

87-101 Blanchard Road Cambridge

November 29, 2023 | Volume 3: Other Requirements



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87-101 Blanchard Rd Sustainability Commitments

October 25, 2023

The project known as 87-101 Blanchard Road, located in Cambridge, MA is pursuing certification through the PHIUS+ Core 2021 certification program. Certification through this passive house standard will not only ensure compliance with the specialized Opt-in code, effective July 1st, 2023, but will also ensure a high performance low carbon building is constructed. The building design will feature a high performance envelope and efficient all electric MEP systems, that in conjunction with on site roof mounted solar PV will reduce the carbon emissions to as low as feasibly possible. A summary of specific green building rating systems that the project will pursue are detailed below.

PHIUS+ Core 2021

- Whole Building Blower Door – The project will achieve a whole building air leakage rate of 0.06 cfm50/SF.
- Energy Performance – The project will meet the energy performance thresholds as defined by PHIUS for the following metrics. Heating demand, cooling demand, heating load, cooling load and source energy.
- Reduced Thermal Bridging – thermal bridging will be reduced through the use of continuous exterior insulation.
-

ENERGY STAR Multifamily New Construction V1

- Duct leakage – duct leakage of any central exhaust systems will be verified to be less than 25% of exhaust fan flow.
- Ventilation flow rate – ventilation flow rate will be confirmed to meet ASHRAE 62.2 minimums and to not exceed design by greater than 15% or 15cfm.

DOE Zero Energy Ready Home (ZERH)

- Water Efficiency – Whether central or individual systems are to be used, efficient design of the system will be ensured through minimizing pipe lengths, pipe insulation and efficient equipment.
- Lighting – 100% of lighting fixtures will be LED
- Appliances – all installed refrigerators, dishwasher and clothes washers will be ENERGY STAR labelled.

EPA Indoor airPLUS

- Unit Compartmentalization – each unit will be effectively air sealed from the surrounding units and corridors leading to less noise and odor transfer between units. All units tested will be below 0.30 cfm50/SF
- Radon – whether passive or active, radon will be managed at the sub slab level and removed from the building.
- Indoor air quality – Low VOC emitting materials will be used throughout, leading to a better indoor air quality once the project is occupied.



Stormwater Management

Existing Conditions:

Under existing conditions roof runoff from the two Blair Pond Estates residential buildings is piped to the existing 12” diameter municipal storm drain located in Normandy Avenue, and roof runoff from the existing commercial building fronting on Blanchard Road is piped to the existing 18” diameter municipal storm drain in Blanchard Road.

Surface runoff from the large parking area in the central portion of the site sheet flows to a single catch basin structure located along the northerly edge adjacent to the stream. There is no curbing along the northerly edge and any runoff not collected by the catch basin flows overland into the stream. The stream drains in an easterly direction to Blair Pond.

Surface runoff from the “nose-in” parking stalls between Blanchard Road and the commercial building as well as the parking area south of the commercial building sheet flows to a double grate catch basin located in Blanchard Road in front of the project site. This double grate catch basin connects to the 18” diameter municipal storm drain which in turn drains northerly discharging to the stream running along the north edge of the project site.

Other than the existing on-site catch basin and Blanchard Road double grate catch basin, surface runoff from the paved parking areas do not receive any water quality enhancement prior to reaching the stream.

Proposed Conditions:

The proposed project will reduce the quantity of runoff leaving the site, improve water quality, and provide groundwater recharge compared with existing conditions.

The proposed project will require a Stormwater Control Permit from the Cambridge Department of Public Works (DPW). A Stormwater Management Plan will be prepared for the project in compliance with the DPW’s Stormwater Management Standards including:

- Improvement to the quality of stormwater leaving the site post-development compared with pre-development conditions.
- Mitigation of the quantity of stormwater leaving the project site post-development compared with pre-development conditions.

The proposed project will reduce the site’s impervious surface area by approximately 2,750 square feet by removing existing asphalt and installing landscaping and permeable pavers for some of the proposed pedestrian walkways. This reduction of impervious surface area will result in a reduction in the quantity of stormwater leaving the site.

The parking layout will be reconfigured for better circulation, curbing will be installed along the perimeter within the limits of work and at proposed landscaped islands, and the parking areas

regraded to create shallow depressions with deep sump/hooded catch basins collecting and treating stormwater runoff. Subsurface infiltration systems comprised of StormTech SC-740 infiltration chambers with isolator-row water quality enhancement will receive runoff from the proposed catch basins as well as roof runoff from the proposed residential building. These subsurface infiltration systems will be sized to store the difference in site runoff between the pre-construction 2-year storm event and the post-construction 25-year storm event in compliance with the DPW's Stormwater Management Standards.

The proposed catch basins and isolator-row water quality enhancement will satisfy the DPW's requirements for Total Suspended Solids (TSS) removal, and the infiltration systems will remove between 65-100% of the average annual load of Total Phosphorous generated by the site's post-development impervious surface area in compliance with the DPW's Standards.

The Applicant will continue to coordinate with the DPW and Conservation Commission as the project plans are further developed and associated stormwater management systems are fully designed.

Erosion and Sediment Controls

The proposed project will include an Erosion and Sediment Control Plan prepared in conformance with the City's Erosion and Sediment Standards.

The plan will include but not be limited to:

- Crushed stone construction entrance(s) to prevent sediment from tracking onto City streets.
- Street sweeping as required.
- Erosion control compost filter socks along the downgradient limit of work.
- Silt sacks in existing catch basins.
- Controlled dewatering discharged to onsite temporary sediment basins.
- Proper management and disposal of construction waste.
- Dust control.

The Applicant will continue to coordinate with the DPW and Conservation Commission as the project plans are further developed and associated Erosion and Sediment Controls are fully designed.

Flood Resiliency

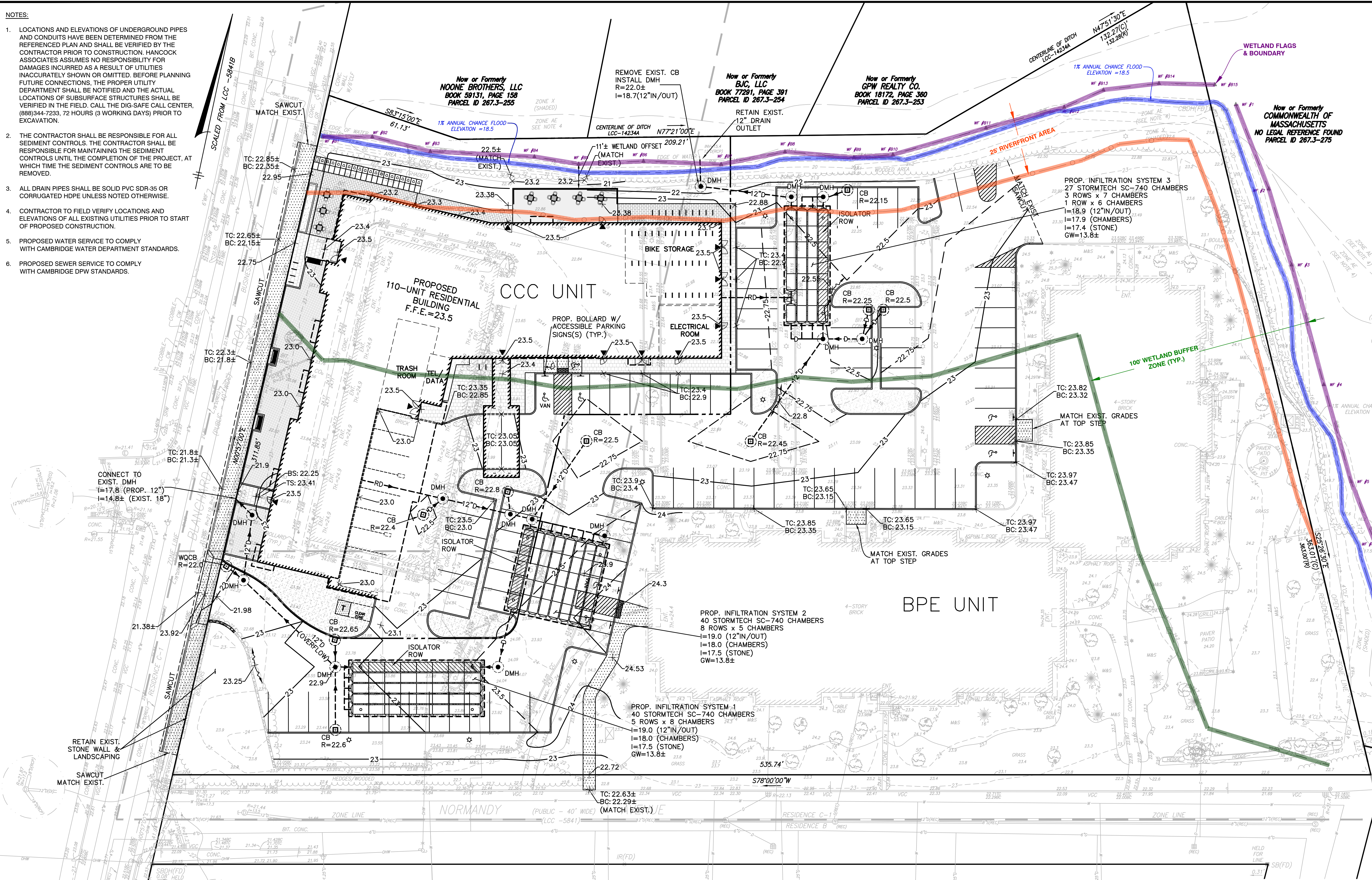
In accordance with the City's Flood Resiliency Standard's the project site is located in an area with a projected 2070 100-year Flood Elevation (Sea Level Rise/Storm Surge) of 23.3 Cambridge City Base.

The proposed building has been designed with a First Floor Elevation (FFE) of 23.5 to be above this projected 2070 flood elevation, and the proposed transformer will be located on the

southerly side of the building (away from the stream) with the transformer pad also set at elevation 23.5 to provide for resiliency against current and future year flood events.

NOTES:

- LOCATIONS AND ELEVATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE REFERENCED PLAN AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. HANCOCK ASSOCIATES ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES INACCURATELY SHOWN OR OMITTED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY DEPARTMENT SHALL BE NOTIFIED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHALL BE VERIFIED IN THE FIELD. CALL THE DIG-SAFE CALL CENTER, (888)344-7233, 72 HOURS (3 WORKING DAYS) PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT CONTROLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SEDIMENT CONTROLS UNTIL THE COMPLETION OF THE PROJECT, AT WHICH TIME THE SEDIMENT CONTROLS ARE TO BE REMOVED.
- ALL DRAIN PIPES SHALL BE SOLID PVC SDR-35 OR CORRUGATED HDPE UNLESS NOTED OTHERWISE.
- CONTRACTOR TO FIELD VERIFY LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF PROPOSED CONSTRUCTION.
- PROPOSED WATER SERVICE TO COMPLY WITH CAMBRIDGE WATER DEPARTMENT STANDARDS.
- PROPOSED SEWER SERVICE TO COMPLY WITH CAMBRIDGE DPW STANDARDS.



PLAN REFERENCE:

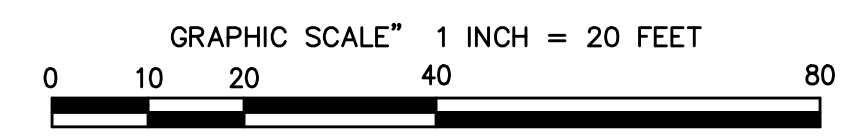
- EXISTING CONDITIONS TAKEN FROM A DIGITAL FILE NAMED "2300076-EX-(SUBMIT_2023-08-23).DWG" OF A PLAN TITLED "EXISTING CONDITIONS PLAN 89 BLANCHARD ROAD CAMBRIDGE, MASS.," PLAN DATED AUGUST 21, 2023 AND WITH REVISION DATE 8/22/23. PLAN WAS PREPARED BY FELDMAN LAND SURVEYORS. DIGITAL FILE WAS RECEIVED VIA EMAIL ON AUGUST 23, 2023.
- PROPOSED BUILDING & PARKING LAYOUT TAKEN FROM A DIGITAL FILE NAMED "23 0615 89 BLANCHARD CAMBRIDGE_GROUND FLOOR EXPORT.dwg". PLAN PREPARED BY THE ARCHITECTURAL TEAM. DIGITAL FILE WAS RECEIVED VIA EMAIL ON JUNE 15, 2023.
- PROPOSED LANDSCAPE TAKEN FROM A DIGITAL FILE NAMED "BR_LO00_SITE.dwg". PLAN PREPARED BY GROUND LANDSCAPE, INC. DIGITAL FILE WAS RECEIVED VIA EMAIL ON AUGUST 9, 2023.

LEGEND

-----4"W-----	4" DOMESTIC WATER SERVICE	-----12"D-----	12" DRAIN PIPE
-----6"F-----	6" FIRE SERVICE	-----RD-----	ROOF DRAIN
-----6"S-----	6" SEWER SERVICE	CB (E)	CATCH BASIN
-----E-----	ELECTRICAL DUCTBANK	DMH	DRAIN MANHOLE
-----T/D-----	TEL/DATA DUCTBANK		
[Symbol]	TRANSFORMER PAD		

NOTES:

- ELEVATIONS ON THIS PLAN REFER TO CAMBRIDGE CITY BASE.
- THE PARCEL SHOWN HEREON LIES PARTIALLY WITHIN ZONE "AE" SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, HAVING A BASE FLOOD ELEVATION OF 6.9' NAVD88 (ELEVATION 18.6' CAMBRIDGE CITY BASE), AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR MIDDLESEX COUNTY, MASSACHUSETTS, MAP NUMBER 25017C0418E, CITY OF CAMBRIDGE COMMUNITY NUMBER 250186, PANEL NUMBER 0418E, HAVING AN EFFECTIVE DATE OF JUNE 4, 2010.



**BBH
SITE
PLAN**

89 BLANCHARD ROAD
CAMBRIDGE, MA 02138

PREPARED FOR:

**BBH
COMMUNITY
DEVELOPMENT
LLC**

34 WASHINGTON STREET
BRIGHTON, MA 02135

**HANCOCK
ASSOCIATES**

Civil Engineers
Land Surveyors
Wetland Scientists

121 EAST BERKELEY STREET, BOSTON, MA 02118
VOICE (617) 357-8145, FAX (617) 357-9495
WWW.HANCOCKASSOCIATES.COM

1	CMK	FAK	8/23/23	FELDMAN TOPO UPDATE
NO.	BY	APP	DATE	ISSUE/REVISION DESCRIPTION
DATE:	7/21/2023	DESIGN BY:	FAK	
SCALE:	1"=20'	DRAWN BY:	CMK	
APPRVD. BY:	JP	CHECK BY:	AD	

**SCHEMATIC DESIGN
SITE GRADING
AND
DRAINAGE PLAN**

DWG: 26708sp25.dwg
LAYOUT: C4-G&D
SHEET: 4 OF 6
PROJECT NO.: **26708**

Green Factor Certification Form

This is for projects that are subject to the Green Factor Standard in Section 22.90 of the Cambridge Zoning Ordinance, which requires site and landscape design features that reduce urban heat.

Review Section 22.90 of the Cambridge Zoning Ordinance and the Cambridge Cool Score Information and Guidelines before completing this form. When submitting a completed form, attach the supporting materials listed in the Green Factor Checklist.

Project Address/Location: 87-101 Blanchard Road

Planning Board (PB) and/or Board of Zoning Appeal (BZA) case number (if applicable): _____

Developer Name and Contact Information

Name: B'nai B'rith Community Development, LLC c/o David Webster
 Mailing Address: 34 Washington St.
 Email Address: david@bbhousing.org
 Telephone #: (978) 270-8594

Applicability: Section 22.92 & Section 5.22.5

Is this project subject to Green Building Requirements (Section 22.20)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does this project involve the construction of a new building?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does this project enlarge an existing building's footprint by at least 50%?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this project involve the creation of new surface parking area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Answer the questions below if the answer is "Yes" to any of the above

Requirements

Cool Roof Requirement

Does this project involve the construction of a new building roof or replacement of more than 50% of an existing roof?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Has this project received a Certificate of Appropriateness from the Cambridge Historical Commission or a Neighborhood Conservation District Commission, or a determination of adverse effect by the Executive Director of the Cambridge Historical Commission? [if "Yes," attach the document to your submission]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Last Updated: April, 2023

How much of the new or replaced roof area (in sq. ft.) has a slope (rise:run) of less than 2:12? [Cool Roof Requirement is not applicable to roof area with a 2:12 or steeper slope]	
What is the initial Solar Reflectance Index (SRI) of the proposed roof surface material for the area described above, excluding any solar energy systems or green roof area? [Minimum is 82]	

Cool Score – Base information on the attached Cool Score Sheet and Site/Roof Plan

What is the Cool Score of the proposed site design? [Minimum is 1.0 except per below]	
What is the Cool Score of the existing site? [If the project does not involve a new building or enlargement of a building footprint, the proposed Cool Score must not be less than the Cool Score of the existing site]	

Modifications to Requirements

Has the project received, or will the project seek, a special permit from the Planning Board to modify the Green Factor Standard for this proposal?	<input type="checkbox"/> Received SP (date: _____) <input type="checkbox"/> Seeking SP <input type="checkbox"/> No modification
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Signature of Applicant

Date

Last Updated: April, 2023

Green Factor Checklist

Project Phase	Required Submissions
<input type="checkbox"/> Special Permit (if applicable)	<input type="checkbox"/> Green Factor Certification Form <input type="checkbox"/> Cool Score Sheet <input type="checkbox"/> Site and Roof Plans
<input type="checkbox"/> Building Permit	<input type="checkbox"/> Green Factor Certification Form (updated from prior version) <input type="checkbox"/> Cool Score Sheet (updated from prior version) <input type="checkbox"/> Site and Roof Plans (updated from prior version) <input type="checkbox"/> Specifications of roof surface material including initial Solar Reflectivity Index (SRI) <input type="checkbox"/> Catalog of landscape materials including plant species and pavement (including SRI) <input type="checkbox"/> Specifications of green roof installation with operations and maintenance plan (if applicable)
<input type="checkbox"/> Certificate of Occupancy	<p><i>All materials updated based on as-built conditions:</i></p> <input type="checkbox"/> Green Factor Certification Form (updated from prior version) <input type="checkbox"/> Cool Score Sheet (based on as-built conditions) <input type="checkbox"/> Site and Roof Plans (based on as-built conditions) <input type="checkbox"/> Specifications of roof surface material including initial Solar Reflectivity Index (SRI) <input type="checkbox"/> Catalog of landscape materials including plant species and pavement (including SRI) <input type="checkbox"/> Specifications of green roof installation with operations and maintenance plan (if applicable)

Last Updated: April, 2023