

2. REGULATORY CONTEXT



2. INTRODUCTION

The following sections address the zoning requirements and describe how the Project complies, specifically addressing the housing program and Innovation Space program. This section also outlines the anticipated review and approval process for the Concept Plan and the individual Project Components as the design advances through a Design Review Submission. Lastly, this section outlines the criteria for approval pursuant to Sections 12.35.3(3) and 19.25 of the Zoning Ordinance, and consistency with the KSURP.

2.1 ZONING REQUIREMENTS

CATEGORY	ZONING REQUIREMENT	PROPOSED	DOCUMENT REFERENCE
14.34: MAXIMUM BUILDING HEIGHT	UP TO 250 FEET	250 FEET (COMMERCIAL BUILDING A) 200 FEET (COMMERCIAL BUILDING B)	TABLE 1-1
	UP TO 350 FEET FOR NO MORE THAN TWO (2) MIXED-USE/RESIDENTIAL BUILDINGS	350 FEET (RESIDENTIAL BUILDING SOUTH)	TABLE 1-1
14.32.5: INNOVATION SPACE	MINIMUM OF 10% OF OFFICE AND BIOTECH MANUFACTURING USES	105,200 GFA	SECTION 1.3.2
	EXISTING GFA WITHIN THE DISTRICT CAN BE CONVERTED	EXISTING COMMERCIAL OFFICE AT 255 MAIN STREET TO BE CONVERTED	
14.35: MIDDLE INCOME HOUSING	AT LEAST 5% OF THE TOTAL FLOOR AREA DEVOTED TO MULTI-FAMILY RESIDENTIAL SHALL BE DEVOTED TO MIDDLE INCOME HOUSING	20,000 GFA	SECTION 2.1.1
14.36: AFFORDABLE HOUSING	NO LESS THAN 20% OF THE TOTAL FLOOR AREA DEVOTED TO MULTI-FAMILY RESIDENTIAL SHALL BE DEVOTED TO AFFORDABLE UNITS	80,000 GFA	
14.37: DWELLING UNITS	A MINIMUM 5% OF RESIDENTIAL GFA SHALL BE DEVOTED TO UNITS OF 3-BEDROOMS OR MORE	20,000 GFA	
14.38: ACTIVE GROUND FLOORS	GROUND FLOOR OF BUILDINGS OF 50,000 SF OR MORE MUST BE OCCUPIED BY RETAIL AND CONSUMER SERVICE USES OR ACTIVE PUBLIC GATHERING SPACE (WHETHER OPEN OR CLOSED) ALONG A MINIMUM 75% OF FRONTAGE ¹	APPROX 25,000 GFA	FIGURE 4.X FOR THE RETAIL PLAN; SECTION 4.2 FOR FURTHER DETAILS
14.42: DISTRICT PUBLIC OPEN SPACE	MINIMUM 100,000 SF WITHIN THE DISTRICT RESERVED OR DESIGNATED AS PUBLIC OPEN SPACE	183,532 GFA	FIGURE 3.X FOR THE OPEN SPACE PLAN; SECTION 3.2 FOR FURTHER DETAILS

This table summarizes the key zoning requirements and demonstrates how the Project aims to comply with these requirements. Sections of the document are referenced for further details.

CATEGORY	ZONING REQUIREMENT	PROPOSED	DOCUMENT REFERENCE
14.43: PROJECT-BASED OPEN SPACE	CONTRIBUTE TO THE OPEN SPACE NETWORK OF THE DISTRICT, PER SECTION 403 OF THE KSURP	CONTRIBUTING 33,600 SF OF OPEN SPACE	SECTION 3.1
14.52: PARKING	MAX 0.9 SPACE/1,000 SF FOR COMMERCIAL 613,134 ² GFA 552 SPACES MAX 0.5 SPACE/1,000 SF RETAIL 19,366 GFA 10 SPACES MAXIMUM 0.75 SPACE/DWELLING UNIT 425 UNITS 319 SPACES CAR SHARING 10 SPACES TOTAL MAXIMUM PARKING 891 SPACES	UP TO 809 SPACES ³	SECTION 5.5
14.52: BIKE PARKING	LONG-TERM 0.3 SPACES/1,000 SF FOR COMMERCIAL 613,134 ² GFA 184 SPACES 0.1 SPACES/1,000 SF FOR RETAIL 19,366 GFA 4 SPACES 1.05 SPACES PER DWELLING UNIT ⁴ 425 UNITS 445 SPACES TOTAL LONG-TERM BIKE PARKING 633 SPACES	633 SPACES	TABLE 5-1; SECTION 5.3 FOR FURTHER DETAILS
	SHORT-TERM 0.06 SPACES/1,000 SF FOR COMMERCIAL 613,134 ² GFA 37 SPACES 1.0 SPACES/1,000 SF FOR RETAIL 19,366 GFA 22 SPACES 0.10 SPACES PER DWELLING UNIT 425 UNITS 43 SPACES TOTAL SHORT-TERM BIKE PARKING 102 SPACES	102 SPACES	TABLE 5-1; SECTION 5.3 FOR FURTHER DETAILS
14.53: LOADING REQUIREMENTS	SUFFICIENT OFF-STREET LOADING TO MEET NEEDS OF USERS	COMMERCIAL BUILDING A 3 BAYS (ONE TRASH) RESIDENTIAL BUILDING SOUTH 3 INTERIOR BAYS 1 EXTERIOR BAY RESIDENTIAL BUILDING NORTH 1 INTERIOR BAY COMMERCIAL BUILDING B 3 BAYS (ONE TRASH) PLUS ADDITIONAL STAGING LOCATION FOR QUICK TURNAROUND DELIVERIES	SECTION 5.6

1. Active Ground Floor Uses can include retail uses and active public gathering space (whether open or enclosed) where that ground floor fronts Main Street, Broadway or Ames Street, per Article 14.38 of the Cambridge Zoning Ordinance.
2. Excludes 14,000 GFA dedicated to Broad Institute Office Conversion.
3. The Applicant is proposing to distribute these spaces across the Commercial Buildings A and B in order to compensate for the loss of spaces in the Blue Garage due to construction of Residential Buildings North and South. It is anticipated that Commercial Building A will house up to 374 spaces, Commercial Building B will house up to 650 spaces and the Blue Garage will lose approximately 215 spaces, for a net addition of 809 spaces.
4. Per schedule in Section 6.107.2 of the Zoning Ordinance the first 20 units in a building are subject to a ratio of 1.00 spaces per dwelling unit.

2.1.1 HOUSING PROGRAM

The Project is proposing the addition of 420,000 GFA of residential development, comprising 400,000 Infill GFA, in addition to Exempt GFA totaling 20,000 square feet attributable to middle-income housing. This addition of residential GFA will contribute to the housing needs of the City through the delivery of up to 425 units, offering a broad spectrum of residential units ranging in size, type and affordability across both rental and home ownership product types.

The Project will meet the requirements under the Zoning Ordinance and the Commitment Letter dated December 21, 2015. This includes a minimum of twenty percent (20%) of residential Infill GFA dedicated to affordable units, a minimum of five percent (5%) of residential Infill GFA dedicated to middle-income units, a minimum of five percent (5%) of the residential Infill GFA dedicated to three bedroom units and a minimum of twenty percent (20%) of residential Infill GFA dedicated to home-ownership units. These commitments contribute to the City of Cambridge's goal of creating more housing product in the Kendall Square area, across a range of sizes and affordability.

AFFORDABLE HOUSING

The Concept Plan will deliver 80,000 GFA dedicated to affordable housing. This represents 20 percent (20%) of the residential Infill GFA and will create approximately 80-85 units. This will be proportionately distributed across the Residential Buildings North and South based on 20 percent (20%) of the residential Infill GFA, delivering 66,667 GFA of affordable housing at Residential Building South and 13,333 GFA of affordable housing at Residential Building North.

MIDDLE INCOME HOUSING

The Concept Plan will deliver 20,000 GFA dedicated to middle-income housing. This represents five percent (5%) of residential Infill GFA and will contribute approximately 20-25 units. This will be proportionately distributed across Residential Buildings North and South based on 5 percent (5%) of residential Infill GFA, providing approximately 16,667 GFA of middle-income housing at Residential Building South and 3,333 GFA of middle-income housing at Residential Building North.

THREE BEDROOM UNITS UNITS

The Concept Plan will deliver a minimum of 20,000 GFA as three-bedroom units, equivalent to five percent (5%) of the residential Infill GFA. All three-bedroom units up to the five percent (5%) threshold will be devoted to middle-income and affordable uses. These units are designed as larger units to accommodate families with children and are intended to further the City's goal of providing larger family-sized across varied income levels.

HOME OWNERSHIP UNITS

The Concept Plan will deliver a minimum of 80,000 GFA of home ownership units. This represents twenty percent (20%) of the residential Infill GFA and will create approximately 70-75 units. It is proposed that one-hundred percent (100%) of these units will be delivered in the Residential Building South project which is earmarked for Phase 2 of the Concept Plan. This will ensure the Concept Plan will meet its goal of delivering twenty percent (20%) home ownership units, at the earliest possible opportunity, while maintaining future flexibility to deliver the Residential Building North project as either a one-hundred percent (100%) home ownership building or a one-hundred percent (100%) rental building.

TABLE 2-2 SUMMARY OF HOUSING PROGRAM

	RESIDENTIAL BUILDING SOUTH	RESIDENTIAL BUILDING NORTH	TOTAL GFA ¹	UNIT RANGES
<i>Affordable Housing</i>				
Affordable Housing Rental	50,667	13,333	64,000	
Affordable Housing Home Ownership	16,000	0	16,000	
TOTAL Affordable Housing	66,667	13,333	80,000	80-85 Units
<i>Market Rate Housing</i>				
Market Rate Housing - Rental	202,666	53,334	256,000	
Market Rate Housing - Home Ownership	64,000	0	64,000	
TOTAL Market Rate Housing	266,666	53,334	320,000	315-325 Units
<i>Middle Income Housing - GFA EXEMPT</i>				
Middle Income Housing - Rental	12,667	3,333	16,000	
Middle Income Housing - Home Ownership	4,000	0	4,000	
TOTAL Middle Income Housing	16,667	3,333	20,000	20-25 Units
<i>Residential GFA</i>				
Rental Housing	266,000	70,000	336,000	
Home Ownership Housing	84,000	0	84,000	
TOTAL Residential GFA	350,000	70,000	420,000	Up to 425 Units

1. The Allocation of GFA between Residential Building South and Residential Building North is approximate and subject to further design as the project moves through Design Review.

2. The distribution between rental housing and home ownership housing shown is targeting a minimum of 20% GFA dedicated to home ownership housing. The distribution is subject further design as the project moves through Design Review.

2.1.2 INNOVATION SPACE PROGRAM

Pursuant to the Zoning Ordinance, the Project will deliver 105,200 GFA of Innovation Space. The 105,200 GFA is inclusive of two components as outlined in the applicable Zoning Ordinance: (1) an obligation to deliver Innovation Space equaling ten percent (10%) of nonresidential Infill GFA and (2) a right to deliver Innovation Space equaling an additional ten percent (10%) of nonresidential Infill GFA for an Innovation Space total of twenty percent (20%) of nonresidential Infill GFA.

The Applicant is proposing to take existing office space out of service in an existing asset, replace it with newly designated Innovation Space, and transfer the office GFA into the proposed Commercial Buildings A and B.

BASE LINE GFA CALCULATION	
Commercial Infill GFA	600,000.00
Whitehead Deduction (provided in zoning)	(60,000.00)
Broad Institute Space Reservation	(14,000.00)
Base Commercial Infill GFA	526,000.00

INNOVATION SPACE TRANSFER		
10% Innovation Space Requirement	10%	52,600.00
10% Innovation Space Bonus	10%	52,600.00
Total Innovation Space GFA		105,200.00

It is proposed that the Innovation Space be located in 255 Main Street, backfilling a 124,000 square feet of forthcoming vacancy. This space is scheduled to be made available concurrently with Phase 1 of the Project. For more specific detail on the phasing refer to Section 9, Phasing.

Strategically situated at the front door of Kendall Square, 255 Main Street is well-suited to accommodate a home for emerging businesses. The Project will promote and foster the continued innovative spirit of Kendall Square (and by extension, MIT) with the development of a new innovation hub modeled after, and improving upon, well-established co-working and incubation environments.

A few characteristics of the Innovation Space will include shorter term leases with roughly one month lease terms, a highly diverse set of smaller tenants (with no one tenant occupying more than ten percent (10%) of the entire Innovation Space provided in the District), and separately contracted private office suites of 200 square feet or less. As is often found with this type of product, shared resources including co-working areas, conference space, classroom space, office equipment, showroom, shop or lab equipment, storage, circulation, supplies, and kitchens will be made available to all tenants and will occupy the majority of the Innovation Space.

To maintain compliance with the requirements set forth in the Zoning Ordinance, potential tenants of the Innovation Space may include small businesses, incubators, small research laboratories, office space for investors and entrepreneurs, facilities for teaching and theoretical, basic, and applied research, product development and testing, and prototype fabrication or production of experimental products.

Additionally, we will engage other developers in the Kendall Square neighborhood to explore possibilities for collaboration in the development of joint Innovation Space. The development and operation of the Innovation Space will either be (1) executed via a master lease to an existing co working or innovation space operator or (2) developed and managed by the Applicant. In either case, the Applicant will ensure that twenty-five percent (25%) of the innovation space membership or leases are at below market rates.

2.2 CAMBRIDGE OUTDOOR LIGHTING ORDINANCE

The Applicant is aware that the City Manager has appointed an Outdoor Lighting Ordinance Task Force to work with City staff to evaluate existing standards and offer guidance for the creation of a new ordinance/approach for regulating and enforcing an outdoor lighting ordinance. While an ordinance has not been adopted by the City at the time of this submission, the Project will explore outdoor lighting that promotes the safe use and enjoyment of outdoor areas, mitigates light trespass and glare to abutters and the public at large, reduces light pollution, and promotes energy conservation.

2.3 REVIEW AND APPROVAL PROCESS

As stated in Section 14.32.2 of the Zoning Ordinance, this Concept Plan is submitted to establish the “context and conceptual governance structure for existing and potential future development that allows development to proceed in a flexible manner without requiring additional special permit for each building.”

This Concept Plan seeks to obtain a special permit for the entire Project but still allow for specific design review of each of the four proposed Project Components at the appropriate junctures in the future.

Accordingly, the information presented within this Concept Plan addresses the public realm, open space, design guidelines and urban design context along with the massing of each of the Project Components.

As described in the Zoning Ordinance, a Design Review Submission will be submitted for each Project Component, addressing specific design criteria that seeks to supplement the design elements submitted within the Concept Plan. It is the Applicant’s intent to submit a Design Review Submission for Commercial Building A simultaneously with the Concept Plan for concurrent review.

The Design Review Submission seeks to develop upon the design guidelines established in this Concept Plan and provide specific details about the individual Project Components appropriate for review and approval jointly by the Planning Board and the CRA Board.

Table 2-3 presents the anticipated sequence and general detail of information submitted with each component piece of the Special Permit:

SPECIAL PERMIT SUBMISSION INFORMATION PLAN					
	Submission 1		Submission 2	Submission 2	Submission 3
	INFILL DEVELOPMENT CONCEPT PLAN	Design Review Commercial A 145 Broadway	Design Review Commercial B 250 Binney	Design Review Residential Building South	Design Review Residential Building North
Transportation	X				
Ped. Circulation	X				
Open Space	X				
Bike Parking	X				
Vehicle Parking	X				
Loading	X				
Retail Planning	X				
Storm water	X				
Shadow Analysis	X				
Noise	X				
Wind - Desktop	X				
Sustainability	X	X	X	X	X
Wind - Wind Tunnell		X	X	X	X
Building Design		X	X	X	X

TABLE 2-3 ARTICLE 14 FILING STRATEGY

2.4 FINDINGS AND APPROVAL

As described in Section 14.32.2.2 of the Zoning Ordinance, the Planning Board shall grant a special permit approving a Concept Plan upon determining that the Project identified within the plan meets the criteria for approval of a Planned Unit Development set forth in Section 12.35.3(3) of the Zoning Ordinance and the criteria for approval of a Project Review Special Permit set forth in Section 19.25 of the Zoning Ordinance. In making its findings, the Planning Board shall consider the objectives set forth in the Kendall Square Final Report of the K2C2 Planning Study (“K2 Plan”) and the Kendall Square Design Guidelines. The approval of a Concept Plan shall serve to meet any applicable project review requirements of Article 19.000. No additional Project Review Special Permit shall be required for any new development identified within an approved Concept Plan and only design review shall take place for each specific Project Component.

2.4.1 CONFORMANCE WITH ARTICLE 12.35.3(3)

Section 12.35.3.3 of the Zoning Ordinance provides that:

Approval of the Development Proposal shall be granted only upon determination by the Planning Board that the Development Proposal provides benefits to the City which outweigh its adverse effects. In making this determination the Planning Board shall consider the following:

QUALITY OF SITE DESIGN

This Concept Plan presents a vision that reflects the unique needs and interests of the people who live, work, connect and innovate within Kendall Square. The Project will comply with the Zoning Ordinance as recently amended in response to the public process that occurred in fall/winter 2015 and approved by the Cambridge City Council on December 21, 2015. The Project has been responsive to the K2 Plan, as outlined throughout this Concept Plan, through the thoughtful integration of office, laboratory space, housing, retail and innovation space to ensure a dynamic and lively environment that serves people of different backgrounds, interests, professions and incomes.

For details on this refer to Section 3, Open Space, Section 4, Retail Plan and Section 10, Design Guidelines.

TRAFFIC FLOW AND SAFETY

A Traffic Impact Study (TIS) was developed and certified by the City of Cambridge Traffic, Parking and Transportation Department (TP&T) on July 14, 2016. Refer to Section 5, Transportation for more details, along with Appendix B for a full copy of the Traffic Impact Study (TIS), including the City’s scoping letter and Certification.

ADEQUACY OF UTILITIES AND OTHER PUBLIC WORKS

City utilities are generally adequate to support the Project. Section 6, Infrastructure, details the existing and proposed utility infrastructure, and specific infrastructure improvements and services associated with the Project. This section also details measures that the Applicant will take to reduce the impacts of the Project on the existing utility systems.

IMPACT ON EXISTING PUBLIC FACILITIES WITHIN THE CITY

It is not anticipated that the Project will have a significant impact on City services. The proposed buildings contained in the Project will meet all applicable codes at the time of building construction.

DELIVERY OF PUBLIC BENEFIT

The Project is proposing to deliver significant public benefits, as outlined throughout this Concept Plan and highlighted below:

- Up to 425 units of new, diverse housing across a broad spectrum of unit type, size and affordability;
- 627,134 GFA of new commercial space that will blend office and laboratory uses;
- 19,366 GFA of active use/retail space;
- New and enhanced open space and streetscapes along Broadway and Binney Streets;
- Activation of Broadway and Binney Street through 19,366 GFA of new ground floor retail/active use that will enhance the Kendall Square area;
- Delivery of approximately 105,200 gross square feet of new innovation space converted from existing office uses;

- Generate approximately \$12 million in new annual real estate taxes revenue for the City, as well as additional income and sales tax revenues generated through the influx of new workers and residents;
- Create approximately 4,500 permanent jobs, as well as approximately 2,600 construction jobs across all the Project Components; and
- Provide a series of enhancements that will encourage alternative modes of transportation, through the addition of 633 long-term, secure and covered bike parking spaces, 102 short-term bike parking spaces, and the enhancement of pedestrian and bicycle connections.

2.4.2 CONFORMANCE WITH ARTICLE 19.25

The following section demonstrates that the Project conforms with Article 19.25: Review Criteria.

TRAFFIC IMPACT FINDINGS

A TIS was developed for the Project that is consistent with Section IV, Guidelines for Presenting Information to the Planning Board of the City of Cambridge Transportation Impact Study Guidelines, Sixth Revision dated November 28, 2011. The TIS, dated June 23, 2016, was Certified by the TP&T on July 14, 2016. Refer to Appendix B for a copy of a copy of the full TIS, including the City's scoping letter and Certification.

TRAFFIC IMPACT INDICATORS

The TIS analysis identified impacts that the Project will have on the transportation network and is used by the City to identify possible mitigation to offset these impacts. Based on the TIS analysis, the Project has been evaluated within the context of the Planning Board Criteria to determine if the Project has any potential adverse transportation impacts. The Planning Board Criteria evaluates the Project's vehicular trip generation, impact to intersection level of service and queuing, as well as increase of volume on residential streets. In addition, pedestrian and bicycle conditions are considered. A discussion of the criteria set forth by the Planning Board and a summary of Planning Board Criteria Performance is presented in the TIS.

Exceeding one or more of the criteria is indicative of a potentially adverse

impact on the City's transportation network. However, the Planning Board will consider mitigation efforts, their anticipated effectiveness, and other information that identifies a reduction in adverse transportation impacts. The TIS analysis demonstrated that the Project had 31 criteria exceedances out of a possible 445 data entries. The Applicant, the CRA and the City are continuing the process of developing and discussing the mitigation program associated with this Project. The TIS identified policies and programs that could potentially be implemented as Project mitigation.

CONSISTENCY WITH K2 MASTER PLAN

Since the filing of the SEIR in October 2015, the Project has undergone a thoughtful evolution based upon public presentations, public agency feedback and the requirements of the recent amendments to the Zoning Ordinance. In addition to adapting to programmatic changes related to the expansion of required affordable housing and the potential bonus for the inclusion of Innovation Space contained in Zoning Ordinance, the Applicant further studied the Project site in connection with the K2 Planning study from 2012. Refer to Section 1.4 for a description of the Project's consistency with the K2 Master Plan.

The Project conforms to Section 501, General Design Principles of the the KSURP.

An architectural rendering of a modern building with a glass facade and a prominent corner. The scene is overlaid with a blue tint. In the foreground, there is a paved area with a grassy strip. Several people are depicted: some walking, some riding bicycles, and a person running. Two cars are parked on the street. The building has a large glass entrance area and a section with a perforated metal screen. The overall atmosphere is one of a vibrant, pedestrian-friendly urban environment.

3. OPEN SPACE PLAN

3. INTRODUCTION

PUBLIC REALM

The public realm in the redevelopment area between Broadway and Binney Street consists of Broadway Park and Binney Park, three East West Pedestrian Connectors and the Sixth Street Connector. Streetscapes include Broadway, Binney Street, Galileo Galilei and the North South Streets flanking the existing parking garage.

The proposed four new buildings and related areas of the public realm are designed to enhance the connectivity and pedestrian experience in this part of the MXD. The two existing open spaces, Broadway Park to the south and Binney Park to the north, are redesigned as more recognizable and visible focal points, as well as more usable and attractive public gathering spaces. These two small but significant open spaces are redesigned to express stronger connections to the existing and proposed buildings, framing the spaces. The intent is to reposition each park to better engage the proposed new active ground floor uses as well as the pedestrian circulation along Broadway and Binney Street.

Overall pedestrian connectivity is enhanced by refinements and adjustments to the Sixth Street Connector as well as redesign of the three East West Pedestrian Connectors. A new bicycle path paralleling the Sixth Street Connector separates pedestrian and bike traffic on this well used route. The streetscape along Broadway and Galileo Galilei at 145 Broadway is transformed with new active ground floor uses and streetscape design for pedestrian use that will be coordinated with the proposed CRA redesign for these streets. Likewise, the Binney Street streetscape at 250 Binney Street is enhanced with new active uses at the ground floor and expanded pedestrian space.

The combination of new active ground floor uses, the redesign of key existing spaces along with adjustments and refinements to other parts of the public realm will significantly improve the connectivity, as well as the experience of the public realm between Broadway and Binney Street in the MXD.

3.1 EXISTING OPEN SPACE

DEFINITION OF OPEN SPACE

Open spaces, as described in this document, and reinforced by Article 14, are described in the following ways:

1) Portion of a lot or other area of land associated with and adjacent to a building for a group of buildings in relation to which it serves to provide light and air, or scenic, recreational or similar purposes. Such space shall, in general, be available for entry and use by the occupants of the building(s) with which it is associated, and at times to the general public, but may include a limited proportion of space so located and treated as to enhance the amenity of development by providing landscape features, screening or buffering for the occupants or neighbors or a general appearance of openness. Open space shall include parks, plazas, lawns, landscaped areas, decorative plantings, pedestrian ways as listed in Section 14.45 of the Zoning Ordinance, active and passive recreational areas, including playgrounds and swimming pools.

2) Parks, gardens and plazas reserved for public use and enjoyment as guaranteed through one or more of the following:

- Retention by the CRA.
- Dedication to and acceptance by the City or other public entity.
- Easements or deed restrictions over such land sufficient to ensure its perpetual reservation for public open space purposes.
- Dedication, by covenant or comparable legal instrument. to the community use of the residents, lessees and visitors to the MXD District for reasonable amounts of time on a regular basis.
- Lease agreements of 99 years or longer from the private developer or owner to the City or other public entity.

3) Open space on the development lot. Some or all of this required open space may be designated and also serve as open space.

Spaces that **are not** considered as open spaces, as described in this document and reinforced by the Zoning Ordinance are:

- Streets, parking lots, driveways, service roads, loading areas, and areas normally inaccessible to pedestrian circulation beneath pedestrian bridges, decks or shopping bridges.



EXISTING OPEN SPACES

- Existing open space on grade
- Existing open space above grade

3.1 EXISTING OPEN SPACE

EXISTING MXD PARCEL AREAS & OPEN SPACE CALCULATION

EXISTING MXD DEVELOPABLE PARCEL AREA	
P2	445,825
P3	229,558
P4	257,824
GRAND JUNCTION + BINNEY	79,611
TOTAL EXST MXD AREA (±SF)	1,012,817

EXISTING OPEN SPACE (OS) TOTALS	
P2	148,825
P3	77,429
P4	141,247
GRAND JUNCTION. + BINNEY	79,611
TOTAL EXISTING MXD OS (±SF)	447,112

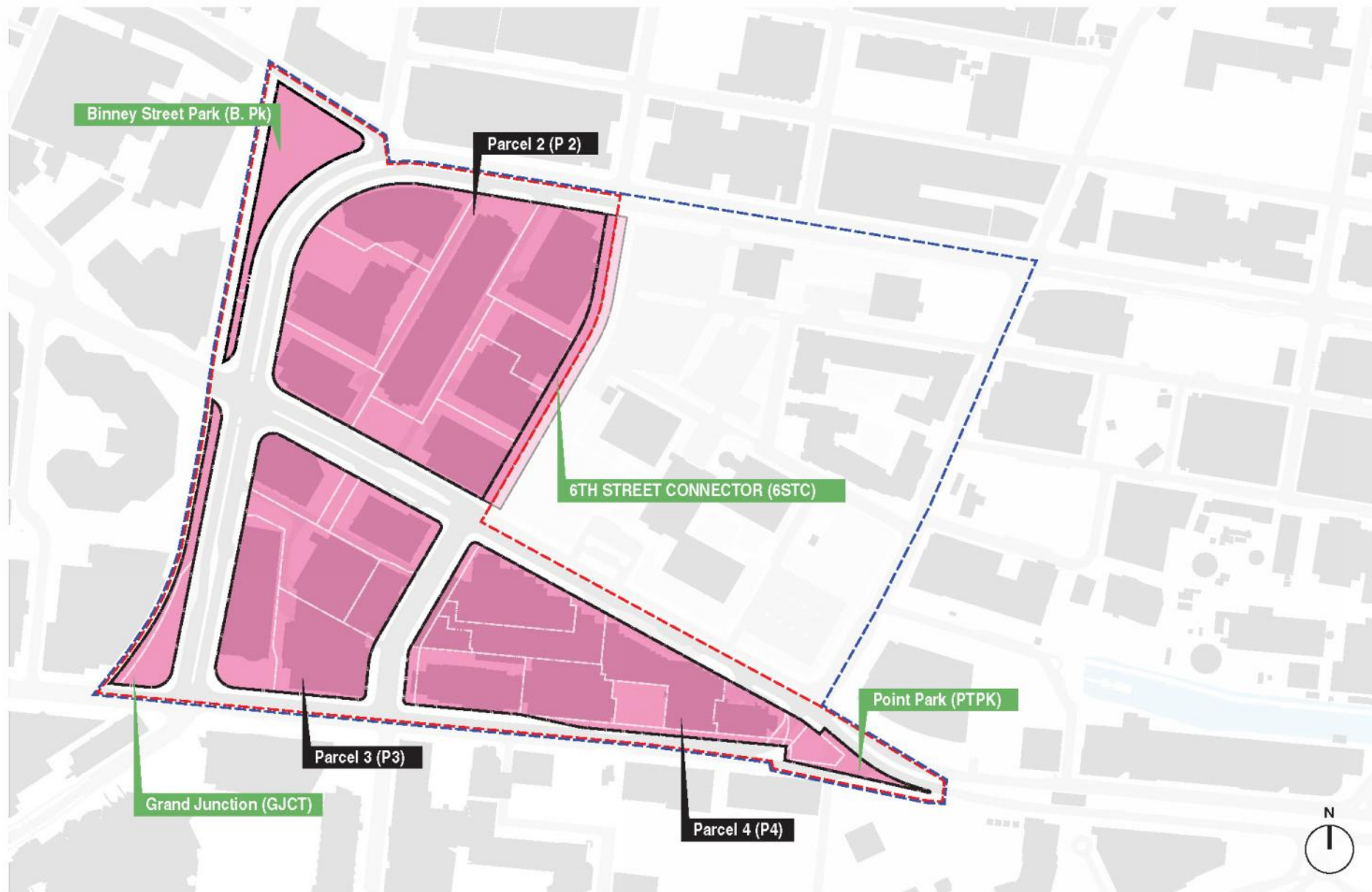
TOTAL EXISTING MXD PUBLIC OS	
GARAGE ROOF GARDEN	25,798
MARIOTT PLAZA	14,372
POINT PARK	22,933
DANIEL LEWIN PARK (CENTER STRIP ONLY)	5,297
ORIGINAL BROAD OPEN SPACE (7CC)	5,022
WHITEHEAD PLAZA	10,930
GRAND JUNCTION	32,611
BINNEY STREET PARK	47,000
6TH STREET WALKWAY	19,569
TOTAL EXST PUBLIC OS (±SF)	183,532

REQUIRED	PROVIDED
100K 100,000 ±SF	TOTAL EXISTING PUBLIC OPEN SPACE 183,532 ±SF
15% OF TOTAL MXD AREA 151,923 ±SF	TOTAL EXISTING OPEN SPACE 466,681 ±SF

REQUIRED OPEN SPACE VS. PROVIDED OPEN SPACE

SOURCES:

1. CAD/Alta survey
2. Exhibit A Development Area Map. CRA Document. March 18, 1982.
3. Exhibit A Development Area Map. CRA Document. May 25, 1979.
4. CRA's KSURP Open Space Accounting. June, 2015.
5. Kendall Center Open Space Parcels 2, 3, and 4. July 31, 2015.



EXISTING MXD DISTRICT PARCELS

 Parcels

 MXD Boundary

 Open Space/Park

 KSURP Boundary

3.1 EXISTING OPEN SPACE - PARCEL 2 TRACTS

EXISTING PARCEL 2 BREAKDOWN PER TRACT

TRACT	BLDG	EXST. TRACT AREA	EXST. DEV. AREA	EXST. BLDG. FTPRINT	LOT COVERAGE (BLDG/TRACT)	EXST. OPEN SPACE	REQ'D OPEN SPACE
I	250 BINNEY	60,622	40,839	33,538	55.32%	19,783	5,006
II	145 BROADWAY	37,862	25,437	20,563	54.31%	12,424	6,231
III	105 BROADWAY	49,115	28,107	24,721	50.33%	21,008	11,648
IV	BLUE GARAGE	91,848	72,852	53,504	58.25%	18,997	-
V	12 CC	36,571	24,924	23,677	64.74%	11,647	COMBINED IN TRACT VI
VI	12 CC	25,916	17,554	17,554	67.73%	8,362	11,858
VII	15 CC	74,783	35,070	33,604	44.94%	39,714	16,380
VIII	300 BINNEY	49,544	32,654	32,276	65.15%	16,890	17,093

PARCEL 2 EXISTING OPEN SPACE REQUIRED (±SF)	68,216
PARCEL 2 EXISTING OPEN SPACE PROVIDED (±SF)	148,825

NOTES: Existing Required Open Space figures based on Applicant survey of Parcel 2 buildings.

SOURCES:

1. CAD/Alta survey
2. Exhibit A Development Area Map. CRA Document. March 18, 1982.
3. Exhibit A Development Area Map. CRA Document. May 25, 1979.
4. CRA's KSURP Open Space Accounting. June, 2015.
5. Kendall Center Open Space Parcels 2, 3, and 4. July 31, 2015.



PARCEL 2 TRACT

--- Tract/Lot Boundary

Ⓧ Tract/Lot Number

█ Open Space/Park

3.2 PROPOSED OPEN SPACE

OPEN SPACE OBJECTIVES

The landscape in the MXD District is designed to function as a landscape that embraces, integrates and embodies design, environmental and real estate values. As a complete system, the landscape responds to the climate and natural conditions of the site, working with its features to maximize their functional qualities. The landscape serves as an extension of the collaborative environment of Kendall Square, embracing academic values and utilizing the landscape as an integrated living laboratory to enhanced connectivity. The following tenets were established to guide the landscape design process and are fully reflected in the site plan:

- Create an identifiable “district” experience that is inviting, reinforces the pedestrian environment
- Design with the New England climate in mind
- Enhance and respond to local climates and ecology as a fundamental design determinant for district landscape, including the high water table
- Develop a functional landscape that incorporates water conservation, integrates rainwater management into the various landscape and open space elements, and is easy to maintain
- Create outdoor living spaces to promote a strong feeling of community in addition to supporting activities of the community and contain a system of lively public spaces that provide a hospitable environment for social interaction
- Create a network of shade and comfort zones where people can walk, gather and rest outdoors
- Create an identity and community presence through signature campus gateways and a defined, unified landscape along the public edges of the district
- Define design standards for landscape elements, including furnishings and lighting
- Create pedestrian paths and connections that are well proportioned and offer a variety of spatial sequences
- Use native trees and plant material that adapt to the site conditions and integrate the new with the existing landscape
- Use the landscape as a living lab to educate the community and visitors of the climate, local vegetation and natural systems.



- Proposed open space enhancements on grade
- Potential Proposed open space above grade
- Existing open space on grade
- Existing open space above grade

PROPOSED OPEN SPACES

3.2 PROPOSED OPEN SPACE

PROPOSED PARCEL AREA AND OPEN SPACES

EXISTING MXD DEVELOPABLE PARCEL AREA	
P2	445,825
P3	229,558
P4	257,824
GRAND JUNCTION + BINNEY	79,611
TOTAL EXST MXD AREA (±SF)	1,012,817

PROPOSED OPEN SPACE (OS) TOTALS	
P2	155,605
P3	77,429
P4	141,247
GRAND JUNCTION + BINNEY	79,611
TOTAL PRPSD MXD OS (±SF)	453,892

TOTAL PROPOSED MXD PUBLIC OS	
TRACT III (BROADWAY PARK)	11,674
TRACT II (BINNEY PARK)	7,793
6TH STREET WALKWAY	19,569
P2 ENHANCED OPEN SPACE	73,290
GRAND JUNCTION	32,611
BINNEY ST. PARK	47,000
GARAGE ROOF GARDEN	25,798
MARIOTT PLAZA	14,372
POINT PARK	22,933
DANIEL LEWIN PARK (CENTER STRIP ONLY)	5,297
ORIGINAL BROAD OPEN SPACE (7CC)	5,022
WHITEHEAD PLAZA	10,930
TOTAL PRPSD PUBLIC OS (±SF)	276,289

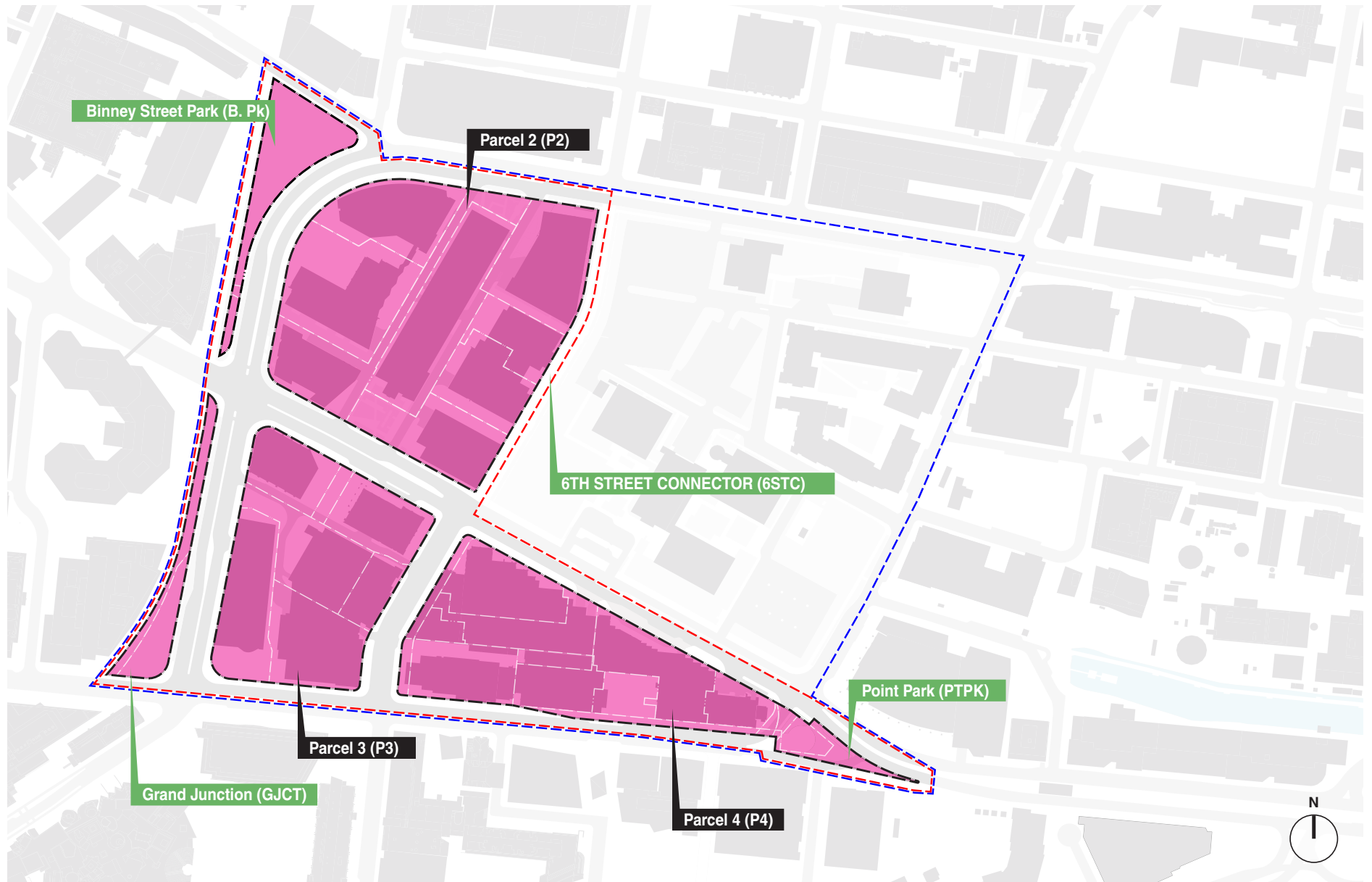
REQUIRED	PROVIDED
100K 100,000 ±SF	TOTAL PROPOSED PUBLIC OPEN SPACE 276,289 ±SF
15% OF TOTAL MXD AREA 151,923 ±SF	TOTAL PROPOSED OPEN SPACE 473,546 ±SF

REQUIRED OPEN SPACE VS. PROVIDED OPEN SPACE

TOTAL EXISTING MXD PUBLIC OS	
GARAGE ROOF GARDEN	25,798
MARIOTT PLAZA	14,372
POINT PARK	22,933
DANIEL LEWIN PARK (CENTER STRIP ONLY)	5,297
ORIGINAL BROAD OPEN SPACE (7CC)	5,022
WHITEHEAD PLAZA	10,930
GRAND JUNCTION	32,611
BINNEY STREET PARK	47,000
6TH STREET WALKWAY	19,569
TOTAL EXST PUBLIC OS (±SF)	183,532

SOURCES:

1. CAD/Alta survey
2. Exhibit A Development Area Map. CRA Document. March 18, 1982.
3. Exhibit A Development Area Map. CRA Document. May 25, 1979.
4. CRA's KSURP Open Space Accounting. June, 2015.
5. Article 14. July 31, 2015.



EXISTING MXD DISTRICT PARCELS

Parcels

MXD Boundary

Open Space

KSURP Boundary

3.2 PROPOSED OPEN SPACE

PROPOSED PARCEL 2 BREAKDOWN PER TRACT

TRACT	BLDG	RECONFIG'D. TRACT AREA	PROP'D DEV. AREA	PROP'D BLDG. FTPRINT	LOT COVERAGE (BLDG/TRACT)	PROP'D OPEN SPACE	REQ'D OPEN SPACE
I	250 BINNEY	-	44,093	35,222	58.10%	16,530	25,652
II	145 BROADWAY	56,760	29,945	21,707	39.18%	25,460	36,502
III	105 BROADWAY	-	26,135	24,721	50.33%	22,980	11,648
IV	BLUE GARAGE	72,950	60,283	52,404	70.53%	14,022	33,730
V	12 CC	-	24,924	23,677	64.74%	11,647	COMBINED IN TRACT VI
VI	12 CC	-	17,554	17,554	67.73%	8,362	11,858
VII	15 CC	-	35,070	33,604	44.94%	39,714	16,380
VIII	300 BINNEY	-	32,654	32,276	65.15%	16,890	17,093

PARCEL 2 PROPOSED OPEN SPACE REQUIRED (±SF)	152,863
PARCEL 2 PROPOSED OPEN SPACE PROVIDED (±SF)	155,605

NOTES: Required open space calculations based on Lot/Tract. Rows in pink in above chart indicate new construction in Parcel 2.

SOURCES:

1. CAD/Alta survey
2. Exhibit A Development Area Map. CRA Document. March 18, 1982.
3. Exhibit A Development Area Map. CRA Document. May 25, 1979.
4. CRA's KSURP Open Space Accounting. June, 2015.
5. Kendall Center Open Space Parcels 2, 3, and 4. July 31, 2015.



PARCEL 2 TRACT

--- Tract/Lot Boundary

Ⓥ Tract/Lot Number

Open Space/Park

3.2 PROPOSED OPEN SPACE

REQUIRED OPEN SPACE CALCULATIONS: TRACT I AND TRACT II

TRACT I - 250 BINNEY STREET

GFA Allocation	
Infill GFA	213,389.80
Innovation Space Transfer GFA	42,677.96
Existing GFA	62,576.00
TOTAL ALLOCATED GFA	318,643.76
Planned Office GFA	310,614.76
Planned Retail/Active Use GFA	8,029.00
TOTAL GFA	318,643.76
Lot Open Space - New Infill GFA + Existing GFA	
Office Infill GFA - Lot Open Space (8:100)	19,843.10
Retail Infill GFA - Lot Open Space (10:100)	802.90
Existing GFA - Lot Open Space (8:100)	5,006.08
TOTAL LOT OPEN SPACE REQUIREMENT	25,652.08

Tract I Total Open Space Required

25,652 ±SF

TRACT II - 145 BROADWAY

GFA Allocation	
Infill GFA	312,610.20
Innovation Space Transfer GFA	62,522.04
Existing GFA	78,636.00
TOTAL ALLOCATED GFA	453,768.24
Planned Office GFA	443,731.00
Planned Retail/Active Use GFA	10,037.00
TOTAL GFA	453,768.00
Lot Open Space - New Infill GFA + Existing GFA	
Office Infill GFA - Lot Open Space (8:100)	29,207.62
Retail Infill GFA - Lot Open Space (10:100)	1,003.70
Existing GFA - Lot Open Space (8:100)	6,290.88
TOTAL LOT OPEN SPACE REQUIREMENT	36,502.20

Tract II Total Open Space Required

36,502 ±SF

REQUIRED OPEN SPACE CALCULATIONS: TRACT IV

TRACT IV - RESIDENTIAL BUILDING NORTH

GFA Allocation	
Infill GFA	70,000.00
Innovation Space Transfer GFA	-
Existing GFA	-
TOTAL ALLOCATED GFA	70,000.00
Planned Rental GFA	68,700.00
Planned Home Ownership GFA	-
Planned Retail/Active Use GFA	1,300.00
TOTAL GFA	<u>70,000.00</u>
Lot Open Space - New Infill GFA + Existing GFA	
Office Infill GFA - Lot Open Space (8:100)	5,600.00
Retail Infill GFA - Lot Open Space (10:100)	130.00
Existing GFA - Lot Open Space (8:100)	-
TOTAL LOT OPEN SPACE REQUIREMENT	5,730.00

Tract IV Open Space Required
(Residential Building North)

5,730 ±SF

TRACT IV - RESIDENTIAL BUILDING SOUTH

GFA Allocation	
Infill GFA	350,000.00
Innovation Space Transfer GFA	-
Existing GFA	-
TOTAL ALLOCATED GFA	350,000.00
Planned Rental GFA	266,000.00
Planned Home Ownership GFA	84,000.00
Planned Retail/Active Use GFA	-
TOTAL GFA	<u>350,000.00</u>
Lot Open Space - New Infill GFA + Existing GFA	
Office Infill GFA - Lot Open Space (8:100)	28,000.00
Retail Infill GFA - Lot Open Space (10:100)	-
Existing GFA - Lot Open Space (8:100)	-
TOTAL LOT OPEN SPACE REQUIREMENT	28,000.00

Tract IV Open Space Required
(Residential Building South)

28,000 ±SF

Tract IV Total Open Space Required
(Residential Building North + South)

33,730 ±SF

3.2 OPEN SPACE VISION

PARKS

BROADWAY PARK

The existing park is between Broadway and the North Garage and is defined on the east and west sides by the streets that lead to and border the North Garage. The current grading slopes up from the south to north toward the existing parking garage separated from these streets by the grades. The park is further separated from these adjacent streets by the brick walls at the edges of the park. The existing entries to the park are limited to Broadway at the southeast and southwest corners and from the parking garage.

The redesign of the Broadway Park aims to expand the usable space of the park to the east and west toward the proposed new building at 145 Broadway, the existing building at 105 Broadway and the new building entries for residential at the north edge of the park. The expanded park space is expressed in the design with the park paving pattern extended into the adjacent streets, and installed in a flush condition. A change of color and texture, along with a couple of vertical elements along each side of the street, marks the travel ways.

The redesign also makes the park more permeable in response to pedestrian desire lines to and from the East West Pedestrian Connector north of 105 Broadway, and to and from the southeast corner of the park on Broadway toward the northwest. While the park redesign accommodates these pedestrian movements through the space, the redesign, first and foremost aims to make the park a more usable public space with multiple seating options and more ways to program and enjoy the park.

Along the eastern side of the park, a 50' long community table functions as

a meeting place, lunchtime eating spot, outdoor work table, game table and outdoor classroom. The table and its seating are framed by rather tightly spaced, light leafed, canopy shade trees to create dappled light in the space. To extend the use of the community table into the evening, LED light strips form a pattern of illuminated lines overhead.

The planting is in a series of linear zones with a varied and mostly native palette of shrubs and perennials up to 3' or so in height as an understory, and canopy trees overhead. The planting creates a presence of nature in this urbanized area and is designed to create seasonal interest as well as define paths and subspaces. The central space of the park is an open and flexible lawn area suitable for programming.



THE CITYDECK GREENBAY
([HTTP://WWW.STOSS.NET/](http://www.stoss.net/))



BYRANT PARK
([HTTP://WWW.NEWYORK.COM/](http://www.newyork.com/))



HARVARD YARD
([HTTP://WWW.MVVAINC.COM/](http://www.mvva-inc.com/))



SMITH CARDIOVASCULAR RESEARCH BUILDING

PARKS

BROADWAY PARK

In addition to the seating at the community table, the park includes long wooden benches along the linear planting zones. Along the path at the north edge of the lawn, another elongated seating element is designed in a profile that corresponds to the reclined seating of a chaise lounge for relaxing in a south facing orientation.

At the north edge of the park along a key east west path, is a simple rectangular basin of water that is supplied from rainwater harvested from the site. Water drops via gravity into the basin from a series of water spouts along a low wall that separates the edge of the basin from the residential entries. The grading in the park directs surface runoff into the planting zones as recharge areas. The basin of water also serves as an address for the residential lobbies along the northern edge of the park.

The key materials in the park include bands of concrete unit pavers in several colors on a concrete setting bed, over the walking surfaces and drives, as described above. The pavers in the driving surface will match the colors and pattern of pedestrian areas, but be a smaller paving module size to prevent breaking from vehicular travel. The rectangular space with the community table may have special paving such as stone.



LOOKING ALONG BROADWAY TOWARD BROADWAY PARK



LOOKING ALONG THE WATER BASIN TOWARD THE COMMUNITY TABLE

PARKS

BINNEY PARK

The existing park along Binney Street at the north end of the garage is defined on the east and west sides by the service roads that flank the Blue Garage. The site is flat and currently has paths that lead to an entry to the existing parking garage. There are crosswalks on the flanking streets leading to the garage that provide a shortcut to the garage from the existing 250 and 300 Binney Street buildings. Currently the open space is used mostly for circulation and not designed as a place to pause and enjoy.

The redesign of the Binney Park aims to make a space that is more green than the Broadway Park but retains the pedestrian circulation through the space. The goal is to also make the space more usable for employees as well as residents. The existing crosswalks at the adjacent streets are retained in response to pedestrian desire lines toward Broadway and the transit station, between 250 and 300 Binney Street and to the new residential and active use areas at the Residential Building North and Commercial Building B.

The redesign also draws connections between the existing paved area at the entry to 300 Binney Street and the new entry to the Commercial Building B. The proposed paving in the Binney Park and at Commercial Building B are concrete unit pavers that are similar, but not identical to the existing paving at

300 Binney Street to draw continuities along Binney Street, in a way similar to the design expression along Broadway. The streets however along each side of the park, are only in a flush condition at the crosswalk near Broadway, as exists today.

Paths that respond to pedestrian circulation are angled toward the entries of the Residential Building North and retail / active use space. There is some expanded paving in front of the active use area to allow for outdoor seating. The balance of the space is planted with an understory of mostly native shrubs and perennials to create a presence of nature as well as seasonal interest.

Colorful structures that support netting are located over some the perennial planting at the center of Binney Park. The netting slopes toward paths and are used as informal and relaxing seating structures, appealing to adults as well children. It is envisioned these unique seating structures could be used by employees during the weekday and also attract families and children to be used as play structures at other times, encouraging activity throughout the week.



LOOKING ALONG BINNEY STREET TOWARDS THE RESIDENTIAL LOBBY AND ACTIVE USE



LOOKING ALONG ACTIVE USE TO SCULPTURAL LOUNGE SEATING

CONNECTORS

SIXTH STREET CONNECTOR

The existing Sixth Street Connector is a 12.5' wide path between an alley of mature Red Oaks connecting from Binney Street to Broadway, which is well used by pedestrians and bicyclists. The path is approximately 7' from the existing buildings to the west. A new 10' wide bike path is proposed in the space between the existing path and buildings on the west. This proposed bicycle path aligns with paths to the north on Sixth Street and to the south on Ames Street. The new bike path will be set at the existing grade to reduce impacts on the existing tree roots. The Red Oaks, as is typical for oaks in general, as compared to other tree species, can survive some disruption of the root zone. The design team is working with an arborist at Bartlett Trees to evaluate the location and design details of the path to minimize impacts on the existing trees. The East West Pedestrian Connectors cross the new bike path where a change of material, texture and color serves as a warning to pedestrians crossing the bike path.

At a few selected locations where the grading permits, seating will be added between the pedestrian path and bicycle path with crushed stone as a permeable surface over the tree roots. New shade tolerant ground cover planting is between the trees. The lighting is updated with new LED cut off fixtures to enhance safety and the pedestrian experience at night, as well as improve energy efficiency and reduce maintenance costs. The new lights are located in the same location as the existing lights to avoid disturbing the existing tree roots with new conduit.

EAST WEST PEDESTRIAN CONNECTORS

There are three East West Pedestrian Connectors in the overall site area. There are two connectors linking the Sixth Street Pedestrian Connector to the East Drive along the parking garage. The third East West Pedestrian Connector links the West Drive to the sidewalk along Galileo Galilei Way.

It is anticipated that the southernmost East West Pedestrian Connector on the east side will have the most significant use, because of pedestrian desire lines leading to and from the Sixth Street Connector to the Broadway Park and the new building at 145 Broadway. Since this Connector is aligned slightly north of the open space at Broadway Park, it is proposed to add a walkway which angles toward the southwest to accommodate the pedestrian desire line to and from Broadway Park and westward. Other than this addition, the balance of the path is in the same alignment as the existing path in the Connector.

The southernmost East West Pedestrian Connector on the east side will also be designed to accommodate short term bicycle parking for the residential building to the west. This location, slightly more than 50' from the entries, will allow the Broadway Park to accommodate pedestrian use rather than taking up park space with bicycle parking. If possible, linear rain gardens will be water receiving landscapes along the path as one part of the storm water strategy.

The northernmost East West Pedestrian Connector on the east side will remain in the current configuration, because this paved space also serves as a fire lane between 115 Broadway and the new building at 250 Binney Street. New planting of small trees and ground cover are added along the wide path/fire lane.

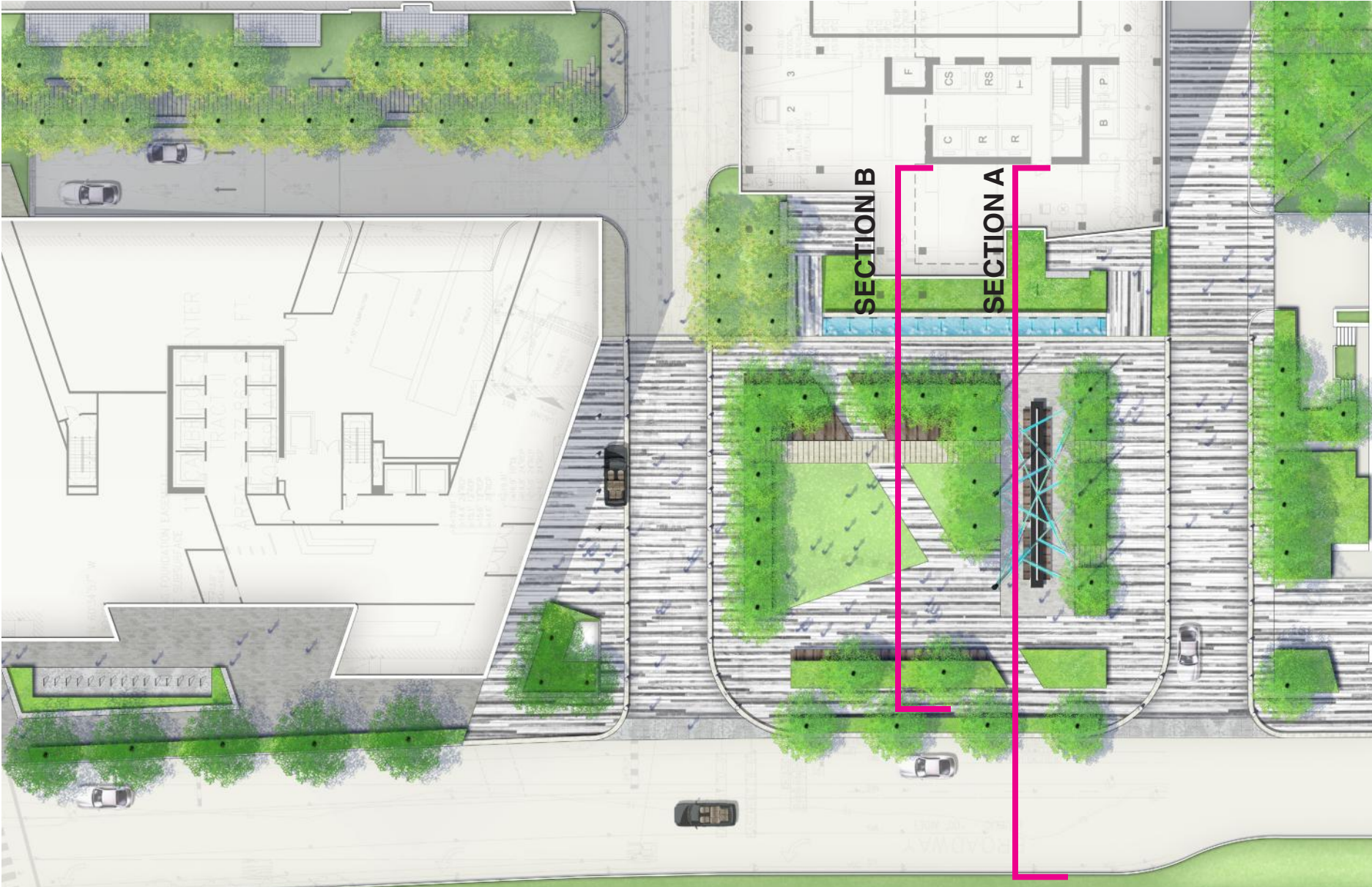
The alignment of the path of East West Pedestrian Connector on the west side is adjusted to shift northward, away from the ramp down to the parking garage at 145 Broadway. This allows planting between the path and the ramp. New planting of small trees and ground cover is located along the 5' wide path. If possible, a portion of the landscape will function as a water receiving landscape.

Each of the East West Pedestrian Connectors will have new LED lighting in cut off fixtures to enhance safety and the pedestrian experience at night, as well as improve energy efficiency and reduce maintenance costs.



LOOKING NORTH ALONG THE 6TH STREET CONNECTOR

3.2 DETAILS - OPEN SPACE PLANS



BROADWAY PARK

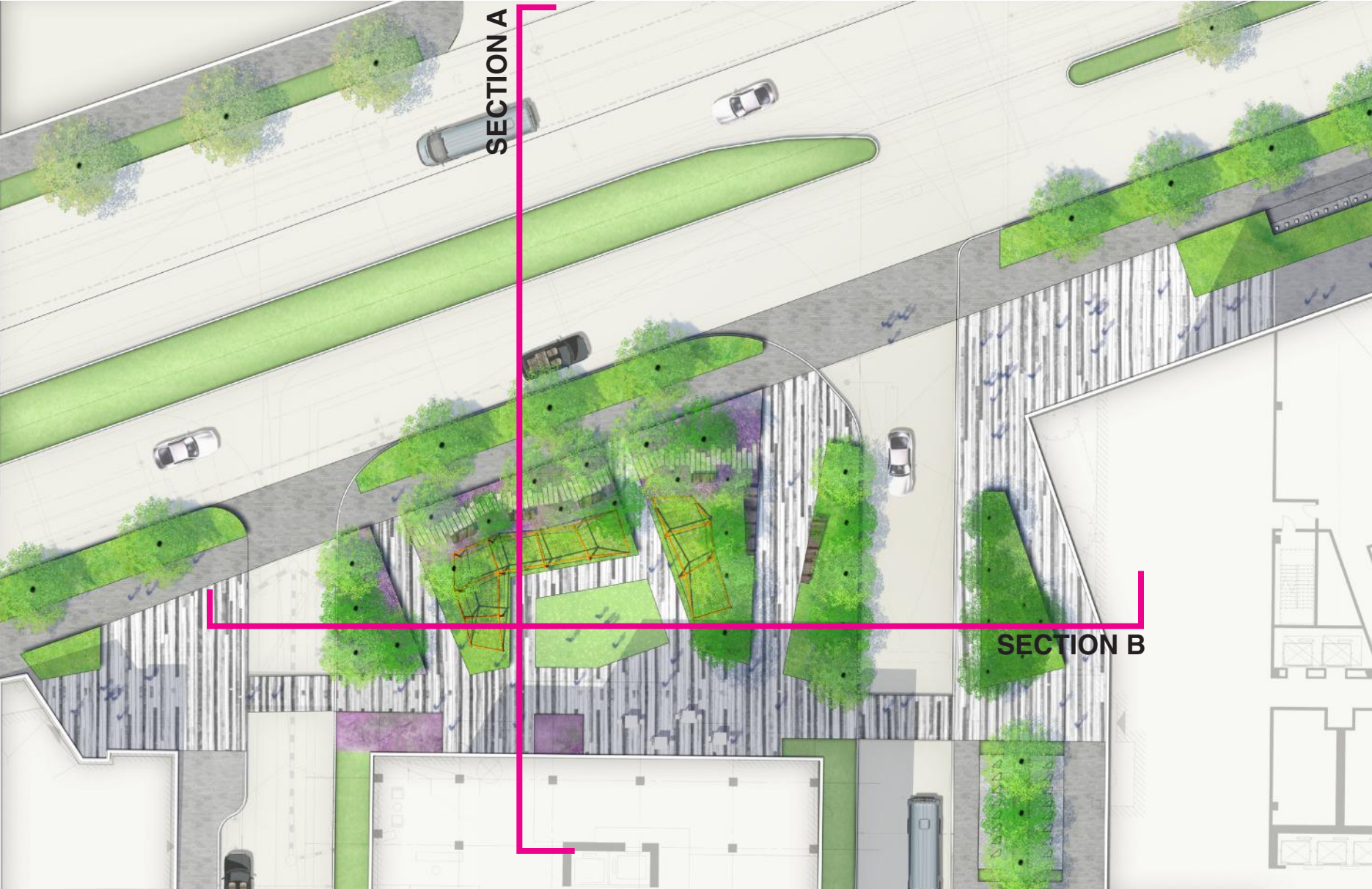


BROADWAY PARK SECTION A



BROADWAY PARK SECTION B

3.2 DETAILS - OPEN SPACE PLANS



BINNEY PARK



BINNEY PARK SECTION A



BINNEY PARK SECTION B