

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

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- Waste Management
- Operations and Maintenance
- Metrics for evaluation

Save That Stuff, already a BC recycling vendor, has recently initiated a composting program, one of the few available in the Boston area. It is working with local retailers and foodservice companies to turn their organic waste into compost, while also controlling their waste removal costs. We urge BC to talk with staff of Save That Stuff about establishing a program.

Some excess building materials may be suitable for donation to the Building Materials Resource Center (100 Terrace Street, Roxbury, 02120, 617-442-8917). This non-profit center offers, for only a handling fee, new and used materials for low and middle income homeowners.

BC uses The Institution Recycling Network (IRN) for major recycling efforts. The end markets cultivated by IRN allow for a high level of recycling and reuse from both renovation and new construction projects. That IRN and its members shipped in 2007, 5.2 million pounds of surplus furniture, equipment and supplies to relief and development projects in twelve countries and eight U.S. states promotes both environmental and social justice and we commend BC for its participation.

We suggest that BC evaluate the potential for using Otis Gen2 elevators or Kone EcoSpace elevators in new construction. Each is more energy efficient than standard elevators and uses no oil for operation. In some cases, no machine room is required so valuable space can be used for other purposes.

The benefits and detriments of using synthetic surfaces on the proposed athletic fields should be discussed in the IMP. We request that surfaces made of recycled materials be compared with those made of non-recycled materials in terms of cost, maintenance and potential environmental impacts. Any savings in operation and maintenance of synthetic surfaces versus grass surfaces should be identified and water percolation rates compared.

We ask that BC include in the IMP a detailed plan describing its sustainability goals, the framework within which it will design open space and the built environment and how it will operate a sustainable campus.

ENVIRONMENTAL PROTECTION

An environmental protection plan should be included in the IMP. It should address:

- Groundwater;
- Open space protection and maintenance;
- Stormwater quality and management;
- Erosion and sedimentation control
- Air quality protection

Examples of practices to address air quality issues include the posting of “No Idling” signage parking garages, drop-off/pick-up areas and loading areas and CO meters in parking garages that are direct-read with audible and visual alarms. An effort to improve stormwater quality would include the installation at catch basins, permanent plaques that bear the warning, “Don’t Dump - Drains to Boston Harbor.” (The plaques are available from the Operations Division of the Boston Water and Sewer Commission (BWSC) at 617-989-7000.

Sound and light that will be generated from use of the proposed athletic fields is an issue of concern to residential neighbors and this department. An assessment of these impacts and effective mitigation will be essential. We recommend looking at the following Web site - www.britastro.org/dark-skies/ - for examples of good and bad lighting. Click on “lighting” and then “good and bad lighting” for examples of lighting that serves use and safety ends while minimizing off-site impacts.

Staff from the BRA, Boston Inspectional Services Department and this department must sit down to discuss this matter to ensure that neighbors can be adequately protected.

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 be 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.

CONSTRUCTION MANAGEMENT

We request that the following elements be included in a management plan that will apply to all construction projects in Boston.

City of Boston Code Ordinance 16-26.4 allows construction from 7:00 a.m. to 6:00 p.m., Monday through Friday unless a permit, issued on a week-by-week basis, is granted by the City of Boston Inspectional Services Department (ISD). This department receives frequent complaints about noise generated at construction sites before 7:00 a.m. Complaints show that contractors often allow workers on site before that time. Noise is frequently related to the run-up of diesel equipment and the preparation and movement of tools and materials. No sound-generating activity is allowed to occur at a site prior to 7:00 a.m.

Construction-period noise is subject to regulation by the Boston Air Pollution Control Commission (APCC), part of this department. The proponent must ensure compliance with the construction-related limits as outlined in the Regulations for the Control of Noise in the City of Boston.

If chemical cleaning or abrasive blasting will be a part of renovation or other projects executed during the IMP term, a permit must first be obtained from the APCC.

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 is seeking to minimize the number of motor vehicles that enter Boston each day, currently 600,000, and to protect parking city residents. Encouraging construction workers not to drive to work does not result in the desired outcome. As part of this effort, we request that a comprehensive Transportation Demand Management (TDM) plan be established for all construction workers. Such a plan should include:

- Providing secure, on-site storage so that workers do not have to transport tools and equipment each day.
- Offering pre-tax payroll deduction for Massachusetts Bay Transportation Authority (MBTA) transit pass purchase.
- Providing a ride-matching service.
- Posting transit schedules in a prominent area.

TRANSPORTATION

BC provides bicycle racks for 298 bikes in 15 locations, all on the Chestnut Hill campus. None are provided on the Brighton campus.

The IMP should provide the following bicycle-related information in text and on an updated Figure 6-4:

- The location(s) of bicycle racks protected from the elements and the total number of bicycle that can be accommodated;
- The location(s) of shower and locker facilities and the number of lockers provided at each facility;
- A description of eligibility for use of the facilities. Are all students, faculty and staff allowed to use them? Are the showers/lockers available for students, faculty and staff who walk to work?
- Any proposed changes to the number and locations of racks and shower/lockers during the IMP term, including at the Brighton campus.

We suggest that BC investigate participation in the City’s Bike Friendly Business Program. Please contact Nicole Freedman, Director of Bicycle Program, at Nicole.Freedman.bra@cityofboston.gov, (617) 429-8440 for information on this initiative.

BC has 3,011 parking spaces on the Chestnut Hill campus and 788 on Brighton campus for a total of 3,799 spaces.

The following is parking information from the IMPNF:

- Eighty (80) percent of faculty and staff drive to BC; six percent use transit.
- Twenty-six (26) percent of students use transit; the same percentage drive.
- Students get an 11 percent discount for purchase an MBTA semester pass.
- Faculty and staff need permits for on-campus parking. An Eligibility and Parking Access System that defines criteria for on-campus parking and locations is referenced but not described.

- The eligibility criteria for an on-campus parking permit for undergraduates are not defined.

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- Undergrads who live more than 1 mile from public transit lines may park on campus.
- All juniors and seniors enrolled in a BC-sponsored field practicum or three-credit internship not accessible by transit are eligible for parking passes.
- All graduate students are eligible for a parking permit.
- Graduate students who park in the Strathmore/Orkney Road and Embassy Road are charged \$150 per month; law and graduate students may receive a carpool permit if there are at least two passengers per vehicle and they commute as a carpool at least three days per week.
- BC offers a shuttle bus to the C and D branches of the Green Line.
- Pre-registered employees are eligible for a Guaranteed Ride Home
- BC, with MassRIDES, assists with car/vanpools. They get a 55 percent discount on graduate and law student parking rates.
- Five percent of commuters participate in ride-sharing.
- BC partners with Zipcar to provide one vehicle on the lower campus and seven in the adjacent neighborhood.
- Visitors get the first two hours of parking free, then pay \$2/hour up to a maximum of \$10.
- BC looking at pre-tax payroll deduction for employee purchase of transit passes.

An IMP should provide the following information:

- The number of employees (all faculty and all staff) who commute in single occupant vehicles (SOV) and the percentage of faculty and staff this represents.
- The number of employees (all faculty and all staff) who carpool/vanpool and the percentage of employees this represents.
- The vehicle occupancy rate (VOR) for all faculty and all staff.
- The number of undergraduate students who commute in SOV and the percentage of undergraduates this represents.
- The number of undergraduates who carpool/vanpool and the percentage of undergraduates this represents.
- The number of graduate, law, special program students who commute in SOV and the percentage of graduate, law, special program students this represents.
- The number of graduate, law, special program students who carpool/vanpool and the percentage of graduate, law, special program students this represents.
- The VOR for undergraduate, graduate, law and special program students.
- The parking rates charged broken down by category of employee, category of student and location of parking area/facility.
- The level of subsidy represented by each parking rate based upon the cost of building, maintaining and operating the parking areas/facilities.
- If a student lives more than one mile from public transit, does this include bus lines that will take the student to another mode?
- How is accessibility to a practicum or internship defined?
- If a student is enrolled in a practicum or internship for one semester, is the parking permit good only for that semester?
- Why is a shuttle offered to Cleveland Circle on the C branch of the Green Line and to Reservoir Station on the D line of the Green Line when there is a B line stop at Chestnut Hill and Commonwealth Avenue, one block from Cleveland Circle and two blocks from Reservoir Station?
- What is the criteria for eligibility for the Guaranteed Ride Home program?
- Is there a limit on the number of times that a commuter may use the Guaranteed Ride Home program?

We understand that part-time students may work or have other responsibilities and that part-time faculty and staff may have other jobs. These situations do not, however, mean that using transit is impossible or undesirable. The lack of a comprehensive Transportation Demand Program (TDM) and likely favorable parking rates encourages vehicular commuting.

An effective TDM program should include:

- On-site Transportation Coordinator.

- 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.
- Parking coupons for employees who regularly use transit but need to drive to work on occasion.

The IMP should include a broad TDM program designed to increase transit mode share and decrease vehicle use.

Thank you for the opportunity to offer comment. We look forward to the IMP.

Sincerely,

Bryan Glascock
Director