

# City of Cambridge

*Richard C. Rossi • City Manager*



# Executive Department

*Lisa C. Peterson • Deputy City Manager*

August 1, 2016

To the Honorable, the City Council:

I am writing to request that you approve the submission of the attached Home Rule Petition that would authorize the City of Cambridge to include in the planned reconstruction (the “Project”) of the King Open / Cambridge Street Upper School and Community Complex (“KOCUS”) the area that is presently occupied by the public swimming pool known as the Gold Star Pool (the “Gold Star Pool Site”) and to construct subsurface geothermal wells in a portion of Donnelly Field that lies directly along and adjacent to the current southerly boundary of the KOCUS site (the “School Site”).

Specifically, relief is required from the Legislature to construct a portion of the KOCUS Project on the existing Gold Star Pool Site, which occupies a small portion of the currently existing School Site that was not included in Chapter 49 of the Acts of 1955 (the “1955 Legislation”) by which a portion of the original Donnelly Field site (that had comprised the entire block stretching easterly from Cambridge Street to Berkshire Street, south along Berkshire to York Street, west along York to Willow and then north along Willow to Cambridge Street (“Original Donnelly Field Site”)) was authorized to be changed from its then “public park and park purposes” and re-used “for the erection of a public school building, and for other school purposes, and for all purposes incidental thereto”. When the 1955 Legislation was passed, the portion of what was to become the School Site remained part of the Original Donnelly Field Site to continue to be used for “public park and park” purposes because it was used and occupied by the Gold Star Pool prior to 1955. It continues to be used and occupied by the Gold Star Pool today.

Relief is also required from the Legislature to construct subsurface geothermal wells within a portion of Donnelly Field that lies directly along and adjacent to the southern edge of the School Site. All existing “public park and park” uses that are conducted in that part of Donnelly Field will continue to be conducted after the installation of the subsurface geothermal wells.

Pursuant to Article 97 of the Articles of Amendment to the Constitution of the Commonwealth of Massachusetts (“Article 97”), land that is held and dedicated for parkland uses may only be re-used for another use with the consent of two thirds of both houses of the Legislature.

## BACKGROUND

### 1. The Gold Star Pool

The City’s architect has completed the Schematic Design phase for the KOCUS Project. The design for the KOCUS Project includes reconstruction of the Gold Star Pool and moving the pool south of the existing location. The new location of the Gold Star Pool, which will be adjacent to Berkshire Street and Donnelly Field, will be beneficial to the City and the community because it allows for a larger pool and deck space, a new wading pool, and it faces south with a direct connection to Donnelly Field. The proposed new location allows better visibility from

Berkshire Street and Donnelly Field. The new location is smaller than the existing location (11,773 sf verses 17,890 sf); however, it will provide a more optimized and efficient building layout for the overall Project. The new pool house and changing rooms will be located on the first level of the three story building, and the school administrative offices will be located above the pool house and changing rooms.

## 2. Geothermal Wells

The KOCSUS Project is being designed as a Net Zero Emissions (“NZE”) project. The two main systems helping to facilitate that goal are photovoltaic panels (“PV”) which produce electricity, and the subsurface geothermal wells that provide tempered water for heating and cooling the building. The PVs are primarily on the roof and the geothermal wells will be below grade. The subsurface geothermal wells will be installed in areas that will not have any building structures above them. The new building and site design will significantly increase the green space around the Project buildings at the School Site.

The Project design requires 190 wells. They are spaced 20’ apart, and even with the additional green space on the Project Site, the 190 wells cannot all fit within the existing School Site. The area outside of the School Site that is proposed for the balance of the subsurface geothermal wells is the strip of land along the northern edge of Donnelly Field between Willow and Berkshire Streets that is presently used for a seating area, basketball courts, and the Frisoli play area. In the final constructed condition, the subsurface geothermal wells and piping will reside underground and remain unseen while the disturbed surface will be restored and replaced with a new park, basketball courts and seating area.

### HOME RULE LEGISLATION

Both the area proposed for the construction of the subsurface geothermal wells and the Gold Star Pool are presently located in parts of the Original Donnelly Field Site, which is owned and held by the City for “public park and park” purposes and therefore is protected under Article 97 from any change in use absent legislation authorizing such a change in use. In order to proceed with the design of the Project as planned, to construct the subsurface geothermal wells within a portion of Donnelly Field and to use the Gold Star Pool Site as part of the overall site for the Project, I ask that the City Council vote in favor of filing the attached Home Rule Petition.

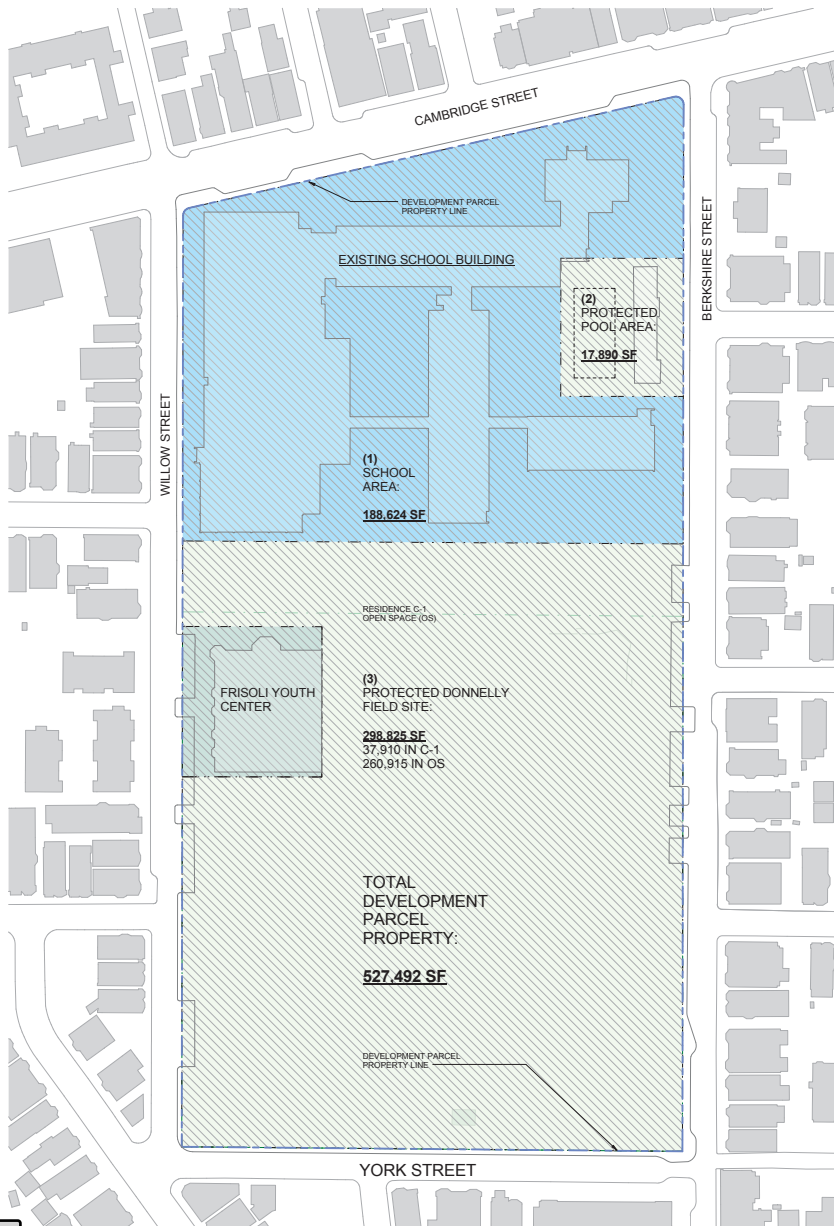
I have attached for your information a site plan and plan attachment sheets depicting the restrictions on the existing Original Donnelly Field Site, the description of the requests and benefits of the proposed changes that are requested, site renderings showing the existing and proposed site conditions, and calculations relating to the existing and proposed pool locations at the proposed Project Site.

Very truly yours,



Richard C. Rossi  
City Manager

RCR/mec  
Attachment(s)



## RESTRICTIONS ON EXISTING SITE:

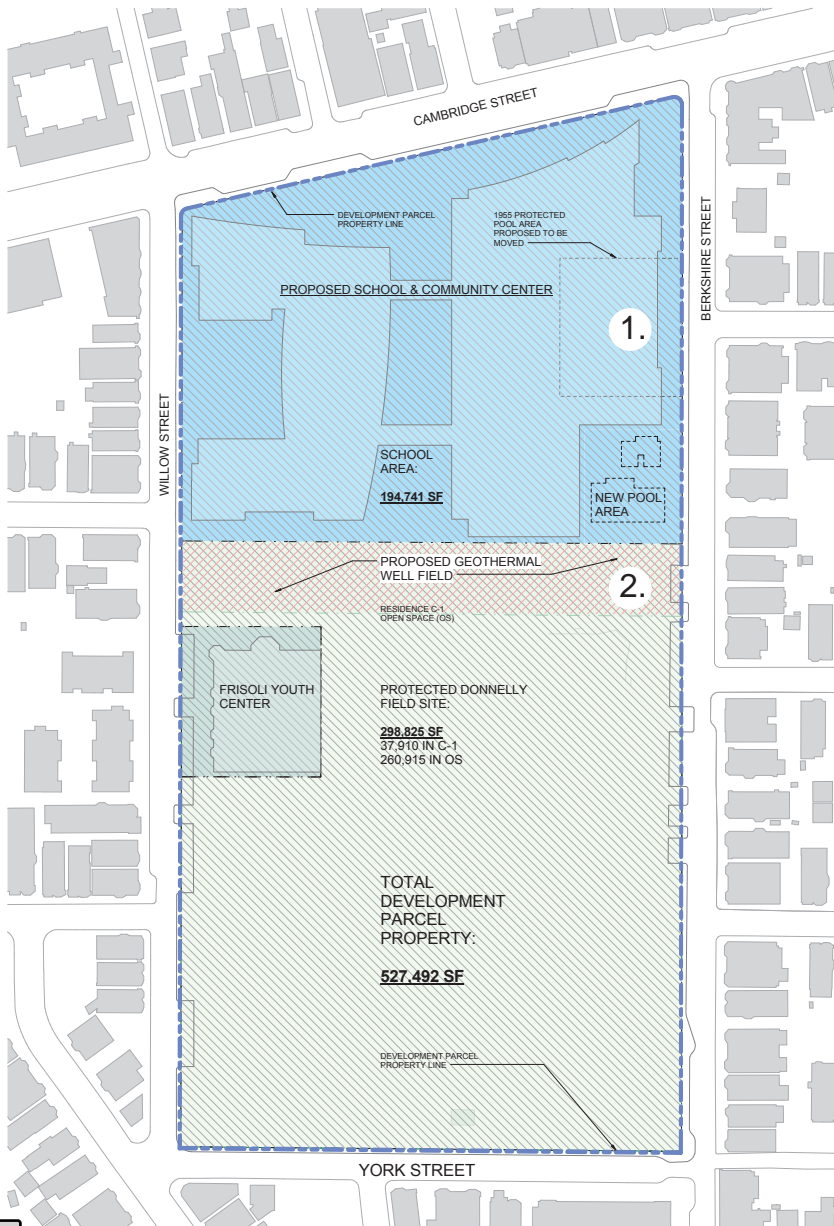
THE CURRENT STATE OF THE SITE'S RESTRICTIONS INCLUDE 3 DISTINCT AREAS THAT HAVE BEEN DEFINED BY DIFFERENT ACTS OF THE LEGISLATURE:

- (1) SCHOOL AREA
- (2) PROTECTED POOL AREA
- (3) PROTECTED DONNELLY FIELD SITE

- 1893 ACT AUTHORIZED CITY TO MAINTAIN THE SITE THAT NOW COMPRISES THE ENTIRE PARCEL FOR PARK, PLAYGROUND OR RECREATIONAL USE.

- 1955 ACT CARVED OUT THE SCHOOL AREA AND IN DOING SO DEFINED THE "POOL AREA" ALONG BERKSHIRE ST. & DONNELLY FIELD AS REMAINING FOR PARK, PLAYGROUND OR RECREATIONAL USE.





# DESCRIPTION OF REQUESTS & BENEFITS:

## 1. POOL LOCATION

**RELIEF FROM THE POOL FACILITY BOUNDARY IN ORDER TO ACHIEVE AN OPTIMAL LAYOUT FOR THE NEW SCHOOL WHILE IMPROVING ON THE NATURE AND LOCATION OF THE POOL FACILITIES.**

- INCREASED OPEN POOL AND DECK SPACE OVER EXISTING
- SOUTH-FACING RECREATIONAL SPACE DIRECTLY CONNECTED TO DONNELLY FIELD
- VISIBILITY FROM BERKSHIRE STREET & DONNELLY FIELD MAKE IT SAFER FOR USERS AND NEIGHBORS
- FACILITATES A MORE EFFICIENT AND OPTIMIZED FLOOR LAYOUT FOR THE SCHOOL AND COMMUNITY BUILDING

## 2. GEOTHERMAL WELLS

**PERMISSION TO BUILD GEOTHERMAL WELLS UNDERNEATH WHAT WILL BE AN ENTIRELY NEW LANDSCAPED PARK/RECREATION AREA IN PURSUIT OF THE PROJECT'S NET ZERO ENERGY GOALS.**

- GEOTHERMAL WELLS DRASTICALLY IMPROVE THE ENERGY PERFORMANCE OF THE BUILDING
- THE WELLS LEAVE NO VISUAL IMPACT ON THE LANDSCAPE
- A PARK AND RECREATIONAL SPACE WILL BE BUILT BACK ON TOP OF THE GEOTHERMAL WELL FIELD AS ANOTHER AMENITY FOR THE COMMUNITY



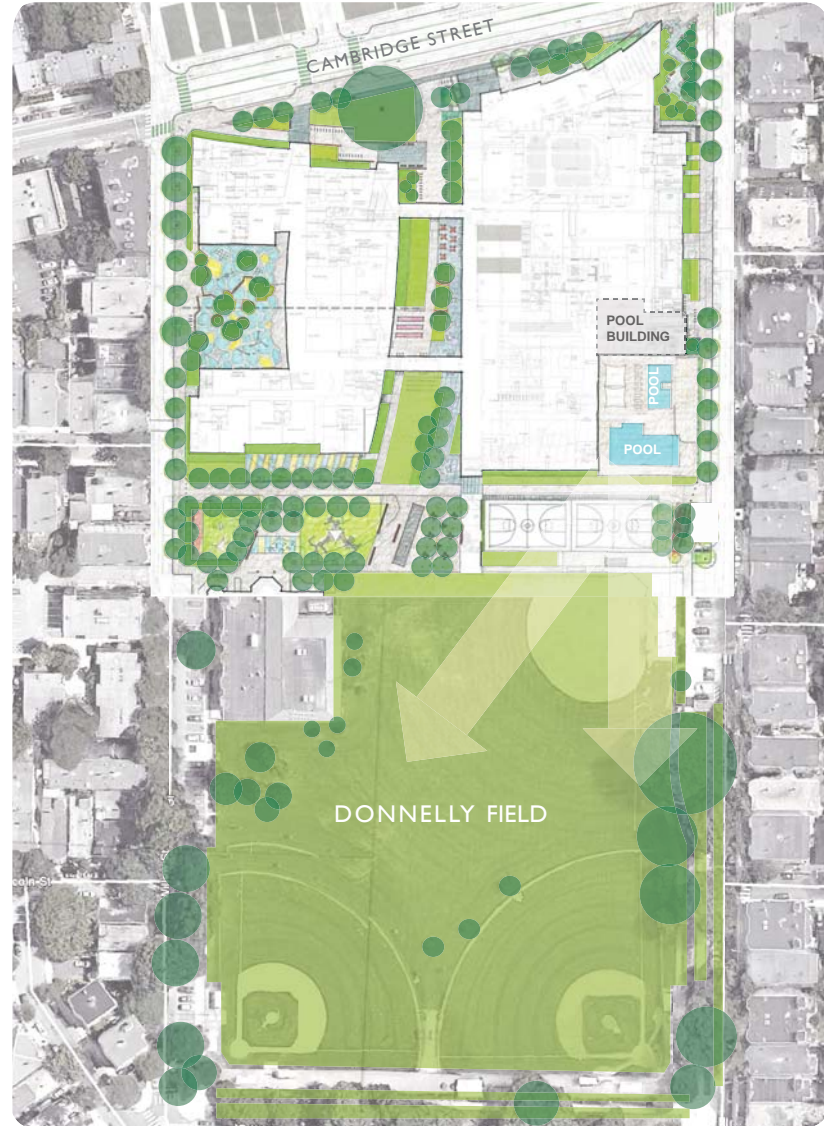
# EXISTING & PROPOSED SITE RENDERINGS

## EXISTING



EXISTING POOL FACILITIES ARE SURROUNDED BY PAVEMENT AND BUILDINGS, MAKING THEM ISOLATED FROM THE COMMUNITY, DONNELLY FIELD AND GREENERY IN GENERAL.

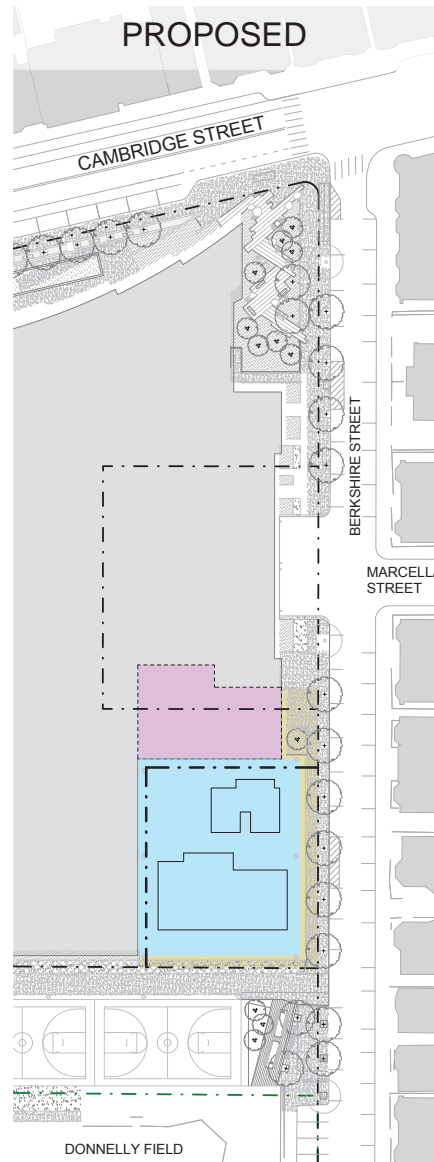
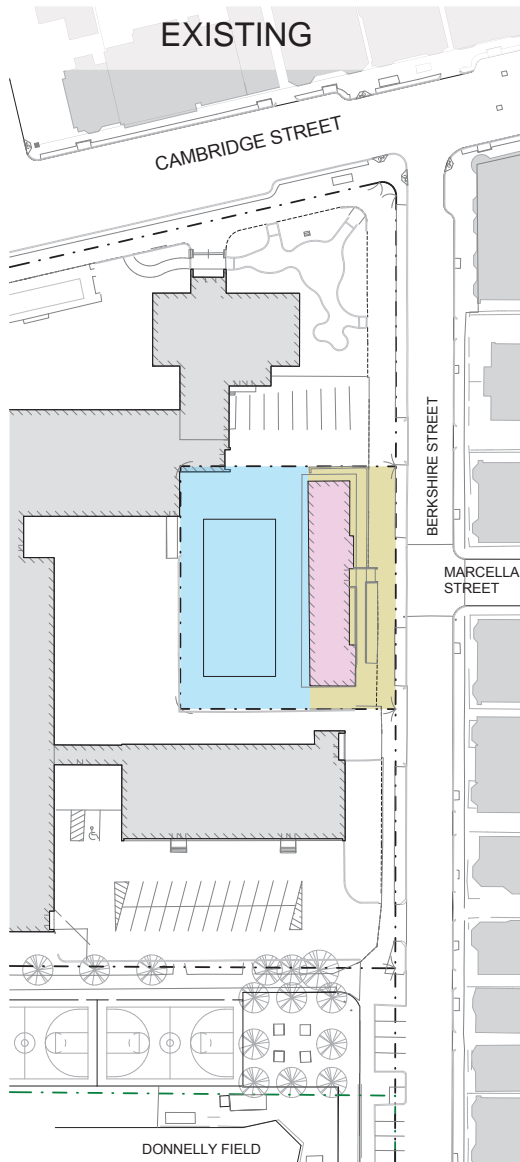
## PROPOSED






THE PROPOSED PLAN PROVIDES IMPROVED USER EXPERIENCE BOTH IN TERMS OF FACILITIES AS WELL AS THE CONNECTION TO GREEN, LANDSCAPED OUTDOOR SPACE.

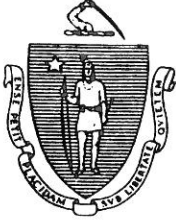


# EXISTING & PROPOSED POOL CALCULATIONS



	<u>EXISTING</u>	<u>PROPOSED</u>	<u>DELTA</u>
<b>TOTAL POOL SITE:</b>	17,900 SF	17,898 SF	<b>-2 SF</b>
 <b>POOL BUILDING:</b>	2,978 SF (16% OF TOTAL)	4,110 SF (23% OF PROPOSED TOTAL)	<b>+1,132 SF</b>
 <b>POOL DECK:</b>	10,693 SF (60% OF TOTAL)	10,925 SF (61% OF PROPOSED TOTAL)	<b>+232 SF</b>
 <b>ENTRY/SIDEWALK:</b>	4,230 SF (24% OF TOTAL)	2,863 SF (16% OF PROPOSED TOTAL)	<b>-1,367 SF</b>





# The Commonwealth of Massachusetts

IN THE YEAR ONE THOUSAND NINE HUNDRED AND NINETY-

## AN ACT

AN ACT AUTHORIZING THE CITY OF CAMBRIDGE TO USE CERTAIN LAND USED FOR PARK, PLAYGROUND OR RECREATION USES FOR SCHOOL PURPOSES AND FOR INSTALLATION OF SUBSURFACE GEOTHERMAL WELLS

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

### SECTION 1.

The City of Cambridge is hereby authorized to use for the erection of a public school building and for other school purposes, and for all purposes incidental thereto, an area now owned and held by said City for park, playground or recreation purposes described as follows.

Commencing at the intersection of the southerly sideline of Cambridge Street and the westerly sideline of Berkshire Street, said point being a point of curvature, thence running along a curve to the right having a radius of 8.00 feet and arc length of 14.38 feet to a point of tangency, thence running S 39°47'24" W, a distance of 158.34 feet, along the westerly sideline of Berkshire Street to the point of beginning;

NOTE. — Use ONE side of paper ONLY. DOUBLE SPACE. Insert additional leaves, if necessary.

Thence running S 39°47'24" W, a distance of 142.00 feet, along the westerly sideline of Berkshire Street to a point;

Thence turning and running N 50°12'36" W, a distance of 126.00 feet to a point;

Thence turning and running N 39°47'24" E, a distance of 142.00 feet, to a point;

Thence turning and running S 50°12'36" E, a distance of 126.00 feet, to the point of beginning.

Containing an area of 17,892 Square Feet, more or less, as shown on a plan entitled, "Plot Plan Showing (A) Existing Swimming Pool Area and (B) Proposed Geothermal Field" King Open School, 850 Cambridge Street, Cambridge, Massachusetts, dated July 18, 2016, prepared by Feldman Land Surveyors.

SECTION 2. The City of Cambridge is hereby authorized to use for the installation of subsurface geothermal wells a portion of an area now owned and held by said City for park, playground or recreation purposes described as follows.

Commencing at the intersection of the southerly sideline of Cambridge Street and the westerly sideline of Berkshire Street, said point being a point of curvature, thence running along a curve to the right having a radius of 8.00 feet and arc length of 14.38 feet to a point of tangency, thence running S 39°47'24" W, a distance of 451.94 feet, along the westerly sideline of Berkshire Street to the point of beginning;

Thence running S 39°47'24" W, a distance of 74.51 feet, along the westerly sideline of Berkshire Street to a point;

Thence turning and running N 49°56'05" W, a distance of 514.62 feet to a point on the easterly sideline of Willow Street;



Thence turning and running N 39°48'43" E, a distance of 72.85 feet, to a point on the easterly sideline of Willow Street;

Thence turning and running S 49°56'05" E, a distance of 514.58 feet, to the point of beginning.

Containing an area of 37,915 Square Feet, more or less, as shown on a plan entitled, "Plot Plan Showing (A) Existing Swimming Pool Area and (B) Proposed Geothermal Field" King Open School, 850 Cambridge Street, Cambridge, Massachusetts, dated July 18, 2016, prepared by Feldman Land Surveyors.

SECTION 3. This act shall take full effect upon its acceptance by vote of the City Council of said City, but not otherwise.

NOTES:

- 1) THIS BOUNDARY LINE WAS ORIGINALLY PROVIDED BY THE CITY OF CAMBRIDGE, MASS. ACTS 1883 CHAPTER 317, AUTHORIZING THE CITY OF CAMBRIDGE TO LAYOUT AND MAINTAIN THIS LAND FOR PARK USE.
- 2) "EXISTING SWIMMING POOL AREA" WAS DEFINED BY THE 1955 MASSACHUSETTS SCHEMATIC PLAN WHICH SHOWED AN AREA OF THE PARK FOR A SWIMMING POOL. THIS AREA WAS LATER CARRIED OUT BY THE CITY OF CAMBRIDGE AND THEREBY REMAINED RESTRICTED FOR PARK USE.
- 3) THIS BOUNDARY LINE DEFINES THE SOUTHERN EDGE OF THE SCHOOL AREA WHICH WAS CARRIED OUT OF THE ORIGINAL PARK PARCEL BY THE 1955 SCHEMATIC PLAN. THIS BOUNDARY LINE ALSO DEFINES THE NORTHERN EDGE OF THE PROPOSED GEOTHERMAL FIELD.
- 4) PROPOSED GEOTHERMAL FIELD AREA TAKEN FROM REFERENCE CAD FILE PROVIDED BY THE CITY OF CAMBRIDGE ON 7-31-2016.

REFERENCES:

- CITY OF CAMBRIDGE ENGINEERING DEPARTMENT
  - BOOK 87 PAGE 94
  - BOOK 84 PAGE 130
  - BOOK 114 PAGE 88
  - BOOK 154 PAGE 88
  - BOOK 158 PAGE 77
  - BOOK 158 PAGE 8
  - BOOK 180 PAGE 8
- MIDDLESEX COUNTY REGISTRY OF DEEDS
  - BOOK 892 PAGE 76 (DANIELLY PARK)
- MASSACHUSETTS DEPARTMENT OF LAND AND COURT
  - MASSACHUSETTS LEGISLATURE
    - ACTS 1883 CHAPTER 317
    - ACTS 1955 CHAPTER 49 (SCHOOL PARCEL)

I CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST PLANS AND DEEDS OF RECORD.

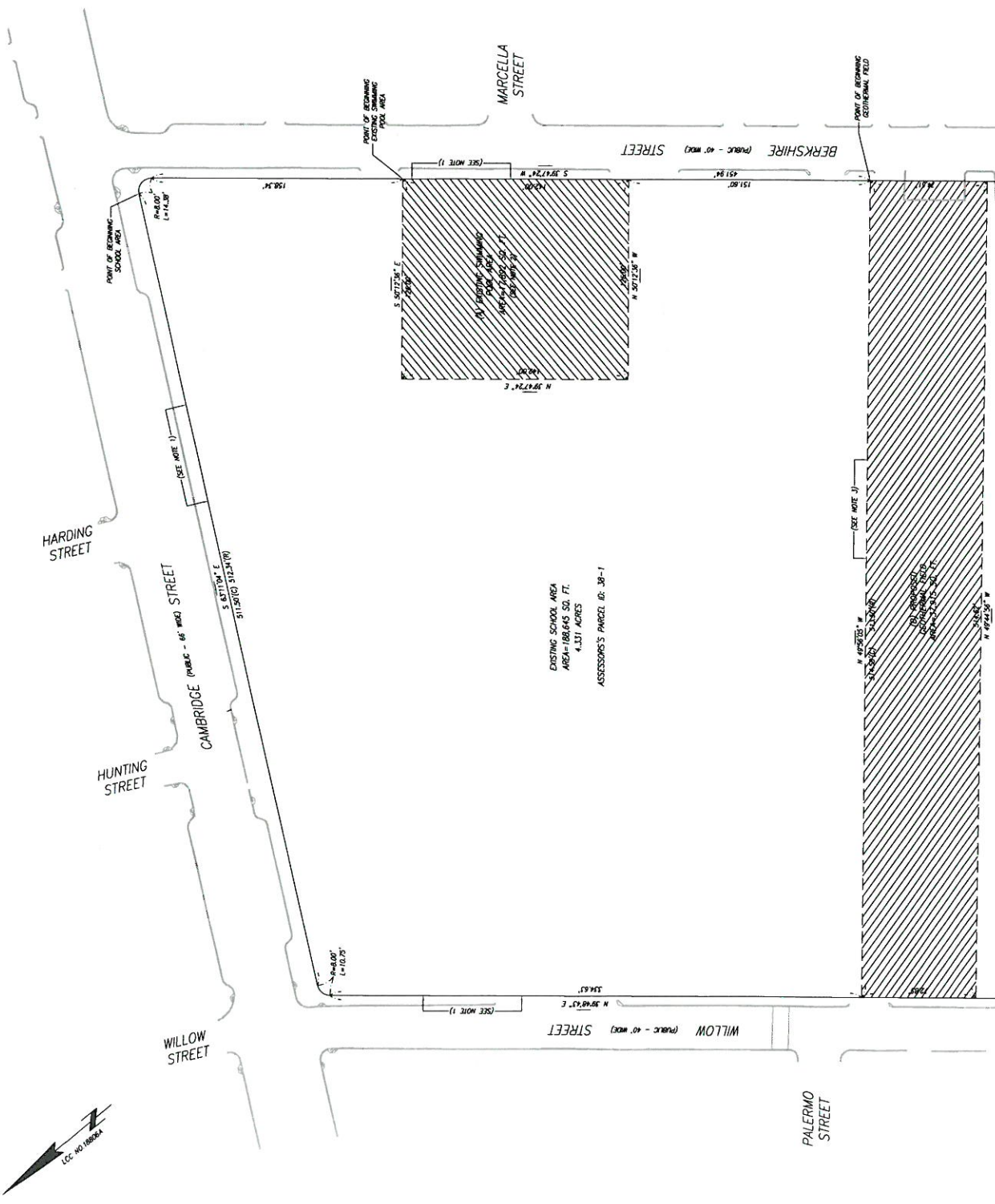
TARA A. MCCARTHY, PLS (PLM 38774) DATE \_\_\_\_\_

PLOT PLAN SHOWING  
 (A) EXISTING SWIMMING POOL AREA AND  
 (B) PROPOSED GEOTHERMAL FIELD  
 "KING OPEN SCHOOL"  
 850 CAMBRIDGE STREET  
 CAMBRIDGE, MASS.

FELDMAN LAND SURVEYORS  
 112 SHAWMUT AVENUE  
 BOSTON, MASS. 02118  
 PHONE: (617)357-9740  
 www.feldmansurveyors.com



RESEARCH SMO	FIELD SHEET 15	PROJ. NO. 380	APPROVED	SHEET NO. 1 OF 1
DATE MADE	LAND SURVEY	FIELD CHECKED	DATE FILED	JOB NO.
FILE NAME: S:\PROJECTS\100511\0801016\0236\236.dwg				





# City of Cambridge

O-36  
**IN CITY COUNCIL**  
August 1, 2016

**ORDERED:** That the City Council petition the General Court of the Commonwealth of Massachusetts to enact the attached home rule petition entitled, AN ACT AUTHORIZING THE CITY OF CAMBRIDGE TO USE CERTAIN LAND USED FOR PARK, PLAYGROUND OR RECREATION USES FOR SCHOOL PURPOSES AND FOR INSTALLATION OF SUBSURFACE GEOTHERMAL WELLS.