



Charles River Watershed Association

Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

Attn: Sonal Gandhi

March 23, 2007

Re: Institutional Master Plan (IMP) and Draft Project Impact Report (DPIR)
for Center for Cancer Care, Dana-Farber Cancer Institute

Dear Ms. Gandhi:

Charles River Watershed Association (CRWA) has reviewed the IMP and DPIR for the above referenced project and we provide the following comments for your consideration. We recommend requiring the completion of a Final Project Impact Report (FPIR) for this project and hope these comments will assist the Boston Redevelopment Authority (BRA) and Dana-Farber Cancer Institute (DFCI) as the planning process moves forward.

First, CRWA acknowledges and greatly appreciates DFCI's words of commitment to environmental health and sustainability incorporated in both the documents. We also recognize that many of the concerns and questions we raised in previous comment letters during the PNF have been addressed—with varying degrees of specificity—in the IMP and DPIR. However, the expanded development in the LMA is leading to numerous cumulative environmental strains that are addressed only in a limited way by site-specific planning and design review process. Assessing cumulative impacts and identifying appropriate mitigation is an important function of the Article 80 review process. Therefore, the IMP and Large Project reviews need to address issues in a more comprehensive manner, as described herein.

Stormwater Management

The IMP document neither evaluates the impact of the project on the Muddy River, nor 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. We feel that the Article 80 project impact review is the appropriate process for a full analysis of the stormwater management program. 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. However, the IMP and DPIR do not yet include details on stormwater volumes and quality for roof-tops and ground-level surface runoff; accordingly it is difficult to evaluate the appropriateness of the proposed means of treating stormwater in the project.

The *comment responses* in Section 11 of the DPIR acknowledge the following numbered list (1-6) of stormwater management suggestions from prior CRWA letters. The authors of the comment responses refer the reader back to Sections 7 and 8 of the DPIR for more information on both stormwater management and sustainability. Yet, the language within Sections 7 and 8 does not clearly address each point from the prior letters, as discussed below.

Stormwater Management Suggestions

Original comments are in *italics*. New comments are bulleted below them in plain type.

- 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;*
 - Page 17 of Section 11, IMPNF Response to Comments, addresses the BWSC comment that a Site Plan is a required submittal. The FPIR should therefore include the details required above.

- 2 *Detailed information about any surface stormwater management features such as green roof technology, stormwater planters, rain gardens, permeable pavement or vegetated storage areas;*
 - We are pleased to see the inclusion of a green roof and cistern system in the DPIR. The FPIR should include plan and section drawings of the green roof and cistern system to be used as a runoff reduction measure as it is the primary technology being utilized for stormwater reductions.
 - There is no description of the landscape surrounding the proposed building (neither vegetated nor “hardscape”) within the DPIR, although the ground floor plan (Appendix A- Level 1 Plan) does show paved pedestrian, bike parking, and vehicle areas and street tree locations. All of these areas are possible sites for incorporating stormwater BMPs into the project design and are also likely contributors to the total site runoff. The FPIR should demonstrate both the existing impacts of these areas, and BMPs that can be implemented there.
 - Stormwater runoff has not been analyzed to the extent required by the DEP Stormwater Management Policy, e.g. in that the proponents are not clear as to whether additional catch basins will be required (Standard #1; see 7.4.3.1). In other words, the runoff from these non-roof surfaces is not accounted for within the DPIR, Section 7.4.3.

- 3 *An assessment of the opportunities to reduce even further the peak flows and volume of stormwater runoff, including estimates of the impacts in a one-year storm;*
 - The design goal of reducing the 2 year-storm runoff by 25% (Page 7-2) is a good start but it is not clear that the proponent has “fully investigated methods for retaining stormwater on site” as would be indicated by a “feasibility assessment for retaining stormwater on site...to be submitted with the site plan” as requested by Boston Water and Sewer Commission’s (BWSC)

comment letter (page 4 of letter, within Section 11). The FPIR should provide a complete feasibility study, and specify DFCI's commitments regarding stormwater.

4 *An assessment of how the site could meet DEP's stormwater management policy in its entirety, not just "to the maximum extent practicable;"*

This assessment has still not been completed and should be included in the FPIR.

5 *A plan to minimize the primary pollutants of concern for the Muddy River, sediments and nutrients;*

- The proponents have addressed roof runoff and mentioned oil and grease separators and catch basin protection during construction, but have not considered other pollutants of concern, particularly TSS, metals, nutrients, and bacteria, all of which are contributing to water quality violations in the Muddy River. (See <http://www.mass.gov/dep/water/resources/2004il4.pdf>)
- While Section 7.4.3.4, Standard #4 (requiring 80 percent Total Suspended Solids (TSS) removal) makes clear that the project proposal will be an improvement on the existing project, it does not specify a mechanism for treating the post-construction, *non-roof runoff* -- to 80% TSS removal -- which is to be conveyed into the storm sewer system (and Muddy River) from the hard surfaces at the ground level of the project site.
- The "remaining" roof runoff—which DFCI are planning to send into the drainage network (ostensibly once the cisterns reach capacity) and which Standard #4 says doesn't need treatment should be discharged untreated *only* if it has filtered through a green roof. Runoff from non-green roof surfaces should be treated before discharge into the existing storm sewer system.

6 *A maintenance plan for the stormwater management plan.*

- According to the IMPNF Response Comments (Section 11), the maintenance plan will be submitted following the BWSC Site Plan approval process. Section 7.4.3.9 mentions street sweeping for sand removal in pedestrian and vehicular access ways during winter months. Frequency of sweeping in the winter as well as in other seasons should also be described, as well as a plan or schedule for vactoring out any catch basins associated with the project.

Given the enormous effort and expenditure of federal, state and local resources that are going into cleaning and dredging the Muddy River, DFCI should seek more aggressive stormwater management designs and contribute more significantly through this redevelopment to the efforts to reduce flooding and improve water quality in the Muddy River.

Groundwater

Given that a 7 level parking structure will underlay much of the project, opportunities for on-site infiltration of stormwater may be minimal. The FPIR should therefore evaluate the possibility of seeking off-site locations for groundwater recharge and stormwater

infiltration. Also, a detailed plan for the treatment and disposal of water from dewatering activities should be included in the FPIR. According to the DPIR, water from the adjacent Smith Laboratories (which the designers use as a precedent for the Center for Cancer Care project) is pumped into a city storm drain, which implies that excess groundwater--that upwardly seeps from the underlying bedrock into the parking area--will be piped to the Muddy River (rather than being infiltrated off-site).

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 increase the use of the Emerald Necklace parks, including the Riverway and Fenway. This park system is already heavily used, and is in need of significant capital and operations improvements. **CRWA recommends that DFIC carry out an analysis of project impacts to the Emerald necklace, including parkways, and draft a proposed mitigation plan to ensure that park system does not deteriorate further with ever increasing use, before the IMP is approved.** On this topic Section 11 of the DPIR acknowledges the comment, however does not spell out a plan for addressing it.

CRWA also re-iterates our suggestion that DFCI work with the BRA, the Boston Park and Recreation Commission, 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 Design

CRWA again acknowledges and greatly appreciates DFCI's words of commitment to environmental health and sustainability as described in Section 7 of the IMP and Section 8 of the DPIR. However, besides the measures like green roofs and cisterns being incorporated on a building scale/ level, there are no specifics provided on what kinds of best management practices and technologies will be incorporated at the overall site or campus scale/ level. The FPIR needs to explicitly define what the project aims to achieve in terms of standards for environmental sustainability on the overall site and campus level as well as how the project will determine indicators for sustainability.

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.

Dana Farber's commitment to a series of urban design and streetscape improvements for its entire campus (pages 1-1 , 3-16, 3-17, 4-5 and 4-8 of the IMP) needs to be realized through various LID retrofit projects so as to achieve environmental sustainability and improve public health along with the improvement of pedestrian experience and appearance of the campus. For instance the streetscape improvements proposed along Jimmy Fund Way, Binney Street, MATEP alley, Shattuck Street and Brookline Avenue (Fig 4-15 and Fig. 4-16 in the IMP) need to incorporate state-of-the-art green infrastructure approaches for stormwater management. Given that DFCI will be investing in utility upgrades under Jimmy Fund Way (page 8-11 of the IMP) in the near future, it is advisable that green infrastructure opportunities be maximized to the extent possible in its design and construction. CRWA hopes to work with DFCI, MASCO and various City agencies as these streetscape projects are designed and implemented over the timeframe of the IMP.

We appreciate the opportunity to provide comment on the IMP and DPIR and hope that our remaining concerns will be addressed in the FPIR. Please feel free to contact either of us should you have any questions.

Sincerely,



Pallavi Kalia Mande
Urban Restoration Specialist



Stephanie E. Hurley
Landscape Designer

cc: Dana Farber Cancer Institute
Medical Academic and Scientific Community Organization
Boston Parks and Recreation Department
Boston Groundwater Trust
Muddy River Restoration Project MMOC