

February 13, 2008

John Palmieri, Director
Boston Redevelopment Authority
Boston City Hall, Room 925
Boston, MA 02201
Attention: John FitzGerald, Project Manager

Re: Boston College Institutional Master Plan Notification Form

Dear Director Palmieri:

The City of Boston Environment Department has reviewed the Boston College (BC) Institutional Master Plan Notification Form (IMPNF) and offers the following comments.

BC has developed a 10-year, \$2.6 billion Strategic Plan to address academic, facilities and fundraising goals. The IMPNF outlines the projects BC plans to implement over that period; \$800 million in renovation and new construction.

Construction in the Boston portion of the campus is to include a Recreation Center; University Center; Brighton Athletics Center (a field house and four new fields); a fine arts district (three structures – Fine Arts/academic, museum and auditorium); a 500-space parking facility; 1,585 beds of undergraduate student housing, 610 net new; 75 beds of housing for Jesuit and graduate student housing; and library storage. The Beacon Street parking garage is to be expanded by an unidentified number of spaces. The following buildings on the Brighton Campus will be re-used:

- current School of Theology
- former Cardinal's Residence
- Bishop Peterson Hall
- Chancery and Creagh Library
- St. John's Hall

It appears from the description of Institutional Master Plan (IMP) projects that More Hall; the modular housing; Flynn Recreational Complex; the University Center; Edmonds Hall; 188, 192 and 196 Foster Street; and St. John Seminary Service Building are to be demolished. The IMP should include a list of proposed demolition. The IMP should contain an amended list if this is inaccurate.

In describing off-campus parking for graduate students, the IMPNF references properties on Strathmore/Orkney Roads and Embassy Road at which students can park for a monthly fee. These properties and their use(s) are not shown on Figure 2-1 and are not listed in Table 2-1, *Boston College Properties – Brighton, Chestnut Hill, and Newton Campuses*. The IMP should describe provide this information. In addition, the IMP should identify the location and uses of all off-campus properties that BC owns, operates, manages and uses.

The IMP should identify the specific uses of 18, 24 and 30 Wade Streets and their respective garages.

BC does not presently house graduate students or faculty on campus; it leases 186 units of private, off-campus housing for this use. BC has an agreement with the City of Boston (COB) and Boston Redevelopment Authority (BRA) that allows it to lease the units for six years as long as graduate housing is part of an IMP. The IMPNF does not indicate when the six year term began. This information should be provided in the IMP.

The IMP should replicate Figures 2-1 and 3-1 in the IMP with the addition of a legend that indicates the uses of buildings adjacent to the Boston campus perimeter.

BC's undergraduate enrollment is about 9,000; graduate and professional program enrollment is 4,650 and 750 students are in Woods College of Advanced Studies.

Total faculty is identified as 1,210 of which 725 are full-time, 175 are teaching fellows and 310 are Teaching Assistants.

Total staff is identified as 2,440; almost 2,200 are full-time. The IMPNF does not indicate if there are contract and *per diem* employees working at BC. The IMP should provide the number of any full- and part-time workers in these categories.

SUSTAINABILITY

We concur with BC that engaging stakeholders from all levels of a variety of campus functions is essential for the success of sustainability programs and we encourage efforts to bring together a community dedicated to achieving a wide range of goals.

The IMP should describe the Campus Consortium for Environmental Excellence and its benefits for BC.

We recommend, consistent with the Mayor's focus on sustainability and responding to climate change, that BC evaluate participation in the American College & University Presidents Climate Commitment (ACUPCC). Over 30 Massachusetts institutions of higher education are signatories.

Presidents belonging to the ACUPCC sign a Commitment pledging to eliminate their campuses' greenhouse gas emissions over time. This involves:

- Completing an emissions inventory
- Within two years, setting a target date and interim milestones for becoming climate neutral.
- Taking immediate steps to reduce greenhouse gas emissions by choosing from a list of short-term actions.
- Integrating sustainability into the curriculum and making it part of the educational experience.
- Making the action plan, inventory and progress reports publicly available.

The ACUPCC Web site offers assistance through overviews and examples of Climate Action Plans and suggestions for work on energy, green building, transportation, procurement, recycling and waste management, carbon offsets and implementation progress reports. A September 2007 Implementation Guide is a, " 'handbook' for implementation of the American College & University Presidents' Climate Commitment (ACUPCC)...developed to more fully define the specific obligations represented in the Commitment, explain technical issues related to implementation, and set out the conditions to be considered in "good standing" within the ACUPCC. It is intended for use at several levels, including presidents and other senior administrators, sustainability committees and directors, and ACUPCC implementation liaisons."

The American Council on Renewable Energy (ACORE) Web site (<http://www.acore.org/programs/hec/>) indicates that, "The purpose of [the ACORE Higher Education Committee] committee is to provide forums, information, tools, and other resources to facilitate three key initiatives:

- Increase use of renewable energy on college and university campuses.
- Develop curricula and resources for multi-disciplinary education of current and future generations.
- Increase funding for Higher-Education-based research and development on renewable energy.

In addition, the HEC promotes collaboration, fosters partnerships and information sharing between academic institutions, for the purposes of promoting the use of renewable energy. The Committee addresses a range of topics of interest, including, but not limited to: the role of renewable energy in sustainability strategies; the fit with energy efficiency initiatives; the role of renewable energy in climate change mitigation; and other topics of interest to the Committee."

The IMP indicates that it will identify goals in the areas of:

- Public awareness and outreach
- Transportation
- Water quality and quantity of use
- Energy distribution and conservation

- Buildings – ex. envelope, orientation, massing, materials, indoor air quality

Potential shadow and wind impacts will require study as part of Article 80. Shadow diagrams should include:

- a north arrow;
- street names;

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- the identification of doorways, bus stops, open space and areas where pedestrians are likely to congregate (in front of historic resources or other tourist destinations, for example);
- clear delineation of shadow on both rooftops and facades; and
- Clear distinctions between existing shadow and new shadow.

They should oriented consistent with that used for diagrams depicting wind monitoring locations, no build and build. A 6:00 p.m. analysis should be conducted for the Summer Solstice and Autumnal Equinox.

HISTORIC RESOURCES

The staff of the Boston Landmarks Commission (BLC) looks forward to the opportunity to review specific details of the proposed buildings for the Chestnut Hill and Brighton campuses in order to determine what affect demolition and new construction may have on historic campus buildings and the adjacent historic resources.

The BLC staff is pleased to see the commitment to sustainable design and LEED Certification and the high rate of demolition and construction material recycling. However, the BLC prefers rehabilitation to demolition and reconstruction wherever feasible. Preservation and rehabilitation of historic buildings is recognized as a sustainable building practice by LEED and the City of Boston. Demolition constitutes a loss of historic fabric and of a building's embodied energy and results in fuel expenditure, air pollution during demolition and removal of the building and significant deposits of material into landfills.

BLC staff strongly encourages a thorough study of alternatives to rehabilitate or incorporate historic buildings into proposed development plans, rather than demolition. Proposed demolition of campus buildings over 50 years of age requires Article 85 Demolition Delay review by the Boston Landmarks Commission. The Article 85 Demolition Delay application can be found online at www.cityofboston.gov/environment/downloads.asp. Contact Gary Russell at 617-635-3850 if you have questions about the application.

BLC staff agrees with BRA Urban Design staff that projects in the City should be constructed with traditional building materials and techniques rather than synthetic composite materials. Simulated materials such as exterior insulated finish systems (EIFS), and glass fiber reinforced concrete (GFRC) are inconsistent with Boston architecture and are unlikely to withstand decades of the City's freeze-and-thaw climate.

The BLC requests that dated cornerstones be incorporated into all new construction. This element will allow those who are attentive to and value the architecture of the City to appreciate the historical context in which structures were conceived.

The BLC staff looks forward to reviewing details of specific projects as they move forward.

Regular vacuum cleaning of streets and sidewalks in the project area should be employed to ensure that they remain free streets of dust and debris.

According to the Massachusetts Department of Environmental Protection (DEP), about 33 percent of mobile source particulate matter (PM) and ten percent of all nitrogen oxide (NO_x) pollution in the northeast is caused by construction vehicles. More than 90 percent of diesel engine particulate emissions are highly respirable and carry toxins deep into the lung, exacerbating human respiratory ailments. The U. S. Environmental Protection Agency (EPA) has proposed classification of diesel exhaust as “highly likely to be carcinogenic in humans.” It estimates that diesel engines currently on the road can run for 1,000,000 miles and remain in operation for as long as 20 to 30 years. This amounts to 160 to 240 tons of pollution over the life of each engine.

The DEP’s Clean Air Construction Initiative is designed to reduce air quality degradation caused by emissions of carbon monoxide (CO), volatile organic compounds (VOC), NO_x and air toxins from heavy- duty, diesel-powered construction equipment. Oxidation catalysts and catalyzed particulate filters reduce toxic emissions of formaldehyde, benzene, acrolein and 1-3 butadiene by as much as 70 percent. The program offers contractors a cost-effective way to decrease localized adverse impacts and reduce dust and odor complaints from project abutters and regulatory agencies. Experience with a pilot project that retrofitted 83 pieces of equipment working on the Central Artery/Tunnel (CA/T) project showed that:

- Vehicles did not experience significant power loss.
- There are no additional operation and maintenance (O & M) or fuel costs.
- Engine manufacturers continue to honor vehicle warranties.

More information on the program can be obtained from Christine Kirby of DEP at 617-292-5500.

The City of Boston's is seeking to minimize the number of motor vehicles that enter Boston each day, currently

- Transit pass subsidies for all employees, including contract workers, with a *pro rata* subsidy for part-time staff, a standard practice among Boston institutions of higher education.

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- Subsidized transit reimbursement for *per diem* workers.
- Pre-tax payroll deduction for transit pass purchase.
- On-site transit pass distribution.
- The posting of public and private transit schedules with rate information.
- A transportation Web site.
- On-site information about MassRIDES.
- Provision of the same information on Web sites and through e-mails, newsletters, at employee and student orientations and, periodically, with paychecks.
- Payroll deduction or subsidy for the purchase of bicycles and accessories for those enrolled and participating in a Workout to Work or similar program.
- Participation in promotional/special events such as National Bike Week.
- Direct deposit of paychecks.
- A local hiring program.
- Participation in Zipcar's Z2B program so that necessary vehicle trips off-campus do not require commuting by vehicle.
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