH continue to explore alternatives to demolition, specifically the relocation of any or all three of the historic buildings to other sites within the old West End neighborhood. These three historic West End buildings are visible reminders of the vibrant community that was the West End neighborhood. Their proposed demolition should be carefully and thoughtfully reconsidered. MGH had been careful caretakers of these buildings over the past decades. Other nearby sites owned by MGH or by others should be evaluated for moving one, two or all three of the buildings onto one or more sites. The preservation of the West End buildings would continue to be concrete, physical evidence of the late 19th-20th century history of this part of Boston. The former Winchell Elementary School is one of a few buildings to survive the destruction of the urban renewal program that leveled almost all of the West End neighborhood in the 1950s. It stands today as the only remaining school building that served the children of the West End. It also stands as a fine example of Romanesque Revival architecture by one of Boston's leading designers, Arthur H. Vinal. The 1929 Colonial Revival style West End Settlement House was an important building within the West End neighborhood serving Jewish youth through the 1950s. The 1910 Classical Revival West End Tenement House is an important of example of a West End tenement house. It is important to consider their unique historical importance and the need to explore ways that they can be preserved.

These comments are offered to assist in compliance with M.G.L. Chapter 9, sections 26-27C (950 CMR 71.00) and MEPA (301 CMR 11). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,

Brona Simon

Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

xc: Steve Chilton, MDFA
Katherine Ronan, MWRA
Sally Mason Boemer, MGH
Boston Landmarks Commission
Boston Preservation Alliance
West End Museum

MASSACHUSETTS WATER RESOURCES AUTHORITY
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June 9, 2021

Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge St, Suite 900
Attn: MEPA Office, Erin Flaherty
Boston, MA 02114

Subject: EOEEA #16012 – Draft Environmental Impact Report
Massachusetts General Hospital - 2019 IMP Projects, Boston, MA

Dear Secretary Theoharides,

The Massachusetts Water Resources Authority (MWRA) appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) submitted by The Massachusetts General Hospital and The General Hospital Corporation (the "Proponent") for Massachusetts General Hospital – 2019 IMP Projects (the "Project") in Boston, Massachusetts. The Project includes construction of a new Clinical Building in the Massachusetts General Hospital (MGH) main campus on Cambridge Street. The proposed Clinical Building will include approximately 1,050,450 square feet of Gross Floor Area. A five-story podium will include a variety of surgical and medical services as well as administrative space and a café. Above the podium will be two inpatient towers with approximately 482 beds. A six-story, below-grade parking garage is proposed to include approximately 977 parking spaces

MWRA previously commented on the Project Environmental Notification Form (ENF) on May 12, 2019. MWRA's comments on this DEIR continue to relate to wastewater issues and the need for Infiltration/Inflow (I/I) Removal as well as Discharge Permitting from the Toxic Reduction and Control (TRAC) Department.

Wastewater

MWRA's comments on the ENF stated the need to ensure that the Project's wastewater flow does not increase system surcharging or overflows in large storms. The Proponent and BWSC should ensure a 4:1 offset of the Project's wastewater flow increase by removing stormwater and/or infiltration and inflow (I/I) from a hydraulically related system(s). The DEIR states that the Project is expected to produce more than 15,000 gpd and that the Proponent will coordinate with BWSC to comply with this requirement. MWRA requests that the Proponent

present the progress of this coordination and the I/I mitigation approach in the Final Environmental Impact Report.

TRAC Discharge Permitting

Construction activities associated with the Project may require a MWRA Temporary Construction Site Dewatering Discharge Permit, pursuant to 360 C.M.R. 10.091-10.094. For assistance in obtaining this permit, the Proponent and the Contractor should contact Lisa Chapman, Industrial Coordinator, in the TRAC Department at 1 (617) 305-5622. The discharge of groundwater into the sanitary sewer system is prohibited without a Construction Site Dewatering Discharge Permit from the MWRA and Boston Water Sewer Commission. The DEIR acknowledges this requirement and states that the Project will comply.

The Proponent currently holds MWRA Sewer Use Discharge Permit #45005712, which includes the Project site. The Proponent should continue to adhere to this permit. If the Proponent intends to change its current operation(s) and/or discharge(s), such as increasing daily wastewater discharge flow from permit sample locations, at least 30 days advance written notification is required. Notification should be mailed to Lisa Chapman, Industrial Coordinator, in the TRAC Department at 2 Griffin Way, Chelsea MA 02150. Notification is required prior to any action which may substantially change the volume or nature of discharge, including an increase of daily discharge flow or character of pollutants in its discharge from any compliance measurement location or any sewer connection. The DEIR acknowledges this requirement and states that the Project will comply.

Any gas/oil separators in parking garages associated with the Project must comply with 360 C.M.R. 10.016 and State Plumbing Code. Installation of the proposed gas/oil separator(s) may not be back filled until inspected and approved by the MWRA and the Local Plumbing Inspector. For assistance in obtaining an inspection, the Proponent should contact John Feeney, Source Coordinator, in the TRAC Department at 1 (617) 305-5631. The DEIR acknowledges this requirement. The DEIR acknowledges this requirement and states that the Project will comply.

On behalf of the MWRA, thank you for the opportunity to provide comments on this Project. Please do not hesitate to contact Katie Ronan of my staff at 1 (857) 289-1742 with any questions or concerns.

Sincerely,

Rebecca Weidman
Director
Environmental and Regulatory Affairs

cc: John Viola, DEP
Adam Horst, BWSC

dcr
Massachusetts

June 9, 2021

Secretary Kathleen A. Theoharides
Executive Office of Energy and Environmental Affairs
Attn: Erin Flaherty, MEPA Office
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Re: EOEEA #16012 Massachusetts General Hospital – 2019 IMP Projects DEIR

Dear Secretary Theoharides:

The Department of Conservation and Recreation ("DCR" or "Department") is pleased to submit the following comments in response to the Draft Environmental Impact Report ("DEIR") submitted by The Massachusetts General Hospital and the General Hospital Corporation (the "Proponent") for the Massachusetts General Hospital – 2019 IMP Projects project (the "Project").

As described in the DEIR, the Project will demolish six existing buildings on the Mass. General Hospital campus. The Proponent plans to redevelop the parcel with a new Clinical Building of approximately one million square feet of Gross Floor Area. The new building will include two inpatient towers connected by a five-story podium. The Project requires a mandatory Environmental Impact Report, due to the generation of 3,000 vehicle trips per day on roadways providing access to a single location. The DEIR estimates the new development will generate 5,446 vehicle trips per day ("vtd"), unadjusted for public transportation use; and 2,996 vtd, adjusted for public transportation use.

The MGH campus relies heavily on DCR parkway assets. DCR has care, custody, and control over nearby Storrow Drive and Charles Circle, which provide access for all travel modes to and from the north, west, and south. The DEIR states that a DCR Construction and Access Permit is not expected to be required. However, the implementation of potential mitigation measures may require a CAP. Potential implementation of traffic operation improvements at the Cambridge Street intersection with Grove Street could result in a need for pavement markings and signage changes that reach back to Charles Circle.

DCR submits the following comments on the Project related to the DEIR Traffic Impact Assessment:

DCR's comments on the ENF included a request for traffic counts ("ATRs") at several locations in the Project area. The Proponent notes that ATR counts were not conducted due to the changes being planned on Charles River Dam Road and its effect on Leverett Circle. Considering the number of DCR parkway sections and intersections in the Project area, the traffic impacts will be substantial and need to be analyzed in the FEIR. DCR reiterates the recommendation that the Proponent conduct Automatic Traffic Recorder Counts ("ATR") for the following locations:

- Each ramp to and from Charles Circle
- Storrow Drive between Charles and Leverett Circles
- Storrow Drive just east of Storrow Drive Tunnel

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Governor

Karyn E. Polito
Lt. Governor

Kathleen A. Theoharides, Secretary, Executive
Office of Energy & Environmental Affairs

Jim Montgomery, Commissioner
Department of Conservation & Recreation

- Storrow Drive outbound on-ramp from Leverett Circle
- Charles Street between Charles Circle and Leverett Circle
- Longfellow Bridge, each direction
- Charles River Dam Road
- Memorial Drive just west of Wadsworth Street

These ATR counts should be conducted for 7 days, and collect volume, speed, and classification.

The DEIR states (page 4-67) that the projected small increase in traffic volume would minimally affect the traffic operations at Leverett Circle. DCR requests that the FEIR include traffic data to assess this opinion.

DCR notes that the Charles Circle has some safety deficiencies, particularly for pedestrians walking to and from the Longfellow Bridge on the north side of the intersection. The proposed project will rely heavily on the pedestrian mode and nearly a quarter of those trips will pass through Charles Circle. Today, the pedestrian crossing of the Storrow Drive outbound off-ramps is not controlled by a pedestrian signal like the rest of the intersection. We request that the Proponent partner with DCR to make safety improvements to this crosswalk.

Thank you for the opportunity to comment on the ENF. Questions related to the Traffic Impact Assessment can be directed to Jeff Parenti, DCR's Deputy Chief Engineer at jeffrey.parenti@mass.gov.

Sincerely,

Jim Montgomery
Commissioner

cc: Jeff Parenti, Patrice Kish, Priscilla Geigis, Tom LaRosa