WILLIAM RAWN ASSOCIATES | Architects, Inc. + ARROWSTREET

KING OPEN / CAMBRIDGE STREET UPPER SCHOOLS & COMMUNITY COMPLEX

12/19/2016 – SPECIAL PERMIT SUBMISSION

Owner	**Contractor**	**Architect**	**Architect**
City of Cambridge City Hall, 795 Massachusetts Ave. Cambridge, MA 02139	WT Rich/KBE 29 Crafts St., Suite 300 Newton, MA 02458	William Rawn Associates, Architects, Inc. 10 Post Office Square, Suite 1010 Boston, MA 02109	Arrowstreet 10 Post Office Square, Suite 700 Boston, MA 02109

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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: 850 Cambridge Street, Cambridge MA

Zoning District: C-1

Applicant Name: City of Cambridge

Applicant Address: City Hall, 795 Massachusetts Ave., Cambridge MA 02139

Contact Information: 617-349-4251 mblack@cambridgema.g NA

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.*

A special permit is requested to:

-Allow the inclusion of CPS Administration, a Local Government Administrative Office (Art.4.56.6)
-Exceed the limitation of height of 55' for a portion of the building (Art.5.54.2C)
-Allow for the Valente Library roof overhang to project over 3-1/2' out to the property line (Art. 5.54.2)
-Allow the use of tandem parking spots (Art.6.43.5)

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

20161205_SpecialPermit_Attachment_A (Project Presentation, Vol.'s 1-4)
20161205_SpecialPermit_Attachment_B (Zoning Analysis Calculations & Diagrams, Vol.'s 1-2)
20161205_SpecialPermit_Attachment_C (Traffic Study)
20161205_SpecialPermit_Attachment_D (Tree Report)
20161205_SpecialPermit_Attachment_E (LEED Narrative & Checklist)

Signature of Applicant:

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

Date Signature of CDD Staff

OWNERSHIP CERTIFICATE

Project Address: 850 Cambridge Street **Application Date:**

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

I hereby authorize the following Applicant: City of Cambridge

at the following address: 795 Massachusetts Avenue

to apply for a special permit for: See 4 Requests on Application

on premises located at: 850 Cambridge Street

for which the record title stands in the name of: City of Cambridge

whose address is: 795 Massachusetts Avenue

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex Book: 2242 Page: 76

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

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 Louis DeRosyuk personally appeared before me,

on the month, day and year 12/19/16 and made oath that the above statement is true.

Notary:

My Commission expires:

MARYELLEN VERA CARVELLO
Notary Public
Commonwealth of Massachusetts
My Commission Expires September 24, 2021

FEE SCHEDULE

Project Address: 850 Cambridge Street **Application Date:**

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): 276,000	× $0.10 =	*
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	**Enter Larger of the Above Amounts:**	*

* THIS IS A CITY OF CAMBRIDGE PROJECT - ALL FEES WAIVED

DIMENSIONAL FORM

Project Address: 850 Cambridge Street **Application Date:**

	Existing	Allowed or Required (max/min)	Proposed
Lot Area (sq ft)	527,492	527,492	527,492
Lot Width (ft)	514'-10"	514'-10"	514'-10"
Total Gross Floor Area (sq ft)	116,082	234,751[i]	233,862
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[ii]	.26	.48	.47
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)[iii]	47'	65' (w/ Sp. Permit)	56'
Cambridge St. Front Yard Setback (ft)	7'-7"	10'	13'-10"[iv]
Willow St. Front Yard Setback (ft)	17'-6"	10'	11'-8"
Berkshire St. Front Yard Setback (ft)	23'	10'	21'-8"
York St. Front Yard Setback (ft)	632'	10'	628'
Open Space (% of Lot Area)[v]	73%	73%	75%
Private Open Space	20,286	n/a	8,775
Permeable Open Space	n/a	n/a	n/a
Public Recreational Open Space	366,958	366,958	388,374
Off-Street Parking Spaces[vi]	55	82	25 complying / 80 tandem
Long-Term Bicycle Parking[vii]	n/a	27	92
Short-Term Bicycle Parking	n/a	113	118
Loading Bays[viii]	1	1	2

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

[i] GFA ALLOWED IN ADDITION TO EXISTING FRISOLI YOUTH CENTER GFA ON SITE. SEE PAGE 2-3 OF ATTACHMENT B FOR GFA AND FAR ANALYSIS.
[ii] ALLOWED AND PROPOSED FLOOR AREA RATIOS INCLUDE FRISOLI YOUTH CENTER.
[iii] SEE PAGE 5 OF ATTACHMENT B FOR HEIGHT ANALYSIS.
[iv] THE PROJECT REQUIRES A SPECIAL PERMIT FOR THE ROOF OVERHANG OF THE VALENTE LIBRARY. SEE PAGE 6 OF ATTACHMENT B FOR SETBACK ANALYSIS.
[v] ALL OPEN SPACE CALCULATIONS INCLUDE DONNELLY FIELD IN BOTH EXISTING AND PROPOSED CALCULATIONS. SEE PAGE 8 OF ATTACHMENT B.
[vi] THE PROJECT REQUIRES A SPECIAL PERMIT TO ALLOW FOR TANDEM PARKING IN THE GARAGE PURSUANT TO ART.6.43.5. SEE PAGE 9 OF ATTACHMENT B FOR PARKING ANALYSIS.
[vii] SEE PAGE 11 OF ATTACHMENT B FOR BIKE STORAGE ANALYSIS.
[viii] SEE PAGE 10 OF ATTACHMENT B FOR LOADING ANALYSIS.

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS
BY CITY OF CAMBRIDGE TRAFFIC, PARKING & TRANSPORTATION

City Department/Office:	Traffic Parking & Transportation
Project Address:	850 Cambridge Street
Applicant Name:	City of Cambridge

For the purpose of fulfilling the requirements of Section 19.20 and/or 6.35.1 and/or 5.28.2 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Project Review Special Permit for the above referenced development project: (a) an application narrative, (b) small format application plans at 11" x 17" or the equivalent and (c) Certified Traffic Study. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS
BY CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

City Department/Office: Public Works

Project Address:	850 Cambridge Street
Applicant Name:	City Of Cambridge

For the purpose of fulfilling the requirements of Section 19.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Project Review Special Permit for the above referenced development project: (a) an application narrative and (b) small format application plans at 11" x 17" or the equivalent. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE TREE ARBORIST

City Department/Office:	Tree Arborist
Project Address:	850 Cambridge Street
Applicant Name:	City Of Cambridge

For the purpose of fulfilling the requirements of Section 4.26, 19.20 or 11.10 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a MultiFamily, Project Review or Townhouse Special Permit for the above referenced development project: a Tree Study which shall include (a) Tree Survey, (b) Tree Protection Plan and if applicable, (c) Mitigation Plan, twenty one days before the Special Permit application to Community Development.

Signature of City Department/Office Representative **Date**

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS
BY CITY OF CAMBRIDGE WATER DEPARTMENT

City Department/Office:	Water Department
Project Address:	850 Cambridge Street
Applicant Name:	City Of Cambridge

For the purpose of fulfilling the requirements of Section 19.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Project Review Special Permit for the above referenced development project: (a) an application narrative and (b) small format application plans at 11" x 17" or the equivalent. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

CERTIFICATION OF RECEIPT OF PLANS BY CITY OF CAMBRIDGE LEED SPECIALIST

City Department/Office:	LEED Specialist
Project Address:	850 Cambridge Street
Applicant Name:	Michael Black

For the purpose of fulfilling the requirements of Section 22.20 of the Cambridge Zoning Ordinance, this is to certify that this Department is in receipt of the application documents submitted to the Planning Board for approval of a Special Permit for the above referenced development project: (a) an application narrative, (b) small format application plans at 11" x 17" or the equivalent and (c) completed LEED Project Checklist for the appropriate LEED building standard, accompanying narrative and affidavit. The Department understands that the receipt of these documents does not obligate it to take any action related thereto.

Signature of City Department/Office Representative **Date**

PROJECT NARRATIVE

As part of its ongoing effort to modernize its schools, the City of Cambridge is replacing the King Open and Cambridge Street Upper Schools with a new 227,000 sf complex on the current school site in East Cambridge. In addition, the project includes replacing the Valente Branch Library and Gold Star Mother's Pool, as well as providing new offices for the Cambridge Public Schools Administration.

The project has been sited and scaled to provide the services of a large-scale civic building while fitting into its neighborhood. The building is surrounded by smaller parks and playgrounds to welcome all residents in the community. A central green spine physically and visually connects the new Cambridge Street Plaza to Donnelly Field on the south while splitting the building into two wings – academic and community.

The total development parcel includes Donnelly Field and is bounded by Cambridge, Berkshire, York, and Willow Streets for a total area of 527,492 SF. The project building site occupies the northern portion of the development parcel between Donnelly Field and Cambridge Street in a C-1 zoning district. The main entrances to both the academic and community wings of the building, including the Valente Library, are located along the Cambridge Street frontage. Entrances to the Pre-K and afterschool programs are accessed through a courtyard on Willow Street while the Gold Star Pool and CPS Administration have entrances on Berkshire Street. The proposal provides parking for 105 vehicles in a below-grade structure while parking for 210 bikes is accommodated between a storage area in the garage and designated areas throughout the site. One curb cut located at the intersection of Berkshire and Marcella Streets provides access to two enclosed loading bays as well as the ramp down to the parking garage. Bus drop-off and pick-up will remain in its current location along Cambridge Street.

The project is seeking 4 special permits: (1) Article 4.56.6 to allow the inclusion of CPS Administration, a Local Government Administrative Office; (2) Article 5.54.2C to exceed the height limitation of 55' for a portion of the building; (3) Article 5.54.2 to allow for the Valente Library roof overhang to project over 3-1/2' out but within the property line; (4) Article 6.43.5 to allow the use of tandem parking spots (Art.6.43.5). Additionally, the project plans to seek a variance from the Zoning Board of Appeals for relief from both the front yard setback and height requirements for the Cambridge Public School Administration Office portion of the project.

COMMUNITY OUTREACH

In support of the project's goal of reflecting and accommodating the surrounding community, the design team, City and school departments have actively solicited the input of abutters, the broader Cambridge community, and the teachers and staff of the Cambridge Public schools. The team initiated this active engagement process beginning in January of 2015 as a part of the project's feasibility study. Through a combined approach of flyering local residences and businesses, communicating through a regular email list, project website and social media, and holding periodic community meetings to solicit input, the project has remained committed to engaging the surrounding community and city throughout the design of the new facility. The following is a schedule of completed community meetings representative of the project's outreach program:

- January 8, 2015
- March 26, 2015
- September 17, 2015
- October 22, 2015
- March 31, 2016
- May 26, 2016
- August 30, 2016 (drop-in hours at construction trailer)
- September 8, 2016 (drop-in hours at construction trailer)
- September 21, 2016 (Groundbreaking ceremony)
- October 20, 2016

SUPPORTING STATEMENT FOR A SPECIAL PERMIT: CONFORMANCE TO 10.43

Please describe in complete detail how you meet each of the following criteria referring to the property and proposed changes or uses which are requested in your application. Attach sheets with additional information for special permits which have additional criteria, e.g. fast food permits, comprehensive permits, etc., which must be met.

Granting the Special Permit requested for the King Open / Cambridge Street Upper Schools & Community Complex would not be a detriment to the public interest because:

A) Requirements of the Ordinances can or will be met for the following reasons:

The project as proposed meets the requirements of the zoning ordinance but seeks the issuance of a special permit for the following:

1) USE: The project requires a special permit to allow the use of the Cambridge Public School Administration, a Local Government Administrative Office, pursuant to Art.4.56.6.
   Note: The site has two pre-existing institutional uses that are in the same use category as Local Government Administrative Office: the Valente Library is a municipal library and the Gold Start Pool is a public recreational building.
2) HEIGHT: The project requires a special permit to exceed the allowed 55' height limit for the lot pursuant to Art.5.54.2C. A portion of the structure exceeds the 55' foot limit, and that portion is more than 50' from any lot line consistent with the requirements of 5.54.2C.
3) SETBACKS: The project requires a special permit for the roof overhang of the Valente Library pursuant to Article 5.54.2.
4) PARKING: The project requires a special permit to allow for tandem parking in the garage pursuant to Art.6.43.5. Article 5.54.1 (F) dictates a minimum of 82 spaces on the site.
   Note: The project is proposing 105 spaces, although only 65 satisfy the 6.43.2 stipulation that the "parking spaces shall permit entering and exiting without moving any other vehicles parked in other spaces." Therefore, in order to comply with the minimum number of parking spaces, the project seeks relief to allow for tandem parking for the employees who use the spaces.

B) Traffic generated or pattern of access or egress would not cause congestion hazard or substantial change in established neighborhood character for the following reasons:

The design team, including a traffic and transportation engineer, has worked to improve or maintain the current state of traffic and parking in the neighborhood. A Transportation Study is in process and will be followed with a Parking and Transportation Demand Management Plan (PTDM). A draft of the traffic study is included with the application materials (ATTACHMENT C).

C) The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

The school, library, and pool components of the project are all replacing programs that exist on the site. The new project will not adversely impact neighboring sites as it has been designed to respond respectfully to its physical context while offering new benefits to the neighborhood such as a significant amount of new public recreational open space. The proposed addition of a Local Government Administrative Office (CPS Administration) would have no adverse effects on the continued operation of or development of adjacent uses in the neighborhood. The CPS Administration program is closely related in daily activity and mission to both the school component as well as the other municipal programs that already operate on site (the library and recreational pool building).

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 for the following reasons:

The replacement of the existing school, library, and public pool in a new facility will not create any new nuisance or hazard. The schools are designed to minimize school entry points to address safety concerns. The outdoor play spaces are set back to minimize noise and nuisance for the residents. The library is placed on Cambridge Street to maximize visibility and convenience for the most public program element. The visibility of the pool from the street

has been improved with the new layout. Appropriate site lighting and security cameras for an urban setting are provided in the new project to improve the safety of the users and local residents. The current design has been reviewed by CFD, CPS Security Department, each of the user groups, and the City. The proposed addition of a Local Government Administrative Office (CPS Administration) would have no adverse effects on the health, safety of welfare of the neighborhood. The presence of CPS Administration along Berkshire Street enlivens that façade and turns what exists as a series of back doors and surface lot entrances into a viable and active building frontage, thus fostering a safer pedestrian experience for the neighborhood.

E) For other reasons, the proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this Ordinance for the following reasons:

The proposed school and community complex is designed to replace the existing facilities in a way that fulfills the provisions of the ordinance and provides the surrounding community with improved and increased outdoor, landscaped area. The inclusion of the Cambridge Public Schools Administration office complements the project's other educational and municipal components, all of which were pre- existing on site. CPS Administration contributes positively to the entire project's efforts to be an asset to the community, not only through its public amenities but also through the building and landscape design's improvements to the safety, quality, and character of the neighborhood. In addition, the project seeks to become an example for Cambridge's sustainability initiatives through its many passive and active energy performance features in pursuit of a Net Zero Emissions design and LEED V4 Gold.

MUNICIPAL K-8 SCHOOL RECONSTRUCTION 5.54.2 COMPLIANCE

Special Permit Criteria:

A special permit is requested to:
- Allow the inclusion of CPS Administration, a Local Government Administrative Office (Art.4.56.6)
- Exceed the limitation of height of 55' for a portion of the building (Art.5.54.2C)
- Allow for the Valente Library roof overhang to project over 3-1/2' out to the property line (Art. 5.54.2)
- Allow the use of tandem parking spots (Art.6.43.5)

The proposed school and community complex has been designed to minimize or mitigate adverse impacts on neighboring residential properties as follows:

i) Arrangement of building height and bulk within the lot

The defining massing strategy of the project has been to break down a large quantity of Gross Floor Area (226,953 GFA) into two wings, academic and community, so as to provide a maximum amount of public outdoor space for the community while fitting the project into the physical context of the neighborhood. On Cambridge Street, the two wings of the building curve inward toward the central, green spine that visually connects the Cambridge Street plaza to Donnelly Field. The curving gesture pulls the mass of the buildings towards the center of the site and allows for the landscaped plaza that enhances and honors the importance of the project's civic uses. The tallest portions of each wing of the building have been pulled away from the street towards the central spine, as seen in the "V" shaped indent in CPS Administration along Berkshire Street as well as in the inset courtyard space on Willow Street.

ii) Access and egress for pedestrians, bicycles and motor vehicles, including pick-up and drop-off areas for buses and cars

The proposed access and egress to the new school and community complex seeks to maintain the current patterns of pickup and drop-off and to improve upon them where possible in terms of both safety and convenience. The two inset drop-off zones along Cambridge Street are deepened by 2' to allow buses to fully pull over and not impede Cambridge Street bike and vehicular traffic. Three existing curb cuts along Berkshire Street will be consolidated into one at the expanded, raised intersection of Marcella and Berkshire Streets. Additionally, new resident permit parking will be added along the West side of Berkshire Street. On Willow Street, an existing curb cut for loading will be eliminated and replaced with parallel parking serving the school parent drop-off during the day and residential parking at night. 105 parking spaces are provided in a below-grade structure accessed off of Berkshire Street, resulting in the removal of existing surface lots and increased landscaped areas throughout the site. In addition to bike racks situated within the landscape at the entrances to the building, long term employee bike parking is also available in the garage and accessed through a stair and elevator core at the corner of Berkshire and Cambridge Streets. The bike storage provided on site exceeds the requirements of the Cambridge Traffic and Parking Department.

iii) Location and screening of functions such as parking, loading, trash handling, and mechanical equipment

The goal of the project has been to recreate the historical sense of the site as a park. The design of the project's massing establishes a connection down the center of the site between the Cambridge Steet landscaped plaza and Donnelly Field. Additionally, the project seeks to articulate the edges of the site along Berkshire and Willow Streets as part of the "school and library within a park" idea. Part of this effort includes the elimination of surface parking lots and their replacement with a below-grade parking garage. The loading facilities have been located off-street next to the garage entrance on Berkshire Street, effectively consolidating vehicular service access into one single area that is deemphasized by a pronounced building overhang. Trash handling occurs at the off-street loading dock, screened behind a garage door in order to present a clean façade to the neighborhood. Mechanical equipment, when not housed inside, is located in dedicated wells on the roof so as to be visually and acoustically screened from the neighborhood.

19.30 Citywide Urban Design Objectives

19.31 New projects should be responsive to the existing or anticipated pattern of development:

The King Open / Cambridge Street Upper Schools and Community Complex has been designed to provide an important, civic presence within the city while integrating into the physical fabric of the existing park and residential neighborhood. The heights and setbacks of the massing along Berkshire and Willow Streets are sensitive to and reflective of the character of those streets. The landscaped plaza along Cambridge Street provides the commercial thoroughfare with needed respite of open space for pedestrians. Despite replacing the existing school and community facilities on-site, the project respects the historical context of the neighborhood through its massing, use of human-scaled textures and materials, and its commitment to returning as much of the site area to park and landscaped use for the community as possible.

19.32 Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings.

The project provides 21,000 SF of new Public Recreational Open Space in addition to the 60,000 SF of existing open space in the old facility's configuration. This open space has been designed specifically for pedestrians and bicyclists while parking has been located in a below-grade garage. Entrances have been designed to provide safe and convenient access to the building through features such as protected overhangs, integrated landscape seating and bike parking, and pathways that respect the natural circulation of the neighborhood. Secure bicycle storage is provided in the garage and together with the short-term bike parking options throughout the landscape the project exceeds the requirements of Cambridge zoning. The building design emphasizes transparency and active uses at the ground floor, particularly along Cambridge Street. The glazing strategy seeks to broadcast the important public amenities that the project provides to the community.

Section 19.33: The building and site design should mitigate adverse environmental impacts of a development upon its neighbors.

With the project's goals of Net Zero Emissions, nearly all of the useable area of the roof has been devoted to photovoltaic arrays. 190 geothermal wells reduce the building's energy load by 54%. The challenge of optimizing the roof for solar energy production has provided the opportunity to enclose the vast majority of mechanical equipment in open-air wells over which the PV spans. These mechanical wells, together with the application of parapets and building setbacks, provide visual and acoustic cover from the surrounding neighborhood.

All loading and waste processing functions will be accommodated off-street in two dedicated bays directly adjacent to the garage entrance along Berkshire Street. The consolidation of vehicles accessing and servicing the building, as well as the use of roll-down doors to screen activity, limits the exposure of the neighborhood to the vehicular and service requirements of the project.

The site drainage will be designed to meet the provisions of the MassDEP Stormwater Management Policy for a redevelopment project. Stormwater management strategies for the proposed building and site improvements will seek to mitigate the stormwater runoff as required by the City of Cambridge standards and standard engineering practices of the State of Massachusetts. Proposed mitigation measures include the use of Cambridge-approved Best Management Practices ("BMP's"), including underground detention systems, proprietary water quality management structures, and a rainwater collection/reuse cistern. Rainwater collected from the rooftops of the proposed building will be directed into the rainwater reuse cistern and any overflow will enter the detention system and routed to the drainage system in Berkshire Street.

During construction, standard engineering practices for erosion and sedimentation control will be implemented on site. A Stormwater Pollution Prevention Plan ("SWPPP") will be prepared for the site per the requirements of the United States Environmental Protection Agency ("US EPA") National Pollutant Discharge Elimination System ("NPDES") Construction General Permit ("CGP") as project construction will disturb more than one acre. The SWPPP will also be used to document compliance with the Leadership in Energy and Environmental Design ("LEED") Sustainable Sites Prerequisite for Erosion and Sedimentation Control (5) Landscaped areas to mitigate run-off.

The landscape plan provides an overall increase in permeable surfaces in the form of extensive new plant beds, lawns, grass paving and permeable asphalt. In addition, the grading plan channels storm water into a series of raingardens/infiltration basins located throughout the site to allow for on-site infiltration. A 30,000 gallon detention storage tank and additional subsurface infiltration tanks minimize discharge into the city drainage system.

The inward curve of the Cambridge Street façade combined with the low, central green spine bring effective relief from shadows on the northern edge of the site along the commercial thoroughfare. The massing of the two wings is pulled in towards the center of the project as seen in the "V" shaped indent along Berkshire Street and the courtyard space along Willow Street.

The grading within property will generally match the existing condition, with sidewalk elevation remaining at roughly 21' above sea level. The 1st floor of the building has been set at 23' to address Cambridge's long-term resiliency goals. As the site encompasses an entire city block, no directly-adjacent properties will be affected.

As discussed above, the project's massing has been designed in a way so as to break the scale of the building down such that it relates to the surrounding residential structures in height and fits into the park.

The site lighting design for has been designed to meet several goals including site security, energy efficiency, ease of maintenance, occupant and neighbor comfort, and aesthetic beauty. All light fixtures will comply with dark-sky to direct light downwards and eliminate light trespass issues with adjacent residences.

Building entrances throughout the site will have recessed LED downlights in the canopy or wall mounted LED sconces for wayfinding and security.

The site adjacent to Cambridge Street is illuminated in combination of pedestrian scale LED poles and canopy mounted LED downlights to provide lighting on the pathways, bike racks, reading garden, and bocce court.

Playground areas have a combination of pedestrian scale LED poles and building mounted LED flood lighting to provide safety during late night hours.

There are a few poles with multiple LED flood lights to illuminate the pool area and the mural on the back wall of the gymnasium.

The protection of the trees is shown on the Site Demolition Plan and Tree Protection Plan where chain link construction fencing and jersey barriers serve as the Tree Protection Fencing for the trees. A specification has been developed for the care of the trees before and during construction that requires that a Certified Arborist review and make recommendation for the care of the trees. A tree study has been completed by the City Arborist (ATTACHMENT D). It had been determined that 560 caliper inches are proposed to be removed from the site. The Proposed Landscaping Plan indicates that 560 caliper inches or greater will be installed at the site as part of the initial planting installation. King Open School Construction Project Cambridge MA Special Permit - March 21, 2013 City File No. 5849, PE Project No. 47931.00 Pg 8 : 10 A Tree Hearing was held on April 26, 2016 to review the request to remove one (1) street tree along Willow Street and three (3) street trees along Berkshire Street that will be in the way of construction. The hearing resulted in the approval to remove the (4) four street trees. The proposed Landscape Plan anticipates that eight (8) additional street trees will be installed on Willow Street and fourteen (14) street trees will be installed along Berkshire Street.

19.34 Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system:

(1) The building and site design will be designed to make use of water-conserving plumbing where possible and to minimize the amount of stormwater runoff through the use of best management practices for stormwater management:

The following strategies and technologies will be employed in the plumbing design, which aid in water conservation:
- Low-flow plumbing fixtures in restrooms
- Rainwater Collection and Reuse Cistern to reduce toilet and irrigation demands
- Reduced or eliminated irrigation by use of native, tolerant plant species

The proposed stormwater management system will be designed in a manner that will meet or exceed the provisions of the MassDEP Stormwater Management Policy for a redevelopment project and the requirements of the City of Cambridge Stormwater Policy. A complete, detailed analysis of the site drainage will be prepared by Nitsch Engineering for submittal to the City under the requirements of the DPW's Stormwater Control Permitting Program.

The proposed stormwater management system will generally consist of area drains and deep-sump, hooded catch basins, manholes, and underground pipes. A rainwater collection cistern and filtration system (located in the courtyard) will capture and manage roof drainage for reuse within the building for toilet flushing and irrigation. Water quality requirements will be met through site greening and proprietary water quality structures, as well as the rainwater collection/reuse system.

The proposed reuse cistern will collect stormwater runoff from the proposed roofs of the new building. The runoff from the roofs will be discharged directly to the rainwater cistern in the school courtyard. The rainwater collected in these cisterns will be reused for toilet flushing in the new building and supplementation of site irrigation demands. Once the cistern fills to capacity, it will overflow to the underground detention system and out to City drainage systems in Berkshire Street.

The soils on the site consist of urban fill which consists of well-drained silty sands with debris. NRCS classifies the site as Merrimac-Urban Land complex with a hydrologic soil group (HSG) rating of A, indicating the soils have a high infiltrative capacity. Although the surface urban fill areas generally consist of well drained silty sands with debris, based on the underlying clay layer and shallow groundwater table, infiltration-type stormwater management practices will be difficult to employ.

According to City of Cambridge GIS information, the separated storm sewer in Willow Street discharges to the combined sewer in Cambridge Street. The combined sewer in Cambridge Street and the separated storm sewer in Berkshire Street ultimately discharge to the Binney Street City of Cambridge owned bending weir regulator at the intersection with Land Boulevard. All stormwater expelled from the regulator during larger storm events discharges via overflow of the weir to the Charles River through a 90-inch by 96-inch culvert. During low flow and smaller storm events All drainage and combined sewers discharges into the MWRA system. As such, one of the overarching design intentions of the project will be to redirect as much stormwater flow as possible away from the combined systems and into the newer separated drainage main in Berkshire Street.

The project team will also continue its cooperation with the City of Cambridge DPW to define the final approach for the mitigation of site drainage.

(2) 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:

Based on conversations with the Cambridge Water Department "CWD", there are typically no water capacity issues in the vicinity of the project site in this part of Cambridge. Hydrant flow tests have been performed to determine the

capacity of the water mains in Cambridge, Willow and Berkshire Streets. It was determined that there is adequate pressure to provide the required flows for the new building, at this time a booster pump will not be required.

The proposed school is expected to require approximately 14,000 gallons per day for its domestic water demand based on Title V estimates and an assumed 10% increase due to consumption. The rainwater collection cisterns will be used to supplement the toilet demand reducing the actual demand on the municipal water system. The project's service connections will be from the existing the 8-inch water mains in Willow Street and Berkshire Street to provide a redundant system.

The building domestic water and fire protection service connections have been appropriately sized for the building. For the current design the installation of a 6-inch, ductile iron, potable water connection and an 8-inch, ductile iron, fire protection connection are being anticipated for the building at the Berkshire Street Connection. A 4-inch, ductile iron, potable water connection is anticipated for the Willow Street connection. The connections to the existing mains are anticipated to be with the installation of new tee fittings or tapping sleeves and new valves, and will be fully coordinated with the CWD. The fire protection engineer will coordinate the fire protection design with the City of Cambridge Fire Department.

The capacities and conditions of the sewer mains in Cambridge, Willow and Berkshire Streets are known to be adequate and in good condition. Cambridge and Willow Street systems discharge to the MWRA sewer at the intersection of Cambridge Street and Warren Street. The Berkshire Street System discharges to the MWRA sewer on Cardinal Medeiros Avenue. The project sewerage service locations (6) are currently designed to discharge to the Willow Street and Berkshire Street Systems.

(3) *Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building, including supporting mechanical systems that reduce the need for mechanical equipment generally and its location on the roof of a building specifically. The buildings are sited on the lot to allow construction on adjacent lots to do the same. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards is encouraged:*

The King Open / Cambridge Street Upper Schools & Community Complex project is working toward a goal of Net Zero Emissions and a LEED Gold Certification. The project is currently tracking 73points in the YES column and 21 points in the MAYBE column. The sustainability narrative and checklist included with this submission (ATTACHMENT E) describes the many ways that this project plans to provide an exemplary project with respect to energy and environmental performance for the City of Cambridge.

19.35 New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically.

The three defining historical aspects of the project site are the existence of community amenities within a park setting, the bordering residential neighborhood, and the commercial thoroughfare of Cambridge Street. The site, beginning as a park space and eventually featuring a municipal library, a community pool, a school and then youth center, can be described in its existing condition as having lost a sense of connection to the park, surrounding residential edges as well as the life of Cambridge Street.

The current project has been designed to re-establish the site as a park setting with amenities that sensibly respond to the residential context surrounding it, while offering a truly public, useable landscaped plaza along Cambridge Street worthy of the project's numerous civic functions and location within the city at large.

19.35.1 Campus
n/a
19.35.2 Institutional construction in commercial areas
n/a
19.35.3 Large, multiple building developments
n/a
19.35.4 Historic structures
n/a
19.35.5 Preservation for start-up companies
n/a
19.36 Expansion of the inventory of housing in the city is encouraged.
n/a

19.37 Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city.

As discussed above, this project provides 21,415 SF of Public Recreational Open Space in addition to maintaining an equivalent 60,000 SF present in the old facility's configuration. In addition to landscaped plaza on Cambridge Street, significant amounts of area have been devoted to park uses. The project's massing strategy breaks the building volume into two wings with a central green spine that visually connects Donnelly Field to Cambridge Street and allowing for this additional outdoor space. All of the school playgrounds, including those located in the Willow Street courtyard and North of the Frisoli Youth Center, will be available for community use during non-school hours. The Gold Star Pool, having previously been hidden from Berkshire Street behind buildings and adjacent to surface parking, will now feature two fully-accessible pools relocated to the southern edge of the site to be connected to the greater landscape of Donnelly Field. The new location creates a more pleasant, sunny environment connected to more trees and green space while providing a safe, well-lit and visible location along Berkshire Street.

Section 4.56, Table of Institutional Use Regulations:

6. This use may be allowed upon issuance of a special permit by the Board of Zoning Appeal if the pre-existing institutional use of the lot is in the same use table category in Subsection 4.56 or if the Board determines that the use will have fewer adverse impacts on the neighborhood than the pre-existing institutional use. In making this determination, the Board shall consider and comment on the physical attributes of the use, including those evaluated in the Cambridge Institutional Growth Management Plan. The Board may require the applicant to submit whatever documentation it deems necessary to assist it in making said determination.

The project requires a special permit to allow the use of the Cambridge Public School Administration, a Local Government Administrative Office, pursuant to Art.4.56.6. The site has two pre-existing institutional uses that are in the same use category as Local Government Administrative Office: the Valente Library is a municipal library and the Gold Start Pool is a public recreational building.

6.43.2 The layout of parking spaces shall permit entering and exiting without moving any other vehicles parked in other spaces except where more than one space is provided for any dwelling unit, such spaces may be located in tandem to the required parking spaces for that dwelling unit.

6.43.5 The Board of Zoning Appeal may grant a special permit modifying the provisions of this subsections 6.43 in accordance with the following conditions:
(a) The provisions for layout of parking spaces in paragraph 6.43.2 may be modified where there is a valet parking arrangement for an off street parking facility.

The project proposes a form of valet parking based on the same system that is in place at other schools and on the project site currently. Parking is limited to faculty and facility staff and each person is assigned a specific tandem spot. In essence, anyone with parking privileges is also given the responsibility of providing on-call movement of their vehicle either through personal communication or the PA system.