

APPLICATION FORM - GENERAL INFORMATION

CITY OF CAMBRIDGE - BOARD OF ZONING APPEAL

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit _____ Variance X Appeal _____

PETITIONER: President and Fellows of Harvard College, c/o W. Kevin Cahill, Harvard Graduate School of Design

PETITIONER'S ADDRESS: Gund Hall, 42-48 Quincy Street, Cambridge, MA 02138

LOCATION OF PROPERTY: 20 Sumner Road

TYPE OF OCCUPANCY: Institutional ZONING DISTRICT: Residence B

REASON FOR PETITION:

<u>X</u>	Additions	_____	New Structure
_____	Change in Use/Occupancy	_____	Parking
_____	Conversion to Add'l Dwelling Units	_____	Sign
_____	Dormer	_____	Subdivision
		_____	Other: _____

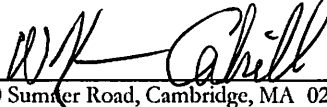
DESCRIPTION OF PETITIONER'S PROPOSAL:

Petitioner proposes building addition and alternation requiring relief with respect to maximum ratio of floor area to lot area and alteration and enlargement of a nonconforming structure and use.

SECTIONS OF ZONING ORDINANCE CITED:

Article	<u>5.000</u>	Section	<u>Section 5.31, Table 5-1, Maximum ratio of floor area to lot area</u>
Article	<u>8.000</u>	Section	<u>8.22.3, Alteration or enlargement of a nonconforming structure and use</u>
Article	_____	Section	_____

Applicants for a Variance must complete Pages 1-5
Applicants for a Special Permit must complete Pages 1-4 and 6
Applicants for an Appeal to the BZA of a Zoning determination by the Inspectional Services Department must attach a statement concerning the reasons for the appeal

Original Signature(s): 
(Petitioner(s))
Address: 20 Sumner Road, Cambridge, MA 02138
Tel. No.: 617-276-5748
Date: _____

BZA APPLICATION FORM - OWNERSHIP INFORMATION

(To be completed by OWNER, signed before a notary, and returned to Secretary of Board of Appeal.)

I/We President and Fellows of Harvard College
(OWNER)

Address: c/o W. Kevin Cahill, Gund Hall, 42-48 Quincy Street, Cambridge, MA 02138

State that I/We own the property located at 20 Sumner Road which is the subject of this zoning application.

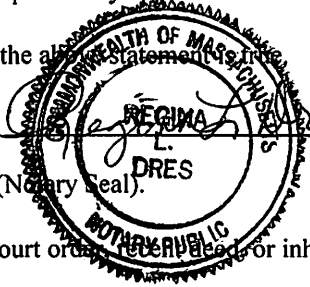
The record title of this property is in the name of President and Fellows of Harvard College

*Pursuant to a deed of duly recorded in the date See list below, Middlesex South County Registry of Deeds at Book, _____, Page _____; or Middlesex Registry District of Land Court, Certificate No. _____ Book _____ Page _____.

W. Kevin Cahill
Signature by Land Owner or Authorized Trustee, Officer or Agent*

Commonwealth of Massachusetts, County of Middlesex
The above-name Kevin Cahill personally appeared before me, this

20th of Sept, 20 16, and made oath that the above is a true and correct statement.
Stephen L. DRES Notary



My Commission Expires 1/13/2017 (Notary Seal).

* If ownership is not shown in recorded deed, e.g. if by court order or inheritance, please include documentation.

Book 55536, Page 369, October 5, 2010
Book 10600, Page 417, August 4, 1964

Ownership Form
ATTACHMENT B
(BZA - PG.3)

BZA APPLICATION FORM
SUPPORTING STATEMENT FOR VARIANCES and SPECIAL PERMIT

Requested Relief

President and Fellows of Harvard College, a Massachusetts educational and charitable corporation, acting by and through the Harvard University Graduate School of Design, seeks two variances from the requirements of the Cambridge Zoning Ordinance (“CZO”) that will allow a proposed addition to 20 Sumner Road, an institutional educational building. The following zoning relief is requested:

Variance 1: Maximum Floor Area Ratio (FAR)

(CZO 5.31, Table 5.1 Maximum ratio of floor area to lot area)

- To exceed the maximum floor area ratio (FAR) permitted on the lot;

Variance 2: Alteration or Enlargement of a Nonconforming Structure and Use

(CZO 8.22.3, not otherwise permitted by CZO 8.22.1 and 8.22.2)

- To permit the alteration or enlargement of a nonconforming structure not otherwise permitted by issuance of a building permit or special permit.

Project Description

20 Sumner Road (1923) is a 4,600 square foot wood frame building, home to the Harvard Center for Green Buildings and Cities (CGBC), a program affiliated with the Harvard Graduate School of Design (GSD). The building has been in institutional use since the early 1970s and owned by Harvard since 2010. This building shares a lot with three (3) other buildings: to the north, two (2) Harvard GSD buildings; to the south, a University parking lot and a privately-owned residential condominium on a ground lease.

The CGBC is a research center focused on creating and improving sustainable, high performance buildings and cities. The proposed project at 20 Sumner Road offers a unique opportunity to study and pilot innovative ideas for retrofitting a residential wood-frame structure, a predominant building form in the U.S., in an environmentally sustainable manner while supporting the research team driving this innovation. The project calls for innovative sustainability approaches including geothermal heating, 100% natural ventilation, 100% daylight autonomy. The building will feature an improved envelope, a solar chimney for ventilation, a green roof, the transformation of an existing surface parking lot to greenspace with a rain garden. The proposed scope of work triggers the regulations of the Massachusetts Architectural Access Board including the installation of new accessible entrance, accessible toilet rooms, a new elevator lift and lobbies, and other modifications. (At present the building is not accessible.)

In addition to the comprehensive renovation, the project includes a small rear addition (1,468 sf) to support the CGBC research. The rear addition will be built partially below grade and equipped with a green roof to integrate visually with the surrounding landscape. The addition will contain office space for the researchers, in part to replace the work space lost from the incorporation of accessibility features into the building, as well as to study the sustainability strategies on new construction as well as existing buildings. This is of critical importance to the CGBC’s mission, which studies the effects of both new and existing construction globally. The house renovation, along with a basement addition, would allow the house to perform as a laboratory for both construction types for researchers at the CGBC, while significantly minimizing the addition’s impact as seen from the exterior.

1. Petition – Supporting Statement for Variances for 20 Sumner Road

A) A literal enforcement of the provisions of this Ordinance would involve a substantial hardship, financial or otherwise, to the petitioner or appellant for the following reasons:

The proposed addition will meet all of the provisions of the CZO with the exception of the areas of requested zoning relief. The 20 Sumner Road structure was built in 1923 prior to the 1924 adoption of the CZO and its

provisions which govern the maximum allowable floor area permitted on a lot. The structure is also considered legally nonconforming for use, setback, parking, and loading.

The proposed addition on the east side of the building will add 1,468 square feet of space that is attributable to gross floor area. This addition will increase the nonconformity of the maximum gross floor area on the lot, and the corresponding FAR. A literal enforcement of the zoning provisions would require that the building size remain unchanged and usable program space be reduced in order to incorporate the required code compliance and accessibility modifications. Fully meeting the specific dimensional and spatial requirements associated with the required modifications within the building would result in the loss of approximately 300 square feet, or about 7% of the building's floor area, which is already significantly constrained. Given the global importance of addressing sustainability challenges, the CGBC is in need of additional space to house researchers. Maintaining the structure in its current size would present a substantial hardship to the Harvard Graduate School of Design as it would significantly limit the Center for Green Buildings and Cities' ability to address its programmatic space needs within its existing buildings and to meet its accessibility obligations. Moreover, meeting those space needs in another location would substantially and adversely affect the academic goal of this project, which is to serve as a pilot project for sustainable renovations of residential wood-frame buildings, as well as to test out sustainable approaches for new construction, in order to support the CGBC's overall mission.

The requested zoning relief will allow the CGBC to make required accessibility improvements to 20 Sumner Road while meeting the programmatic requirement. A literal enforcement of the zoning provisions would necessitate a more limited renovation scope, precluding full building accessibility, needed building code improvements, and transformative sustainability improvements to the building and site. It would therefore place limitations on the building's continued institutional use and its ability to serve as a pilot project for advancing innovative sustainability approaches.

B) The hardship is owing to the following circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located for the following reasons:

20 Sumner Road was originally constructed in 1923 as a single-family residence. Although the building has been in institutional use for more than four decades, it has seen limited physical modification from its original residential use. As a building in institutional use it must comply with many building and code requirements (including those related to accessibility) that would not normally affect structures in private residential use. The layout, configuration and structural characteristics of what was originally a residential building create limitations on accommodating the upgrades and other modifications required for contemporary institutional uses.

The site is located in a Residence B zoning district, which has an FAR that diminishes after the first 5,000 square feet, thus imposing stricter development provisions the larger the lot is. This lot is 43,922 square feet, as it combines four contiguous lots under common ownership, consistent with the requirement to merge such lots. The average lot size of all other lots in this Residence B zoning district is approximately 5,700 square feet, representing one-eighth the size of the 20 Sumner Road site, and the average FAR in the district is approximately 1.24, more than double the 0.61 proposed at this site. The resulting building will be consistent with the prevailing scale in the district and less than half of the average density of the district.

The combination of the building's physical characteristics, its continued utilization for institutional use, and the large lot size are conditions that do not generally affect properties in the Residence B zoning district.

C) Desirable relief may be granted without either:

1) Substantial detriment to the public good for the following reasons:

Rather than create a detriment to the public good, the proposed project at 20 Sumner Road will result in public benefits in terms of supporting research and innovation in building sustainability, expanding site greenspace, improving the building's accessibility, and investing in the historic resources of Cambridge.

This project responds to the City's policy goals for research, best practices and governance related to sustainability and climate change, as manifested in recent City initiatives including the "Getting to Net Zero Task Force" and the

Cambridge Compact for a Sustainable Future. The 20 Sumner Road project is itself a research project, testing innovative ideas for retrofitting a residential wood-frame structure in an environmentally sustainable way. This project directly responds to the Cambridge Growth Policy 50, which states that “The City should recognize the need for the major institutions to adapt and respond to changing circumstances to maintain their leadership positions in...research while recognizing, responding to and coordinating with City policy goals.” The minor expansion of this house and research center represents a unique opportunity to respond to both the City’s and the University’s goals related to sustainability and climate change.

In addition, the project replaces a large asphalt surface parking lot with nearly 4,000 square feet of new greenspace. The project will dramatically improve the accessibility of the building for persons with disabilities including the introduction of an accessible entrance, elevator, and toilet rooms. Through this project, Harvard is investing in a 90+ year old building, and therefore preserving the character of Mid Cambridge.

2) Relief may be granted without nullifying or substantially derogating from the intent or purpose of this Ordinance for the following reasons:

Both the Massachusetts Zoning Act and the Cambridge Zoning Ordinance allow nonconforming buildings to remain in place, and even to be expanded, so long as the change, extension or alteration is not substantially more detrimental to the neighborhood. The 20 Sumner Road addition can be readily accommodated on the site in a manner that respects the neighborhood character and does not impact the overall physical character of the lot or the surrounding neighborhood. As noted above, because of the disproportionate effect of the FAR requirement on larger lots, the project will be consistent with the prevailing scale in the district and less than half of the average density of the district. The proposed project will result in no adverse impacts in terms of traffic or shadows, and the project was designed to provide public benefits of improved accessibility, increased open space, and sustainable building means and methods. Therefore, requested relief does not nullify or substantially derogate from the intent or purpose of the Ordinance. Granting the requested variance will support the intent and purpose of the Ordinance, and will permit the preservation of the nonconforming historic structure, while significantly improving its functionality and accessibility.

**BZA APPLICATION FORM
DIMENSIONAL INFORMATION**

APPLICANT: President and Fellows of Harvard College, c/o W. Kevin Cahill, 42-48 Quincy Street, Cambridge MA 02138 PRESENT USE/OCCUPANCY: Institutional Educational, CZO 4.33.b.1

LOCATION: 20 Sumner Road ZONE: Residence B

PHONE: 617-276-5748 REQUESTED USE/OCCUPANCY: Institutional Educational, CZO 4.33.b.1

		<u>EXISTING CONDITIONS</u>	<u>REQUESTED CONDITIONS</u>	<u>ORDINANCE REQUIREMENTS!</u>
<u>TOTAL GROSS FLOOR AREA:</u>		Bld: 4,608 Lot: 25,005	Bld: 6,076 Lot: 26,473	Lot: 15,947 (max.)
<u>LOT AREA:</u>		43,422 sf	No change	5,000 SF (min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA²:</u>		0.58	0.61	0.37 (max.)
<u>LOT AREA FOR EACH DWELLING UNIT:</u>		N/a	N/a	-- (min.)
<u>SIZE OF LOT:</u>	WIDTH	237'+	No change	50' (min.)
	DEPTH	139'+	No change	--
<u>SETBACKS IN FEET:</u>	FRONT – to Sumner Rd	11'-9.5"	No change	15' (min.)
	REAR	N/a	N/a	-- (min.)
	LEFT SIDE – to south prop line	~89'	No change	7'-6" (sum of 20') (min.)
	RIGHT SIDE – to east prop line	70'	33.3'	7'-6" (sum of 20') (min.)
<u>SIZE OF BUILDING:</u>	HEIGHT	30'-1"	No change	35' (max.)
	LENGTH	42'-4 1/4"	94'-5"	--
	WIDTH	38'-1 1/4"	No change	--
<u>RATIO OF USEABLE OPEN SPACE TO LOT AREA³:</u>		N/a	N/a	-- (min.)
<u>NO. OF DWELLING UNITS:</u>		N/a	N/a	-- (max.)
<u>NO. OF PARKING SPACES:</u>		22 spaces allocated	24 spaces allocated	24 spaces (min./ max.)
<u>NO. OF LOADING AREAS:</u>		0	0	0 (min.)
<u>DISTANCE TO NEAREST BUILDING ON SAME LOT:</u>		31'-10"	31'-10"	13.3' (min.)

Describe, where applicable, other occupancies on same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g.; woodframe, concrete, brick, steel, etc.
The following buildings are located on the same lot: 18 Sumner Road (5,200 sf, woodframe), 40 Kirkland Street (7,519 sf, woodframe), 42 Kirkland Street (7,678 sf, woodframe).

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS.)
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.

APPLICATION FORM - GENERAL INFORMATION

CITY OF CAMBRIDGE - BOARD OF ZONING APPEAL

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit _____ Variance X Appeal 2016 OCT 13 PM 3:11

PETITIONER: President and Fellows of Harvard College, c/o W. Kevin Cahill, Harvard Graduate School of Design
OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

PETITIONER'S ADDRESS: Gund Hall, 42-48 Quincy Street, Cambridge, MA 02138

LOCATION OF PROPERTY: 20 Sumner Road

TYPE OF OCCUPANCY: Institutional ZONING DISTRICT: Residence B

REASON FOR PETITION:

- | | |
|--|---------------------|
| <u>X</u> Additions | _____ New Structure |
| _____ Change in Use/Occupancy | _____ Parking |
| _____ Conversion to Add'l Dwelling Units | _____ Sign |
| _____ Dormer | _____ Subdivision |
| | _____ Other: _____ |

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Article _____	Section _____

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Original Signature(s): *W. Kevin Cahill*
(Petitioner(s))
Address: 20 Sumner Road, Cambridge, MA 02138
Tel. No.: 617-276-5748
Date: _____



20 Summer Rd.

Petitioner

142-117
GREENSPUN, PHILIP G.
5 IRVING TERRACE #3
CAMBRIDGE, MA 02138

142-85
YEE, NANCY,
TR OF THE YEE IRVING TRUST
82 COLLINS RD
WABAN, MA 02468

PRESIDENT & FELLOWS OF HARVARD COLLEGE
C/O W. KEVIN CAHILL
HARVARD GRADUATE SCHOOL OF DESIGN
GUND HALL
42-48 QUINCY STREET
CAMBRIDGE, MA 02138

142-71
KLINE, ELIZABETH
15 KIRKLAND RD
CAMBRIDGE, MA 02138

142-72
SPELKE, ELIZABETH S.
11 KIRKLAND RD
CAMBRIDGE, MA 02138

142-74
SHAH, JAYANT & EMMA DUCHANE,
TRS. THE 44 KIRKLAND STREET REALTY TRUST
44 KIRKLAND ST
CAMBRIDGE, MA 02138

142-87
VOGEL, EZRA F. & CHARLOTTE IKELS,
TRUSTEE OF THE EV NOMINEE TRUST
14 SUMMER RD.
CAMBRIDGE, MA 02138

142-117
GROLLMAN, SHARON & NATHANIEL NOVOD
7 IRVING TERR.
CAMBRIDGE, MA 02138

142-35
GARFIELD, DONALD L. &
CITY OF CAMBRIDGE TAX TITLE
707 PARK AVENUE
BALTIMORE, MD 21201

142-129
KON, MARK
C/O BOSTON UNIV MATH & SCEIN DEPT
111 CUMMINGTON ST
BOSTON, MA 02215

144-1 /145-30-36 /143-4-5-6
PRESIDENT & FELLOWS OF HARVARD COLLEGE
C/O HARVARD REAL ESTATE, INC.
HOLYOKE CENTER, ROOM 1000
1350 MASSACHUSETTS AVE
CAMBRIDGE, MA 02138

142-96
CULLEN, KATHY S. & DAVID J. CULLEN
16 KIRKLAND RD
CAMBRIDGE, MA 02138

142-36
USON PROPERTIES LLC
C/O FOLEY HOAG LLP
155 SEAPORT BLVD
BOSTON, MA 02138

142-86
LEE, MIN Y. & YOUNG J. LEE
10-12 SUMNER ROAD
CAMBRIDGE, MA 02138

146-87
RIAL, NANCY E.
4 FRANCIS AVE.
CAMBRIDGE, MA 02138

142-117
LITTMARCK, FANNY
5-7 IRVING TER., #2A
CAMBRIDGE, MA 02138

142-117
AUGENBLICK, KATHY L. &
CITY OF CAMBRIDGE TAX TITLE
5-7 IRVING TER 2B
CAMBRIDGE, MA 02138

142-19-21-20
PRESIDENT & FELLOWS OF HARVARD COLLEGE
48 QUINCY STREET
CAMBRIDGE, MA 02138

142-18
GAY, CLAUDINE & CHRISTOPHER C. AFENDULIS
16 SUMNER RD. UNIT#16
CAMBRIDGE, MA 02139

142-18
DAMROSH, DAVID & LORI FISLER DAMROSH
18 SUMNER RD.
CAMBRIDGE, MA 02139

142-104
9 ASHTON PLACE, LLC
C/O LEE J. & DANIEL M. GUZOVSKY
30 PETERBOROUGH ST., #34
BOSTON, MA 02215

142-73
ALTSTEIN, LILY L.
7 KIRKLAND RD
CAMBRIDGE, MA 02138



CAMBRIDGE HISTORICAL COMMISSION

831 Massachusetts Avenue, 2nd Floor, Cambridge, Massachusetts 02139

Telephone: 617 349 4683 TTY: 617 349 6112

E-mail: histcomm@cambridgema.gov URL: http://www.cambridgema.gov/Historic

William B. King, *Chair*, Bruce A. Irving, *Vice Chair*, Charles M. Sullivan, *Executive Director*

William G. Barry, Jr., Shary Page Berg, Robert G. Crocker, Chandra Harrington,

Jo M. Solet, *Members*; Joseph V. Ferrara, Kyle Sheffield, Susannah Barton Tobin, *Alternates*

Jurisdiction Advice

To the Owner of Property at 20 Sumner Road

The above-referenced property is subject to the jurisdiction of the Cambridge Historical Commission (CHC) by reason of the status referenced below:

- Old Cambridge Historic District
- Fort Washington Historic District
(M.G.L. Ch. 40C, City Code §2.78.050)
- Avon Hill Neighborhood Conservation District
- Half Crown – Marsh Neighborhood Conservation District
- Harvard Square Conservation District
- Mid Cambridge Neighborhood Conservation District
Approved by MCNDC on Oct. 17, 2016.
- Designated Landmark
- Property is being studied for designation: _____
(City Code, Ch. 2.78., Article III, and various City Council Orders)
- Preservation Restriction or Easement (as recorded)
- Structure is fifty years or more old and therefore subject to CHC review of any application for a demolition permit, if one is required by ISD. (City Code, Ch. 2.78, Article II). **See the back of this page for definition of demolition.**
- No jurisdiction: not a designated historic property and the structure is less than fifty years old.
- No local jurisdiction, but the property is listed on the National Register of Historic Places; CHC staff is available for consultation, upon request.
Staff comments: _____

The Board of Zoning Appeal advises applicants to complete Historical Commission or Neighborhood Conservation District Commission reviews before appearing before the Board.

If a line indicating possible jurisdiction is checked, the owner needs to consult with the staff of the Historical Commission to determine whether a hearing will be required.

CHC staff initials SLB

Date October 18, 2016

Received by Uploaded to Energov

Date October 18, 2016

Relationship to project BZA 11702-2016

cc: Applicant
Inspectional Services Commissioner

Demolition Delay Ordinance and Application Information

The Demolition Delay Ordinance (Chapter 2.78, Article II of the Cambridge Municipal Code) was adopted by the City Council in 1979 to afford public review of demolition permit applications for potentially significant buildings. When the Historical Commission determines that a building is significant and should be preserved, demolition will be delayed for up to six months so that solutions can be sought to preserve the building indefinitely. The Ordinance covers all buildings over 50 years old, city-wide. The Historical Commission archives provide dates of construction for all properties in the City.

Demolition is defined in the ordinance as "the act of pulling down, destroying, removing or razing a building or commencing the work of total or substantial destruction with the intent of completing the same." The Inspectional Services Commissioner has provided further guidelines to outline what actions require a demolition permit. **In addition to complete demolition of a building, the following actions may require a demolition permit,**

- **removal of a roof,**
- **removal of one side of a building,**
- **gutting of a building's interior to the point where exterior features (windows, etc.) are impacted, and**
- **removal of more than 25% of a structure.**

Please contact the building inspector or a staff member of the Historical Commission if you have questions about whether a demolition permit is required for a particular project.

Demolition permit applications can be obtained from the Inspectional Services Department. The completed application should be submitted to the Historical Commission, where the staff will review the application. If the Executive Director of the Historical Commission makes an initial determination that the building is significant, a public hearing will be scheduled with Historical Commission. If the staff makes an initial determination that the building is not significant, the application is released for further review by the Building Commissioner.

More information about the demolition permit application procedures is available on the Historical Commission's web site or by calling or dropping by the Historical Commission office.

July 2003

Cambridge Historical Commission
831 Massachusetts Ave., 2nd Fl.
Cambridge, MA 02139
Ph: 617/349-4683 or TTY: 617/349-6112
<http://www.cambridgema.gov/Historic>

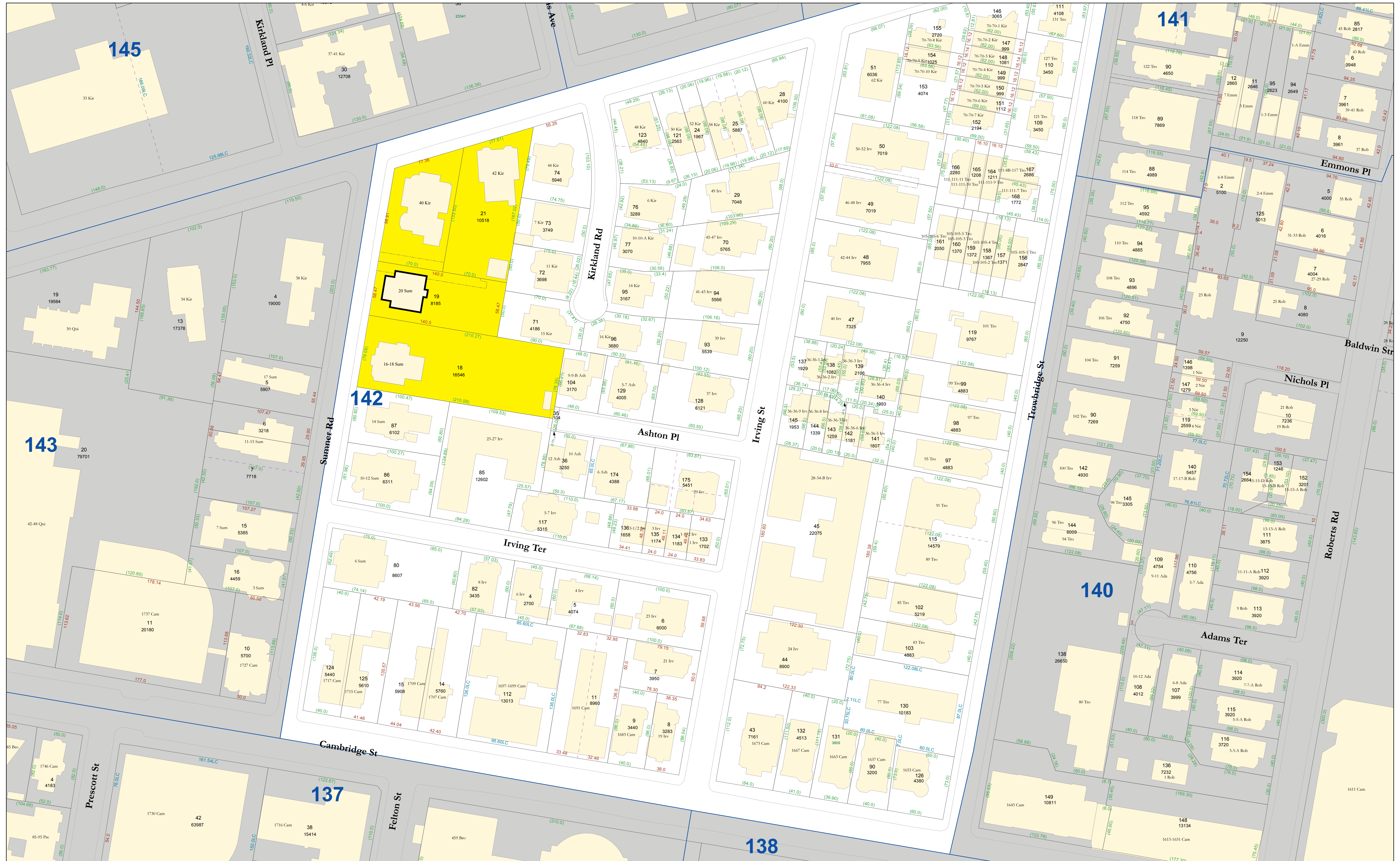


**20 Sumner Road
House Zero**
Board of Zoning Appeal Application

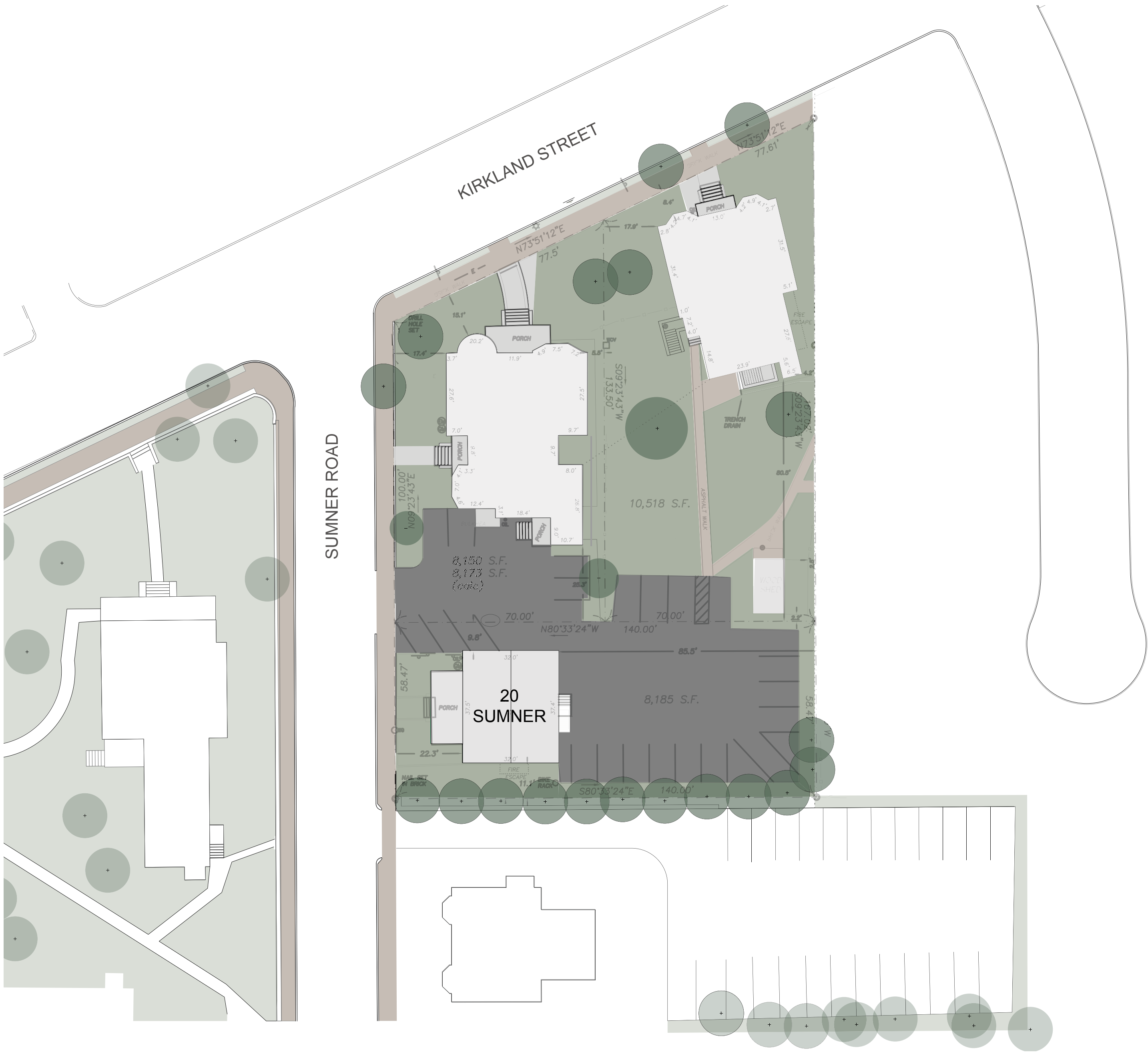
11 October 2016

Snøhetta
Harvard University - Harvard Graduate School of Design

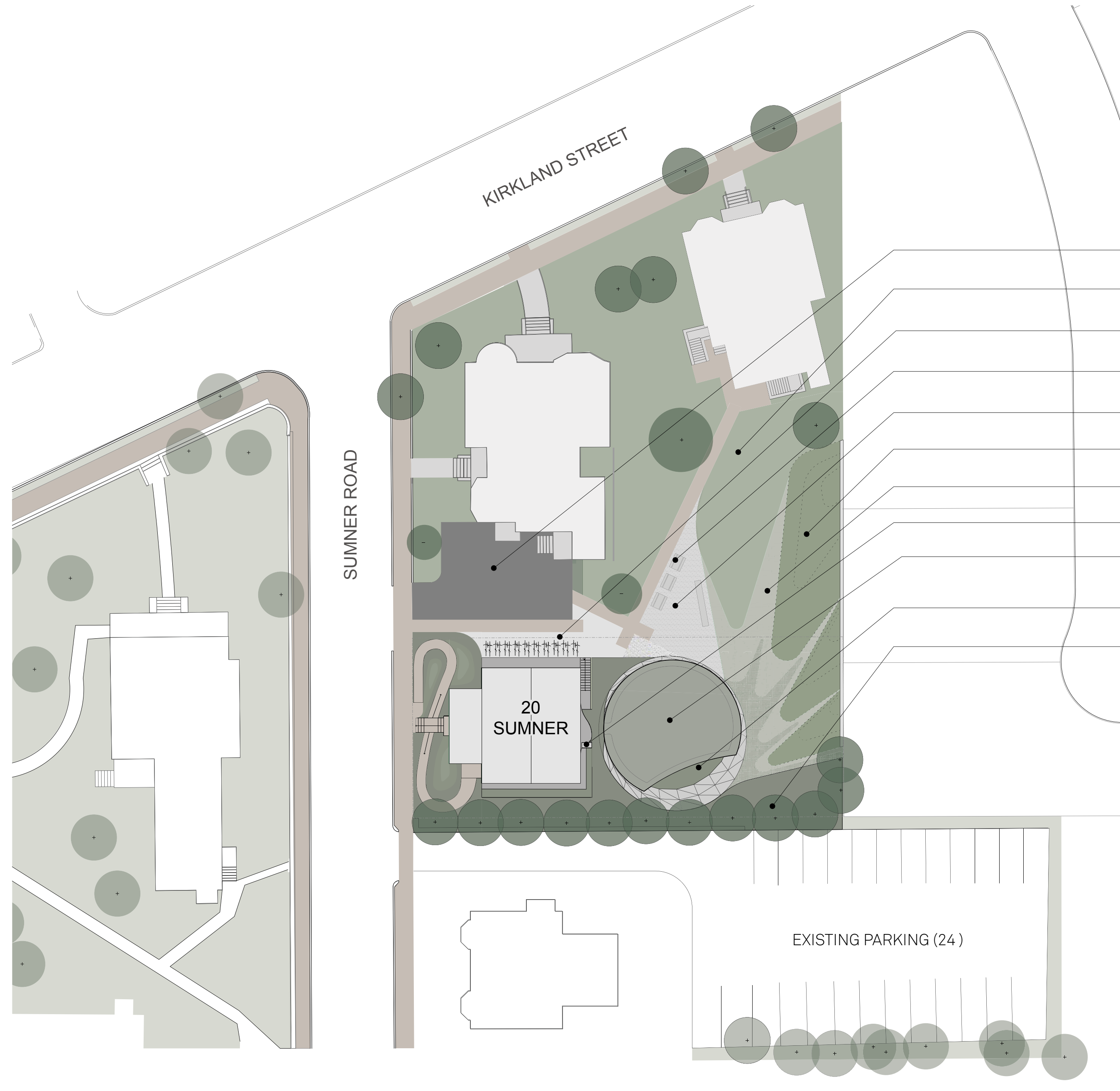
20 Sumner Rd - Assessor's Plat



20 Sumner Rd - Site Plan



Existing

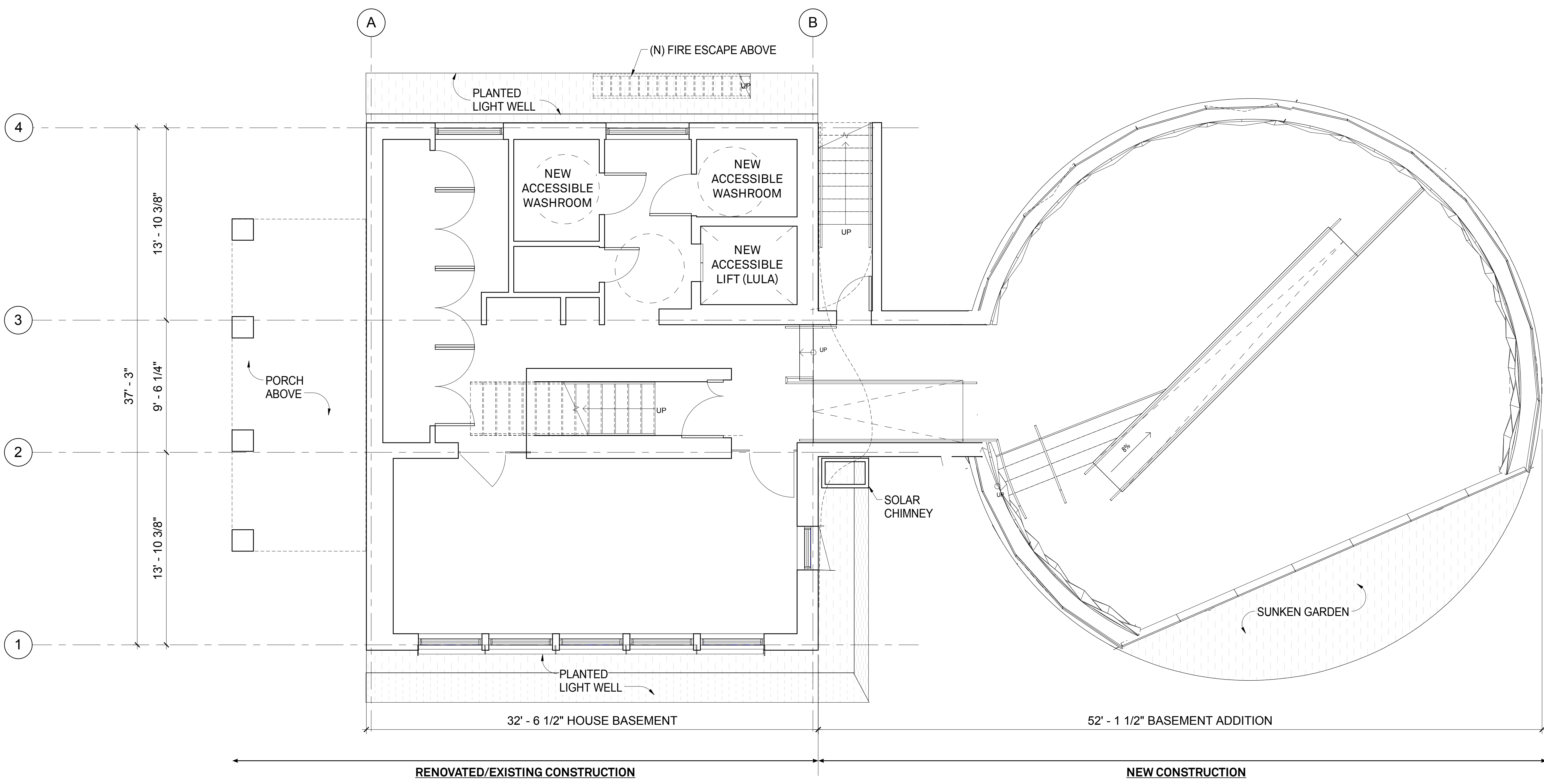


Proposed

- SERVICE DRIVEWAY (PAVED)
- LAWN (PLANTED)
- RELOCATED BIKE PARKING (22 - PAVED)
- NEW PATH (PAVED)
- NEW PATIO SPACE W/ SEATING (PAVED)
- NEW RETAINED SOIL BERMS (PLANTED)
- NEW RAIN GARDEN (PLANTED)
- NEW SOLAR CHIMNEY
- NEW BASEMENT EXPANSION (GREEN ROOF)
- NEW SUNKEN GARDEN (PLANTED)
- EXISTING BIRCH TREES TO REMAIN

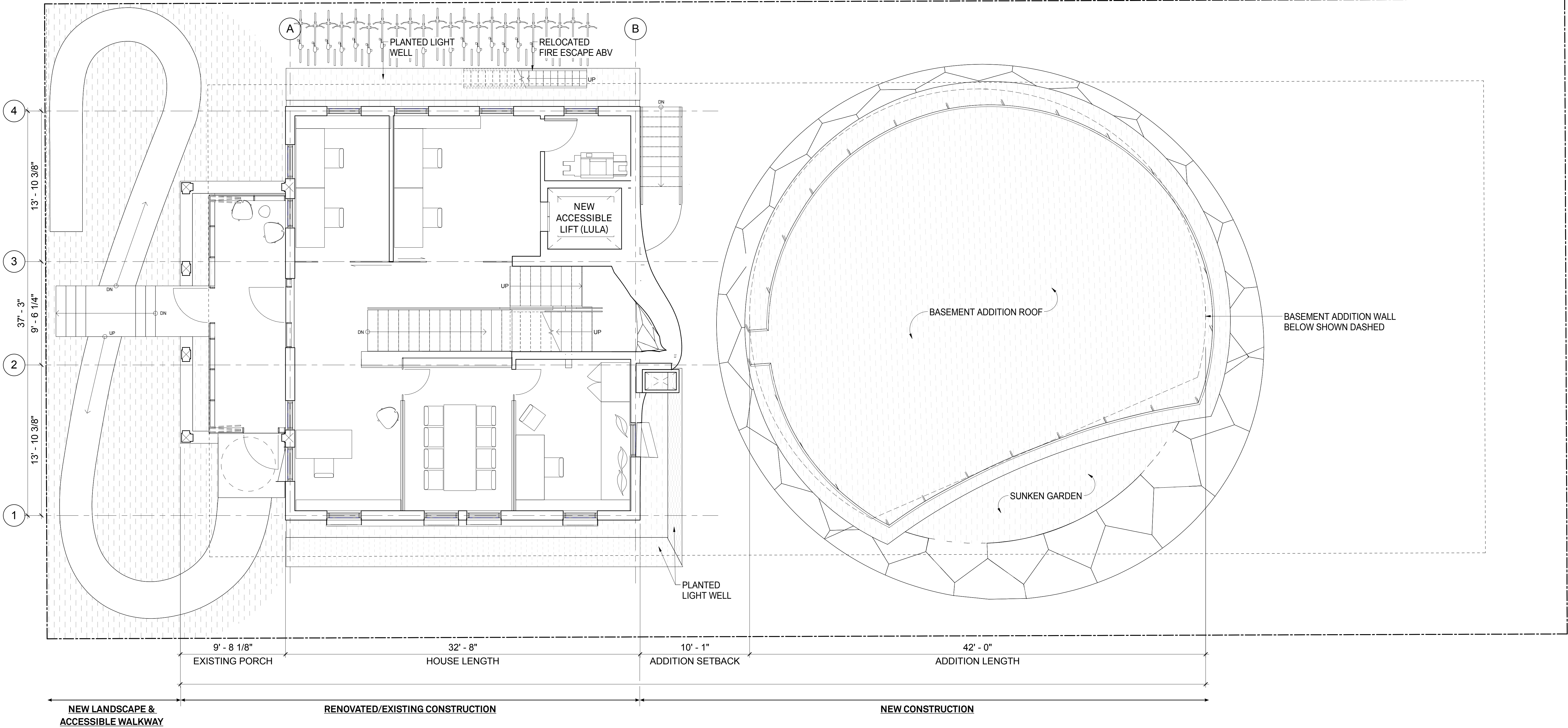


20 Sumner Rd - Proposed Construction Plans



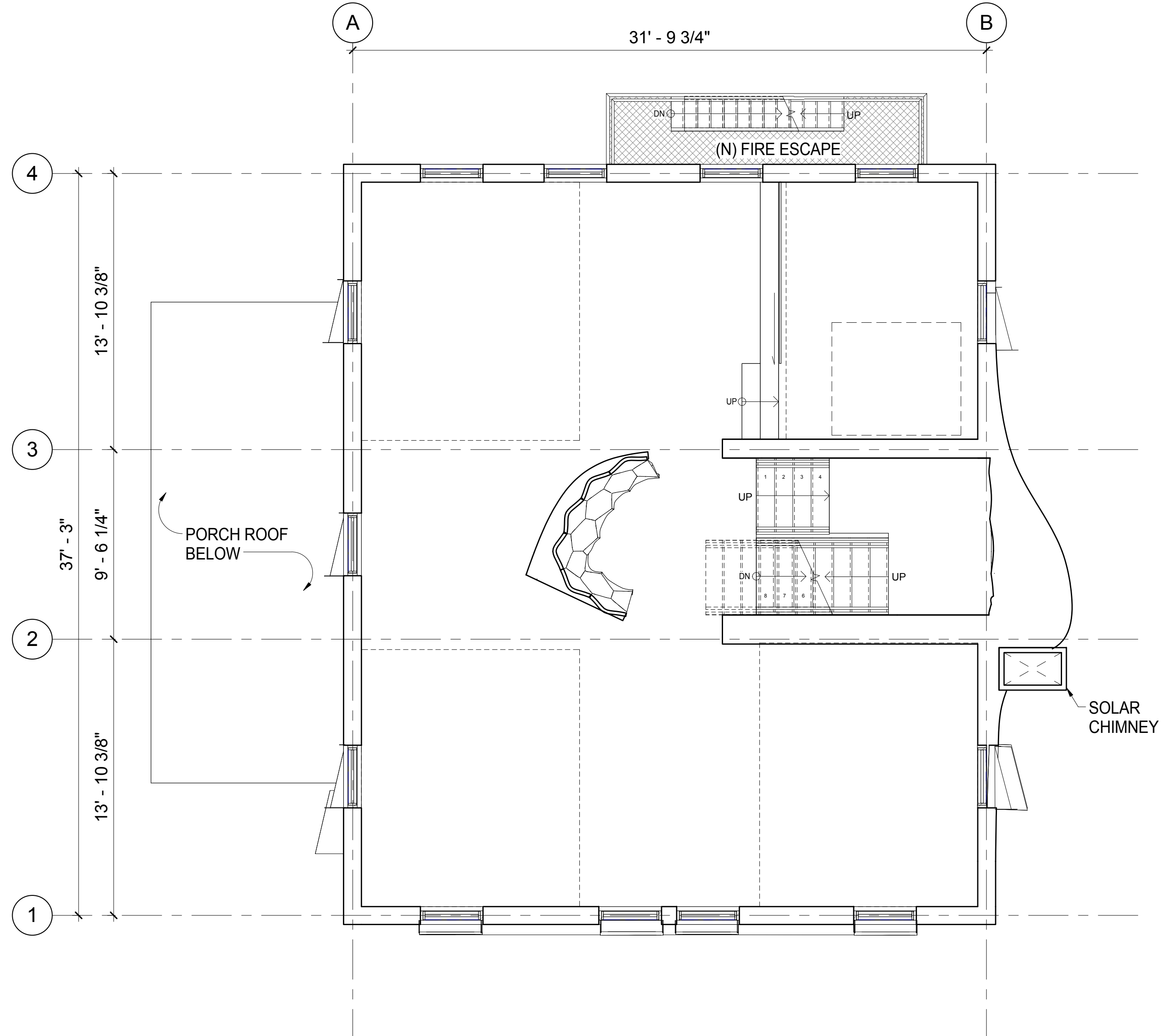
Basement Level (Proposed)

20 Sumner Rd - Proposed Construction Plans

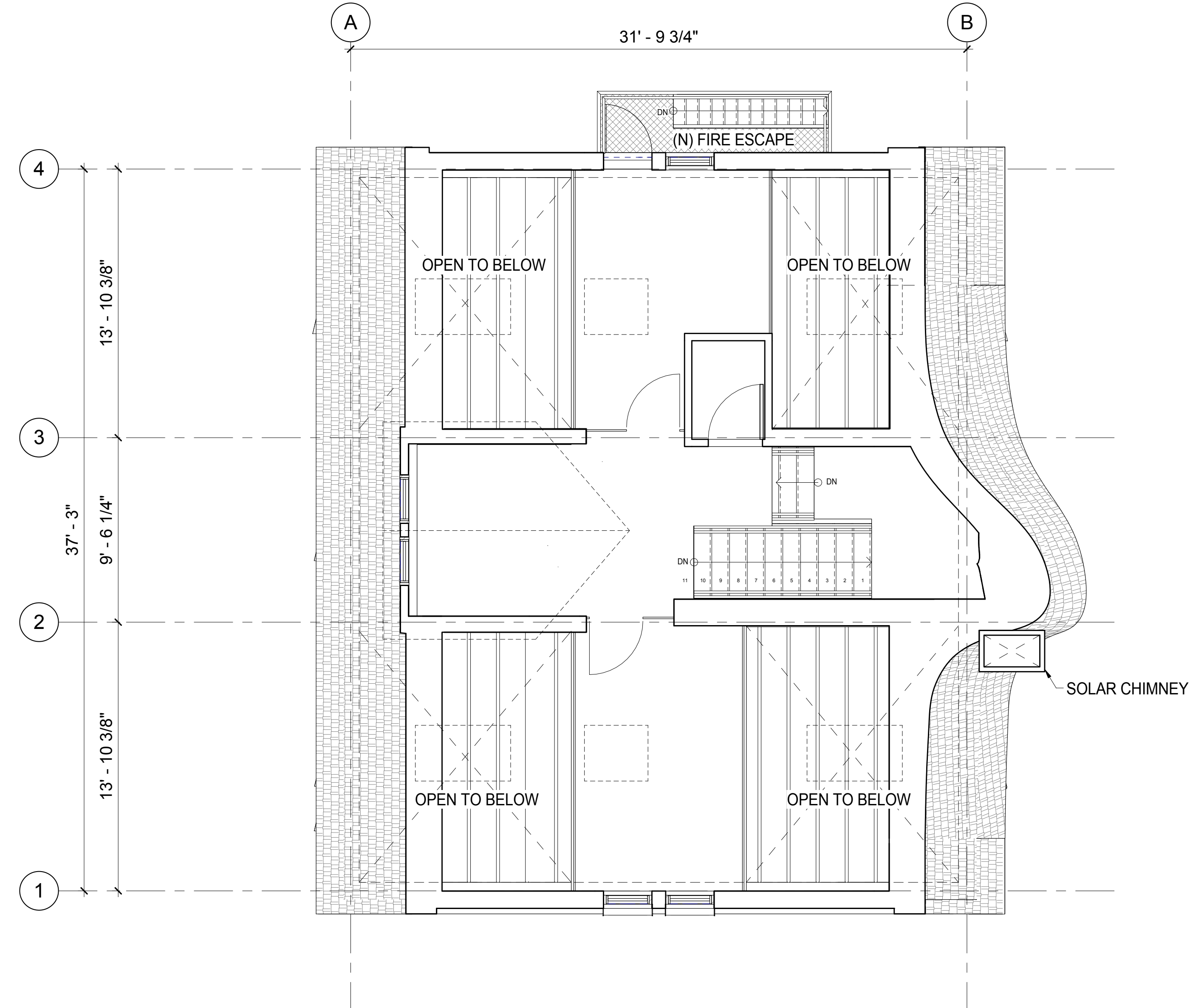


Level 1 (Proposed)

20 Sumner Rd - Proposed Construction Plans

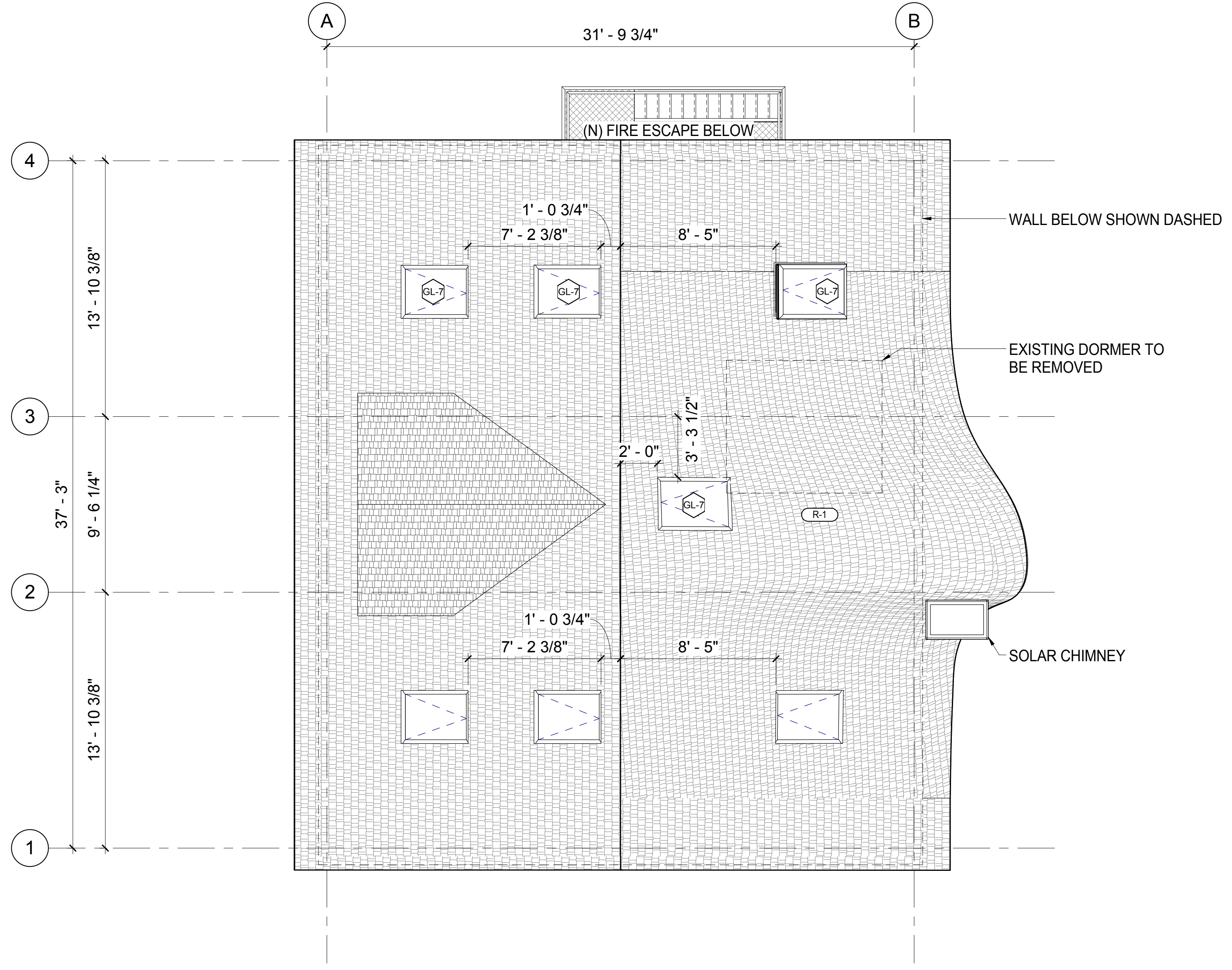


Level 2 (Proposed)



Level 3 (Proposed)

20 Sumner Rd - Proposed Construction Plans



Roof Level (Proposed)

20 Sumner Rd - Proposed Elevations

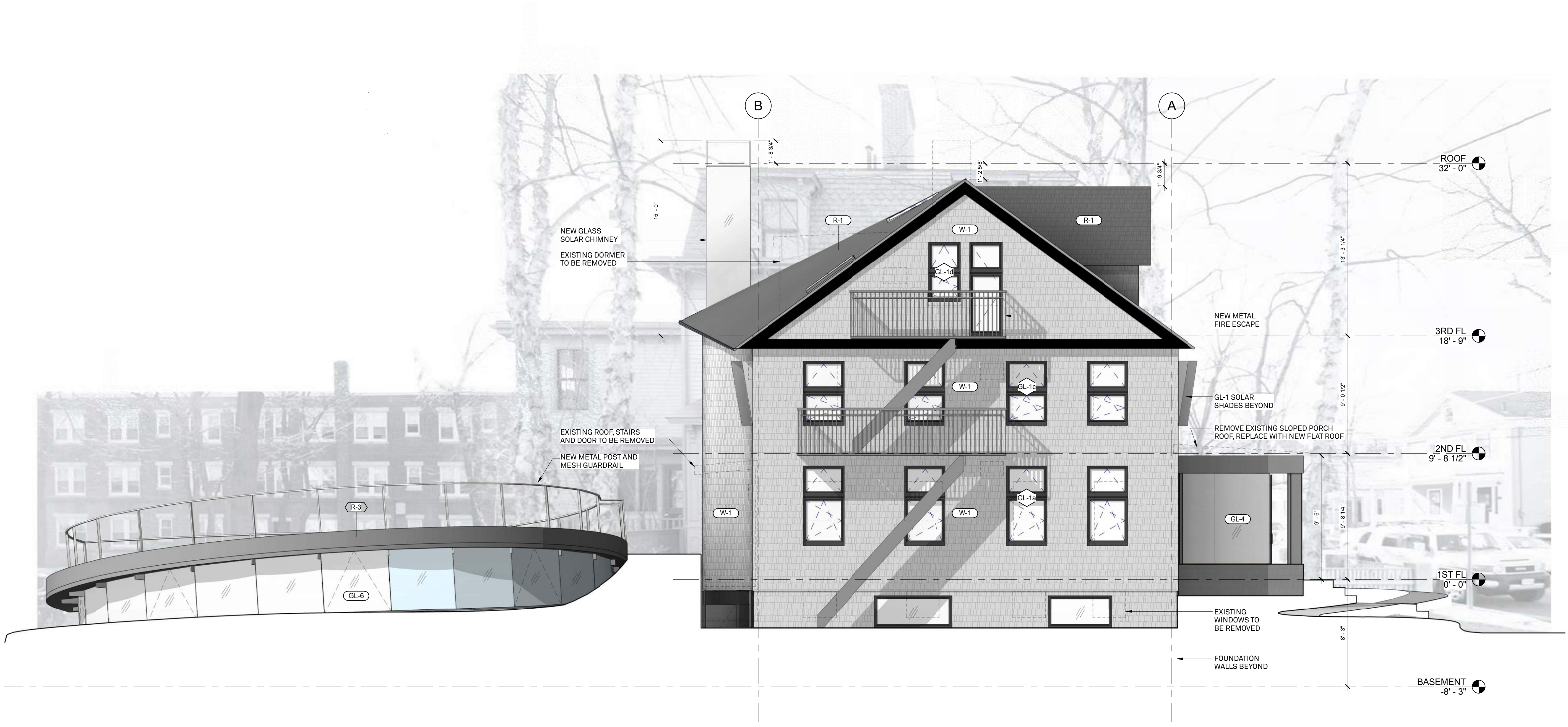


West Elevation (Proposed)

Material Key:

GL-1	New high-performance windows	R-1	New photovoltaic roofing slates
GL-4	New glass porch vestibule	R-2	New roofing slate
GL-6	New butt-glazed windows & wood mullions	R-3	New green roof
GL-7	New high-performance skylights	W-1	New white cedar shingles

20 Sumner Rd - Proposed Elevations

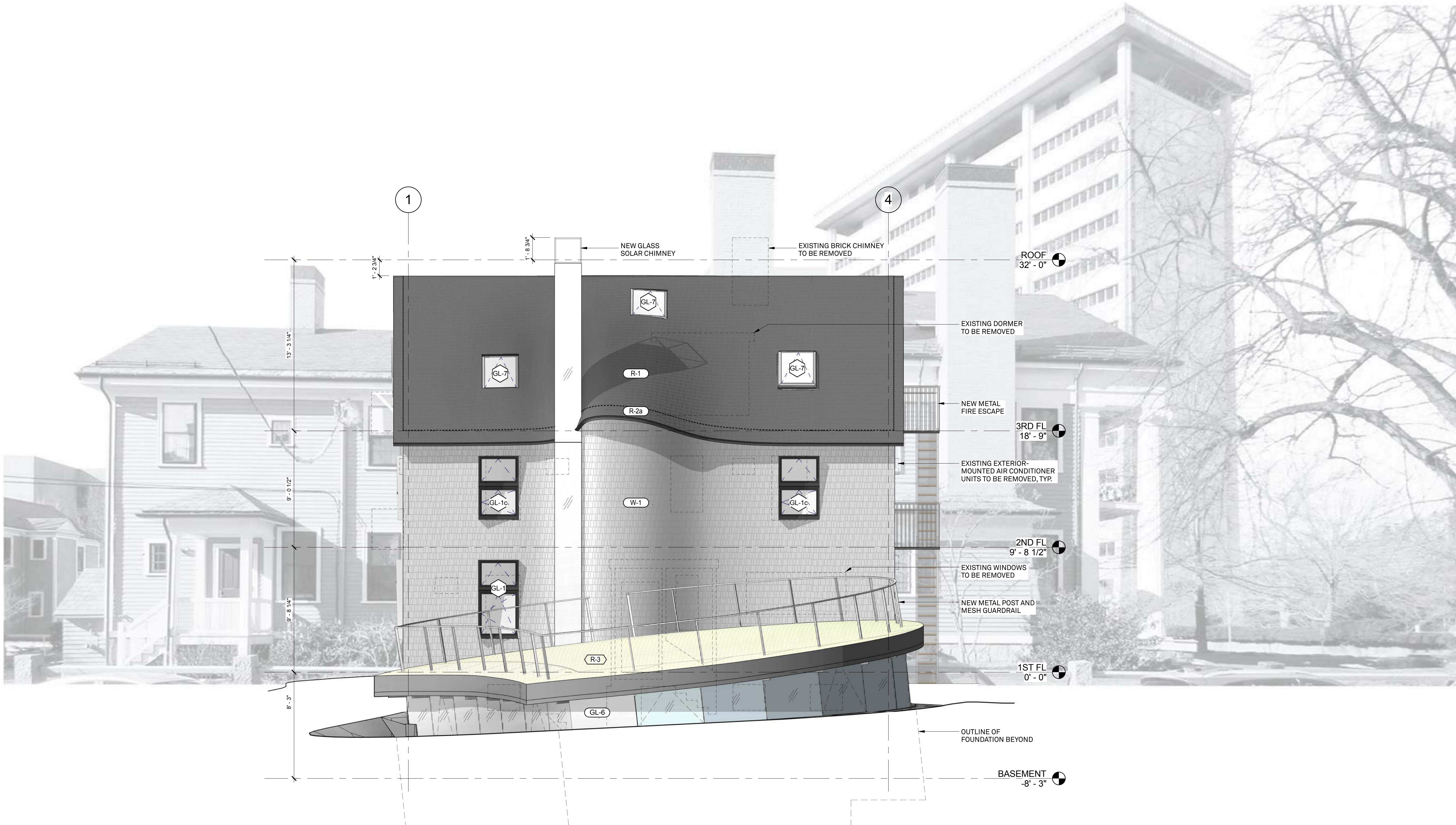


North Elevation (Proposed)

Material Key:

- | | | | |
|------|---|-----|---------------------------------|
| GL-1 | New high-performance windows | R-1 | New photovoltaic roofing slates |
| GL-4 | New glass porch vestibule | R-2 | New roofing slate |
| GL-6 | New butt-glazed windows & wood mullions | R-3 | New green roof |
| GL-7 | New high-performance skylights | W-1 | New white cedar shingles |

20 Sumner Rd - Proposed Elevations



East Elevation (Proposed)

Material Key:

GL-1	New high-performance windows	R-1	New photovoltaic roofing slates
GL-4	New glass porch vestibule	R-2	New roofing slate
GL-6	New butt-glazed windows & wood mullions	R-3	New green roof
GL-7	New high-performance skylights	W-1	New white cedar shingles

20 Sumner Rd - Proposed Elevations



South Elevation (Proposed)

Material Key:

GL-1	New high-performance windows	R-1	New photovoltaic roofing slates
GL-4	New glass porch vestibule	R-2	New roofing slate
GL-6	New butt-glazed windows & wood mullions	R-3	New green roof
GL-7	New high-performance skylights	W-1	New white cedar shingles

20 Sumner Rd - Existing Conditions



Front (West) & Side (North) Facades



Rear (East)



Side (South)

20 Sumner Rd - View from Street (Northwest)



Existing



Proposed

20 Sumner Rd - View from Street (Southwest)



Existing



Proposed

20 Sumner Rd - View from Rear



Existing



Proposed

20 Sumner Rd - View from Rear (Northeast)



Existing



Proposed

20 Sumner Rd - Sustainability Concepts

Solar Thermal

Panels on the south side of the dormer capture solar thermal energy, which is used to heat domestic hot water.

Improved Envelope

Insulation, air tightness and waterproofing are substantially increased through improvements to the existing exterior walls and roof.

Power Production

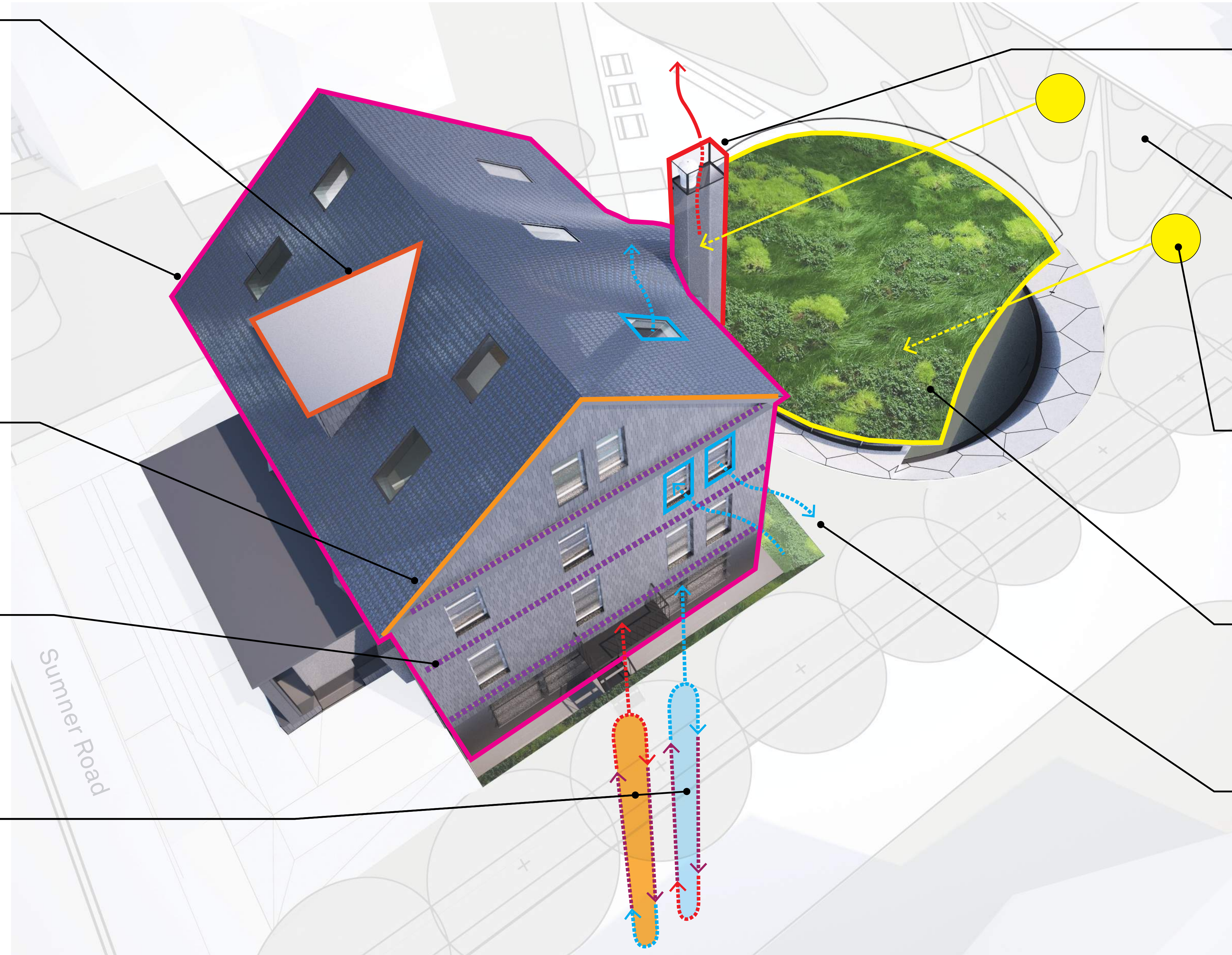
Minimal on site power needs are met by photovoltaic shingles on roof, and stored via batteries in the house.

Thermal Energy Storage

Mass is increased in the house by adding heavy finishes to the floors & stairs in order to store thermal energy and slowly release it throughout each day and season.

Zero Heating/Cooling

All heating and cooling energy is exchanged in the ground through geothermal wells and released through radiant slabs in the house



Solar Chimney

uses air heated by the sun to pull air from basement spaces below to properly ventilate meeting spaces that typically have more occupants than the offices.

Rain Garden & Landscape

in replacing an existing parking lot, the new rear yard landscape will retain stormwater on site, and will keep excavated earth on site to minimize landfill using new plantings and berms to create spaces for people to enjoy.

100% Daylight Autonomy

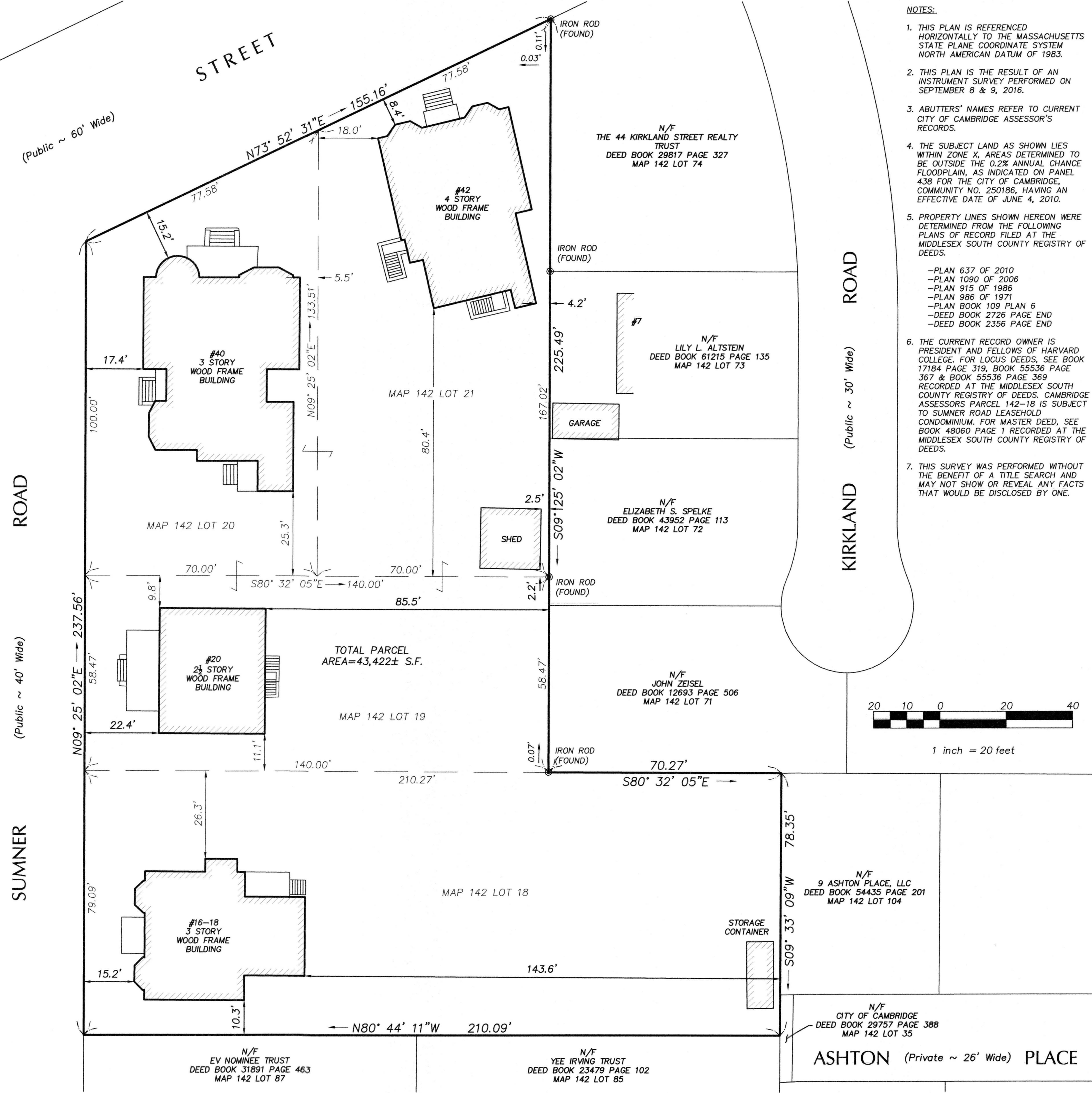
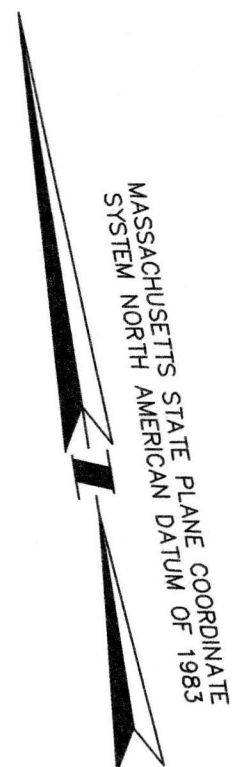
No artificial light is required during daylight hours on non-cloudy days. Roof and window treatments are custom shaped to allow maximum light during the winter, and no direct daylight during the summer.

Green Roof

to help control storm runoff, reduce solar gain on roof and reduce visual impact by blending in with the landscape.

100% Natural Ventilation

is maintained through smart window technology which uses weather and CO² data in the house to automatically open & close certain windows as needed for a healthy interior environment.

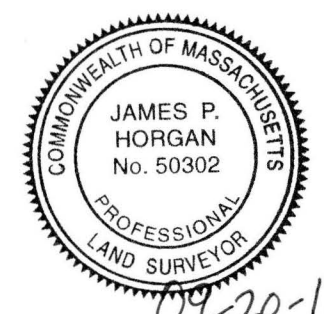


- NOTES:**
1. THIS PLAN IS REFERENCED HORIZONTALLY TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983.
 2. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY PERFORMED ON SEPTEMBER 8 & 9, 2016.
 3. ABUTTERS' NAMES REFER TO CURRENT CITY OF CAMBRIDGE ASSESSOR'S RECORDS.
 4. THE SUBJECT LAND AS SHOWN LIES WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS INDICATED ON PANEL 438 FOR THE CITY OF CAMBRIDGE, COMMUNITY NO. 250186, HAVING AN EFFECTIVE DATE OF JUNE 4, 2010.
 5. PROPERTY LINES SHOWN HEREON WERE DETERMINED FROM THE FOLLOWING PLANS OF RECORD FILED AT THE MIDDLESEX SOUTH COUNTY REGISTRY OF DEEDS.
 - PLAN 637 OF 2010
 - PLAN 1090 OF 2006
 - PLAN 915 OF 1986
 - PLAN 986 OF 1971
 - PLAN BOOK 109 PLAN 6
 - DEED BOOK 2726 PAGE END
 - DEED BOOK 2356 PAGE END
 6. THE CURRENT RECORD OWNER IS PRESIDENT AND FELLOWS OF HARVARD COLLEGE. FOR LOCUS DEEDS, SEE BOOK 17184 PAGE 319, BOOK 55536 PAGE 367 & BOOK 55536 PAGE 369 RECORDED AT THE MIDDLESEX SOUTH COUNTY REGISTRY OF DEEDS. CAMBRIDGE ASSESSOR'S PARCEL 142-18 IS SUBJECT TO SUMNER ROAD LEASEHOLD TO CONDOMINIUM. FOR MASTER DEED, SEE BOOK 48060 PAGE 1 RECORDED AT THE MIDDLESEX SOUTH COUNTY REGISTRY OF DEEDS.
 7. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE SEARCH AND MAY NOT SHOW OR REVEAL ANY FACTS THAT WOULD BE DISCLOSED BY ONE.



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**16-18 & 20 SUMNER ROAD
 40 & 42 KIRKLAND STREET
 CAMBRIDGE, MASSACHUSETTS**



James P. Horgan
 JAMES P. HORGAN - P.L.S. No. 50302
 REGISTERED PROFESSIONAL
 LAND SURVEYOR FOR
 SAMIOTES CONSULTANTS, INC.

REVISION

**CERTIFIED
 PLOT PLAN**

JOB # 16097.00
 DATE: 09-20-16
 SCALE: 1"=20'
 DRAWN BY: JPH
 REVIEWED BY: TMC

HARVARD
PLANNING & PROJECT MANAGEMENT



October 13, 2016

Mr. Ranjit Singanayagam, Commissioner
City of Cambridge Inspectional Services Department
831 Massachusetts Avenue
Cambridge, Massachusetts 02139

RE: Zoning Variances, 20 Sumner Road

Dear Mr. Singanayagam:

Harvard University is seeking zoning relief to facilitate the planned renovation of 20 Sumner Road, a building occupied by the Harvard Center for Green Buildings and Cities (CGBC), a program affiliated with the Harvard University Graduate School of Design. This project at 20 Sumner Road will test innovative ideas for retrofitting a residential wood-frame structure in an environmentally sustainable manner while supporting the research team driving this innovation. The project involves renovating the existing structure to introduce sustainability upgrades, reorganize the space, and address accessibility requirements. The project also calls for a small rear addition that is partially below grade, which is the subject of the zoning relief.

Zoning variances are being sought to 1) exceed the maximum floor area ratio for the lot; 2) permit the alteration and enlargement of a nonconforming structure not otherwise permitted by issuance of a building permit or special permit. The proposed project will otherwise comply with all applicable zoning requirements.

The project will be reviewed by the Mid Cambridge Neighborhood Conservation District Commission. Harvard has hosted a community open house to share information on this project with the Cambridge community.

Please contact me at (617) 384-8155 if you have any questions regarding this application. Thank you in advance for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Alexandra Offiong".

Alexandra Offiong
Director of Planning Services

Enclosure

CC: Ali Malkawi, Kevin Cahill, Thomas Lucey, Tanya Iatridis

BOARD OF ZONING APPEAL APPLICATION FORM

PROPERTY LOCATION: 20 Sumner Road **DATE:** 10/13/2016
PETITIONER OR REPRESENTATIVE: President & Fellows of Harvard College, c/o W. Kevin Cahill
ADDRESS & PHONE: Harvard Graduate School of Design, 42-48 Quincy St, Cambridge, 02138, 617-276-5748
BLOCK: 142 **LOT:** 142-18, 142-19, 142-20, 142-21

PLEASE CHECK THAT YOU HAVE INCLUDED THE FOLLOWING WITH YOUR APPLICATION. APPLICATIONS WILL NOT BE ACCEPTED FOR PROCESSING & SCHEDULING UNLESS ALL REQUIRED DOCUMENTS ARE PROVIDED. PLEASE INCLUDE THIS CHECKLIST WITH YOUR APPLICATION. ALL DOCUMENTS ARE TO BE TYPED OR WRITTEN LEGIBLY.

	<u>REQUIRED</u>	<u>ENCLOSED</u>
Application Form -3 copies with original signatures	<u>X</u>	<u>X</u>
Supporting Statements	<u>X</u>	<u>X</u>
Application Fee (\$494.00 - See attached fee schedule)	<u>X</u>	<u>X</u>
Assessor's Plat (Available at Engineering Dept. - 147 Hampshire Street).	<u>X</u>	<u>X</u>
Dimensional Form - Refer to Cambridge Zoning Ordinance - 2 copies (Subject to further review by Zoning Specialist)	<u>X</u>	<u>X</u>
Ownership Certificate, Notarized - 2 copies	<u>X</u>	<u>X</u>
Floor Plans - 2 copies	<u>X</u>	<u>X</u>
Elevations - 2 copies*	<u>X</u>	<u>X</u>
Certified Plot Plan - 2 copies (by Registered Land Surveyor)	<u>X</u>	<u>X</u>
Photographs Of Property	<u>X</u>	<u>X</u>
Parking Plan (if relevant to your application)	<u> </u>	<u> </u>
FOR SUBDIVISION ALSO INCLUDE:**	<u> </u>	<u> </u>
Proposed Deeds	<u> </u>	<u> </u>
Evidence of Separate Utilities ***	<u> </u>	<u> </u>
Proposed Subdivision Plan	<u> </u>	<u> </u>

Petitioners are advised to refer to Attachment A (Procedures for Applying to the Board of Zoning Appeal) & consult zoning staff for review. It is advisable for the Petitioner to discuss the petition with the abutters as listed in the Zoning BZA Case file.

***For special Permits under Art. 4.32.G.1 (Communication Towers and Antennas), include a photo simulation.**

****See attachment G.**

*****Can be submitted after subdivision has been approved.**

(BZA - PG. 1)

APPLICATION FORM - GENERAL INFORMATION

CITY OF CAMBRIDGE - BOARD OF ZONING APPEAL

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit _____ Variance _____ X Appeal _____

PETITIONER: President and Fellows of Harvard College, c/o W. Kevin Cahill, Harvard Graduate School of Design

PETITIONER'S ADDRESS: Gund Hall, 42-48 Quincy Street, Cambridge, MA 02138

LOCATION OF PROPERTY: 20 Sumner Road

TYPE OF OCCUPANCY: Institutional ZONING DISTRICT: Residence B

REASON FOR PETITION:

- X Additions New Structure
Change in Use/Occupancy Parking
Conversion to Add'l Dwelling Units Sign
Dormer Subdivision
Other:

DESCRIPTION OF PETITIONER'S PROPOSAL:

Petitioner proposes building addition and alternation requiring relief with respect to maximum ratio of floor area to lot area and alteration and enlargement of a nonconforming structure and use.

SECTIONS OF ZONING ORDINANCE CITED:

Table with 2 columns: Article, Section. Row 1: Article 5.000, Section 5.31, Table 5-1, Maximum ratio of floor area to lot area. Row 2: Article 8.000, Section 8.22.3, Alteration or enlargement of a nonconforming structure and use.

Applicants for a Variance must complete Pages 1-5
Applicants for a Special Permit must complete Pages 1-4 and 6
Applicants for an Appeal to the BZA of a Zoning determination by the Inspectional Services Department must attach a statement concerning the reasons for the appeal

Original Signature(s): (Petitioner(s))
Address:
Tel. No.:
Date:

Handwritten signature of W. Kevin Cahill
20 Sumner Road, Cambridge, MA 02138
617-276-5748

BZA APPLICATION FORM - OWNERSHIP INFORMATION

(To be completed by OWNER, signed before a notary, and returned to Secretary of Board of Appeal.)

I/We President and Fellows of Harvard College
(OWNER)

Address: c/o W. Kevin Cahill, Gund Hall, 42-48 Quincy Street, Cambridge, MA 02138

State that I/We own the property located at 20 Sumner Road which is the subject of this zoning application.

The record title of this property is in the name of President and Fellows of Harvard College

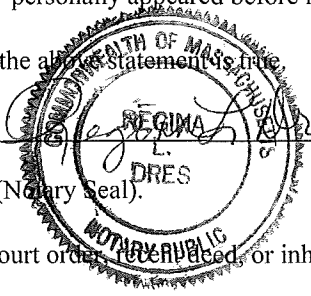
*Pursuant to a deed of duly recorded in the date See list below, Middlesex South County Registry of Deeds at Book, _____, Page _____; or Middlesex Registry District of Land Court, Certificate No. _____ Book _____ Page _____.

Signature by Land Owner or Authorized Trustee, Officer or Agent*

Commonwealth of Massachusetts, County of Middlesex

The above-name Kevin Cahill personally appeared before me, this

20th of Sept, 20 16, and made oath that the above statements are true.



Notary

My Commission Expires 1/13/2017 (Notary Seal).

* If ownership is not shown in recorded deed, e.g. if by court order, or inheritance, please include documentation.

Book 55536, Page 369, October 5, 2010
Book 10600, Page 417, August 4, 1964

Ownership Form
ATTACHMENT B
(BZA - PG.3)

BZA APPLICATION FORM
DIMENSIONAL INFORMATION

APPLICANT: President and Fellows of Harvard College, c/o W. Kevin Cahill, 42-48 Quincy Street, Cambridge MA 02138 PRESENT USE/OCCUPANCY: Institutional Educational, CZO 4.33.b.1

LOCATION: 20 Sumner Road ZONE: Residence B

PHONE: 617-276-5748 REQUESTED USE/OCCUPANCY: Institutional Educational, CZO 4.33.b.1

		<u>EXISTING CONDITIONS</u>	<u>REQUESTED CONDITIONS</u>	<u>ORDINANCE REQUIREMENTS¹</u>
<u>TOTAL GROSS FLOOR AREA:</u>		Bld: 4,608 Lot: 25,005	Bld: 6,076 Lot: 26,473	Lot: 15,947 (max.)
<u>LOT AREA:</u>		43,422 sf	No change	5,000 SF (min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA²:</u>		0.58	0.61	0.37 (max.)
<u>LOT AREA FOR EACH DWELLING UNIT:</u>		N/a	N/a	-- (min.)
<u>SIZE OF LOT:</u>	<u>WIDTH</u>	237'+	No change	50' (min.)
	<u>DEPTH</u>	139'+	No change	--
<u>SETBACKS IN FEET:</u>	<u>FRONT – to Sumner Rd</u>	11'-9.5"	No change	15' (min.)
	<u>REAR</u>	N/a	N/a	-- (min.)
	<u>LEFT SIDE – to south prop line</u>	~89'	No change	7'-6" (sum of 20") (min.)
	<u>RIGHT SIDE – to east prop line</u>	70'	33.3'	7'-6" (sum of 20") (min.)
<u>SIZE OF BUILDING:</u>	<u>HEIGHT</u>	30'-1"	No change	35' (max.)
	<u>LENGTH</u>	42'-4 1/4"	94'-5"	--
	<u>WIDTH</u>	38'-1 1/4"	No change	--
<u>RATIO OF USEABLE OPEN SPACE TO LOT AREA³:</u>		N/a	N/a	-- (min.)
<u>NO. OF DWELLING UNITS:</u>		N/a	N/a	-- (max.)
<u>NO. OF PARKING SPACES:</u>		22 spaces allocated	24 spaces allocated	24 spaces (min./ max.)
<u>NO. OF LOADING AREAS:</u>		0	0	0 (min.)
<u>DISTANCE TO NEAREST BUILDING ON SAME LOT:</u>		31'-10"	31'-10"	13.3' (min.)

Describe, where applicable, other occupancies on same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g.; woodframe, concrete, brick, steel, etc.

The following buildings are located on the same lot: 18 Sumner Road (5,200 sf, woodframe), 40 Kirkland Street (7,519 sf, woodframe), 42 Kirkland Street (7,678 sf, woodframe).

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.

BZA APPLICATION FORM
SUPPORTING STATEMENT FOR VARIANCES and SPECIAL PERMIT

Requested Relief

President and Fellows of Harvard College, a Massachusetts educational and charitable corporation, acting by and through the Harvard University Graduate School of Design, seeks two variances from the requirements of the Cambridge Zoning Ordinance (“CZO”) that will allow a proposed addition to 20 Sumner Road, an institutional educational building. The following zoning relief is requested:

Variance 1: Maximum Floor Area Ratio (FAR)

(CZO 5.31, Table 5.1 Maximum ratio of floor area to lot area)

- To exceed the maximum floor area ratio (FAR) permitted on the lot;

Variance 2: Alteration or Enlargement of a Nonconforming Structure and Use

(CZO 8.22.3, not otherwise permitted by CZO 8.22.1 and 8.22.2)

- To permit the alteration or enlargement of a nonconforming structure not otherwise permitted by issuance of a building permit or special permit.

Project Description

20 Sumner Road (1923) is a 4,600 square foot wood frame building, home to the Harvard Center for Green Buildings and Cities (CGBC), a program affiliated with the Harvard Graduate School of Design (GSD). The building has been in institutional use since the early 1970s and owned by Harvard since 2010. This building shares a lot with three (3) other buildings: to the north, two (2) Harvard GSD buildings; to the south, a University parking lot and a privately-owned residential condominium on a ground lease.

The CGBC is a research center focused on creating and improving sustainable, high performance buildings and cities. The proposed project at 20 Sumner Road offers a unique opportunity to study and pilot innovative ideas for retrofitting a residential wood-frame structure, a predominant building form in the U.S., in an environmentally sustainable manner while supporting the research team driving this innovation. The project calls for innovative sustainability approaches including geothermal heating, 100% natural ventilation, 100% daylight autonomy. The building will feature an improved envelope, a solar chimney for ventilation, a green roof, the transformation of an existing surface parking lot to greenspace with a rain garden. The proposed scope of work triggers the regulations of the Massachusetts Architectural Access Board including the installation of new accessible entrance, accessible toilet rooms, a new elevator lift and lobbies, and other modifications. (At present the building is not accessible.)

In addition to the comprehensive renovation, the project includes a small rear addition (1,468 sf) to support the CGBC research. The rear addition will be built partially below grade and equipped with a green roof to integrate visually with the surrounding landscape. The addition will contain office space for the researchers, in part to replace the work space lost from the incorporation of accessibility features into the building, as well as to study the sustainability strategies on new construction as well as existing buildings. This is of critical importance to the CGBC’s mission, which studies the effects of both new and existing construction globally. The house renovation, along with a basement addition, would allow the house to perform as a laboratory for both construction types for researchers at the CGBC, while significantly minimizing the addition’s impact as seen from the exterior.

1. Petition – Supporting Statement for Variances for 20 Sumner Road

A) A literal enforcement of the provisions of this Ordinance would involve a substantial hardship, financial or otherwise, to the petitioner or appellant for the following reasons:

The proposed addition will meet all of the provisions of the CZO with the exception of the areas of requested zoning relief. The 20 Sumner Road structure was built in 1923 prior to the 1924 adoption of the CZO and its

provisions which govern the maximum allowable floor area permitted on a lot. The structure is also considered legally nonconforming for use, setback, parking, and loading.

The proposed addition on the east side of the building will add 1,468 square feet of space that is attributable to gross floor area. This addition will increase the nonconformity of the maximum gross floor area on the lot, and the corresponding FAR. A literal enforcement of the zoning provisions would require that the building size remain unchanged and usable program space be reduced in order to incorporate the required code compliance and accessibility modifications. Fully meeting the specific dimensional and spatial requirements associated with the required modifications within the building would result in the loss of approximately 300 square feet, or about 7% of the building's floor area, which is already significantly constrained. Given the global importance of addressing sustainability challenges, the CGBC is in need of additional space to house researchers. Maintaining the structure in its current size would present a substantial hardship to the Harvard Graduate School of Design as it would significantly limit the Center for Green Buildings and Cities' ability to address its programmatic space needs within its existing buildings and to meet its accessibility obligations. Moreover, meeting those space needs in another location would substantially and adversely affect the academic goal of this project, which is to serve as a pilot project for sustainable renovations of residential wood-frame buildings, as well as to test out sustainable approaches for new construction, in order to support the CGBC's overall mission.

The requested zoning relief will allow the CGBC to make required accessibility improvements to 20 Sumner Road while meeting the programmatic requirement. A literal enforcement of the zoning provisions would necessitate a more limited renovation scope, precluding full building accessibility, needed building code improvements, and transformative sustainability improvements to the building and site. It would therefore place limitations on the building's continued institutional use and its ability to serve as a pilot project for advancing innovative sustainability approaches.

B) The hardship is owing to the following circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located for the following reasons:

20 Sumner Road was originally constructed in 1923 as a single-family residence. Although the building has been in institutional use for more than four decades, it has seen limited physical modification from its original residential use. As a building in institutional use it must comply with many building and code requirements (including those related to accessibility) that would not normally affect structures in private residential use. The layout, configuration and structural characteristics of what was originally a residential building create limitations on accommodating the upgrades and other modifications required for contemporary institutional uses.

The site is located in a Residence B zoning district, which has an FAR that diminishes after the first 5,000 square feet, thus imposing stricter development provisions the larger the lot is. This lot is 43,922 square feet, as it combines four contiguous lots under common ownership, consistent with the requirement to merge such lots. The average lot size of all other lots in this Residence B zoning district is approximately 5,700 square feet, representing one-eighth the size of the 20 Sumner Road site, and the average FAR in the district is approximately 1.24, more than double the 0.61 proposed at this site. The resulting building will be consistent with the prevailing scale in the district and less than half of the average density of the district.

The combination of the building's physical characteristics, its continued utilization for institutional use, and the large lot size are conditions that do not generally affect properties in the Residence B zoning district.

C) Desirable relief may be granted without either:

1) Substantial detriment to the public good for the following reasons:

Rather than create a detriment to the public good, the proposed project at 20 Sumner Road will result in public benefits in terms of supporting research and innovation in building sustainability, expanding site greenspace, improving the building's accessibility, and investing in the historic resources of Cambridge.

This project responds to the City's policy goals for research, best practices and governance related to sustainability and climate change, as manifested in recent City initiatives including the "Getting to Net Zero Task Force" and the

Cambridge Compact for a Sustainable Future. The 20 Sumner Road project is itself a research project, testing innovative ideas for retrofitting a residential wood-frame structure in an environmentally sustainable way. This project directly responds to the Cambridge Growth Policy 50, which states that “The City should recognize the need for the major institutions to adapt and respond to changing circumstances to maintain their leadership positions in...research while recognizing, responding to and coordinating with City policy goals.” The minor expansion of this house and research center represents a unique opportunity to respond to both the City’s and the University’s goals related to sustainability and climate change.

In addition, the project replaces a large asphalt surface parking lot with nearly 4,000 square feet of new greenspace. The project will dramatically improve the accessibility of the building for persons with disabilities including the introduction of an accessible entrance, elevator, and toilet rooms. Through this project, Harvard is investing in a 90+ year old building, and therefore preserving the character of Mid Cambridge.

2) Relief may be granted without nullifying or substantially derogating from the intent or purpose of this Ordinance for the following reasons:

Both the Massachusetts Zoning Act and the Cambridge Zoning Ordinance allow nonconforming buildings to remain in place, and even to be expanded, so long as the change, extension or alteration is not substantially more detrimental to the neighborhood. The 20 Sumner Road addition can be readily accommodated on the site in a manner that respects the neighborhood character and does not impact the overall physical character of the lot or the surrounding neighborhood. As noted above, because of the disproportionate effect of the FAR requirement on larger lots, the project will be consistent with the prevailing scale in the district and less than half of the average density of the district. The proposed project will result in no adverse impacts in terms of traffic or shadows, and the project was designed to provide public benefits of improved accessibility, increased open space, and sustainable building means and methods. Therefore, requested relief does not nullify or substantially derogate from the intent or purpose of the Ordinance. Granting the requested variance will support the intent and purpose of the Ordinance, and will permit the preservation of the nonconforming historic structure, while significantly improving its functionality and accessibility.