Charles River Watershed Association

Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Attn: Sonal Gandhi

Dec 29, 2006

Dear Ms. Gandhi:

RE: Joslin Diabetes Center IMPA & Development Plan for Two and Three Joslin Place PDA

Charles River Watershed Association has reviewed the Institutional Master Plan Amendment (IMPA) and Development Plan (the Plan) for Planned Development Area (PDA) for the above referenced projects. It is our understanding that the above documents were filed due the conveyance of the land and air rights of the Site (Two and Three Joslin Place) from Joslin Diabetes Center (JDC) to the Boston Properties Limited Partnership (the Proponent). Therefore the development being proposed (the Project) at the Site will now be reviewed under Section 3-1A and Article 80C of the Zoning instead of being a part of the 2003 JDC Institutional Master Plan (IMP). It is our understanding that since the Project received a Preliminary Adequacy Determination waiving further review, subject to continuing approval by the Authority in 2003, the Project may not be subjected to a Large Project Review process again. However, CRWA has concerns on issues related to Stormwater, Groundwater, impact to the Emerald Necklace & Muddy River and overall concerns regarding environmental sustainability, which we hope the BRA will require the Proponent to address before approving the Plan and the IMPA.

Stormwater Management

It is our understanding that the stormwater from this site drains, via the Boston Water and Sewer Commission's municipal storm drain system, into either the Muddy River conduit and out to the Charles River; or, during larger storm events, into the Muddy River Fens and then out to the Charles River via Charlesgate. In either case, stormwater from the site enters and impacts the Muddy River and its drainage network.

As you are undoubtedly aware, there are significant and long-standing flooding and water quality problems in the Muddy River. The US Army Corps of Engineers is currently in the process of designing a dredging and environmental restoration project for the entire Muddy River that is estimated to cost well over $60 million. The Muddy River Restoration project is needed to reduce significant flood hazards, to improve water quality, to restore degraded habitat, and to remove sediments that have accumulated in the Muddy River. Most of these problems are a direct result of stormwater discharges into the Muddy River.

Any redevelopment that is proposed in areas that drain directly into the Muddy River system, therefore, needs to focus carefully on stormwater management issues, and should maximize opportunities to reduce peak storm flows, minimize imperviousness, maximize infiltration and capture sediments. The significant expenditure that will be made by the federal and state government, as well as by the City of Boston, to dredge and restore the Muddy River must be protected to the maximum extent possible.

Neither the Plan nor the IMPA makes any reference to putting together a stormwater management program to ensure that every effort will be made to protect the River from flooding and water quality impairments. Redevelopment should always improve existing conditions, and in this location, water quality and flooding are critical issues. It is our hope that the Proponent will study various alternatives to enhance stormwater management on the site so as to maximize stormwater management improvement opportunities.

In general, the Article 80 Project Impact Review is the appropriate process for a full analysis of the stormwater management program. If this project is not to be subject to a full Project Impact Review, we suggest that a complete stormwater management plan analysis be completed prior to BRA approval. The analysis should include specific, detailed information and alternatives analyses of stormwater management on the site. Stormwater management should aim to maximize infiltration, slow runoff from the site, maximize the use of vegetation, capture rooftop runoff for irrigation, and minimize sediment and nutrient loading. Documentation about the proposed stormwater management program should include:

1. Detailed information about the final design of the proposed stormwater management infrastructure including the location and design of drains, catch basins, water quality structures, and infiltration structures;
2. Detailed information about any surface stormwater management features such as swales, vegetative filter strips, rain gardens, permeable pavement or vegetated storage areas;
3. An assessment of the opportunities to reduce peak flows and total volume of stormwater runoff;
4. An assessment of how the site could meet DEP's stormwater management policy in its entirety, not just "to the maximum extent

practicable;"

5 A plan to minimize the primary pollutants of concern for the Muddy River, sediments and nutrients (current science suggests a system of BMPs designed to provide water quality control for a one-year storm is an appropriate target for many urban pollutants);

6 A maintenance plan for the stormwater management plan.

Groundwater

This Project is proposed to have a six level parking garage in addition to a storage and mechanical level underground. While there are many significant aesthetic benefits to underground parking, there are important environmental issues both during and post- construction that need to be addressed. The location of this Project in an area of historic fill, and the ongoing problems throughout many areas of the City with groundwater levels, make it all the more important that this aspect of the Project be designed with the utmost care and in anticipation of any potential impacts.

The Project needs to be designed to minimize groundwater impacts from the site, and the proponent should commit to working closely with abutters and the Boston Groundwater Trust to ensure that there are no alterations to groundwater levels as a result of the development. Since the Project is on the border of the City's "Groundwater Conservation Overlay District" (GCOD), similar recharge standards need to be applied to all redevelopment projects in the area surrounding the GCOD. Investigations should also include the potential seasonal changes in groundwater levels, as well as potential effects on groundwater flow. In some areas of Boston, construction of sub-surface projects such as tunnels, underpasses and even some building foundations have altered groundwater flow patterns, resulting over time in changes to ambient groundwater levels. Groundwater flows are extremely slow so alterations may occur over years.

The Project analysis should therefore include an assessment of groundwater flow directions, as well as a determination of whether those directional flows change seasonally. If the Project shows any potential for altering flows, either slowing or reducing flows into the Muddy River, or conversely reducing flows back into the ground during periods of high groundwater, or causing any groundwater "mounding," the analysis should document a mitigation plan for any such alterations. In addition, the analysis should specify what source of water would be used should groundwater recharging be necessary during or after construction.

Given that the parking structure will underlay much of the project, opportunities for on-site infiltration of stormwater may be minimal. If so, the Project analysis should evaluate the possibility of seeking off-site locations for groundwater recharge and stormwater infiltration. Finally, a detailed plan for the treatment and disposal of water from dewatering activities should be included in the analysis.

Impacts to the Emerald Necklace

The Project will increase not only the vehicular traffic in the area, but also the number of pedestrians, and will likely increase the use of the Emerald Necklace Parks, including the Riverway. This park system is already heavily used, and is in need of significant capital and operations improvements.

We suggest that Boston Properties and Joslin Diabetes Center work with the Boston Redevelopment Authority, the Boston Park and Recreation Department, the Medical Academic and Scientific Community Organization (MASCO), the Fenway Alliance, and the Emerald Necklace Conservancy to develop a program to support the improvement of maintenance and management of the park system to mitigate this increased use and to provide support for the community-wide effort that is underway to bring this park system up to an acceptable community standard. This contribution could be made as a linkage payment (as a part of the public benefits package) or through the implementation of a specific capital improvement project for improving access to and maintenance of the park or for environmental restoration projects in the LMA as a whole.

Sustainable Site and Building Design

There are no specifics provided in the Plan or the IMPA on what kinds of best management practices and technologies will be incorporated to promote environmental sustainability at the building and the overall campus level respectively. The analysis needs to explicitly define what environmental sustainability standards the Project aims to achieve as well as how the Project will determine indicators for sustainability. Two potential frameworks for incorporating sustainability and green building standards are the LEED system and the Green Guide for Health Care. The proponent should make every attempt to meet the proposed “Boston Green Building Zoning Amendment” and achieve a LEED Certifiable project under the provision of article 37.

In addition to fulfilling requirements related to stormwater management on site, the green building standards should be adopted for wastewater reuse for flushing toilets etc. (through double plumbing the building) as well as capturing, filtering and storing roof run-off. CRWA encourages the Proponents to consider a green roof for not only the new buildings but also as a retrofit for all other buildings on the JDC Campus. Given that there is such a dearth of green / open space in the LMA as a whole, green roofs would not only provide cleaner roof runoff and reduce the urban heat island effect in the LMA but also provide an aesthetically pleasing amenity for the building occupants as well as habitat for birds and insects.

This project offers a huge potential to expand the purview of green practices from individual building scale to looking a “greening of infrastructure” at an overall neighborhood level. Through retrofitting the entire campus area with Low Impact

Development (LID) best management practices, the Proponent can achieve a much larger impact than the cumulative impact of a collection of individual green buildings.

We appreciate the opportunity to provide comment on this project through the Article 80 review process. Please feel free to contact me should you have any questions.

Sincerely,

Pallavi Kalia Mande

Pallavi Kalia Mande
Urban Restoration Specialist

cc: Joslin Diabetes Center
Medical Academic and Scientific Community Organization