HARVARD Kennedy School

JOHN F. KENNEDY SCHOOL OF GOVERNMENT

Project Review Special Permit

August 5, 2014

HARVARD
PLANNING & PROJECT MANAGEMENT

August 5, 2014

Mr. Hugh Russell, Chairman
Cambridge Planning Board
Cambridge Community Development Department
344 Broadway
Cambridge, MA 02139

Re: Article 19.20 Project Review Special Permit Application
Harvard Kennedy School, 79 John F. Kennedy Street,

Dear Chairman Russell:

Enclosed please find 3 original and 15 additional copies of the Planning Board Article 19.20 Project Review Special Permit application for proposed development on the campus of the Harvard Kennedy School. We are requesting that this application be heard by the Planning Board at the meeting scheduled for October 7, 2014.

If you need additional information or have any questions, please call me at 617-496-1879 or you can reach me by email at mark_verkennis@harvard.edu.

Sincerely,

Mark Verkennis

Mark Verkennis
Senior Campus Planner

Attachments

cc: Tanya Iatridis, HU
Thomas Lucey, HU
Bryan Baldwin, CSL Consulting
George de Brigard, Robert A.M. Stern Architects

1350 Massachusetts Avenue, Suite 573 Cambridge, MA 02138 T 617 496 1999 F 617 495 0559

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CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

SPECIAL PERMIT APPLICATION • COVER SHEET

In accordance with the requirements of the City of Cambridge Zoning Ordinance, the undersigned hereby petitions the Planning Board for one or more Special Permits for the premises indicated below.

Location of Premises:	79 John F. Kennedy Street
Zoning District:	Residence C-3
Applicant Name:	President and Fellows of Harvard College, c/o Harvard Planning & Project Management
Applicant Address:	1350 Massachusetts Avenue, Suite 573, Cambridge, MA 02138
Contact Information:	(617) 496-1879 mark_verkennis@harvard.edu (617) 495-0559
	Telephone # Email Address Fax #

List all requested special permit(s) (with reference to zoning section numbers) below. *Note that the Applicant is responsible for seeking all necessary special permits for the project. A special permit cannot be granted if it is not specifically requested in the Application.*

Project Review Special Permit (19.20)

List all submitted materials (include document titles and volume numbers where applicable) below.

See attached list.

Signature of Applicant: Mark Verkennis

For the Planning Board, this application has been received by the Community Development Department (CDD) on the date specified below:

8/8/14 Eg M Pdl

Date Signature of CDD Staff

List of Materials Submitted

Application Forms

- Special Permit Application – Cover Sheet
- Dimensional Form
- Ownership Certificate
- Fee Schedule

Project Narrative

1. Project Overview
2. Compliance with Zoning
3. Compliance with Project Review Special Permit Criteria (Article 19.00)
    - Citywide Urban Design Objectives
4. Conformance with General Special Permit Criteria (Section 10.43)

Project Plans and Illustrations

1. Site Map – Immediate Area
2. Context Map – Harvard Square
3. Existing Site Plan
4. Proposed Site Plan
5. Floor Plans
6. Landscaping Plan
7. Bicycle Parking Plan
8. Elevations
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11. Existing and Proposed Views

Appendices

A. Transportation Impact Study
B. Tree Study
C. LEED Checklist and Narrative
D. Sewer Service Infrastructure Narrative
E. Water Service Infrastructure Narrative
F. Noise Mitigation Narrative
G. Summary of Community Outreach
H. Wind Study

Certification of Receipt of Plans

1. Cambridge Department of Traffic, Parking and Transportation
2. Cambridge Department of Public Works
3. Cambridge City Arborist
4. Cambridge Water Department
5. Cambridge LEED Specialist

DIMENSIONAL FORM

Project Address: 79 John F. Kennedy Street **Application Date:** 8-05-14

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	126,655	5,000 (min)	No Change	
Lot Width (ft)	> 50	50 (min)	No Change	
Total Gross Floor Area (sq ft)	241,065	379,965 (max)	317,927	
Residential Base	N/A	N/A	N/A	
Non-Residential Base	N/A	N/A	N/A	
Inclusionary Housing Bonus	N/A	N/A	N/A	
Total Floor Area Ratio	2.08	3.0	2.51	
Residential Base	N/A	N/A	N/A	
Non-Residential Base	N/A	N/A	N/A	
Inclusionary Housing Bonus	N/A	N/A	N/A	
Total Dwelling Units	N/A	N/A	N/A	
Base Units	N/A	N/A	N/A	
Inclusionary Bonus Units	N/A	N/A	N/A	
Base Lot Area / Unit (sq ft)	N/A	N/A	N/A	
Total Lot Area / Unit (sq ft)	N/A	N/A	N/A	
Building Height(s) (ft)	58' - 78'	120' (max)	See attached.	
Front Yard Setback (ft)		See attached.	See attached.	
Side Yard Setback (ft)		See attached.	See attached.	
Side Yard Setback (ft)	N/A	N/A	N/A	
Rear Yard Setback (ft)	N/A	N/A	N/A	
Open Space (% of Lot Area)	N/A	N/A	N/A	
Private Open Space	N/A	N/A	N/A	
Permeable Open Space	N/A	N/A	N/A	
Other Open Space (Specify)	N/A	N/A	N/A	
Off-Street Parking Spaces	129	43 spaces (add'l.)	43 spaces	
Long-Term Bicycle Parking	N/A	64	64	
Short-Term Bicycle Parking	99 spaces	140	140	
Loading Bays	1	3	3	

Use space below and/or attached pages for additional notes:

Dimensional Form *(Additional Information)*

Proposed Building Heights (ft)*

Gateway: 56’ – 6”

South Pavilion: 69’ – 6”

West Pavilion: 57’ – 0”

** highest point of roof above the mean grade adjoining the building*

Front Yard Setback at Eliot Street

The addition of the Gateway Building creates a single building wall (comprised of the existing Belfer and Taubman buildings and the Gateway Building) with a front yard setback requirement at Eliot Street. As the building presents multiple vertical planes to the street line, a multi-plane setback calculation has been used to determine compliance with CZO setback requirements. Based on this calculation, the proposed setback conforms to CZO 52.24.4 (3).

Side Yard Setback at JFK Park pedestrian connector

The addition of the West Pavilion creates a single building wall (comprised of the existing Taubman and Rubenstein buildings and the West Pavilion) with a side yard setback requirement at the JFK Park pedestrian connector. As the building presents multiple vertical planes to the lot line, a multi-plane setback calculation has been used to determine compliance with CZO setback requirements. Based on this calculation, the proposed setback does not conform to CZO 52.24.4 (3). A zoning variance will be sought from the BZA to permit a setback of 11’ to the property line.

OWNERSHIP CERTIFICATE

Project Address: 79 John F. Kennedy Street **Application Date:** 8-05-14

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: President and Fellows of Harvard College

at the following address: c/o Mark Verkennis, Harvard Planning & Project Management
1350 Mass. Avenue, Cambridge, MA 02138

to apply for a special permit for: Project Review (19.20)

on premises located at: 79 John F. Kennedy Street

for which the record title stands in the name of: President and Fellows of Harvard College

whose address is: Massachusetts Hall, Cambridge, MA 02138

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex Book: 13111 Page: 410

OR Registry District of the Land Court, Certificate No.: Book: Page:

John Haigh Executive Dean, Harvard Kennedy School

Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

To be completed by Notary Public:

Commonwealth of Massachusetts, County of Middlesex

The above named John Haigh personally appeared before me,

on the month, day and year 07.23.2014 and made oath that the above statement is true.

Notary: Christine M. Cole

My Commission expires: March 23, 2018

CHRISTINE M. COLE NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS MY COMM. EXPIRES MARCH 23, 2018

FEE SCHEDULE

Project Address: 79 John F. Kennedy Street **Application Date:** 8-05-14

The Applicant must provide the full fee (by check or money order) with the Special Permit Application. Depending on the nature of the proposed project and the types of Special Permit being sought, the required fee is the larger of the following amounts:

- If the proposed project includes the creation of new or substantially rehabilitated floor area, or a change of use subject to Section 19.20, the fee is ten cents ($0.10) per square foot of total proposed Gross Floor Area.
- If a Flood Plain Special Permit is being sought as part of the Application, the fee is one thousand dollars ($1,000.00), unless the amount determined above is greater.
- In any case, the minimum fee is one hundred fifty dollars ($150.00).

Fee Calculation

New or Substantially Rehabilitated Gross Floor Area (SF): 76,862	× $0.10 =	$ 7,686.20
Flood Plain Special Permit	Enter $1,000.00 if applicable:	
Other Special Permit	Enter $150.00 if no other fee is applicable:	
TOTAL SPECIAL PERMIT FEE $ 7,686.20	**Enter Larger of the Above Amounts:**	$ 7,686.20

PROJECT NARRATIVE

1. Project Overview

Harvard University is planning new development within the existing campus of the Harvard Kennedy School (HKS) located at 79 John F. Kennedy Street. The project will add three new additions to existing buildings to support the school's academic programs, and will make significant improvements to the campus' central courtyard and pedestrian and vehicular circulation.

Harvard is seeking a Project Review Special Permit (CZO 19.20) from the Planning Board as the project will include construction of approximately 77,000 square feet of new gross floor area. The project is also seeking zoning variances from the Board of Zoning Appeal for 1) the side yard setback of the new addition proposed along the JFK Park pedestrian connector; 2) the height of the proposed loading bays; and 3) the width of the proposed curb-cut at Eliot Street. With the exception of these variances, the project will otherwise fully conform to the requirements of the Cambridge Zoning Ordinance.

Background

The Harvard Kennedy School is proposing new campus development that will implement a long-term vision for the physical development and transformation of its campus in support of the school's mission. HKS strategic priorities – attracting the best leaders, educating students to drive positive change, generating ideas to solve the world's most pressing problems – suggest new models of enhanced collaboration and active learning as well as the value of strong connections within the school, across the university, and with the community. To achieve these strategic priorities, in addition to addressing the pressing need for more and better operational and study space, and the alleviation of current "hyper-utilization" of existing space, a transformative approach to the physical environment of the HKS campus is being proposed.

The HKS campus was constructed in discrete phases over the span of 12 years beginning in 1978. While these buildings have served the school well, their ability to support the evolution of the school's mission, adapt to changes in curriculum and pedagogy, and foster collaborative research is limited. In addition, HKS seeks to address key physical shortcomings in its existing campus including conflicts in vehicular and pedestrian circulation, compromised off-street loading facilities, and limited campus services such as a kitchen and dining facilities.

The proposed project will not only advance the school's academic mission by creating an environment that supports greater collaboration and active learning, but will significantly improve the day-to-day functionality of the campus and its operations.

Project Site

The Harvard Kennedy School campus is located in Harvard Square on a 126,655 square foot lot bounded by John F. Kennedy Street to the east, the JFK Park pedestrian connector to the west, Eliot Street to the north, and JFK Park to the south. The uses surrounding the campus include mixed commercial uses to the north, Harvard College dormitory buildings to the east across John F. Kennedy Street, JFK Park to the south, and the Charles Square commercial and residential development to the west.

Formerly the site of MBTA rail yards, Harvard acquired the property in 1976-77. The University developed the site in four separate phases between 1978 and 1990, erecting four buildings that comprise the existing HKS campus (Littauer Center – 1978; Belfer Center – 1983; David Rubenstein Building – 1986; and the Taubman Building – 1990). Littauer, Belfer, and Rubenstein are contiguous and constitute a single building for the purposes of zoning and building code compliance.

All of the HKS campus buildings are four or five stories in height and clad in brick, containing a total of 241,065 square feet of gross floor area. The campus contains classrooms and meeting spaces, faculty and administrative offices, a library, cafeteria and other support spaces.

The four campus buildings surround a landscaped courtyard that has pedestrian access from Eliot Street. The courtyard elevation is approximately 13 feet below the grade of the Eliot Street sidewalk. The entrance ramp from Eliot Street to the courtyard also serves as a vehicular access point to a small parking area on the courtyard's western side, and to the campus' off-street loading facility located at the Belfer Center. The existing courtyard provides an important amenity to the campus, however its character is significantly impacted by its existing elevation, and the need to serve multiple functions and their associated circulation requirements.

Project Description

The Harvard Kennedy School proposes new development on its campus that will add approximately 77,000 square feet of new gross floor area (GFA) per zoning in three additions:

1) The "Gateway Building," a two-level addition connecting the existing Taubman Building and Belfer Center at the 3rd and 4th Floors. This addition will contain faculty offices and meeting space while maintaining an open two-story pedestrian entrance to the campus from Eliot Street;
2) The "West Pavilion," a four-level addition connecting the existing Taubman Building with the David Rubenstein Building. This addition will contain classrooms, meeting spaces, faculty offices, and building support spaces, and provide a new entrance to the campus from the JFK Park pedestrian connector; and
3) The "South Pavilion," a four-level addition which will connect the existing Littauer Building and the proposed "West Pavilion." This addition will contain classrooms, meeting spaces, faculty offices, new campus kitchen and dining facilities, and building support space. The South Pavilion will also create a new landscaped courtyard space between Littauer and Rubenstein. This courtyard will be covered by a glass roof, creating a new winter garden internal to the campus.

In addition to the building additions, a major component of the project is to raise the level of most of the existing courtyard by approximately 13'. The raised courtyard will preserve the central campus green space while creating a new lower level that contains a below-grade loading facility, additional classroom space and building mechanical space. The courtyard will have at grade pedestrian access at its north side from Eliot Street (below the Gateway Building) and at the west side from the JFK Park pedestrian connector. This new campus access point will improve pedestrian circulation between the Charles River and Harvard Square.

The project proposes site improvements at the perimeter of the campus, improving the landscape along Eliot Street from the Taubman Plaza to the Belfer entrance. Harvard will also improve the landscape at the existing building entrances along Eliot and JFK Street.

Special Permit Required

The project will add more than 50,000 gross square feet and will be located within 100' of a public way. A Project Review Special Permit (CZO 19.20) issued by the Planning Board is required for this development.

Project Schedule

The current project schedule anticipates construction to commence in the June 2015 with completion in October 2017.

2. Compliance with Zoning

The project site is located in the Residence C-3 base zoning district, a multi-family residential district that permits institutional educational uses as of right. The HKS campus is also located within the Harvard, Radcliffe, Lesley Institutional Overlay District.

The proposed project has been designed to meet the applicable sections of the Cambridge Zoning Ordinance including floor area ratio, building heights, off-street parking and bicycle parking requirements. The project is consistent with the urban design objectives outlined in Section 19.30 of the CZO, as described in more detail in the following section.

The project requires three variances from the Board of Zoning Appeals (BZA) as follows:

- Side yard setback at the JFK Park pedestrian connector to allow the alignment of new construction with existing buildings and to meet conditions of a variance previously granted for earlier phases of campus development. (86' required, 18 - 23' proposed)
- Height of the loading bays in the proposed loading facility due to the campus' existing structural limitations. (14' required, 13'-6" proposed)
- Width of proposed Eliot Street curb cut (at driveway to proposed loading facility) to facilitate safe delivery vehicle turning movements. (30' maximum, 41' proposed)

3. Compliance with Project Review Special Permit Criteria (Article 19.00)

Urban Design Objectives (CZO § 19.30)

The proposed HKS campus development is responsive to the existing or anticipated pattern of development. (CZO 19.31)

- *The heights and setbacks of the proposed building provide a suitable transition to abutting and nearby residential zoning districts.*
- *The proposed buildings are designed and oriented on the lot so as to be consistent with the established streetscape on those streets on which the project lot abuts.*

The proposed construction is consistent with the existing pattern of development on the HKS campus; with buildings located at the perimeter of the site, enclosing a landscaped central courtyard. Building heights and setbacks are also consistent with existing campus buildings and the established streetscape in this part of Harvard Square. The proposed expansion of the HKS campus is comprised of three main components:

1) The "Gateway Building," is a two-level addition connecting the existing Taubman Building and Belfer Center at the 3rd and 4th Floors. This addition will contain faculty offices, meeting space, and student study and lounge space. The face of the Gateway Building aligns with the existing setbacks of the adjacent Belfer building and is set back behind the Littauer building. The building height is lower than the adjoining buildings, marking a prominent new pedestrian entrance to the HKS campus via a two-story opening beneath the building.
2) The "West Pavilion," is a four-level addition connecting the existing Taubman and Rubenstein buildings. This addition will contain classrooms, meeting spaces, faculty offices, and building support spaces. The West Pavilion is set back behind the adjacent facades of the existing buildings. The three-story height of the addition along the JFK Park pedestrian connector is complementary to the neighboring Charles Square development and in keeping with the heights of existing buildings on the campus. The West Pavilion also creates a new point of pedestrian entry to the HKS campus via a one-story opening at ground level beneath the building. This passageway also enhances the pedestrian route between the residences at 975 Memorial Drive and the Charles Hotel, strengthening the pedestrian network in the precinct.
3) The "South Pavilion," is a four-level addition facing the courtyard which will connect the existing Littauer Building and the proposed "West Pavilion. This addition will contain classrooms, meeting spaces, faculty offices, new campus kitchen and dining facilities, and building support space. The South Pavilion's massing and height is consistent with adjoining campus buildings. This addition will feature a new mechanical penthouse, however due to the addition's location internal to the campus, it will have limited visibility from adjoining streets and public walkways.

- *The proposed HKS campus development respects the relevant historical context of buildings on the site and neighboring buildings.*

The HKS campus is located in a part of Harvard Square that has been largely re-developed since the late 1970's, and is characterized by developments such as the Charles Square commercial and residential complex immediately west of the campus. The proposed development is in keeping with the general physical character of development in the area.

The campus itself was built on a portion of the site of the former MBTA red line rail yards. The remaining physical evidence on the HKS campus of the site's former use is limited to a section of rail yard retaining walls along the JFK Park pedestrian connector, and a section of wall placed in the campus central courtyard that reads *"BOSTON ELEVATED RAILWAY CO. 911"*. Although this fragment is in very poor structural condition, HKS proposes to explore the feasibility of restoring and relocating this feature for continued use as an interpretive element of the site's history and previous use.

The proposed campus development is pedestrian and bicycle friendly, with a positive relationship to its surroundings. (CZO 19.32)

- *Ground floors, particularly where they face public streets, public parks, and publicly accessible pathways, consist of spaces that are actively inhabited by people*
- *The ground floor of the proposed campus development incorporates transparency.*

The proposed campus development will introduce new inhabited spaces along public streets and pathways and will greatly improve sightlines into the campus at key pedestrian access points. The new Gateway Building features a two-story high pedestrian entrance beneath the building that allows views into the campus and activity within the central courtyard from Eliot Street. The building itself features an extensive glass curtain wall facing Eliot Street.

The West Pavilion similarly features an open one-story pedestrian access point to the campus from the JFK Park pedestrian connector. This new at grade entry permits views into the interior of the courtyard and improves campus permeability by creating a new point of pedestrian access. The West Pavilion will contain classrooms and a dining area introducing new activity to this part of the campus along the pedestrian connector. This addition also makes use of extensive glazing on its upper floors to increase the transparency of the building along the pedestrian walkway.

- *Entries to buildings are located so as to ensure safe pedestrian movement across streets, encourage walking as a preferred mode of travel within the city and to encourage the use of public transit for employment and other trips.*
- *Pedestrians and bicyclists are able to access the site safely and conveniently; bicyclists should have, secure storage facilities conveniently located on-site and out of the weather.*

The proposed development will enhance key entry points to the campus from Eliot Street, the JFK Park pedestrian connector and John F. Kennedy Street, improving the experience of pedestrians and strengthening the campus' connections to Harvard Square. The HKS campus is very well connected to pedestrian, bicycling, Harvard Shuttle, and MBTA bus and rapid transit infrastructure.

Pedestrian Improvements

The raised central courtyard will create an at grade pedestrian connection between Eliot Street and the interior of the HKS campus at the proposed Gateway Building. The new courtyard elevation eliminates the significant grade change between the Eliot Street sidewalk and the interior of the campus, improving access for pedestrians, and particularly for persons with disabilities. The two-story high pedestrian entrance beneath the Gateway Building allows views into the campus from Eliot Street and creates a dramatic new primary pedestrian entry point to the campus from Harvard Square. This entrance also creates a more welcoming and safer connection to the campus by separating pedestrian and vehicular (loading facility) access points.

The development of the West Building between the Taubman and Rubenstein buildings will include a new pedestrian connection from the JFK Park connector to the central campus courtyard, replacing the high retaining wall that blocks access and limits views into the campus from the west. With the raising of the interior courtyard, pedestrian access and visibility from the JFK Park connector will now be provided into the interior of the courtyard. The presence of this new entrance at the pedestrian connector will enable pedestrian circulation from the Charles Square development through the HKS campus to Eliot Street.

The South Pavilion located within the interior of the HKS campus has been designed with a prominent entry at its eastern end which serves to clarify campus way finding, and reinforces pedestrian circulation through the courtyard. The design of the central courtyard also reflects desire lines between campus buildings, facilitating pedestrian circulation within and through the HKS campus.

The project also includes improvements at existing campus entry points. At the Taubman Plaza located at the corner of Eliot Street and the JFK Park pedestrian connector, new landscaping, paving and seating will create a more prominent and welcoming entrance to the campus. The landscape improvements will open the north elevation and entrance of the Taubman Building to the plaza both visually and with improved circulation. This refurbished space will also contribute to a more animated and attractive streetscape along Eliot Street. In addition, the entry plazas at located at the corner of John F. Kennedy Street and Eliot Street at the Belfer Building, and at the Littauer Center on John F. Kennedy Street will be redesigned with a more open configuration and new paving to provide a much more welcoming entry points to the campus. Narrow sections of sidewalk near the Belfer Building entrance will be widened to provide safer and more attractive pedestrian environment at the intersection of Eliot and JFK Streets. These investments in the public realm will result in improved pedestrian amenities in the vicinity of the campus.

Bicycle Facility Improvements

The existing HKS campus has a high utilization by cyclists, and the new campus development will include significant improvements that will make the campus even more bike friendly. Proposed bike amenities include the following:

- A total of 140 short-term and 64 long-term bicycle parking spaces will be provided.
- Bicycle parking spaces have been distributed in proximity to all major campus and building entrances in accordance with CZO locational requirements. Inverted U-type racks will be used for both types of parking.

- Long-term spaces have been located within the openings located beneath the Gateway Building and the West Pavilion. The parking spaces are located fully underneath the upper stories of the buildings therefore will be weather-protected. The spaces will be monitored by security cameras and will have visibility from the nearby campus security office to be located at the southeast corner of the courtyard
- The existing Harvard-supported Hubway station located at the north edge of Taubman Plaza will remain, however these bicycles have not been included in calculating the number of bicycle parking spaces on campus.

The proposed bicycle parking plan has been informed by existing bicycle rack usage on the HKS campus. Given the nature of the campus community which is comprised of graduate students, faculty, staff and visitors to HKS programs and institutes, there is a high demand for convenient short-term bicycle parking spaces. The plan distributes short- and long-term parking as evenly as possible around the campus, allowing convenient bicycle approach to all of the campus' entrances.

Transit Services

The HKS campus is well served by nearby transit service including the Harvard Shuttle (Allston Campus Express) with a stop opposite the campus on John F. Kennedy Street. This shuttle line provides service to points farther north on the Cambridge Campus and connects to Harvard's Allston Campus. The MBTA bus route No. 66, which provides service between Harvard Square and Dudley Square in Boston via Allston, has a stop on John F. Kennedy Street at Eliot Street serving the HKS campus. The MBTA Red Line subway at Harvard Station is a 3-5 minute walk away.

The proposed campus development mitigates adverse environmental impacts upon its neighbors. (CZO 19.33)

- ***Existing mechanical equipment has been carefully designed, well organized, visually screened from the surroundings, and acoustically buffered from neighbors.***

The new development utilizes lower level and interior spaces within the building to house mechanical equipment. A new 5th Floor mechanical penthouse will contain the majority of building support functions. This penthouse has been placed atop the proposed South Pavilion, which is interior to the campus, in order to minimize external impacts to campus neighbors. Given its location within the campus, the mechanical penthouse will be only minimally visible from adjacent public ways. All outdoor mechanical equipment will be completely contained within screened mechanical wells.

- ***Trash handling avoids impacts (noise, odor, and visual quality) on neighbors.***

All trash and recycling storage will occur within the building at the lower level beneath the new raised courtyard. Trash and recycling will be picked up inside the loading facility and removed via the facility entry door located on Eliot Street. The door will be faced in a material similar to the cladding of the surrounding building volume allowing the entrance to remain inconspicuous when the ramp is not in use and the doors are closed. When not in use, these doors will remain closed eliminating any impacts to neighboring uses.

- *Stormwater Best Management practices and other measures to minimize runoff and improve water quality are implemented.*
- *Landscaped areas are employed to reduce the rate and volume of stormwater runoff compared to pre-development conditions.*

The project will utilize a 75,000 gallon underground storage tank to capture stormwater runoff for onsite detention, treatment and reuse on the HKS campus. The storage tank will capture and treat stormwater runoff from approximately 90% of the average annual rainfall. Treated stormwater will be used for on-site irrigation.

Much of the existing HKS campus is essentially impervious due to the presence of the MBTA slab directly below the courtyard. Although the proposed project will not alter the fundamental presence of the concrete construction underlying the site, the courtyard will function as an intensive green roof, creating a large landscaped open space at the center of the site. The drainage system of the main courtyard will create conditions for improved on-site stormwater management.

- *Structures are designed and sited to minimize shadow impacts on neighboring lots, especially shadows that would have significant impact on the adjacent open space.*

Because the additions are being built within the existing campus, and are smaller in scale than existing buildings, the project creates minimal new shadow affects to neighboring uses. A shadow study has been prepared and is included in the illustrations accompanying this application.

- *Changes in grade across the lot are designed in ways that minimize the need for retaining walls close to property lines.*

The proposed development will raise the central courtyard elevation by approximately 13'. This change will eliminate significant existing grade changes between the campus and adjoining streets. The existing retaining wall along the JFK Park pedestrian connector will be eliminated by the construction of the West Pavilion that will also provide a new at grade pedestrian entrance to the campus.

- *Building scale and wall treatment, including provision of windows are sensitive to existing residential uses on adjacent lots.*

The nearest existing residential uses are the residences at 975 Memorial Drive, part of the Charles Square development. The three story height of the West Pavilion addition along the JFK Park pedestrian connector is complementary to the neighboring Charles Square development. Proposed new windows and glazing are not in close proximity to any existing residential uses on adjacent lots. The West Pavilion also creates a new pedestrian access point to the HKS campus via a one-story opening beneath the building which will enhance pedestrian circulation between the nearby residential uses in the Charles Square development and Harvard Square.

- *Outdoor lighting is designed to provide minimum lighting necessary to ensure safety, night vision, and comfort while minimizing light pollution.*

Existing outdoor lighting will provide adequate safety and night vision while minimizing light pollution. Indirect, pole-mounted outdoor fixtures will illuminate the internal courtyard. Passageways and entrances will be illuminated using downlights integral to the building architecture

- *The creation of a Tree Protection Plan identifies important trees on the site, encourages their protection, or provides for adequate replacement of trees lost to development on the site.*

A Tree Study (see Appendix) has been completed for the project. The study includes a Tree Protection Plan that identifies significant trees on the site which are proposed to be protected or transplanted. The majority of trees which are proposed for removal will be replaced on site. The remainder will be mitigated through payment to the City's Tree Replacement Fund in accordance with the Cambridge Tree Ordinance.

The proposed campus development will not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system. (CZO 19.34)

- *The building and site design make use of water-conserving plumbing and minimize the amount of stormwater run-off through the use of best management practices for stormwater management*

The project will incorporate water-conserving plumbing features such as low-flow fixtures that are expected to result in a minimum 35% reduction water consumption. Additional reductions in water use will result from the installation of efficient site irrigation fixtures and controls, and the on-site treatment and reuse of stormwater.

As previously noted, the project will utilize an underground storage tank to capture stormwater runoff for onsite detention, treatment and reuse on the HKS campus. The courtyard will also function as an intensive green roof, creating a large landscaped open space at the center of the site. The drainage system of the main courtyard will create the conditions for improved on-site stormwater management.

- *The capacity and condition of drinking water and wastewater infrastructure systems are shown to be adequate, or the steps necessary to bring them up to an acceptable level are identified.*

The capacity and condition of drinking water and wastewater infrastructure systems are adequate. The project team has met with the Cambridge Water Department regarding tying into the existing 24" main in Eliot Street that has the capacity (both volume and pressure) to support the proposed development. This capacity will be confirmed via hydrant flow tests.

The site's wastewater infrastructure includes an MWRA main that traverses the middle of the campus, and the project team will be confirming with the MWRA regarding the ability to tie into this main. The City of Cambridge has sewer mains adjacent to the campus in Eliot Street and in the DCR corridor that connects Eliot Street with the JFK Park. These City mains have the capacity to support the HKS project, but would require a pump station to enable a tie in. The city mains are considered an alternative if a MWRA tie in is not feasible.

- *Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building*

Harvard is committed to environmentally sustainable practices and efficient use of energy and natural resources in the design, construction, maintenance, and long-term operation of the new development on the HKS campus. The proposed development will exceed the sustainability and green building requirements of CZO Article 22 (See Appendix for LEED Checklist and Narrative). Harvard is seeking LEED Gold certification of the project and will comply with the standards associated with that certification. Consistent with this certification, and Harvard's sustainability principles, the project includes the following measures:

- Whole Building Energy Simulation modeling to demonstrate energy performance improvement
- Variable air volume controls and chilled beams in office spaces
- Daylighting and daylighting controls throughout
- Occupancy sensors to control room lighting
- Short and long-term bicycle parking that exceeds CZO requirements
- Enhanced building commissioning
- Construction waste management (goal of 95% diversion rate by weight)
- Project specifications that include requirements for recycled content, and certified sources for new wood products
- Low-emitting materials for adhesives, sealants, paints, coatings and flooring systems

The proposed campus development will reinforce and enhance the complex urban aspects of Cambridge as it has developed historically. (CZO 19.35)

- *New educational institutional construction is focused within the existing campus.*

The proposed development will take place entirely within the existing HKS campus. The physical organization and character of the existing HKS campus, with institutional buildings surrounding a central courtyard, is the result of incremental development over the past 35 years. Proposed new development occurs within the existing campus while retaining and enhancing the central courtyard as the campus' primary organizational element. The new development also recognizes the HKS campus' location within Harvard Square and significantly improves and enhances campus connections to the surrounding urban neighborhood.

- *Where institutional construction occurs in commercial areas, retail, consumer service enterprises, and other uses that are accessible to the general public are provided at the ground (or lower) floors of buildings. Where such uses are not suitable for programmatic reasons, institutional uses encourage active pedestrian traffic to and from the site.*

The project's lower floors incorporate significantly improved pedestrian access points at the proposed Gateway Building along Eliot Street, creating a new "front door" to the HKS campus; and at the West Pavilion, where a new pedestrian entrance will be provided from the JFK Park pedestrian connector. In addition, landscape improvements to the Taubman Plaza at Eliot Street, at existing building entrances along John F. Kennedy Street, and at the new courtyard entrance along the JFK Park pedestrian connector will enhance and foster an active pedestrian environment to and from the HKS campus. These improvements will encourage pedestrian and bicycle circulation in the vicinity of the campus and add to the vibrancy of Harvard Square.

- *Historic structures and environments are preserved.*

As previously noted, the HKS campus is located in a part of Harvard Square that has been largely re-developed since the late 1970's. The proposed development is in keeping with the general physical character of development in the area.

A fragment of a wall of the site's former MBTA rail yards is located within the central courtyard. Although this fragment is in very poor structural condition, HKS proposes to explore the feasibility of restoring and relocating this feature for continued use as an interpretive element of the site's history and previous use.

The proposed campus development will enhance existing open space amenities. (CZO 19.37)

The raised central courtyard will provide a significantly improved open space amenity to the HKS campus and Harvard Square. The new development increases the amount of open space by eliminating existing vehicular parking, loading facilities and vehicular access drives from the area. The new courtyard design creates a "yard" within the HKS campus, with additional landscaped areas, and new seating and spaces for socialization. Improved access points at Eliot Street and the JFK Park pedestrian connector link to new walkways that provide a clear circulation path through the campus. The new paths also strengthen the campus' connections with Harvard Square, the neighboring Charles Square development, and nearby JFK Park.

The project recognizes that the Taubman Plaza at the corner of Eliot Street and the JFK Park pedestrian connector is an important piece of the public realm in Harvard Square. This space will be improved through the introduction of new landscaping, including increased planting, additional seating and greater visibility of the Tauman Building entrance. These changes will not only result in a more welcoming entrance to the HKS campus, but will create a more attractive open space amenity in Harvard Square.

Improvements will also be made to several existing campus entrances. The entrance to the Littauer Building off of John F. Kennedy Street will be improved with new granite pavers and a widened sidewalk. The campus entrance at the corner of John F. Kennedy Street and Eliot Street will be redesigned to provide a more open and gracious entry plaza that also creates a wider, safer sidewalk at the intersection and crosswalk. The entrance will be improved with new granite paving and the removal of planting that obscures the building entrance. The existing terrace entrance at the southern end of the Littauer Building which overlooks JFK Park, will have new tables and chairs providing an additional open space amenity. The existing accessible ramp will be made more visible and complemented with a direct stairway to the terrace.

4. Conformance with CZO §10.43 Special Permit Criteria

a) The requirements of this Ordinance can and will be met.

This project has been designed to meet the applicable sections of the Cambridge Zoning Ordinance and is consistent with the urban design objectives outlined in Section 19.30 of the CZO, as described in the preceding urban design narrative. Other than the previously noted variance requests (for side yard setback at JFK Park pedestrian connector, loading bay height, and curb cut width at loading facility driveway) the project meets all other requirements of the CZO.

b) The traffic generated and patterns of access or egress will not cause congestion, hazard, or substantial change in established neighborhood character.

Traffic Impacts

The Transportation Impact Study (TIS) prepared by VHB (see Appendix) indicates that the project will result in no impacts that will exceed the traffic impact indicators contained in Article 19 and their associated criteria presented in the City of Cambridge *TIS Guidelines*.

Project Vehicle Trip Generation

The proposed expansion project is primarily designed to address the space needs of existing HKS programs by allowing for their decompression and to provide improved facilities meeting the school's current academic and operational needs. Limited growth is projected in the HKS campus population over the next 5 years, therefore there is only a nominal increase in traffic generation due to the project's full build-out. Additionally, given Harvard's very low SOV rate (9.50% in 2013 for HKS affiliates), the project will result in a very small number of new vehicle trips. Therefore, the project will not exceed the criteria for project vehicle trip generation.

The small number of additional vehicle trips generated by the development can be accommodated by existing parking spaces within the Harvard's Parking Inventory (for Harvard affiliates with parking permits), and by existing parking facilities in Harvard Square for visitors, as they are currently.

Vehicular LOS at Signalized Intersections

Signalized intersections in the study area (Eliot Street at Bennett Street, Eliot Street at John F. Kennedy Street, and John F. Kennedy Street at Memorial Drive) were studied for project impacts. Project-induced vehicle level-of-service criteria are not exceeded for any intersection.

Traffic on Residential Streets

None of the study-area roadways analyzed have first floor residential frontage comprising more than 1/3 of the total street frontage. Accordingly none of the segments exceed the criteria for vehicles on residential streets.

Increase in Vehicle Queue Length

While some increases in vehicle queuing at study intersections will result from the additional trips generated by the proposed project, the criteria for increase in lane queue length is not exceeded in any instance.

Pedestrian and Bicycle Facilities

The project site is well connected to existing pedestrian sidewalks along surrounding streets which provide access to the campus. The project will improve pedestrian access at Eliot Street and create a new access point to the campus from the JFK Park pedestrian connector. Within the project site, pedestrian facilities will be designed to meet appropriate safety and accessibility standards. The project will not exceed the criteria related to project-induced delays in pedestrian levels of service.

The area around the project site is well-served by several multi-use/bicycle paths and bicycle lanes. Multi-use/bicycle paths are distinguished by their physical separation from vehicular traffic and by the various types of modes that utilize them. Bike lanes are located on all the study area roadways except along John F. Kennedy Street between Eliot Street and Solders Field Road where the installation of bike lanes have been planned.

A total of 140 short-term and 63 long-term bicycle parking spaces will be provided. The number of spaces will almost double the amount of bicycle parking currently located on the HKS campus. Bicycle parking spaces have been located in proximity to all major campus and building entrances.

Parking

Existing On-site Parking

The HKS campus currently contains a small surface parking area with 13 spaces operated by the Harvard Parking Office that is located at the western edge of the central courtyard and is accessed from a driveway off of Eliot Street. The existing surface parking area will be eliminated with the construction of the West Building. Two parking spaces will remain on-site in the loading facility located beneath the courtyard. These spaces will provide secure parking for visiting dignitaries and other VIPS as required. The remaining spaces being removed will be replaced in Harvard's Cambridge Parking Inventory. The new location of these spaces has been taken into account in the TIS trip generation modeling.

Current Parking Allocated

A total of 129 parking spaces in Harvard's Cambridge Parking Inventory are allocated to support the existing uses on the HKS campus. The number of spaces allocated meets the CZO parking requirements in affect at the time the existing buildings were constructed. No change in the allocation of existing parking spaces is proposed as part of the current project.

Additional Parking Required

The proposed development will add approximately 77,000 square feet of new gross floor area requiring a total of 43 additional parking spaces. Harvard will allocate the required spaces from existing, non-allocated spaces in the University's Cambridge Parking Inventory that meet the zoning district and location requirements of the CZO.

Loading Facility

The proposed development will create a new loading facility located beneath the raised courtyard to serve the HKS campus. This facility will be accessed from Eliot Street via a dedicated alternating one-way driveway and ramp. The entrance will be equipped with a door that will be closed when the facility is not in use. The door will be operable from remote locations within the campus and monitored by the security system. The use of the door by vehicles will be announced by visual and audible warnings to alert pedestrians and bicyclists.

The new loading facility will have three loading bays which meets CZO requirements for off-street loading. The facility has been designed to meet the maximum delivery vehicle sizes which currently service the campus (40' wheelbase, maximum height 12' 6"). Internal maneuvering space is provided within the facility to permit delivery vehicles to enter and exit the facility front-forward.

Most regularly scheduled food service deliveries occur early in the morning and are completed before 9:00 am. Other deliveries including mail and office supplies occur on an irregular basis throughout the day. It is expected that the majority of deliveries will occur weekdays between the hours of 6:00 am - 3:00 pm. Loading will be managed by a combination of a traffic signaling system along with the presence of a dock manager or security officer who will monitor the flow of deliveries to and from the area to avoid any off-site traffic impacts. The number, type and frequency of deliveries and trash/recycling servicing are not expected to change as a result of the project.

The new loading facility will significantly improve the accommodation of campus deliveries by eliminating existing circulation conflicts among pedestrians, cyclists and delivery vehicles. The new facility's ability to accommodate multiple deliveries simultaneously will also reduce the likelihood of delivery vehicles stacking up and impacting traffic on Eliot Street. The facility will also provide a secure arrival area for dignitaries and other VIPS visiting the school.

c) The continued operation of the development of adjacent uses as permitted in the Zoning Ordinance will not be adversely affected by the nature of the proposed use.

The proposed campus development continues the existing institutional uses on the HKS campus and will not result in any significant increase in the intensity of these uses. The project is located in an area of Harvard Square where institutional, commercial, and residential uses already comfortably co-exist. The project has been designed to avoid or minimize any potential impacts to neighboring uses. The project will result in significantly improved connections from the surrounding Harvard Square neighborhood, enhancing circulation and connectivity among adjacent uses.

d) Nuisance or hazard would not be created to the detriment of the health, safety and/or welfare of the occupants of the proposed use or the citizens of the City.

No nuisance or hazard will occur as a result of the proposed project. The project has been designed and will be constructed in compliance with the applicable health, safety, and noise standards.

e) The proposed use will not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this Ordinance.

The proposed project continues the existing institutional educational use and therefore will not change the integrity of the surrounding zoning districts or derogate from the intent or purpose of the Cambridge Zoning Ordinance.

f) The proposed construction is consistent with the Urban Design Objectives (CZO Section 19.30)

As detailed in Section 3 of this application the proposed development is consistent with the Ordinance's Urban Design Objectives.