

April 4, 2023

Catherine Preston Connolly, Chair
Cambridge Planning Board, Community Development Department
344 Broadway
Cambridge, MA 02139

Re: Biogen Tank & Enclosure

Planning Board Approval

SMMA No. 21070

Dear Ms. Connolly:

On behalf of Biogen, SMMA filed for approval with the Planning Board on October 25th, 2022 and appeared before the Board on November 1st, 2022 where SMMA presented a brief summary of the project and outlined some of the coordination that had previously occurred with Cambridge Redevelopment Authority (CRA). During the meeting, the Board provided some additional thoughts for consideration.

We would like to provide the Board with a complete project description, detail the work to date with CRA, and propose design updates on the project for your consideration and approval.

Project Description

The project site is located at 125 Broadway in Cambridge, Massachusetts and is approximately 1.7 acres. The site is bound by Galileo Galilei Way to the west, West Service Drive to the east, and mixed-use high-rise developments directly to the north and south. Refer to Figure 1 for a locus map. Biogen's Building 8 occupies much of the project site, open space exists directly north of the building providing pedestrian walkways, a large plaza, children's play structure, and various planted areas. Refer to Figure 2 for an existing conditions aerial map.

The project includes installation of a new oxygen (O₂) tank and replacement of an existing carbon dioxide (CO₂) tank. The building has currently met the maximum allowable limits using bottled and dewar flask supplied O₂. The new O₂ tank is a capacity improvement, will provide bulk storage, and also remove storage of O₂ from within the building. A new CO₂ tank is proposed to replace an existing interior bulk tank. The existing CO₂ tank was located within the loading dock and experienced failure in December 2021 due to over-pressurization. The proposed location meets current code requirements and will continue to provide bulk CO₂ storage.

Each tank will also require various manifold and vaporizer equipment to be in close proximity. The tanks are proposed to be placed immediately adjacent to and along the building with their associated equipment located to the south and east. This layout is preferred because it locates the tallest elements (tanks) as close to the building as possible

given locations of the existing air intakes and louvers nearby. The layout of the tanks and equipment will all be located within the enclosed area as shown (20.5' x 23.5') and will occupy approximately 500 square feet (0.01 acres) of the property. The enclosure will be located on the southern area of the site directly adjacent to the building and existing loading dock and enclosed on three sides. The area is currently mulched with four shrubs and in the proposed conditions would be concrete. Refer to Figure 3 for a proposed site plan and section.

As described above, open space for the parcel is primarily located on the north side of the building therefore the proposed location of the tanks maintains this large space. The project team did initially explore alternative locations; however, they were eliminated due the impact on open space, access requirements for maintenance, and maintaining the existing piping within the building.

An initial comment from the Cambridge Redevelopment Authority (CRA) raised the question of whether this pad and its enclosure could be moved further into the site and off of the roadway edge. It was originally thought that this might be possible as there is a small (2'-6" wide) stone strip between the pad and an existing underground areaway. Upon further evaluation, SMMA has determined that the pad/enclosure cannot be moved from where it currently is proposed as doing so would cause the fire rated wall portion of the west enclosure to intrude upon the exhaust fan/louver opening and nullify the protection provided by the wall.

CRA Coordination

The project team has been coordinating with CRA since an initial site visit was scheduled in September of 2021 when we met on site to review the project.

SMMA filed an initial package to CRA on July 26th, 2022. Initial questions and comments were received from the CRA on or about August 12th.

SMMA and CRA reviewed the project at a design review meeting on September 7th, 2022 where we received feedback on the proposed tank orientation (revise to be east-west along building face), relocation of the egress (personnel) door from the south side to the west side, a request for further review of potential increase in setbacks, screen vs. tank height – ongoing review by CRA, and a question on the time duration for filling tanks. The design and supplemental information was subsequently updated and resubmitted to CRA on September 14th, 2022.

The project was formally reviewed before the CRA on September 21st, 2022, with three screening options presented, all being a variation of the existing Blue Garage-like screen previously installed by Biogen several years ago at Building 6, using a perforated metal screen with graphic applique, to be coordinated with and approved by the CRA/Design Review Committee. At this meeting, the project team received different feedback on the

proposed aesthetics of the tank enclosure. One member of the CRA board shared his opinion that these tank installations occur at various places within the city, some within this local neighborhood, and perhaps the city should embrace these devices as part of the technology that is occurring within these buildings rather than to try to hide them (which will likely be unsuccessful). Four local examples were presented by this member to define the direction going forward, each one illustrating a more transparent solution to providing a barrier around the tanks (see Figure 6 attached). The project received conditional approval on this September 21st, 2022, pending further review of the enclosure materials by the Design Review Committee. SMMA revised and resubmitted information to CRA on September 29th, 2022, to satisfy the concerns regarding the proposal for a more transparent screen solution. A high security fence option was explored and presented, like one that presently occurs across Galileo Way at the Amgen facility located at 360 Binney Street.

CRA reviewed the revisions at a subsequent design review meeting, and the design team was notified that no further revisions or considerations were warranted.

Updated Design

For presentation to the Planning Board on November 1, 2022, SMMA had considered both concepts, whether to screen the equipment or to embrace the science associated with the building and celebrate it by providing fencing that is more transparent which provides the necessary security while allowing the equipment to be seen. While there are precedents of both in the city and in and around Kendal Square, this decision was based on the overall preference from CRA, which was to not screen the equipment as members felt it was not “offensive”, and perhaps opaque walls used to completely screen the equipment would in fact become intrusive and cause additional safety concerns. This concern of pedestrian-level security of those along the adjacent walkway has also led the design team to propose a transparent fence, which allows better site lines for those on the path traveling westbound.

As noted, fencing height had also been debated by the CRA members. It has been suggested that a lower enclosure height may also be valuable and in concert with the transparent enclosure and security concerns. The gas vendor (Airgas) has suggested the minimum enclosure requirements as being a 6'-0" high chain link fence with (3) strands of barbed wire facing outward at the top of the fence. SMMA has initially proposed a commercial grade vertical baluster steel security fence of 10'-0" in height above the pad. If thought to be more desirable, a security fence with a height of 8'-0" could be provided at this location; however, SMMA does not recommend an enclosure less than 8'-0" to provide adequate security of the tank and its related equipment while avoiding the required barbed wire. Note: A security fence of 8'-0" high is current depicted in all supporting graphics attached to this correspondence.

Airgas has been consulted on potential opportunities to cover or paint the equipment. While no specific objection has been raised by them on this concept, they will require approval on the final design concept/color(s) utilized and will want to implement this option as a service to their client (Biogen) with the cost of this feature to be absorbed into the monthly service charge for providing gas products to the site. Due to the highly subjective

nature of providing an “artwork” solution to the tank exteriors that is acceptable to all those concerned, coupled with the logistics of implementing this proposed solution, Biogen is not currently in favor of this idea at this time. SMMA has also reviewed similar installations in the city, see Figure 5, which all include a white tank with a logo. We believe that leaving the proposed tank painted in its natural white finish with the Airgas logo is consistent and suitable.

Additional Design Review Committee comments included 1.) Not opposed to open fence design, just ask that fence geometry (horizontal rails) try to align w/ building lines, if possible, 2.) could pad color match bldg. base color (darker than concrete), 3.) could tank colors match adjacent bldg. louver colors? 4.) could tanks be painted ala like an art canvas? 5.) if open fence could another layer of applied ornamentation be added to fence? (A/E/owner felt #5 is subjective and has too many varying solutions) 6.) would a vegetative green wall be considered (team reviewed and determined it would be a security and ongoing maintenance issue).

For these reasons, SMMA proposes that the enclosure remain partially of masonry block (where required due to code) but mostly of a transparent design. Following up on comments made at the November 1, 2022 Design Review Committee (DRC) meeting, the design team has reviewed and proposes a revised option for providing an enclosure with a similar look and feel as other fencing already in use on this site, located along the property line to the west. The revised tank enclosure, shown in Figure 4, consists of the masonry portion as previously indicated coupled with a transparent steel security fence with a revised detail at the top of the fencing portion. The security fence is envisioned to be 8'-0" high above the concrete slab with 1-inch square vertical steel balusters at approximately 5-inches on center. The arrowhead design, previously submitted at the top of the balusters, has been removed in favor of a simpler beveled edge treatment. The current design also features two horizontal baluster supports, placed at approximately 6'-10" and 7'-4" respectively above the slab. Additional details such as circular accents may be placed within the zones bound by the balusters and the horizontal supports or left blank (open) as is currently shown, at the Design Review Committee's preference. An additional horizontal support will be placed near the bottom of the screen element, at approximately 5-inches above the slab. SMMA's opinion is that this scenario offers the best of all concerns while blending in harmony with the fencing already onsite as well as at similar tank-type facilities located throughout the neighborhood.

Summary of Planning Board working session held on February 2, 2023 included the following notes/comments; relative to LED tank lighting SMMA reached out to Apex Lighting regarding the possibility of adding LED lighting to the tanks and realized that based on the confinements of our enclosure (tanks, vaporizer and support equipment), function of the security lighting and the cost of LED lighting system (\$15k). It was determined by the design team and Biogen that trying to light these tanks was not practical at this time. Whether BXP (building landlord) wanted to revisit this approach in the future once adjacent property (121 Broadway – i.e. Blue Garage) has been fully developed could always be a possibility.

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The Planning Board asked that SMMA provide an additional view of the tank enclosure from the sidewalk perspective (shown in Figure 5). SMMA has confirmed the following items for the Planning Board; that the fence was to be 8'-0" height and access gate was to be full height, that the landscape strip between fence and sidewalk was 2'-0" wide, the detail at louver and brick pier would be resolved, SMMA to provide precedent examples of local fences and that some future wayfinding signage might make sense after BXP completes its new 121 Broadway development.

SMMA/Biogen, therefore, respectfully requests the Planning Board's approval on the recently proposed improvement to the tank enclosure system. If beneficial to the process, SMMA/Biogen would welcome a meeting to discuss the history of this project and its next steps on the path forward to resolve this item. We are at your disposal for scheduling such an event.

Very truly yours,

SMMA



Erin Prestileo, PE
Senior Associate

cc: CRA (MF)

enclosures: Figure 1: Locus Map
Figure 2: Existing Conditions Aerial Map
Figure 3: Proposed Site Plan & Section
Figure 4: Proposed Visual Mitigation
Figure 5: Neighborhood Fencing Precedent
Figure 6: Tank & Enclosure Precedent

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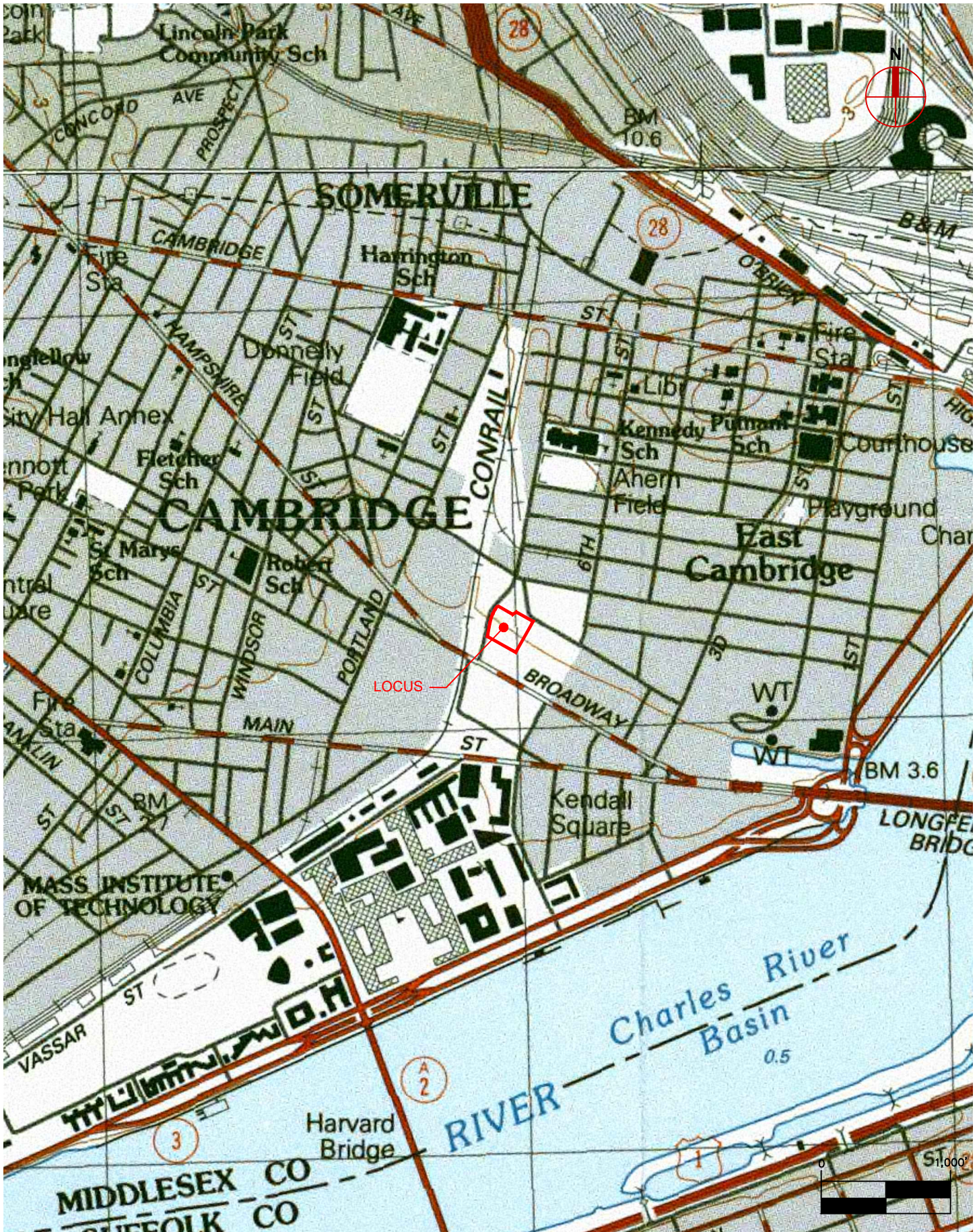
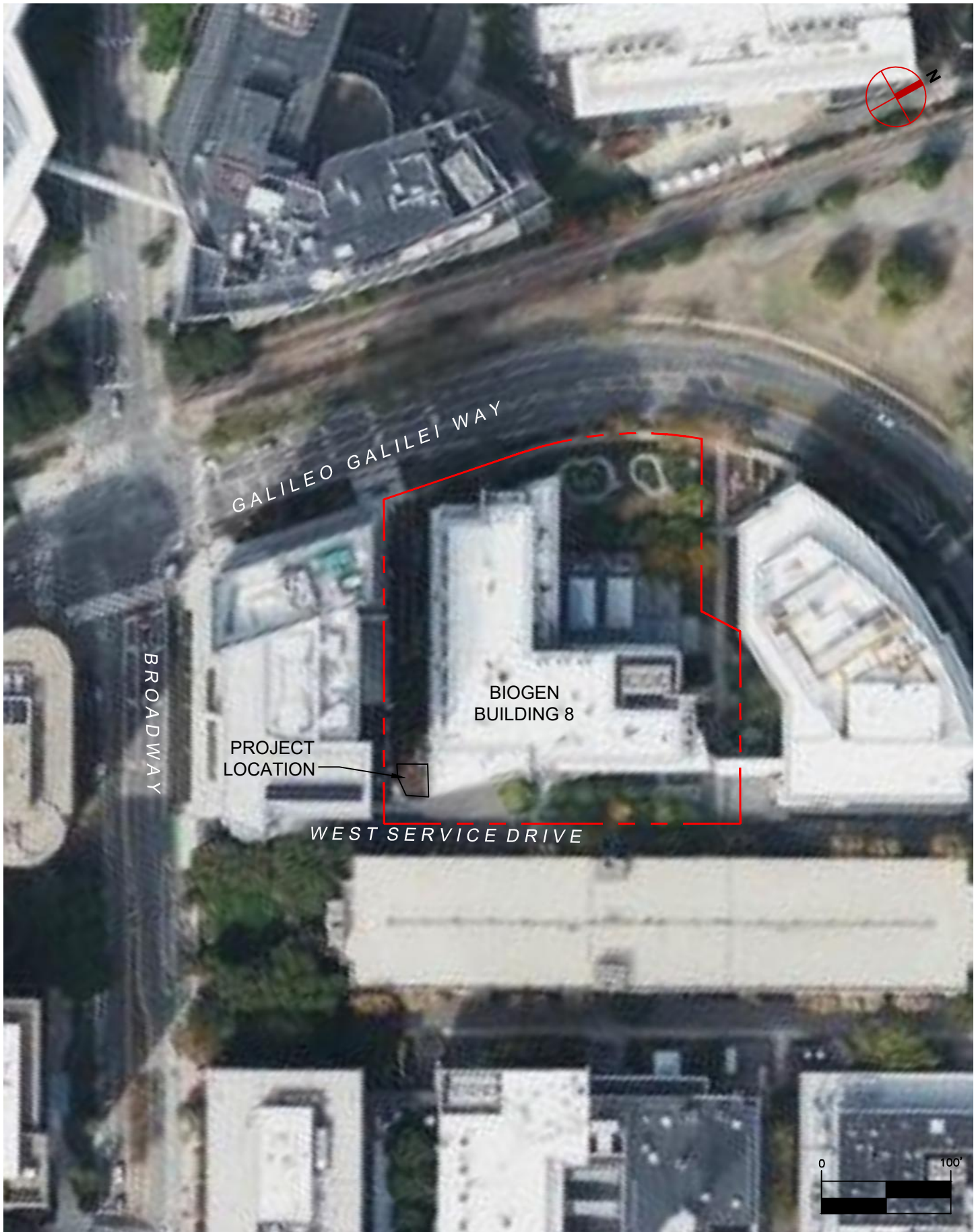


FIGURE 1: LOCUS MAP

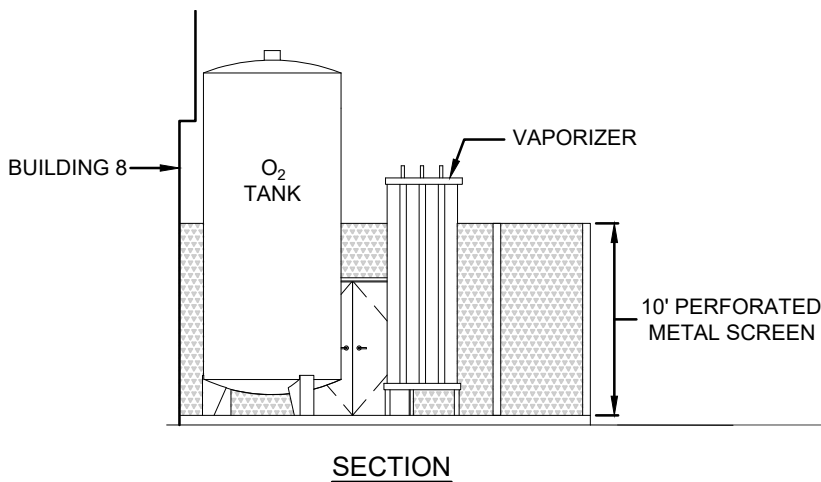
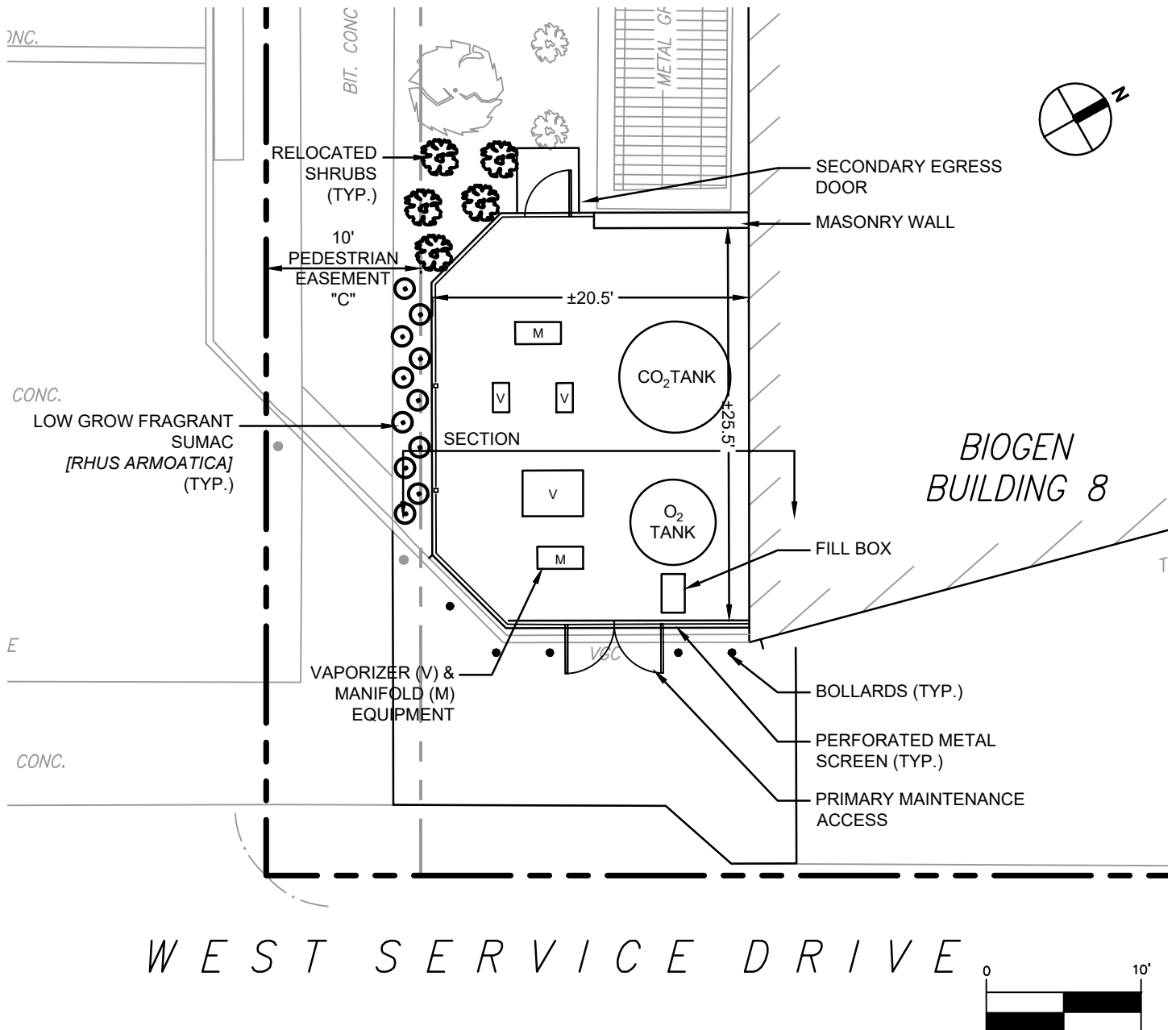
BIOGEN BUILDING 8 - TANKS & ENCLOSURE

07/21/2022



BIOGEN BUILDING 8 - TANKS & ENCLOSURE
FIGURE 2: EXISTING CONDITIONS AERIAL MAP

09/14/2022



BIOGEN BUILDING 8 - TANKS & ENCLOSURE
 FIGURE 3: PROPOSED SITE PLAN & SECTION

04/04/2023



VIEW WEST FROM WEST SERVICE DRIVE



VIEW EAST FROM PEDESTRIAN PATH



BIOGEN - BUILDING 8



AMGEN



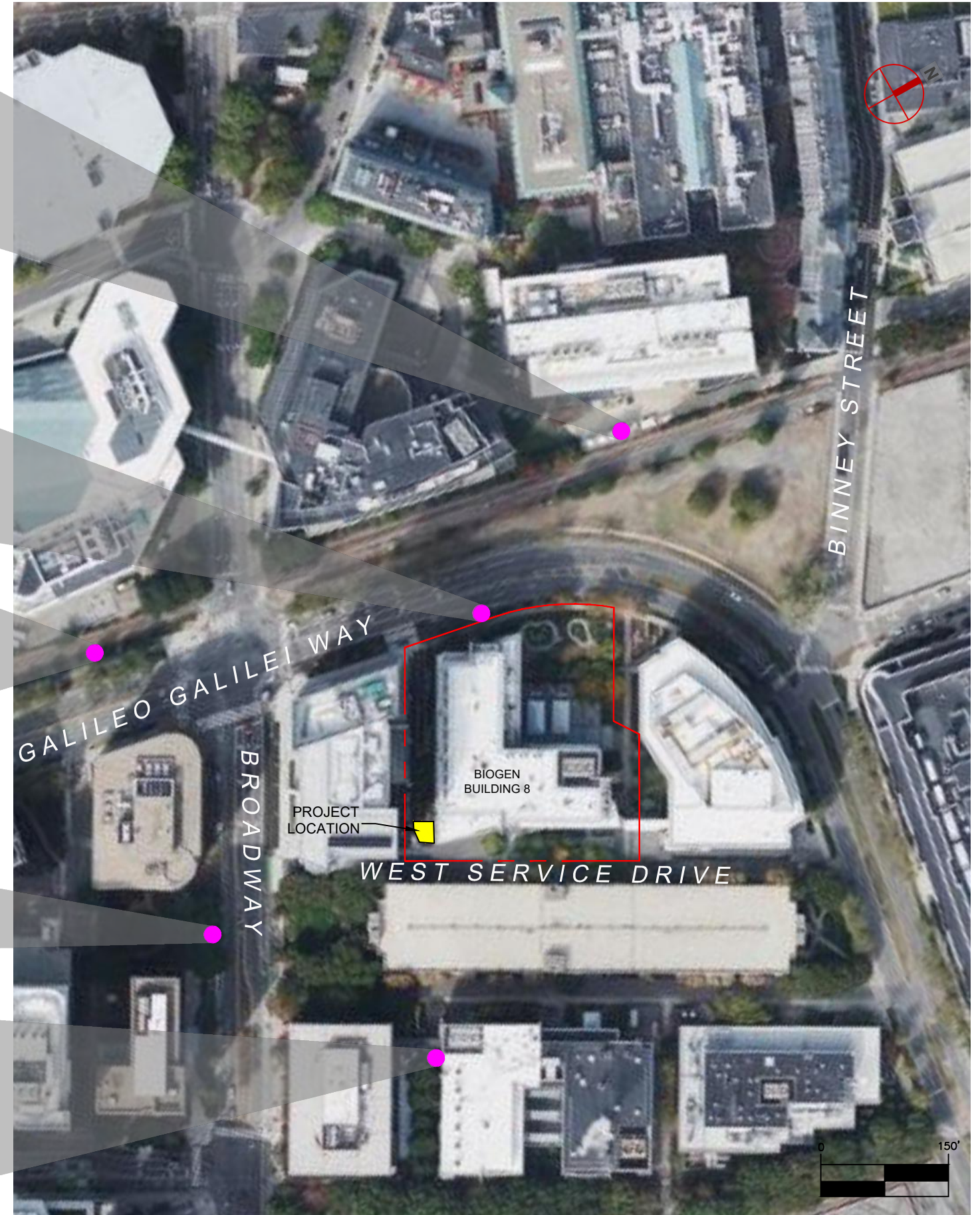
GALILEO GALILEI WAY PEDESTRIAN PATH



DANNY LEWIN PARK



BIOGEN - BUILDING 6





1. AMGEN



2. BIOGEN - BUILDING 6



3. DRAPER LABORATORIES



4. MIT - BUILDING 18



5. TAKEDA PHARMACEUTICALS

