



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Deval L. Patrick
GOVERNOR

Timothy P. Murray
LIEUTENANT GOVERNOR

Ian A. Bowles
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181
<http://www.mass.gov/envir>

January 29, 2010

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Two Brookline Place
PROJECT MUNICIPALITY : Brookline
PROJECT WATERSHED : Charles
EEA NUMBER : 14522
PROJECT PROPONENT : Children's Brookline Place, LLC
DATE NOTICED IN MONITOR : December 23, 2009

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and Sections 11.06 and 11.11 of the MEPA Regulations (301 CMR 11.00), I have reviewed this project and hereby determine that it **does not require** further MEPA review. In a separate Draft Record of Decision also issued today, I have proposed to grant a Waiver from the requirement to prepare a Mandatory Environmental Impact Report (EIR) for the project. This Certificate sets forth the issues that must be addressed by the Proponent during permitting and discusses recommendations that were submitted on the project during the MEPA comment period.

As described in the Expanded Environmental Notification Form (EENF), the project consists of the demolition and redevelopment of a mixed-use complex (Two and Four Brookline Place) into commercial medical office and retail space. The project includes the development of an eight-story, 252,000 square foot (sf) building with 586 underground parking spaces, a pedestrian plaza and pathways, and open space. The project site is located at Pearl Street and Washington Street in Brookline, adjacent to the Brookline Village Massachusetts Bay Transportation Authority (MBTA) Green Line Station and MBTA local bus routes. The project

will result in the creation of 0.13 acres of additional impervious area on the 1.45-acre project site, for a site total of 1.29 acres of impervious area. Estimated water usage will increase by 19,067 gallons per day (gpd) for a total project demand of 34,921 gpd. Wastewater generation is estimated to increase by 17,333 gpd, for a project total of 31,796 gpd. New unadjusted traffic trips associated with the project are estimated at 4,724 vehicle trips per day. However, given the proximity of the project site to public transit and its location with an urban landscape, adjusted vehicle trips are estimated at 2,321 new trips, with consideration given to transit, walk, and bicycle modes of travel. The project site does not abut the State Highway layout.

Jurisdiction

This project is subject to MEPA review and requires the preparation of a mandatory EIR because it requires a State Agency Action and will generate 3,000 or more unadjusted new average daily trips on roadways providing access to a single location (301 CMR 11.03(6)(a)(6)). The project will require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the United States Environmental Protection Agency (U.S. EPA).

The Proponent may seek financial assistance from the Commonwealth in the form of Health and Educational Facility Authority (HEFA) bond proceeds. Therefore, MEPA jurisdiction for this project is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Review of the EENF

The EENF described existing and proposed conditions, discussed potential environmental impacts associated with the project, discussed project consistency with local and State land use plans and policies, and provided a list of federal, State and local permits. The EENF provided a detailed traffic analysis, air quality and greenhouse gas (GHG) analyses, and a discussion of potential stormwater and hazardous materials impacts.

Transportation

The EENF included a traffic analysis that presented data on existing and proposed conditions, levels of service (LOS), and pedestrian and bicycle volumes. The traffic analysis described mode share within the project area, noting the proximity of the project to public transportation. The analysis also included a discussion of the proposed transportation demand management (TDM) program, intersection improvements, and pedestrian/bicycle provisions. The traffic analysis contemplated the traffic-related improvements proposed as part of the *Gateway East Public Realm Plan* (Gateway East) and integrated these proposed improvements into the project design and mitigation commitments. I note that while the Massachusetts Department of Transportation (MassDOT) does not have jurisdiction over this project and therefore has not provided a review of the traffic analysis, as part of the local zoning review process the Town of Brookline had an independent traffic consultant representing its interests. The project has also been designed to enhance pedestrian connections through the construction of a new pedestrian corridor/connection that transects the project site for access to the MBTA

station. Total adjusted traffic trips for the entire project site are estimated at 2,866 vehicle trips per day.

The EENF presented two options to effectively mitigate project-related traffic impacts: a Preferred Mitigation option and an Alternative Mitigation option. These two options have been presented to ensure that project-related traffic is mitigated whether or not the Gateway East traffic improvements are implemented. The Preferred Mitigation option includes the construction of a traffic signal at the intersection of Washington Street and Pearl Street, creating a four-way intersection as part of the Gateway East Plan. This new intersection will also merge Juniper Road and Walnut Street and relocate the westbound left turn from its existing location adjacent to the fire station to the new intersection. The Preferred Mitigation option will also include the installation of a traffic signal and pedestrian crossing at the Pearl Street and Brookline Avenue intersection and the establishment of right-turn only vehicle movements from the on-site parking garage.

The Alternative mitigation option considers the effect on traffic with the project built, but without the Gateway East improvements at Pearl Street and Washington Street. Under this alternative, a traffic signal and pedestrian crossing will be placed at the intersection of Brookline Avenue and Pearl Street and vehicles exiting the on-site garage will be allowed to make both left and right turning movements. The Proponent will also pay one percent of the hard costs of the proposed Gateway East improvements to Route 9. The EENF demonstrated that the project can be successfully coordinated with Gateway East, but if Gateway East is delayed or not realized, the project can still be integrated into the transportation network. Comments received on the EENF from Walk Boston suggest additional mitigation measures geared towards pedestrian movement and access that should be considered by the Proponent as design is finalized.

The Proponent has committed to a comprehensive TDM program to reduce single occupancy vehicle trips to the project site. The following measures will be implemented:

- Provide information on MBTA transit services in Brookline to employees, residents, and visitors in a lobby display;
- Provide 50% transit subsidies to employees;
- Institute on-site MBTA transit pass sales;
- Extend the Medical Academic Scientific Community Organization (MASCO) shuttle services as well as Children's Hospital shuttle services to the project site;
- Provide spaces in the garage for a car-sharing service such as Zipcar;
- Provide showers and locker room facilities;
- Provide ample bicycle storage on-site;
- Charge employees and visitors market rates for parking;
- Provide preferential parking for car and vanpool vehicles;
- Provide a 'Guaranteed Ride Home' for employees using alternative modes of transportation;
- Continue the 'Three for Free' program that provides three free months of transit passes to employees who give up their parking spaces at Children's Hospital. If they remain in the program, they can receive a \$500 bonus;
- Provide shuttles to Back Bay Station and North Station;

- Explore offering flex-time schedules;
- Continue to provide a full-time transportation coordinator;
- Offer an employee tax benefit program through the Federal Transit Administration (FTA) that allows employers to receive a tax deduction for providing transit subsidies and allow employees to pay for transit expenses out of their pre-tax income.

Additionally, to minimize transportation impacts during the construction period the Proponent has committed to limiting construction worker parking on-site, encouraging car pooling, providing storage on-site for equipment and tools, establishment of a community liaison, and maintaining access to both the MBTA Brookline Village Station and existing bus service stops.

Air Quality

The EENF included a mesoscale analysis to demonstrate compliance with the 1990 Clean Air Act Amendments (CAAA) and the Massachusetts State Implementation Plan (SIP). The CAAA and the SIP require that a project not cause any new violation of the National Ambient Air Quality Standards (NAAQS), increase the frequency or severity of any existing violations, or delay attainment of any NAAQS. The mesoscale analysis evaluated the regional ozone precursor impacts of volatile organic compounds (VOCs) and nitrogen oxides (NOx). The results of the mesoscale analysis indicate that the physical and operational improvements to intersections, along with the implementation of a TDM program will result in VOCs and NOx emissions reductions between the 2013 Build with Mitigation Condition and the 2013 Build Condition.

Greenhouse Gas Emissions

The Greenhouse Gas Emissions Policy and Protocol (the Policy) requires projects to quantify their carbon dioxide (CO₂) emissions and identify ways to avoid, minimize, or mitigate such emissions. The GHG analysis evaluated CO₂ emissions for three alternatives in as required by the Policy, including: 1) the 2013 Build Condition (Baseline) corresponding to the current Massachusetts Building Code (7th Edition, amended January 2009); 2) the 2013 Build with Improvements Condition, which included a series of building design improvements; and 3) a 2013 Build with Improvements Plus Condition, which included additional energy saving elements. The Proponent used the EQUEST model to perform the stationary source GHG analysis and has committed to constructing the project in accordance with those energy saving measures modeled in the 2013 Build with Improvements Condition. The project's GHG emissions include direct emissions of CO₂ from natural gas combustion for heating and indirect emissions of CO₂ from project generated motor vehicle trips and electricity used for lighting, building cooling and ventilation, and operation of other equipment such as computers.

The EENF included a GHG analysis that evaluated potential GHG emissions and mitigation measures associated with both stationary and mobile GHG emission sources. The EENF estimated current GHG emissions from the existing office, retail and restaurant uses at 286 tons per year (tpy) of CO₂. The 2013 Baseline Condition concluded that design and construction of the project in a manner consistent with the current building code would result in project-related stationary source emissions of 4,322 tpy of CO₂.

The EENF provided a summary of proposed building systems improvements (i.e., high-efficiency HVAC systems, insulation, energy-efficient windows and lighting, and building operations systems, etc.) to determine potential GHG reductions achievable as part of the 2013 Build with Improvements Condition. Implementation of these mitigation measures is estimated to reduce net stationary source GHG emissions by a total of 574 tpy, achieving a 13.3 percent reduction in stationary source CO₂ emissions from the 2013 Build Condition. These mitigation measures include, but are not limited to:

- Partial use of highly-reflective (high-albedo) roofing materials;
- Maximization of interior daylighting;
- Installation of a high-efficiency HVAC system with an EER of 12.0;
- Sealing of all HVAC ducts to reduce air leakage;
- Use of increased roof insulation (R-40);
- Use of increased insulation in exterior walls (R-30);
- Use of increased insulation in exterior ground floor (R-16);
- Use of double Low-E, U-0.21, S.H.G.F.-0.37 exterior windows and doors;
- Installation of high-efficiency lighting (10 percent reduction from base code);
- Incorporation of motion sensors in bathrooms and utility rooms;
- Installation of programmable thermostats;
- Maintenance of an Energy Management team responsible for control of Energy Management Systems, including heating, cooling, lighting;
- Utilization of environmentally friendly buildings materials; and
- A 30-percent reduction in water demand and wastewater generation.

The Proponent also intends to request that future building users meet energy conservation requirements where possible, such as using Energy Star products in tenant spaces. Additional GHG reductions associated with use of Energy Star products were presented as the 2013 Build with Improvements Plus Condition, assuming a 30 percent reduction in 'Miscellaneous' electrical loads as modeled in EQUEST. Implementation of this additional measure reduces estimated GHG emissions by 652 tpy, and when combined with the demolition of the existing buildings and their associated 286 tpy of CO₂ emissions, results in a net overall reduction of 938 tpy of CO₂ (or 21.7 percent) when compared to the Base Case.

Finally, as part of the stationary source GHG analysis, the EENF considered the implementation of a combined heat and power (CHP) system, on-site renewable energy in the form of a photovoltaic (PV) system, and purchase of green power or renewable energy credits (REC's). While CHP and PV systems appear infeasible, I strongly encourage the Proponent to continue to evaluate the potential for offset GHG emissions through the procurement of green power or purchase of RECs.

The EENF also included a mobile source GHG analysis using the EPA's COMMUTER model Version 2 and data gathered as part of the mesoscale analysis. Existing and future mobile source emissions were calculated and it was determined that the project-related traffic would contribute an additional 374 tpy of CO₂ beyond the 2103 Build Condition. Through the construction of the proposed traffic intersection improvements and implementation of the TDM

program, CO₂ reductions attributable to project improvements were estimated at 63.4 tpy, for a total mobile source CO₂ reduction of approximately 17 percent.

A challenge facing this project is the timing of the EENF filing with the extensive local review process. The Proponent has indicated that the project underwent a detailed review process with local citizens and town officials regarding the use of a glass exterior building design. While the project does provide GHG mitigation measures by going beyond the current State Building Code, information provided by the Department of Energy Resources (DOER) indicates that the building remains energy-intensive based on annual energy use. Therefore, DOER has suggested additional measures related to heating and cooling, ventilation, lighting, and building envelope characteristics that the Proponent should investigate as building design advances. The Proponent should review the DOER comment letter on the EENF to assist in these design refinements and I strongly encourage the proponent to incorporate any of these additional measures that are determined to be feasible for this project type.

The Proponent has committed to implementing the 2013 Build with Improvements Condition. Total GHG emissions for this alternative, including indirect and direct emissions attributable to stationary sources and indirect emissions attributable to mobile sources, are estimated at 4,059 tpy, a 637 tpy net reduction from the Base Case total of 4,696 tpy (a 13.6 percent overall project reduction).

Hazardous Materials

The EENF states that the project will not require any State permits under M.G.L. c.21E related to solid and hazardous materials other than review of Release Tracking Number (RTN) closure under the Massachusetts Contingency Plan (MCP). The EENF noted three RTN's currently or formerly associated with the project site: RTN 3-25820 (active), RTN 3-1188 (a Response Action Outcome (RAO) has been approved) and RTN 3-25017 (associated with a plume from the adjacent 10 Brookline Place; RAO approved). The Proponent will conduct remediation efforts in accordance with the MCP (M.G.L c.21E/21C) and Occupational Safety and Health Administration (OSHA) regulations as part of the redevelopment process.

Stormwater

The EENF described the proposed stormwater management system. The EENF identified proposed Best Management Practices (BMPs), including: use of floor drains and gas and sand traps within the underground parking garage; collection and conveyance of clean roof drainage for irrigation purposes; use of an underground storage tank to control peak rates of runoff; use of deep sump catch basins with hoods; execution of an operations and maintenance plan; and implementation of erosion and sedimentation control measures. The EENF included a discussion of how the project will conform with MassDEP Stormwater Management Standards, to the extent practicable for a redevelopment project.

Stormwater will discharge to the Town of Brookline's drainage system and eventually into the Muddy River. The Proponent has committed to reducing peak stormwater flows and improving water quality in compliance with Town of Brookline stormwater policies. According

to the EENF, a Notice of Intent is not required in accordance with the Massachusetts Wetlands Protection Act and therefore the state stormwater regulations are not directly applicable. However, as noted by MassDEP, the MassDEP stormwater management regulations may be applicable as a requirement in the Town of Brookline's MS4 NPDES Phase II Stormwater General Permit (MS4 Permit). I note that the MS4 Permit requires that if a Total Maximum Daily Load (TMDL) has been approved for any waterbody where the MS4 has a discharge, the permittee (i.e. the Town of Brookline) must comply with additional conditions of the MS4 Permit. In response to MassDEP's request, the Proponent should consult the Brookline Department of Public Works regarding the stormwater management system design to ensure consistency with the work relating to the Muddy River project, the Town's MS4 Permit and the NPDES CGP.

In order to show compliance with the MS4 Permit, the project may need to demonstrate that the project achieves standards for control of peak runoff rates (Standard 2), recharge and infiltration (Standard 3), land use with higher potential pollutant loads (LUHPPLs) (Standard 4), and the redevelopment standard (Standard 7). In an effort to comply with Standard 3, I encourage the Proponent to continue to explore maximizing stormwater infiltration to the extent practicable, including collection of stormwater using rain gardens in the on-site open space or other best management practices. I also encourage the proponent to consider whether there are opportunities to recharge stormwater at nearby off-site locations which may help reduce total runoff to the nearby Muddy River.

The Massachusetts Water Resources Authority (MWRA) comment letter indicates that the project is located within the Brookline Sewer Separation project area, a long-term Combined Sewer Overflow (CSO) control plan currently being designed and constructed by the Town of Brookline with MWRA funds. The Proponent should coordinate the design and construction of new stormwater and wastewater infrastructure with the Town of Brookline to ensure consistency with the Brookline Sewer Separation project timelines.

Wastewater

The project will increase wastewater flows by approximately 17,333 gpd, from 14,413 gpd to a site total of 31,746 gpd. The MWRA comment letter indicates that the Town of Brookline and MWRA sewer systems have sufficient capacities to convey the new flows during dry weather. However, during wet weather these systems can exceed flow capacities due to inflow and infiltration (I/I). The Proponent should mitigate project-related stormwater impacts through the removal of I/I from the system at a minimum ratio of 4:1. The Proponent should contact and consult MassDEP and the Town of Brookline to ensure that I/I removal will be conducted in a manner consistent with applicable policies and regulations. If the project will result in the discharge of process and/or laboratory wastewater to the sanitary sewer system, the Proponent may be required to obtain an MWRA Sewer Use Discharge Permit.

Historic and Archaeological Resources

According to the Massachusetts Historical Commission (MHC), the project site is located in the proximity of several properties and districts that are included in MHC's Inventory of

Historic and Archaeological Assets of the Commonwealth. After review of materials submitted in the EENF and subsequent to discussion with the Brookline Preservation Commission, MHC concluded that the project is unlikely to affect significant historic or archaeological resources.

Construction Period

The project will require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the NPDES CGP to outline BMPs to control erosion and sedimentation during the construction period. Additionally, I encourage the Proponent to consider participation in the MassDEP Diesel Retrofit Program to mitigate the construction period impacts of diesel emissions. MassDEP staff is available to assist in the implementation of construction period diesel emission mitigation, which could include the installation of after-engine emission controls such as diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs).

MassDEP comments note that the project will generate a significant amount of construction and demolition (C&D) waste. I encourage the Proponent to establish a definitive plan for incorporating C&D recycling activities (preferably at a rate of at least 50 percent) as a sustainable measure for the project. The project will also be required to comply with both Solid Waste and Air Pollution Control regulations (M.G.L. Chapter 40, Section 54). The MassDEP comment letter has provided additional guidance with regard to recycling and demolition activities that the Proponent should take under advisement as project design and construction advances.

Conclusion

Based on a review of the information provided by the Proponent and after consultation with the relevant public agencies, I find that the potential impacts of this project do not warrant further MEPA review. Outstanding issues may be addressed during the local and federal permitting processes.

I have also issued today a Draft Record of Decision (DROD) proposing to grant a Waiver from the requirement to prepare an EIR for the project. The DROD will be published in the next edition of the Environmental Monitor on February 10, 2010 in accordance with 301 CMR 11.15(2), which begins the public comment period. The public comment period lasts for 14 days and will end on February 24, 2010. Based on written comments received concerning the DROD, I shall issue a Final Record of Decision or a Scope within seven days after the close of the public comment period, in accordance with 301 CMR 11.15(6). If the Full Waiver is not approved based on comments received on the DROD, then this Certificate on the EENF will be re-issued with a Scope for an EIR.

January 29, 2010

Date



Ian A. Bowles

Comments received:

01/05/2010 Town of Brookline – Department of Planning and Community Development
01/15/2010 Massachusetts Historical Commission
01/19/2010 Kenneth G. Lewis
01/22/2010 Massachusetts Water Resources Authority
01/22/2010 Massachusetts Department of Environmental Protection – NERO
01/22/2010 Charles River Watershed Association
01/22/2010 Walk Boston

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