

CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

NOTICE OF DECISION

Case Number:	243, Amendment 3 (Major)
Location of Premises:	50 Rogers Street and 161 First Street
Zoning:	Industry A-1 / PUD-4C
Applicant:	ARE-MA Region No. 21, LLC and ARE-MA Region No. 32, LLC, c/o Alexandria Real Estate Equities, Inc.
Owner:	ARE-MA Region No. 21, LLC and ARE-MA Region No. 32, LLC, c/o Alexandria Real Estate Equities, Inc. 400 Technology Square, Suite 101 Cambridge, MA 02139
Application Date:	March 22, 2018
Preliminary Determination Date:	April 17, 2018
Second Public Hearing Date:	May 22, 2018
Decision Date:	May 22, 2018
Filing Date:	June 27, 2018

2018 JUN 27 AM 8:23
OFFICE OF THE CITY CLERK
CAMBRIDGE, MASSACHUSETTS

Summary of Proposal: Major Amendment to Planned Unit Development (PUD) Special Permit (Sections 12.37, 13.50 and 13.59) and Project Review Special Permit (Section 19.20) to allow the creation of two new lots at the 161 First Street site, one containing 132,231 square feet of residential space in a new building (called 50 Rogers Street) and the other containing the existing commercial building (called 161 First Street), after demolishing a rear annex, totaling 30,319 square feet. Additional Special Permit to locate a driveway within five feet of the property line of 161 First Street (Section 6.44.1).

Decision: The Planning Board **GRANTS** the requested Major Amendment, with Conditions.

Appeals, if any, shall be made pursuant to Section 17 of Massachusetts General Laws, Chapter 40A, and shall be filed within twenty (20) days after filing of the above referenced decision with the City Clerk. Copies of the complete decision and application are on file with the Community Development Department and the City Clerk.

Authorized Representative of the Planning Board: Swaathi Joseph

For further information concerning this determination, please contact Liza Paden at 617-349-4647, or lpaden@cambridgema.gov.

DOCUMENTS SUBMITTED

Application Documents and Supporting Material

1. Application for Amendments to PUD Development Plan and Project Review Special Permit, dated February 2018, including inter alia, Application Forms, Detailed Narrative of Proposed Amendments, Dimensional Form, and Exhibits A-E.
2. Final Development Plan submission received by the Planning Board on April 26, 2018, containing a plan illustrating revisions from the 2010 Special Permit.
3. Final Development Plan responses received by the Planning Board on May 10, 2018, containing narrative response to additional information request, revised site plan, and Exhibits A & B.
4. Presentation slides shown to Planning Board on May 22, 2018.

City of Cambridge Documents

5. Memorandum to the Planning Board from Katherine F. Watkins, City Engineer, Department of Public Works (DPW), dated 3/27/2018.
6. Memorandum to the Planning Board from Community Development Department (CDD) staff, dated 4/11/2018.
7. Memorandum to the Planning Board from Joseph E. Barr, Director, Traffic, Parking & Transportation Department (TP&T), dated 4/12/2018.
8. Memorandum to the Planning Board from CDD staff, dated 5/16/2018.
9. Memorandum to the Planning Board from Joseph E. Barr, Director, TP&T, dated 5/17/2018.

Other Documents

10. Email communication from Amy Kwei to the Planning Board, dated 4/13/2018.
11. Email communication from Hazel Arnett to the Planning Board, dated 5/21/2018.
12. Letter to the Planning Board from Jason Alves, Executive Director, East Cambridge Business Association, dated 5/22/2018.

APPLICATION SUMMARY

The approved PUD allows over 1.5 million square feet of commercial development and 220,000 square feet of residential development. The Application seeks a Major Amendment to Special Permit #243 first issued on June 7, 2010 and subsequently amended through a Minor Amendment (#1) filed on April 14, 2015 and a Major Amendment (#2) filed on February 22, 2018. The current application seeks a Major Amendment to the PUD Final Development Plan authorized in PB #243 in accordance with Sections 12.37 and 12.34 of the Zoning Ordinance. Along with this PUD amendment, the project is seeking a Special Permit to locate a driveway within five feet of the property line per Section 6.44.1 of the Zoning Ordinance.

The Final Development Plan approved a new addition to the west side of the existing building at 161 First Street, with both buildings accommodating residential use. The amendment proposes subdividing the 161 First Street lot into two lots, containing a new residential building at 50 Rogers Street and retaining the existing building at 161 First Street as a non-residential use, separated by a driveway proposed with its western edge along the new dividing property line. The remaining residential use to satisfy the PUD requirements in Section 13.59.4 would be located in the 50 Rogers Street building, and the 161 First Street building would be used for up to 30,319 square feet of office with up to 10,000 square feet of Innovation Office Space being exempt from the total limit on non-residential gross floor area per Section 13.59.11. The driveway for 161 First Street is proposed to have a new curb cut on Rogers Street, and a separate new curb cut is proposed to access the subsurface parking garage with 102 residential parking spaces below the building at 50 Rogers Street. The application proposes removal of the existing curb cut on Binney Street and landscaping the southern portion of the existing alley.

FINDINGS

Based on a review of submitted Application materials and testimony given at the public hearing, the Board makes the following findings with reference to the applicable criteria for granting the requested special permits.

1. Major Amendment to Planned Unit Development Special Permit (Section 12.37)

According to Section 12.37, the Planning Board shall consider approval of a Major Amendment according to the procedures and criteria applicable to a new PUD Special Permit Application. Therefore, the Major Amendment application was submitted as a Development Proposal, which received a Preliminary Determination granting conditional approval on April 17, 2018. The Planning Board finds that the Final Development Plan continues to meet the applicable criteria as set forth in the Preliminary Determination, as reiterated below, and finds that the Final Development Plan includes modifications and supplementary information provided in response to the requests set forth in the Preliminary Determination.

Section 12.35.3 Approval of the Development Proposal shall be granted only upon determination by the Planning Board that the Development Proposal:

- (1) *conforms with the General Development Controls set forth in Section 12.50, and the development controls set forth in the specific PUD district in which the project is located;*

The Board finds that the proposed amendment remains consistent with the General Development Controls set forth in Section 12.50 and the development controls of the applicable PUD zoning districts. On the whole, this Final Development Plan is not changed from the previously approved Final Development Plan except for the reconfiguration of lots and buildings on the 161 First Street site. The proposed amendment creates two lots with two separate buildings, but still provides the full residential gross floor area (GFA) required by the provisions of the PUD district. The proposed use of the existing 161 First Street site as office space is facilitated by a recent amendment to the PUD zoning district requirements, adopted by the City Council in 2017, allowing an exemption of Innovation Office Space from GFA limitations. In other respects, nearly all of the public benefits required as part of this PUD have been conveyed, including over two acres of open space, funding for open space improvements, and conveyance of the Foundry Building to the City. All environmental standards currently applicable to the Final Development Plan will continue to be met.

- (2) *conforms with adopted policy plans or development guidelines for the portion of the city in which the PUD district is located.*

At the master plan level, this Final Development Plan is a moderate departure from the previously approved Final Development Plan and remains consistent overall with the Eastern Cambridge Design Guidelines and the Eastern Cambridge Planning Study. The amendment will locate residential and non-residential uses in two separate buildings without any substantial change in building size, dimension, footprint, floor area, density, height, or location within the approved PUD. The only element of the development master plan that is

affected is the treatment of the space between the existing and proposed new buildings, which will no longer be connected; however, as in the approved Final Development Plan, a private interior courtyard is proposed for the enjoyment of the residents. The revised Final Development Plan includes a plan showing the extent of the driveway, fencing, and landscape elements proposed in the area between 161 First Street and 50 Rogers Street, which the Board finds to be appropriately designed and in general conformance with the development guidelines for the area.

(3) provides benefits to the city that outweigh its adverse effects; in making this determination the Planning Board shall consider the following:

The Board finds that the Development Plan will continue to provide a net benefit to the city in light of the considerations below.

(a) quality of the site design, including integration of a variety of land uses, building types, and densities; preservation of natural features; compatibility with adjacent land uses; provision and type of open space; provision of other amenities designed to benefit the general public;

The Final Development Plan, as a whole, continues to provide a mix of uses at various densities, including residential uses as required in the PUD zoning district, and provides open spaces, streets and retail uses that will benefit the general public, consistent with the plans and zoning requirements for the area.

(b) traffic flow and safety;

The proposed modifications are not anticipated to result in any additional impact on traffic flow and safety. The Final Development Plan provides additional details regarding the vehicular, bicycle, and pedestrian circulation on the site that respond to comments made by TP&T staff during the Planning Board's initial review of the proposed amendment.

(c) adequacy of utilities and other public works;

Utilities and public works will continue to be designed and constructed in accordance with City standards.

(d) impact on existing public facilities within the city; and

The proposed modifications are not anticipated to result in any additional impact on other public facilities.

(e) potential fiscal impact.

The proposed modifications are not expected to result in negative fiscal impacts for the project or the City.

Response to the requests set forth in the Preliminary Determination

The Applicant provided more detail for the proposed driveway including plans and renderings showing proposed landscaping and screening elements and illustrating the quality of the proposed interior residential courtyard. The Applicant showed a conceptual view of the restoration of the 161 First Street building, while indicating that the 161 First Street building will be subject to future design review and approval by the Planning Board pursuant to the conditions of the special permit. The Applicant also explained that the existing building will be converted from laboratory and life science uses into an office building with up to 10,000 square feet to be used as Innovation Office Space, with 25% of the Innovation Office Space allocated to below-market rents for qualified tenants per Section 13.59.11. The Applicant made reference to similar programs established in the two adjacent Kendall Square Zoning Districts and will develop its program with input from the Economic Development Division at CDD as well as the Kendall Square Association. Detailed information has been provided regarding flood resilient features of the new building as well as continuing community engagement efforts in East Cambridge. Therefore, the Board is satisfied with the Applicant's response to the requests made in the Preliminary Determination.

2. Amendment to Project Review Special Permit (Section 19.20)

Because the original PUD Special Permit Decision also involved the granting of a Project Review Special Permit, the Board makes the following findings regarding the effects of the proposed Major Amendment on the criteria for issuance of a Project Review Special Permit.

(19.25.1) Traffic Impact Findings. Where a Traffic Study is required as set forth in Section 19.24 (2) the Planning Board shall grant the special permit only if it finds that the project will have no substantial adverse impact on city traffic within the study area as analyzed in the Traffic Study.

The proposed Major Amendment will result in no substantive change to traffic impacts as there is no change in the uses that were assessed in the original special permit review and no change to parking ratios for approved uses. In its memoranda to the Planning Board dated April 12, 2018 and May 17, 2018, the TP&T supported the findings that there will be no measurable impact to area roadway operations from the proposed changes to the Final Development Plan. Hence, the Board finds that the Final Development Plan, as amended, will continue to have no substantial adverse impact on city traffic within the neighborhood.

(19.25.2) Urban Design Findings. The Planning Board shall grant the special permit only if it finds that the project is consistent with the urban design objectives of the city as set forth in Section 19.30. In making that determination the Board may be guided by or make reference to urban design guidelines or planning reports that may have been developed for specific areas of the city and shall apply the standards herein contained in a reasonable manner to nonprofit religious and educational organizations in light of the special circumstances applicable to nonprofit religious and educational activities.

The Board finds that the proposed project is consistent with the Urban Design Objectives set forth in Section 19.30, as described below.

(19.31) New projects should be responsive to the existing or anticipated pattern of development.

The proposed amendment is consistent with the zoning regulations and is compatible with the existing and anticipated uses in the area as the uses have not changed from the previously approved development plan.

(19.32) Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings. . . .

The project continues to enhance the pedestrian and bicycle activity in the immediate area with sidewalk improvements, landscaping, a cycle track on Binney Street and a substantial amount of indoor and outdoor bicycle parking for building users. Entries are oriented toward anticipated routes of pedestrian and bicycle movement and transparency is maximized on the ground floor, which promotes an active street edge.

(19.33) The building and site design should mitigate adverse environmental impacts of a development upon its neighbors. . . .

Throughout the review process, significant improvements have been made to the treatment of façades and landscape areas to make the new building more attractive to passersby, and to respond to the finer grain scale of the adjoining neighborhood. The exact treatments for the existing building will be subject to future design review by the Planning Board. On the proposed new residential building, rooftop mechanical equipment and services will be set back from the roof edge and shielded from public view by screen, and therefore will not adversely impact those adjacent uses. Trash and other service functions are housed internally and serviced through the driveway away from the street edge. The location of the electrical transformer within the building reduces the visual impact of external utility features. The proposed blue roof will help promote the city's sustainability goals.

(19.34) Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system, and sewer system. . . .

The proposed project will not create any additional burden on City infrastructure. Traffic impacts have been discussed previously in these Findings. The project will be designed to meet strict Department of Public Works (DPW) stormwater standards applicable as per City of Cambridge Wastewater and Stormwater Drainage Use Regulations, which are described in the March 27, 2018, memorandum to the Planning Board from the City Engineer. Open space permeability will increase as a result of the development, which will assist in minimizing stormwater run-off from the site. Roof runoff and ground runoff will be collected and appropriately treated before being discharged into the municipal

system. There are no anticipated impacts on water supply. The project will meet the Green Building Requirements set forth in Section 22.20 of the Zoning Ordinance.

(19.35) New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically. . . .

The project will continue to be consistent with the evolving character of the area, which includes preserved historic buildings and contemporary buildings used for research and development and other technology-related industries as well as other commercial and residential uses.

(19.36) Expansion of the inventory of housing in the city is encouraged. . . .

The approved development plan includes a total of 220,000 square feet of residential uses on several sites along Binney Street, some of which have completed construction. The proposed residential building at 50 Rogers Street will satisfy the remaining housing requirement and will add 136 residential units to the housing inventory in the city.

(19.37) Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city. . . .

The PUD development plan included the conveyance of approximately 2.5 acres of land on two sites to the City, with funding for the design and construction of park improvements on those sites, with additional funding to be used toward open space in East Cambridge, the conveyance to the City of the Foundry building site, and improvements to Binney Street. The new building will also provide a landscaped courtyard as an open space amenity for occupants of the building and improve the streetscape along the perimeter of the building site.

3. Special Permit to locate a driveway within five feet of the property line (Section 6.44.1)

6.44.1 Setbacks for on grade open parking facilities shall be provided as follows:

(b) Except for one, two, or three family dwellings existing at the time of the effective date of this Ordinance or amendment thereto, no on grade open parking space or driveway shall be located within five (5) feet of any side or rear property line.

(g) The Board of Zoning Appeals may grant a special permit to allow for modification of the requirements in 6.44.1 (a) or (b) if site specific factors favor such modification.

The project is proposing to locate a driveway on the new property line between the two parcels to be created by subdividing the 161 First Street lot. The new building at 50 Rogers Street will be set back from the property line by six feet with utility rooms located on the side along the driveway. The proposed courtyard is screened from the driveway with a fence for privacy. In its memoranda to the Planning Board dated April 12, 2018 and May 17, 2018,

TP&T staff supported the new curb cut on Rogers Street for the driveway as proposed to service the existing building at 161 First Street, with the recommendation to install vehicle exiting warning equipment to minimize conflicts between vehicles, pedestrians and bicyclists when trucks are moving in and out of the driveway. Hence, the Board finds that the proposed driveway located within five feet of the property line will not cause hazard, congestion or nuisance.

4. General Criteria for Issuance of a Special Permit (Section 10.43)

The Planning Board finds that the project meets the General Criteria for Issuance of a Special Permit, as set forth below.

10.43 Criteria. Special permits will normally be granted where specific provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:

(a) It appears that requirements of this Ordinance cannot or will not be met, or ...

Upon granting of the requested special permits, it appears that the requirements of the Ordinance will be met.

(b) traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character, or ...

As discussed earlier in these Findings, granting of the requested special permit will not create any new congestion, hazard, or change in neighborhood character. Patterns of access and egress include minor modifications from the original PUD Special Permit Decision that will cause no substantial adverse impact.

(c) the continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use, or ...

The proposed reallocation of approved uses will not affect the adjacent permitted uses.

(d) nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City, or ...

The proposed changes will not create nuisance or hazard, and all development activity will adhere to applicable health and safety regulations.

(e) for other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance, and ...

The proposed changes fit the existing and anticipated pattern of development in addition to enhancing the integrity of the district.

(f) the new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.

The Board finds the proposed development, as amended, to be consistent with the citywide urban design objectives, as set forth above in these Findings.

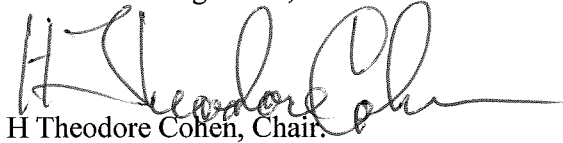
DECISION

Based on a review of the Application Documents, testimony given at the public hearings, and the above Findings, the Planning Board hereby GRANTS the requested Major Amendment to a Planned Unit Development (PUD) per Section 12.37 of the Zoning Ordinance and Project Review Special Permit per Section 19.20 of the Zoning Ordinance, subject to the following conditions and limitations. The provisions set forth in this Decision shall apply to the Permittee and to all successors in interest.

1. The Final Development Plan is hereby amended to allow the following based on the Final Development Plan responses received by the Planning Board on May 10, 2018, containing narrative response to additional information request, revised site plan, and Exhibits A & B, provided that there is no reduction in the total amount of residential use in the Final Development Plan:
 - a) Subdivision of 161 First Street site into two lots as per “Lot Consolidation Plan of Land 161 First Street & 50 Rogers Street, CAMBRIDGE, MASS.” prepared by Feldman Land Surveyors, dated March 13, 2017 submitted as Exhibit C to the February 2018 Application Documents.
 - b) Construction of a new building at 50 Rogers Street with 132,231 square feet of residential space and a two-level subsurface parking garage with 102 parking spaces. Design Review for this building was completed during the review of this Major Amendment in accordance with the Conditions of Special Permit Decision PB#243.
 - c) Renovation of the existing building at 161 First Street, including demolition of a rear annex, resulting in 30,319 square feet of GFA for office use, of which up to 10,000 square feet may be exempt from GFA limitations as Innovation Office Space in accordance with Section 13.59.11 of the Zoning Ordinance, with the requirement that at least twenty-five percent (25%) of the Innovation Office Space shall be set aside as below market rate space. Design Review shall be conducted by the Planning Board in accordance with the Conditions of Special Permit PB#243 prior to the authorization of approved development or uses at 161 First Street. At the time of Design Review, the Permittee shall provide additional information regarding guidelines for eligible tenants and for determining below market rent for Innovation Office Space.
2. The Planning Board hereby approves the future subdivision into two lots resulting in a driveway within five feet of a property line as shown in the “Site Plan” prepared by Dimella Shaffer and included in the Final Development Plan responses received by the Planning Board on May 10, 2018.
3. Except as set forth above, all development and public improvements shall be completed in accordance with the previously approved Final Development Plan and the Conditions of Special Permit PB#243, as modified by prior amendments.

Voting in the affirmative to GRANT the Major Amendment and special permits were Planning Board Members Louis Bacci, Steven Cohen, H Theodore Cohen, Catherine Preston Connolly, Mary Flynn, Hugh Russell, and Associate Member Corinne Espinoza, appointed by the Chair to act on the case, constituting at least two thirds of the members of the Board, necessary to grant a special permit.

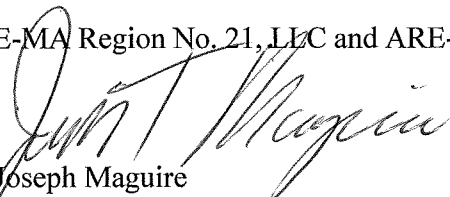
For the Planning Board,



H Theodore Cohen, Chair.

Pursuant to Section 12.36.4 of the City of Cambridge Zoning Ordinance, ARE-MA Region No. 21, LLC and ARE-MA Region No. 32, LLC agree to the conditions attached to this Decision approving the granting of a Major Amendment to PUD Special Permit #243.

ARE-MA Region No. 21, LLC and ARE-MA Region No. 32, LLC



By Joseph Maguire
Senior Vice President, Alexandria Real Estate Equities, Inc.
Their Authorized Representative

A copy of this decision #243 Amendment #3 shall be filed with the Office of the City Clerk. Appeals, if any, shall be made pursuant to Section 17, Chapter 40A, Massachusetts General Laws, and shall be filed within twenty (20) days after the date of such filing in the Office of the City Clerk.

ATTEST: A true and correct copy of the above decision has been filed on June 27, 2018 with the Office of the City Clerk, by Swaathi Joseph, duly authorized representative of the Planning Board. All plans referred to in the decision have been filed with the City Clerk on said date.

Twenty days have elapsed since the above decision was filed in the office of the City Clerk and:
_____ no appeal has been filed; or

_____ an appeal has been filed within such twenty days.

The person exercising rights under a duly appealed special permit does so at risk that a court will reverse the permit and that any construction performed under the permit may be ordered undone. This certification shall in no event terminate or shorten the tolling, during the pendency of any appeals, of the periods provided under the second paragraph of G.L. c. 40A, §6.

Date: _____, City Clerk

Appeal has been dismissed or denied.

Date: _____, City Clerk

Appendix I: Dimensional Form

	Allowed/Required	Proposed	Permitted
Lot Area (sq ft)	87,120 (2 acres)	491,320	No change
Lot Width (ft)	No requirement	N/A	No change
Total GFA (sq ft)	1,533,406 ^{1,5}	1,533,200	Consistent with Zoning Ordinance and Final Development Plan
Non-Residential	1,533,406 ^{1,5}	1,533,200	
Residential	220,000 ²	220,000	
Total FAR ¹	3.00	3.00	Consistent with Zoning Ordinance and Final Development Plan
Non-Residential	3.00	3.00	
Residential ²	N/A	N/A	
Lot Area / Dwelling Unit (sq ft)	300 minimum	approx. 2,233	Consistent with Zoning Ordinance and Final Development Plan
Total Dwelling Units	N/A	220	
Inclusionary Units	None ²	None	None
Range of Building Heights (ft)	45–140 (Detailed in 13.44.4, 13.54.4)	78, 85, 140	Consistent with Zoning Ordinance and Final Development Plan
Range of Yard Setbacks (ft)	0–10 (Detailed in 13.43.41, 13.53.4)	Varies (see Final Development Plan)	Consistent with Zoning Ordinance and Final Development Plan
Total Open Space (acres)	1.7 (Section 13.45) 2.3 (Section 13.59.9)	approx. 3.16	Consistent with Zoning Ordinance and Final Development Plan
Public	2.3 (Section 13.59.9)	approx. 2.57	
Private (Usable)	N/A	approx. 0.59	
Off-Street Parking Spaces	1600 maximum (Section 13.59.5)	1,852 ³	1,852 ^{3,6}
Handicapped	Consistent with Zoning Ordinance Section 6.34	Not shown	Consistent with Zoning Ordinance Section 6.34
Bicycle Spaces	247 minimum (Section 6.37)	435	435 (minimum)
Loading Bays	13 (calculated for all buildings per 6.83)	approx. 13 ⁴	Consistent with Final Development Plan

¹ The total allowed Gross Floor Area includes GFA allowed at an FAR of 3.0 (491,320 x 3.0 = 1,473,960 square feet) plus additional GFA up to a total of 59,446 square feet allowed if the Permittee transfers to the City of Cambridge the property at 101 Rogers Street and a portion of the property at 249 Third Street in accordance with the requirements of Section 13.59.10 of the Zoning Ordinance.

² For a Planned Unit Development meeting all the requirements of Section 13.59, 220,000 square feet of residential uses are allowed and must meet the requirements of 13.59.4. Such residential use is not counted as GFA for the purpose of calculating FAR. Neither the Inclusionary Housing requirements nor the bonuses apply.

³ The proposed parking includes accessory parking for buildings within the Planned Unit Development as well as the relocation of 302 surface parking spaces serving the Athenaeum Building, as allowed in Section 13.59.52.

⁴ Exact number of loading facilities to be specified during design review, per Condition 1(i) of this Decision.

⁵ Excludes up to 10,000 SF of Innovation Office Space allowed per Section 13.59.11

⁶ Amendment #1 reduced the number of spaces from 1902 to 1847, which was calculated as 0.9 spaces per 1,000 SF of commercial use + 0.75 spaces per residential unit + 302 spaces for Athenaeum building. As the estimated number of residential units has increased from 220 to 227, the total maximum/required number of spaces is expected to increase from 1847 to 1852.