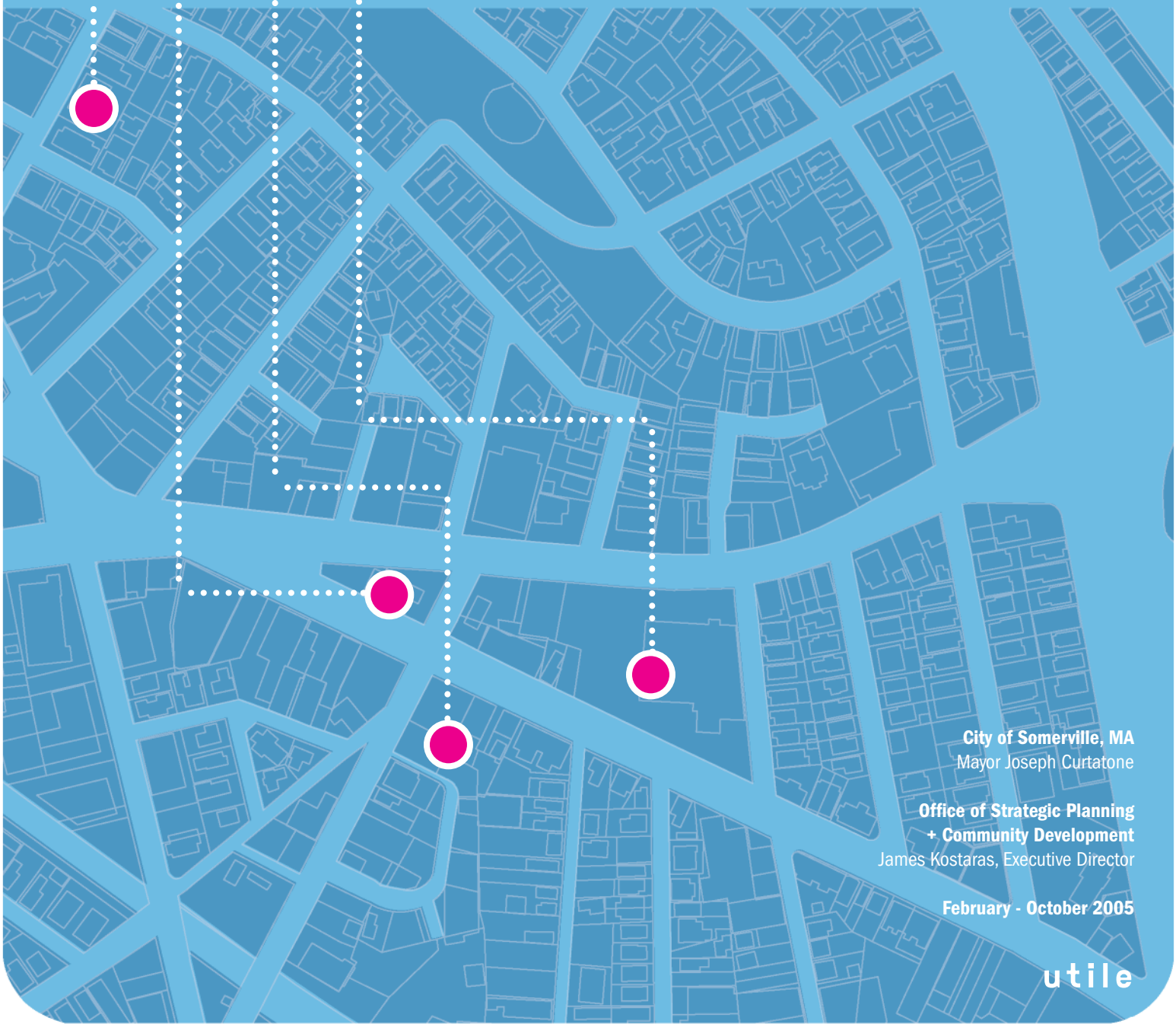
UNION SQUARE HOUSING STUDY



City of Somerville, MA
Mayor Joseph Curtatone

Office of Strategic Planning + Community Development
James Kostaras, Executive Director

February - October 2005

utile

February - October 2005

City of Somerville, MA
Mayor Joseph Curtatone

Mayor's Office of Strategic Planning + Community Development
James Kostaras, Executive Director

Consultants

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Utile, Inc.
Architecture + Planning
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Real Estate Development
GLC Development

Legal / Regulatory
Noble + Wickersham

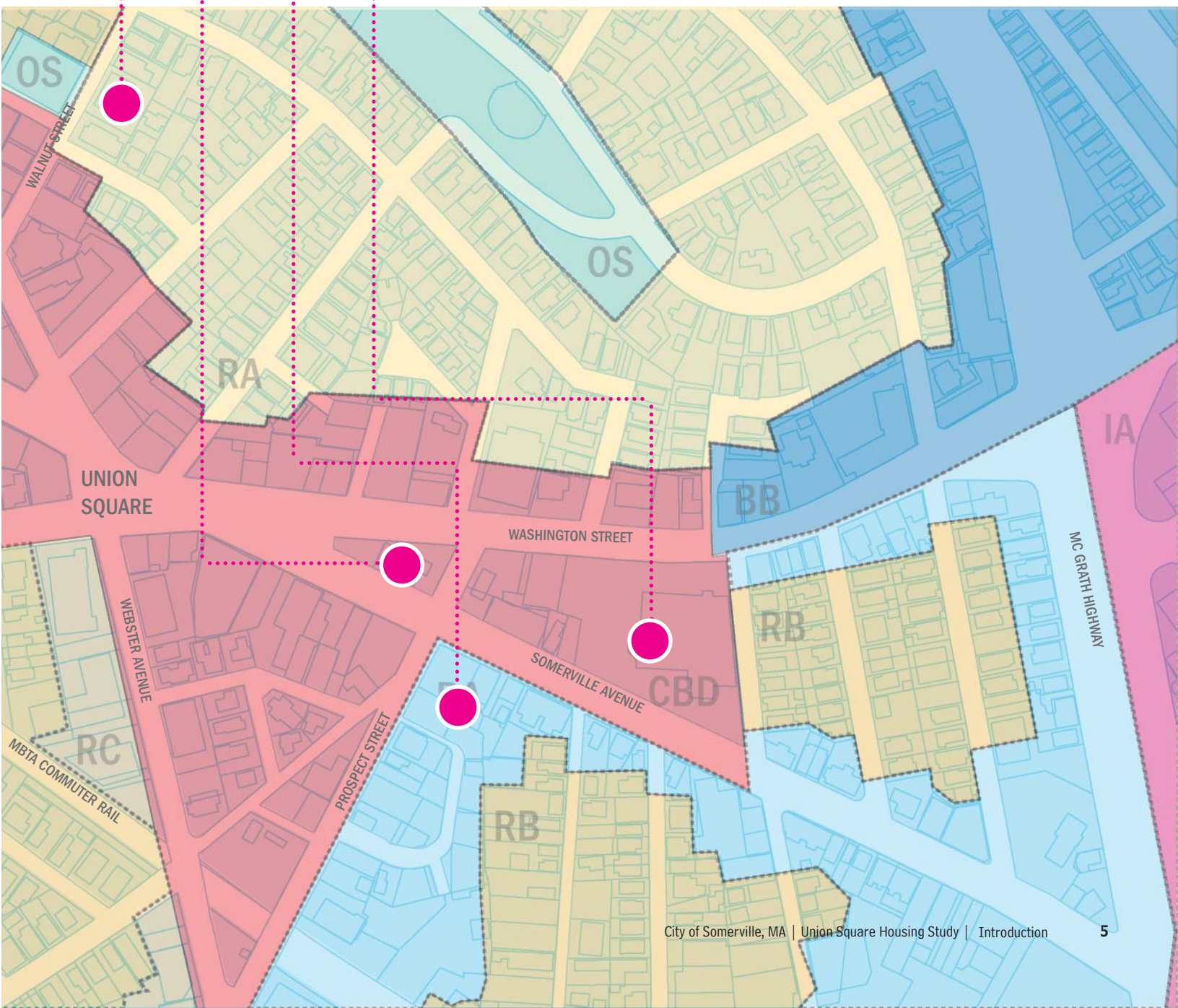
UNION SQUARE HOUSING STUDY

INTRODUCTION: THE CURRENT CONDITIONS

WHAT IF SCENARIOS

RECOMMENDATIONS + CONCLUSIONS

INTRODUCTION
THE CURRENT CONDITIONS

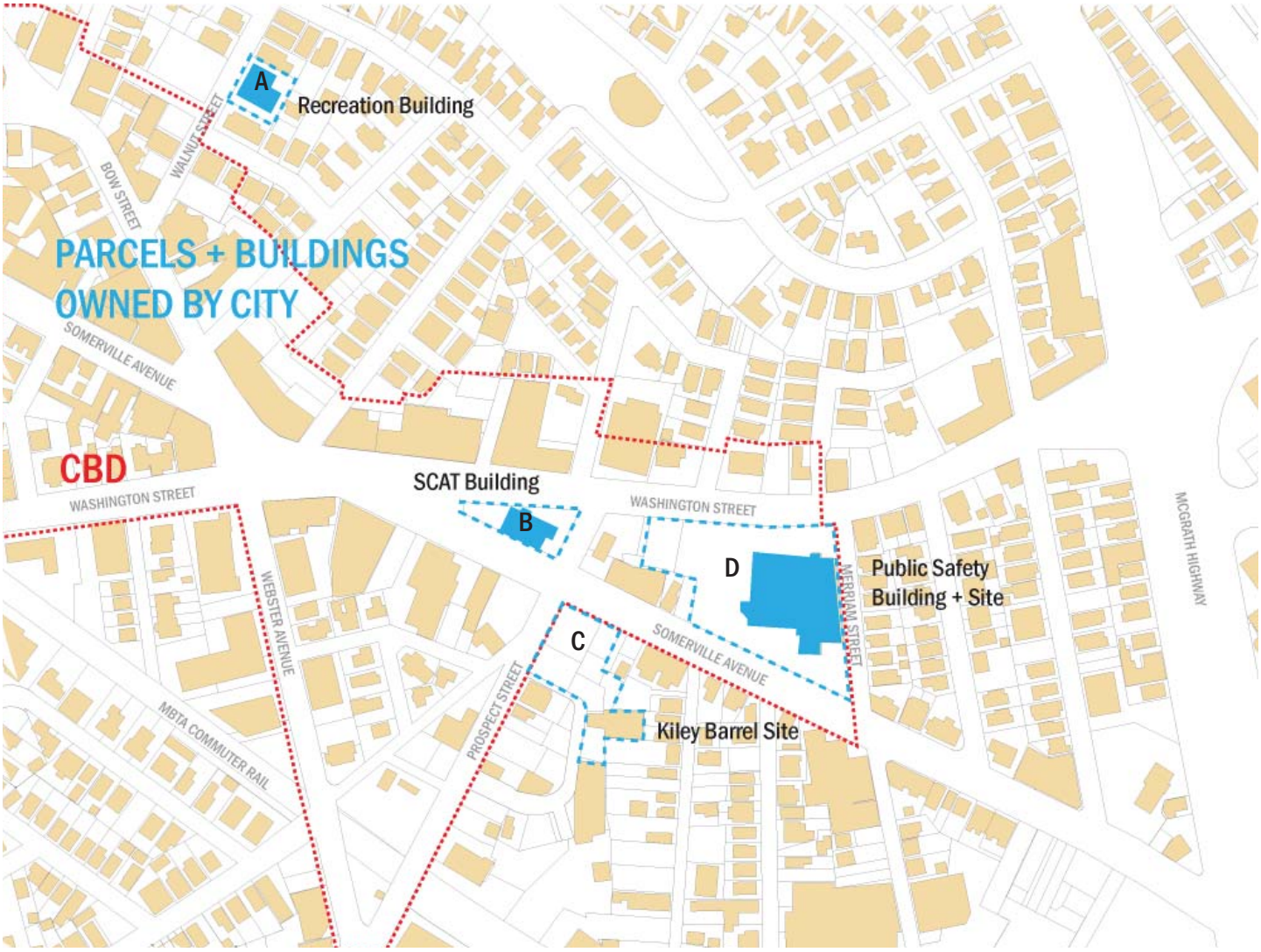


A. Recreation Building

B. SCAT Building

C. Kiley Barrel Site

D. Public Safety Site



Municipal Parcels in Focus: the Backbone of the Study

The housing study undertaken here focuses upon 4 municipal parcels in or adjacent to Union Square deemed under-utilized by the City of Somerville. The focus of the DHCD and MassHousing - Priority Development Fund grant that supported this study was an investigation of the potential for mixed-use development: ground floor retail with mixed-income residential use above. The four parcels studied here were the Recreation Building and site (A), the SCAT Building and site (B), the Kiley Barrel site (C), and the Public Safety site (D). The first two parcels (A, B) were considered only in residential re-use scenarios, as both host historic buildings worth saving. The final two sites (C, D) were considered for full ground-up, new construction development scenarios; in both cases multiple schemes were proposed and tested with financial pro formas.

Methodology

At the beginning of the process, Utile met with GLC, a real estate development consultant, to determine basic developmental parameters within which to work to ensure that the scenarios would be financially feasible for the Union Square context. Armed with general guidelines, Utile approached each site with an eye to maximizing development while maintaining or improving the urban fabric of the Square. In many cases, parking drove the allowable density: 1.25 parking spaces minimum per unit were recommended by GLC from the outset. for market-rate units.

Once the basic "What If" scenarios were set, square footage take-offs, numbers of units, and parking counts were assembled and fed to GLC to generate specific and realistic financial pro formas for each scheme. The pro formas were designed such that the final number arrived upon was the value of the land to a fictional developer (after receiving an industry-standard 20% return) - in other words, the amount the City could expect to receive for the parcel in an RFP process. Finally, Jay Wickersham, the Regulatory / Legal consultant, took the scenarios and financial information and helped to develop new zoning recommendations for the Square based upon the information generated and discussions that followed. The team met two times with the Union Square Advisory Committee to present its findings and to receive feedback on the work done to date.

Development Feasibility of the Housing Study: the Financial Pro Forma as Primary Tool

Utile collaborated with GLC, a real estate development consulting firm, to arrive at realistic financial data to support the What-If scenarios proposed in this study. From the beginning of the study, GLC helped Utile determine a list of parameters for the schematic designs, based upon market demands and economic feasibility. These market-driven guidelines for design are as follows:

> Limit construction type to wood, "stick-built" buildings where possible
> Attempt to find surface, instead of structured, parking solutions
> Assume a 50/50 mix of 2 unit types: 1 bedroom, 650 SF unit; 2 bedroom, 900 SF unit
> Provide 1.25 parking spaces per unit (less than 1.5 parking spaces per unit required by current zoning)
> Set aside street level for rentable retail space
> Provide line item in pro forma for environmental remediation

The primary scenarios for each site met GLC's above recommendations. The study did attempt a couple of scenarios for the Public Safety Site, however, that proposed steel structure and/or structured parking. The urbanistic benefits of these schemes were deemed worthy to pursue, although the financial returns were minimal (or resulted in overall loss).

The following is an example of a pro forma for new construction proposed by this study. Revenue Assumptions for reuse scenarios differ.

Development Program

Structure Type	Unit Count	Bedroom Count	nsf/unit	gsf/unit	gsf per structure type	Efficiency
Residential						
Multi-family condominium						
single-loaded corridor		-	-		-	81%
double-loaded corridor	46	69	767	914	42,021	84%
Total	**46**				**42,021**	
Retail						
Total					**6,610**	
TOTAL SF					**48,631**	

Parking	parking spaces/unit target	availabke parking spaces	Res. parking spaces target	Retail parking spaces target	Total Target
Surface	1.25	58			
Surface (Covered)					
Structured					
Total		**58**	58	13	**71**

Total built square footage (residential + retail) in this scenario

Ideal number of parking spaces for this scenario (note that the residential parking load is met, but there are no spaces available for retail).

Cost Assumptions

Unit Type	$/sf
Four-story Multi-family	$ 145.00
Retail	$ 120.00
Parking	$/space
Surface	$ 2,500
Surface (Covered)	$ 7,500
Structured	$ 20,000

Revenue Assumptions (New Construction)

Residential	Sales Price	Revenue/sf
Unit type		
Townhouse	510,000	$ 322.00
Multifamily	299,263	$ 390.00
Affordable Housing	165,000	
	$/sf	
Retail	$ 20.00	

Projected unit sales prices and retail rent as determined by comparable neighborhoods in Somerville

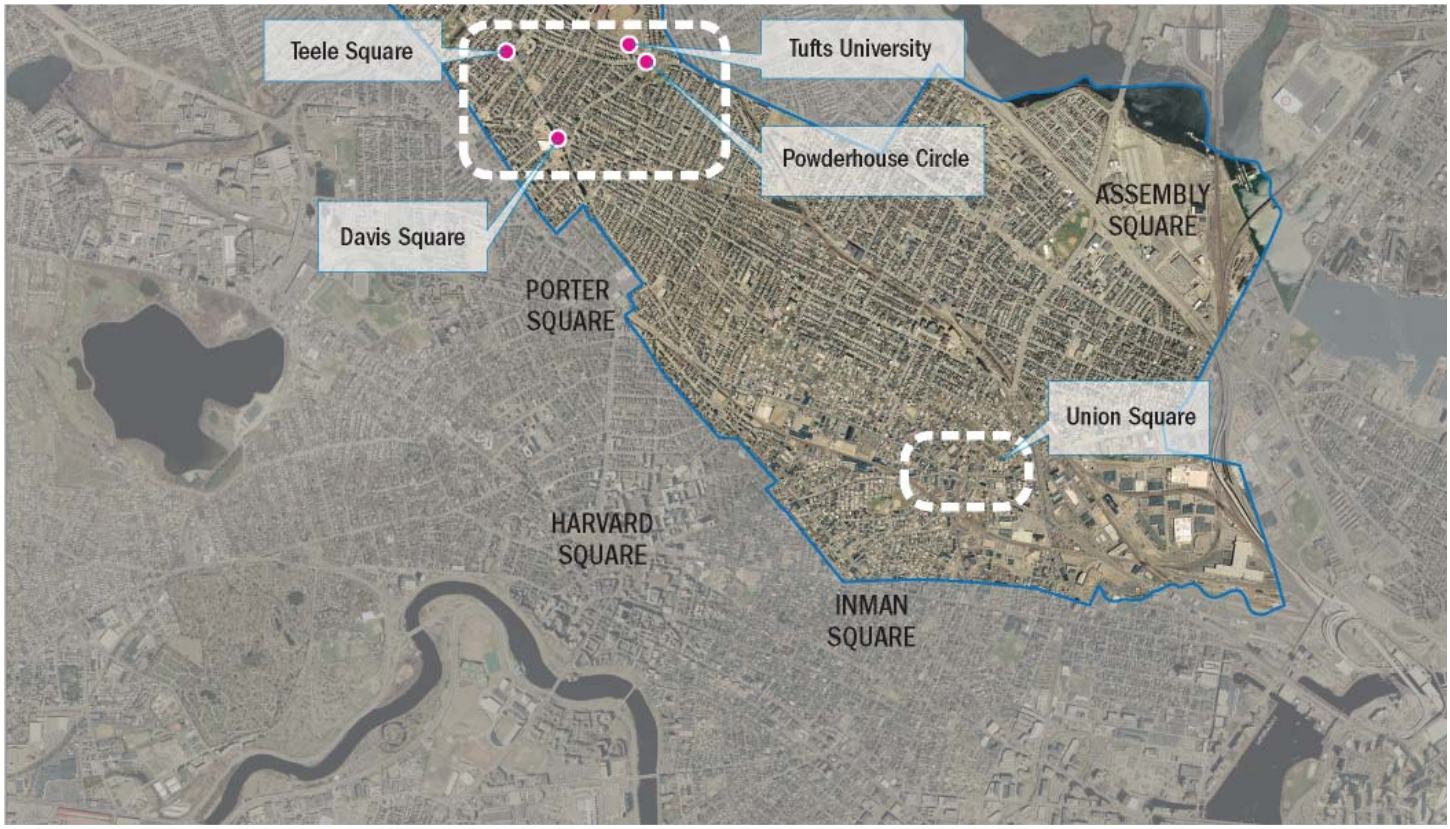
Proforma

INCOME	$	
Residential		
Market Rate Housing		
Multifamily	12,045,320	
Townhouse	-	
Total	**12,045,320**	
Affordable Rate Housing	948,750	12.5% of units
Total Revenue	**12,994,070**	
Less Cost of Sales	(602,266)	5% of market units only
Net Sales Rev.	**$ 12,391,804**	
Retail		
Stabilized Gross Income	132,200	
less Vacancy	(6,610)	5% of Gross Income
less operating expenses	-	
Net Operating Income	125,590	
Capitalized Value	**1,477,529**	8.5%
DEVELOPMENT COSTS		
Hard Costs		
Building	6,886,245	
Parking	145,000	
Environmental Remediation	500,000	assumption
Contingency	376,562	5% of hard cost
Total Hard Cost	**7,907,807**	
Soft Cost	1,581,561	20% of hard cost
Total Development Cost	**9,489,369**	
Required Developer Return for Feasibility	**1,897,874**	20% of TDC
RESIDUAL LAND VALUE	**$ 2,482,091**	

12.5% of unit set aside for affordables, as mandated

20% expected standard return for developer @ end of project

Value of the land (how much the City could expect to receive @ disposition) for this scenario



Market comparables used in this study:
Davis Sq, Teele Sq, Tufts Univ. area

Market Comparables to Union Square Neighborhood

For the purposes of this development feasibility study, as with past work for the City of Somerville on the MaxPac site and other locations, GLC used market comparables from within the City of Somerville as a primary resource for their pro forma analysis. Davis Square, Teele Square, and the Tufts area were chosen as comparables, since they suggest the high end of what is possible in Somerville.

To arrive at the residential sales assumptions that were used for the Union Square analysis, GLC communicated with multiple brokers active in the market and reviewed real estate data bases that provided comprehensive information. GLC reviewed list prices and sales prices for residential property sales throughout Somerville to evaluate comparables on a dollar per square foot and absolute price basis.

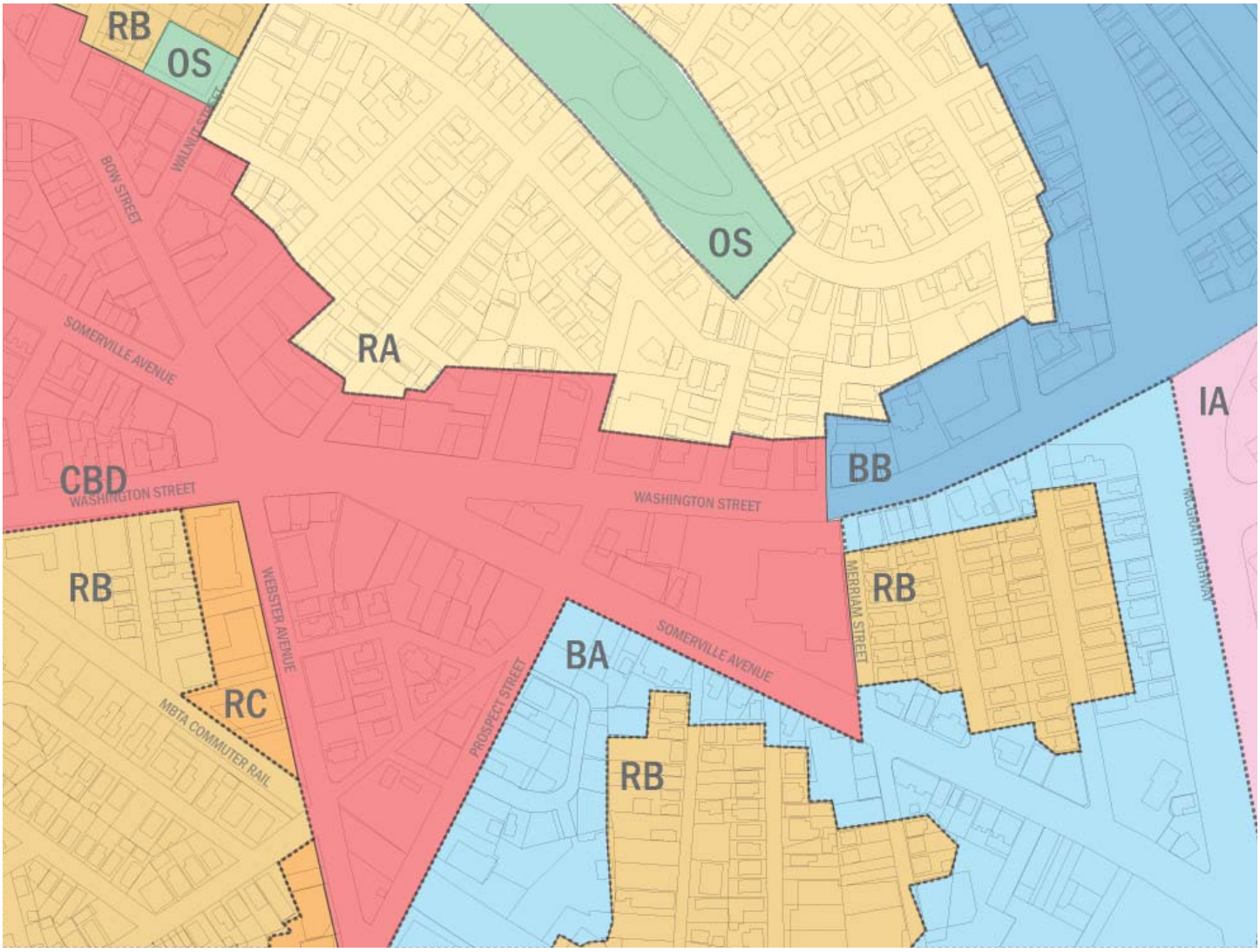
Finally, GLC, in consultation with brokers, arrived at assumptions for residential sales prices at the Union Square locations in this study, taking into account the relative desirability of the Union Square submarket versus other locations in the City and the desirability of new construction versus older product.

Within the City of Somerville, sales prices in late 2004 and early 2005 ranged from $300,000 to over $500,000 for units ranging from nearly 900 to over 1,500 square feet. This translates into average dollar per square foot sales prices of approximately $250 to $400 per sf. Average sales prices for condominiums specifically were in the $325,000 to $390,000 range.

For the Union Square analysis GLC assumed dollar per square foot values of $420 per square foot for multi-family condominiums, translating to an absolute sales value of $322,000. For townhomes, GLC assumed a square foot value of $325 or an absolute sales value of $510,000.

Ground floor retail rents and values

GLC assumed an average retail rent of $20 per square foot. This assumption represents a reasonable average rent for a neighborhood retail location that might be a blend of small- (under 2,000 SF), medium- (up to 4,000 SF), and larger- (up to 10,000 SF) format stores, and a blend of independent and credit tenants. This assumption draws from GLC's familiarity with neighborhood retail patterns in Somerville and our experience with diverse retail locations in Greater Boston including Maverick Square in East Boston, Jackson Square in Jamaica Plain/Roxbury, and Porter Square in Cambridge.

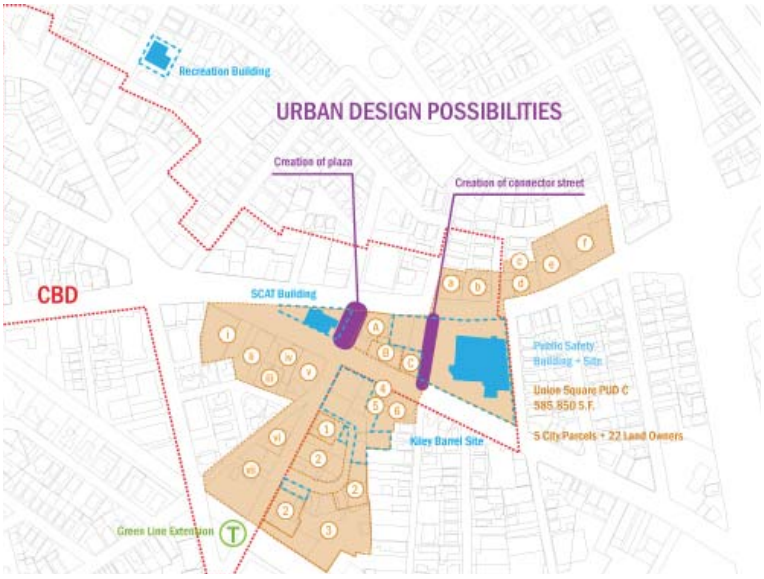


Union Square Existing Zoning Districts

Zoning

The map above represents the April 22, 2004 version of the Zoning Ordinance of the City of Somerville. Much of Union Square falls within the Central Business District (CBD), a zoning district whose primary goal is to "provide environments that are safe for and conducive to a high volume of pedestrian traffic, with a strong connection to retail and pedestrian accessible street levels". Both the SCAT Building and the Public Safety Site fall within this zone, and are thus the closest to matching the goals of current zoning with the goals of this study. The Kiley Barrel Site falls within a less development-friendly BA Commercial zone.

As recommendations later in the report reveal, this report suggests a PUD C Zoning Overlay District for the southeastern portions of Union Square that might jump start more robust development on these under-utilized parcels.



Proposed PUD C Zoning District

Residential Neighborhoods around Union Square

Residential Character

Union Square has a significant residential presence in all directions from the heart of the Square. The character of the housing, however, is of the low-density variety: one-, two-, and three-family buildings. The highest property values can be found to the north of the Square, in the Prospect Hill neighborhood as it rises in elevation to provide views back to Boston. This quiet neighborhood is filled with well-maintained one- and two-family houses. To the south and east of the Square (in the primary area of our study), the housing stock becomes much more workmanlike. Merriam Street, which provides one edge to the Public Safety Site, is lined with triple-decker housing - many of these properties look to be rental properties. To the south of the Square, as the parcels become larger and more industrial, the houses become sparser, and less well-maintained.

Currently there are few multi-unit buildings adjacent to the Square. In order to create the round-the-clock pedestrian vitality called for in the zoning code (for the CBD), this study recommends providing appropriately dense mixed-use developments with commercial spaces on the ground floors and residential units above.

Union Square Ground Floor Uses

Ground Floor Uses Within The Central Business District

As a crossroads of Somerville, Union Square has the potential to draw a wide range of business types, and to generate decent foot traffic. As the above mapping demonstrates, however, the balance of commercial to industrial uses is far outside of normal range. Automotive and industrial uses (shown in purple) make up 10% of the leasable area, compared to the typical 2%. In addition, 52% of businesses within the Square are service-oriented (e.g. insurance offices, check-cashing storefronts, and hair salons) compared to the typical 15%. What is missing from the mix, according to Union Square Main Streets, is a significant retail presence. Whereas a "healthy" urban center would offer approximately 62% retail, Union Square offers only 17%. For these reasons, the developments in this study that fall within or adjacent to the Central Business District propose retail space on the ground floor. While it is understood that there are many under-utilized retail spaces closer to the heart of the Square, this study forwards the idea that a few larger retail spaces slightly off the Square would enrich the mix of retail types, and attract tenants that cannot currently be accommodated.

* Programming + quantitative information courtesy of *Union Square Main Streets*

Vacant upper stories in historic building on northern Somerville Avenue

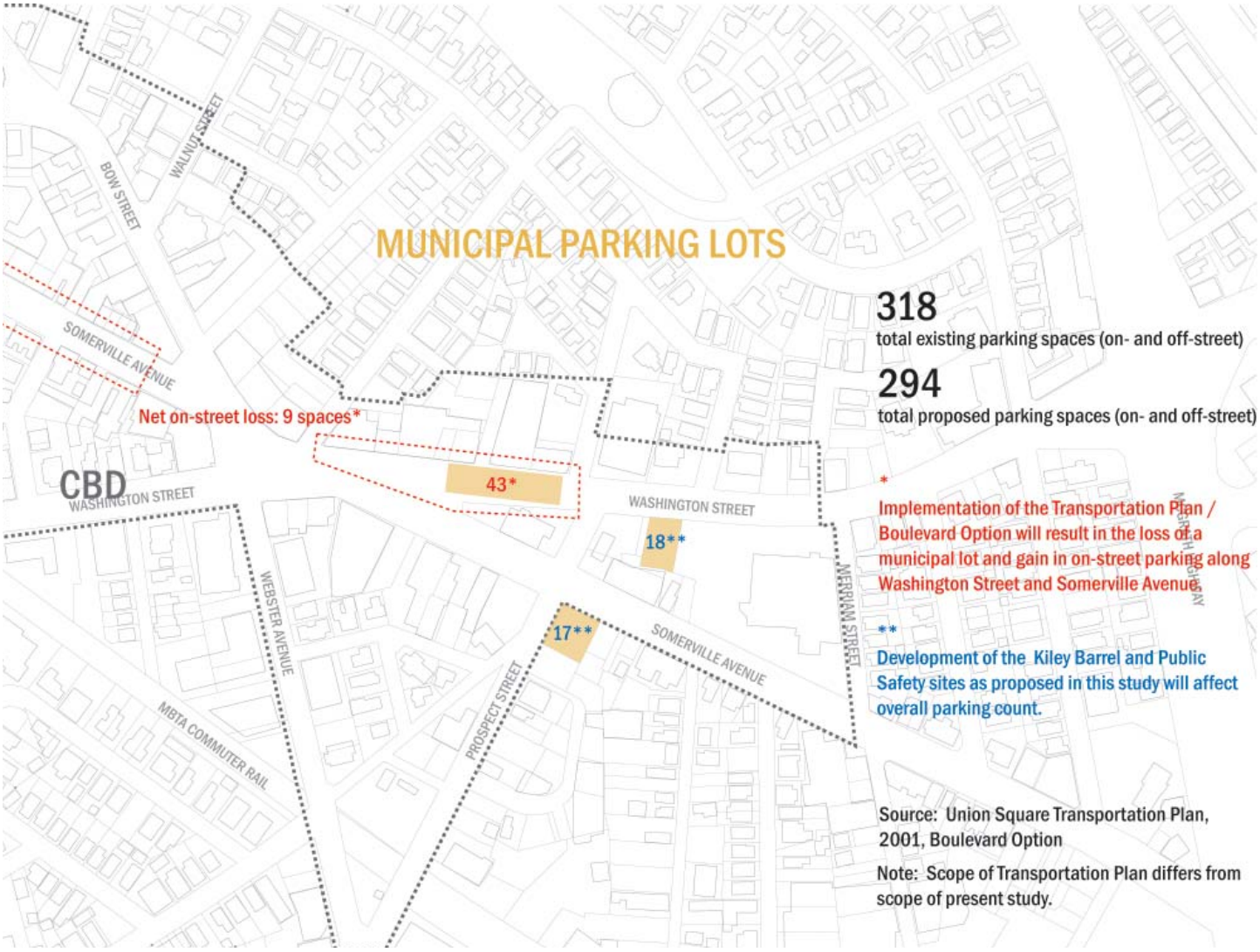
Union Square Under-utilized Parcels

Municipal surface parking lot on Washington Avenue, at the northwestern corner of the Public Safety Site

Under-utilized Parcels Within Union Square

In order to objectively assess the development potential within Union Square's Central Business District, we used Tax-Assessor's information to generate a map of the "under-utilized" parcels. In the above map, the brown parcels are those on which there are currently no buildings; surface parking lots and vacant lots fall within this category. The green parcels are those in which the value of the parcel equals or approaches twice the value of the building that sits upon it. In the most dire circumstances (the yellow parcels) the land value is over twice the value the building(s). A quick overview demonstrates that Union Square is blanketed with parcels that require development attention.

All three municipal parcels addressed in this study qualify as under-utilized - only the SCAT Building can be classified as slightly under-utilized. Currently, the Kiley Barrel site is vacant, and used as a municipal surface lot. The Public Safety Site plays host to a surface parking lot (at left) and a "sick" building, slated for demolition as soon as the programs can be relocated.



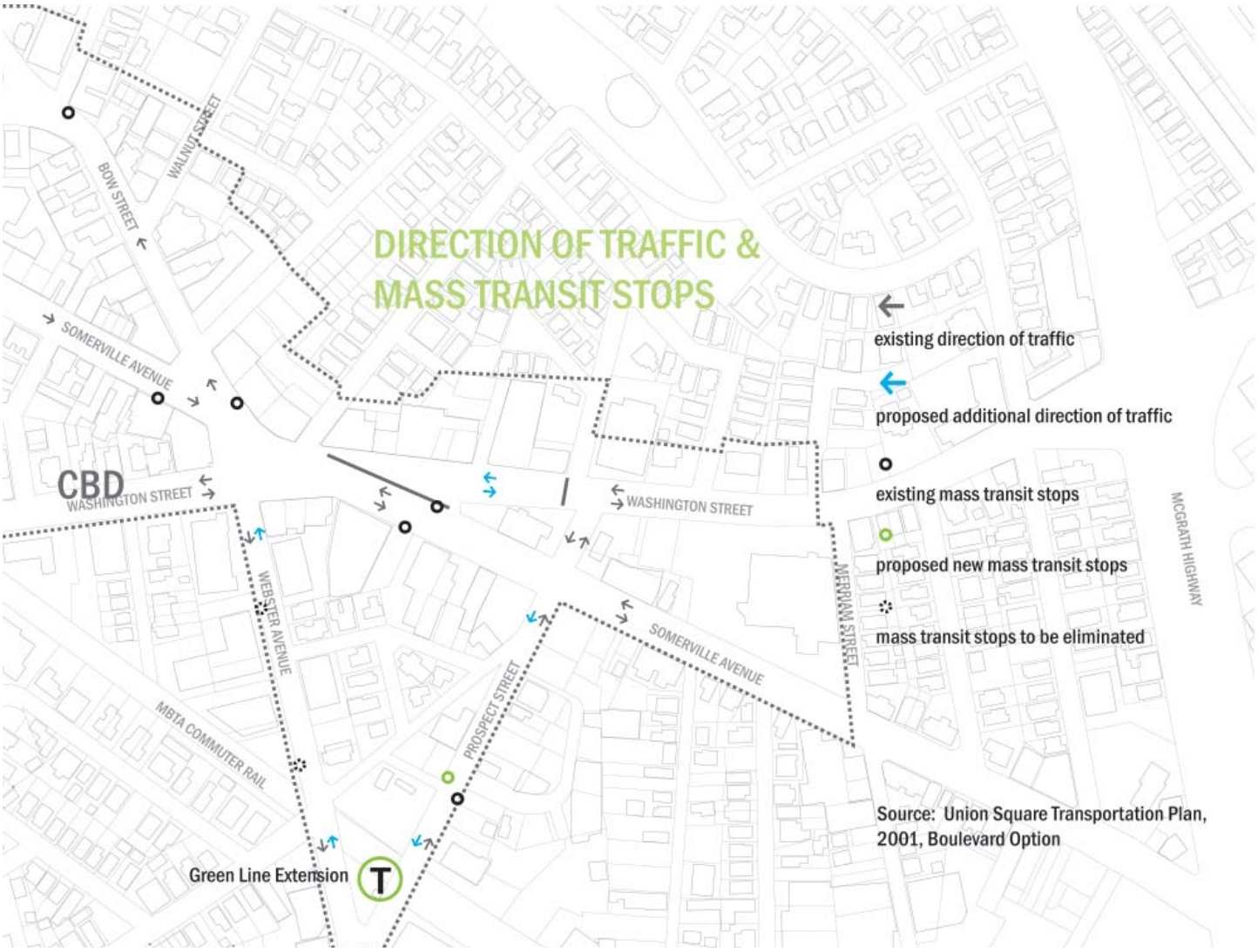
Union Square Parking Counts
Existing + Proposed

Parking Issues

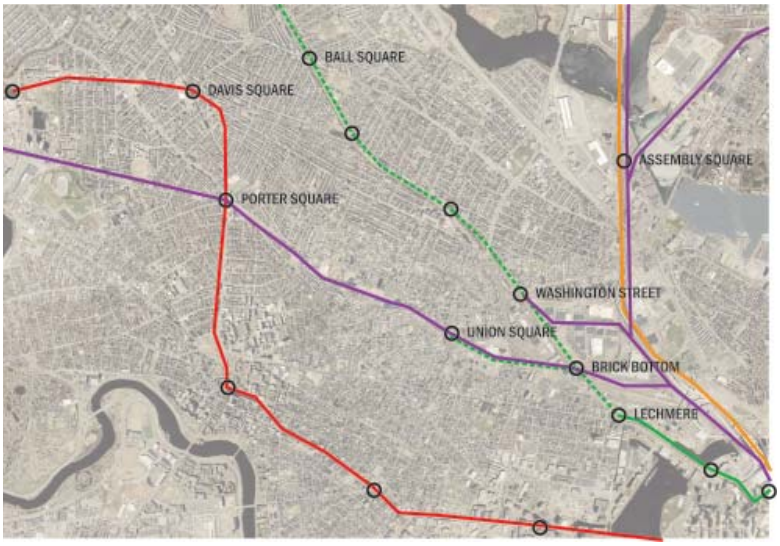
The existing public parking spaces in Union Square are a combination of on-street spaces and municipal parking lots. In the near future, this overall count may shrink considerably due to two factors: the implementation of the 2001 Union Square Transportation Plan and the expected development of two vacant sites which currently serve as municipal lots.

The City of Somerville's 2001 Union Square Transportation Study inventoried 318 parking spaces in the Union Square area. The urban boulevard option proposed by the Study involves the extension of Washington Street to reconnect with Somerville Avenue with parallel parking on both streets, and would result in a net loss of 24 spaces. The urban boulevard option forms the basis of the present Housing Study.

It is important to consider several factors in this count. The scope of the Transportation Study differs from that of the present Housing Study. The municipal parking lot on Washington Street, for example, was not included.



Union Square Mass Transportation
Existing + Proposed



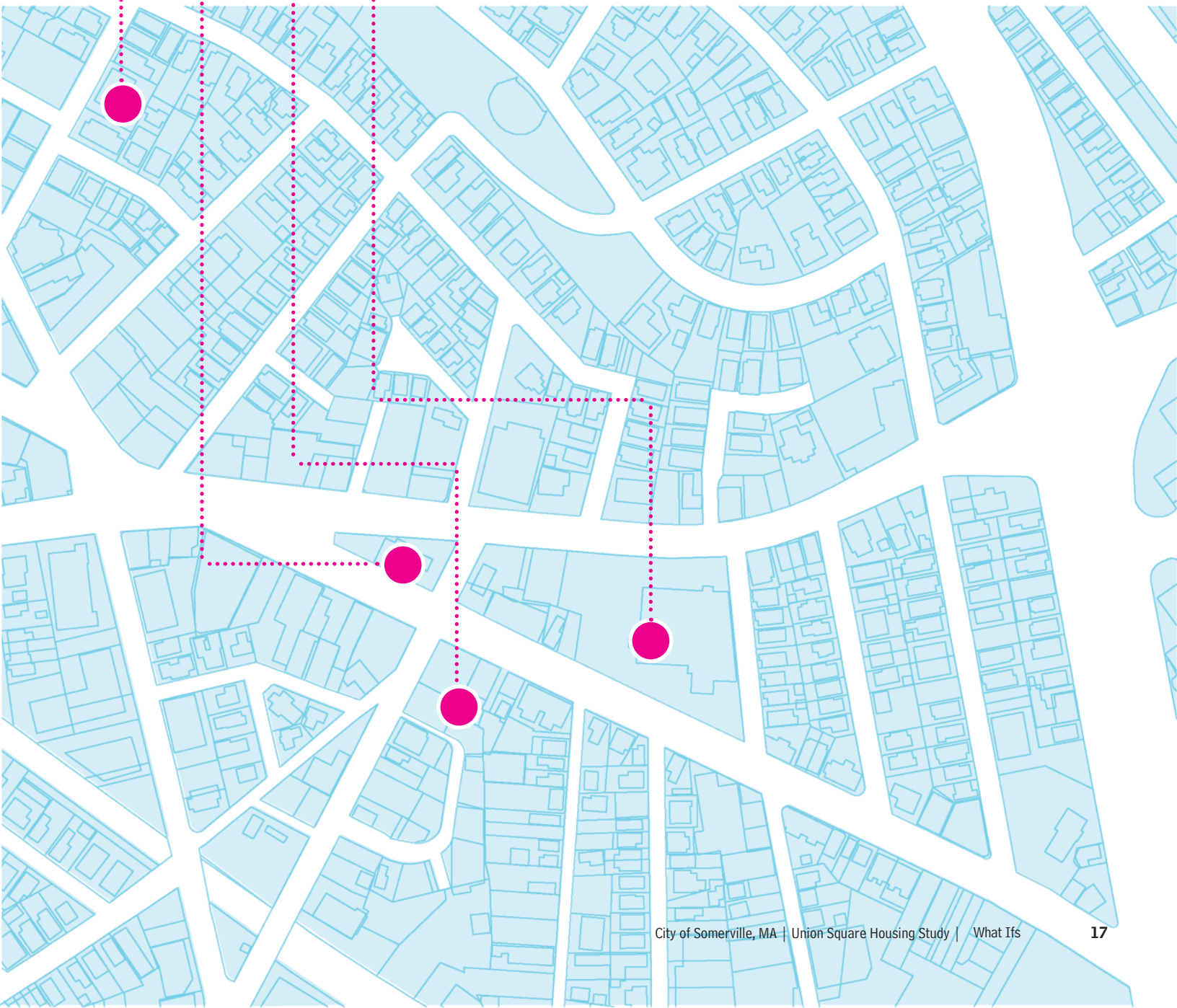
Proposed Green line T stop to Union Square
+ Regional Mass Transportation Links in Future

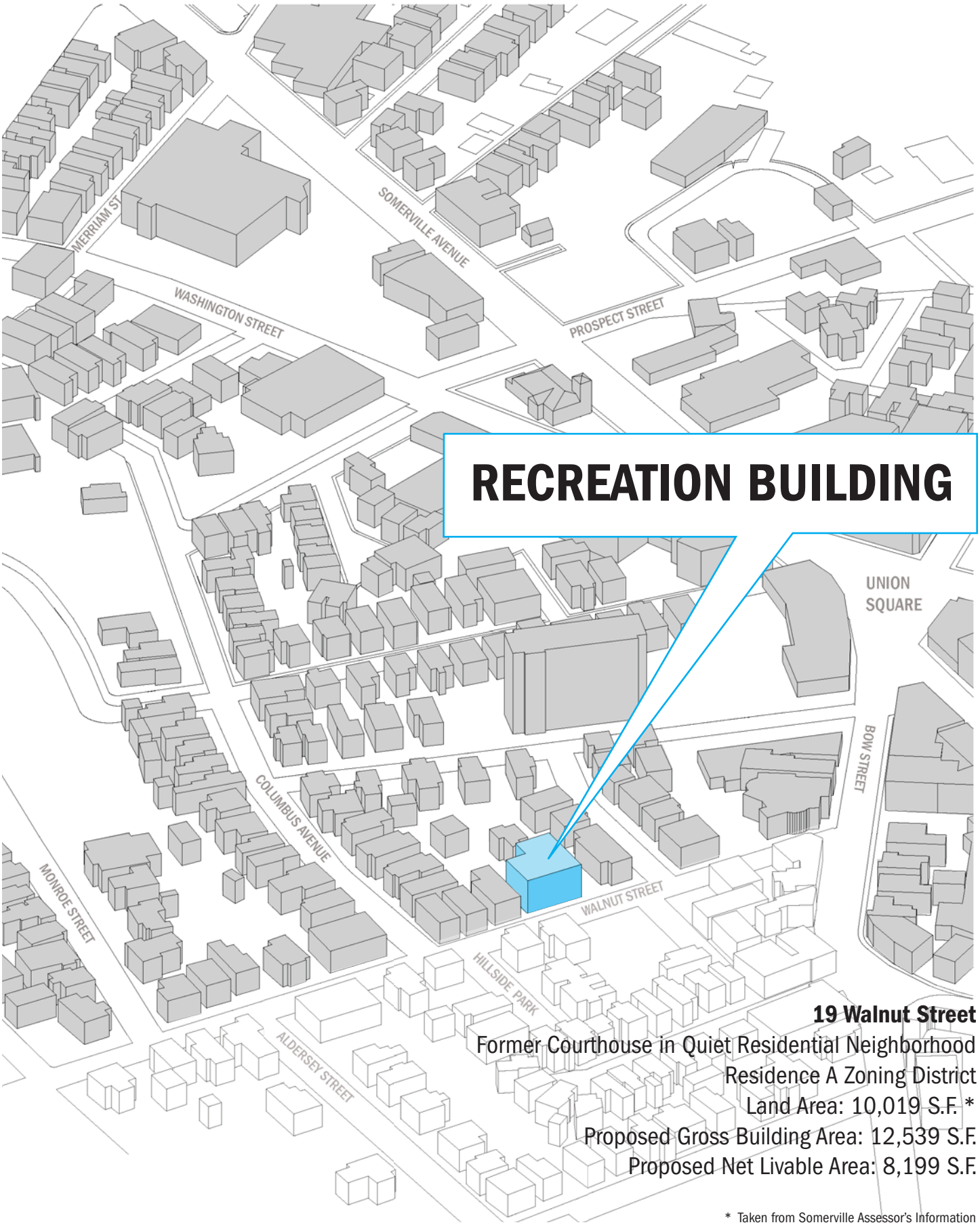
Mass Transportation Issues

Currently, Union Square is a hub that relies entirely on busses for mass transportation connectivity. There is sufficient bus coverage in the Square that directs commuters toward nearby subway connections and further into Cambridge, Boston, and towns north.

As part of the reparations for Big Dig inconvenience, Somerville was promised an extension of the Green Line subway into Union Square. Both the fate of the stop, and the location of the stop - were it to be implemented - are in flux. One potential location is near the intersection of Prospect Street and Webster Avenue, close to the existing MBTA Commuter Rail line. In this study, the Prospect Street location has been taken as the station's probable location. It occurs in many of the maps in this report as a desired amenity that positively affects the property value of the proposed development sites.

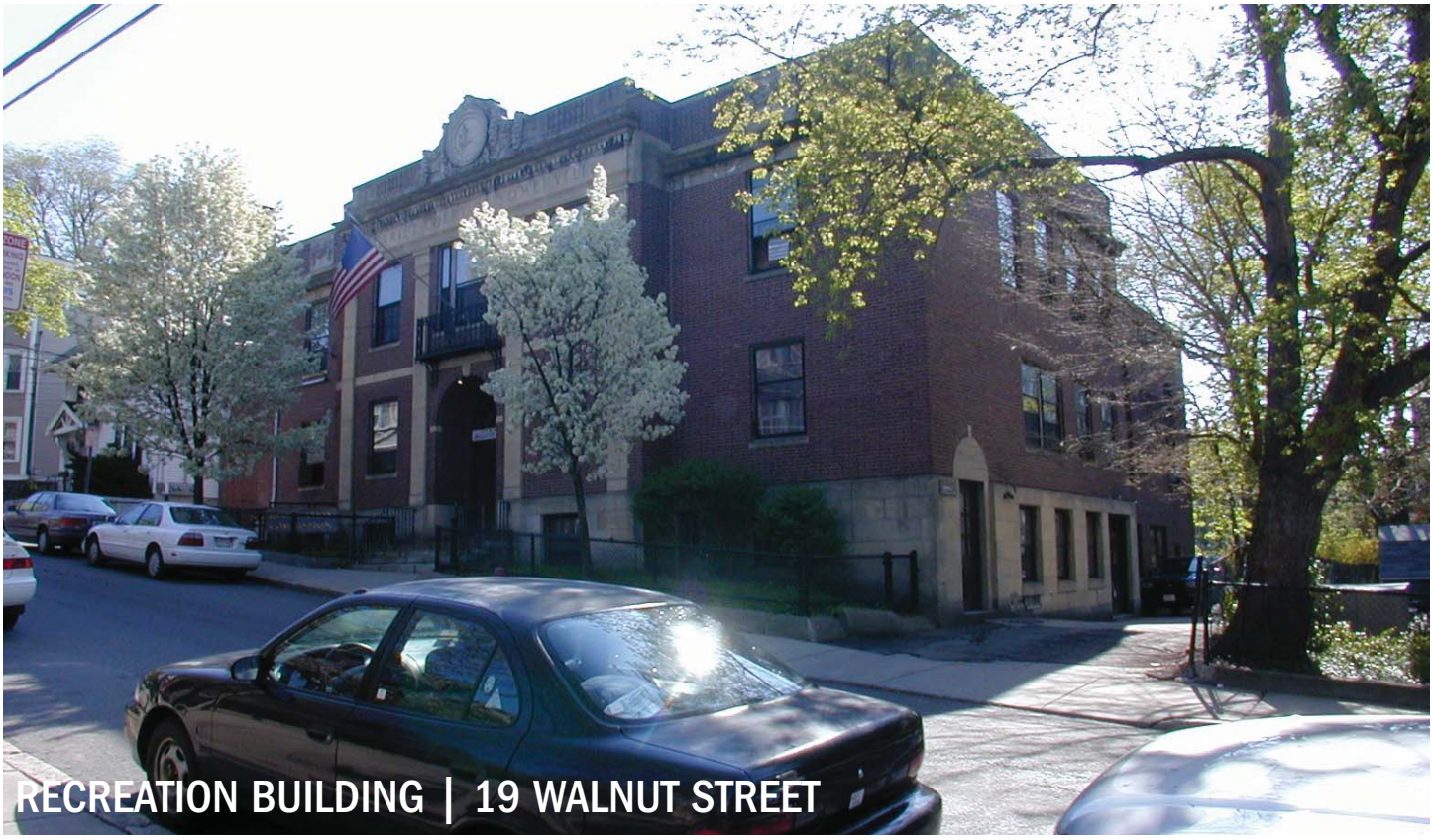
WHAT IF SCENARIOS
DEVELOPMENT FEASIBILITY





19 Walnut Street
Former Courthouse in Quiet Residential Neighborhood
Residence A Zoning District
Land Area: 10,019 S.F. *
Proposed Gross Building Area: 12,539 S.F.
Proposed Net Livable Area: 8,199 S.F.

* Taken from Somerville Assessor's Information



RECREATION BUILDING | 19 WALNUT STREET

SITE + CONTEXT

19 Walnut Street (the Recreation Building) is a former courthouse, built circa 1900. The style of the building is consistent with turn-of-the-century civic structures, and offers a certain gravity and solidity to the otherwise wood-framed residential character of the small side street on which it sits. The building is constructed primarily of brick with pre-cast concrete decorative accents. The site itself is sloped, such that the entry from the Walnut Street facade of the building is a full story above the back entry. In a residential renovation, this elevation change would allow for multiple individual entryways along the North and South sides of the site. Two driveways flank the building, leading to a limited number of on-site parking spaces to the side and rear of the site. Directly across the street from the building sits a small public park with a playground. Currently the building is home to the City of Somerville Recreation Department, and the Walnut Street Center, Inc., a day facility for adults with disabilities.

PROPOSED RESIDENTIAL CONVERSION

Eight units are spread over 3 floors in the proposed residential conversion. On the lowest level, all three of the units have individual entrances. They also share the small lobby on the ground floor which has a stair leading to the building's main lobby off Walnut Street. The two back units gain a small private exterior space between the back of the building and the limit of the site. Much of the surface at this level, however, is occupied by parking spaces.

On the second floor - the Walnut Street level - are three units, one of which occupies the former courtroom space. This unit, with 15' ceilings and an open plan, most closely approximates loft-style living. The remaining two units on the second floor, and the two third floor units, are more typical 2- and 3-bedroom apartments.

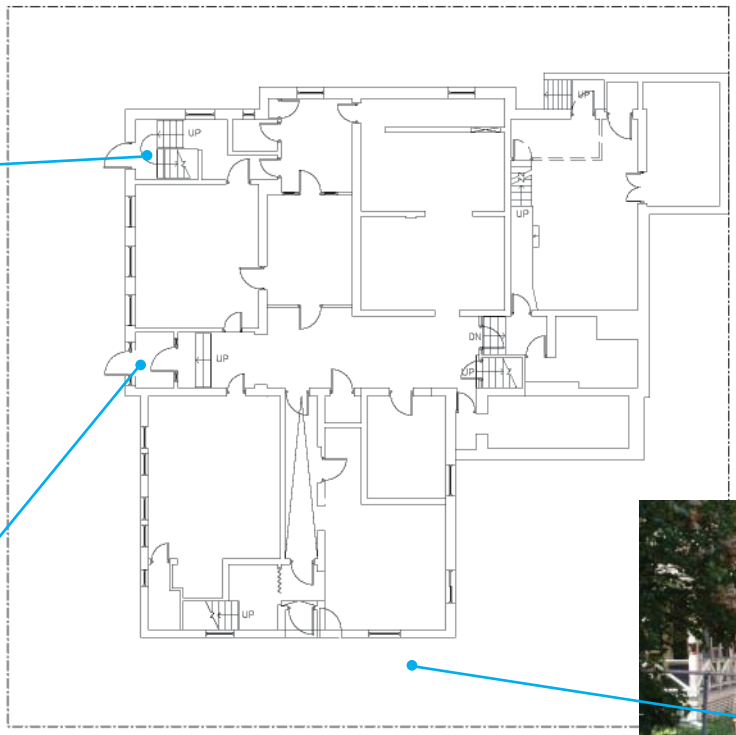
BARRIERS TO DEVELOPMENT

While the location and the character of the building make it attractive for residential conversion, the overall density of the proposed scheme and the lack of parking provide potential stumbling blocks to such a development. 19 Walnut Street is located in the most restrictive residential zoning district (RA), which allows for 1- to 2-family structures only. Multifamily buildings are not permitted in the RA district, and thus require a zoning variance. In addition, although the parking requirements are grandfathered under Section 9.4.1. of the 2004 Zoning Ordinance, market-rate housing in the Boston area demands at least 1 dedicated space per unit (in our financial pro-formas, we used 1.25 as minimum, taking the market as a lead). The street does offer much in the way of on-street parking, which could help diffuse the parking issue, were such a development proposed.

Side entry 1

Side entry 2

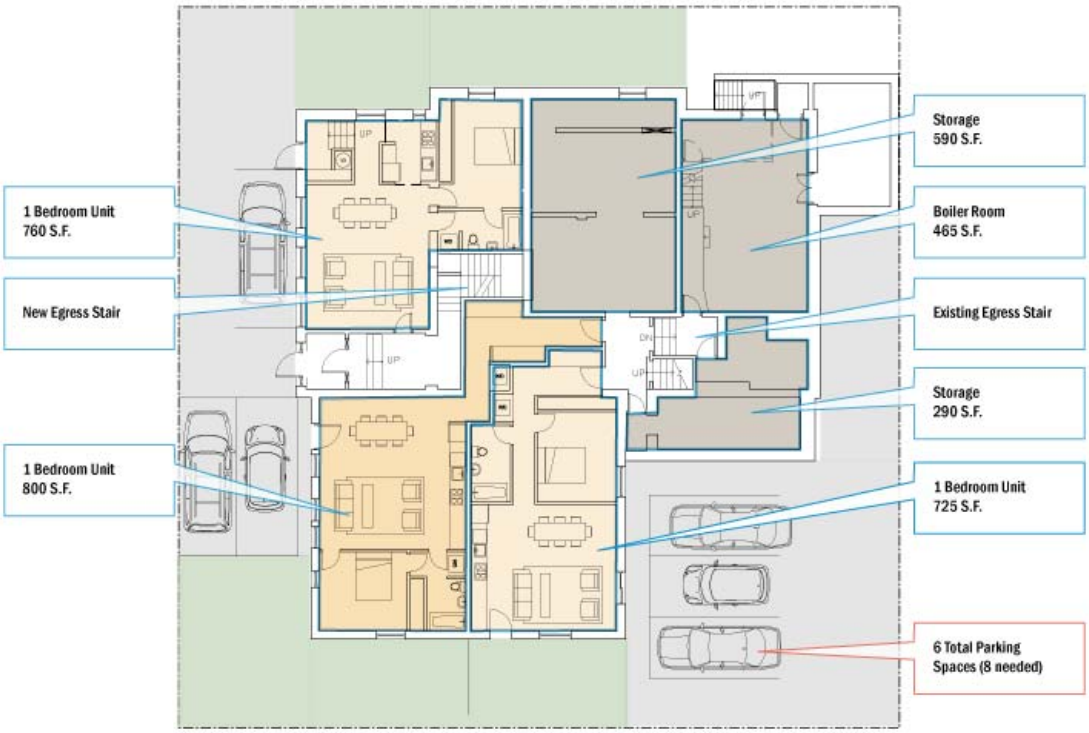
WALNUT STREET



19 Walnut Street
Ground floor | Existing

Back of site

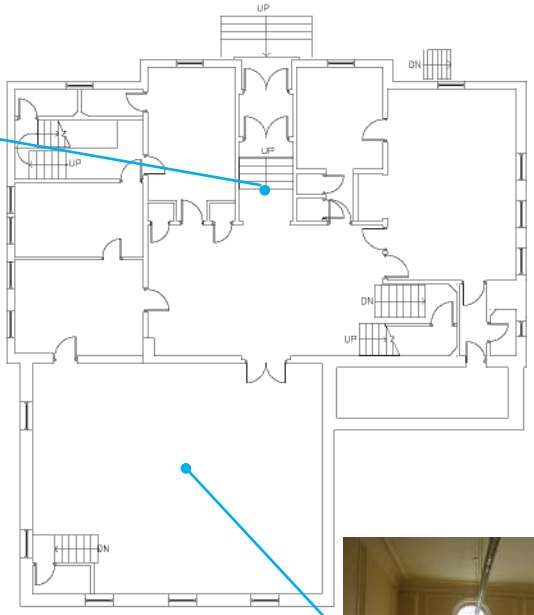
WALNUT STREET



N 0' 5' 10' 20'

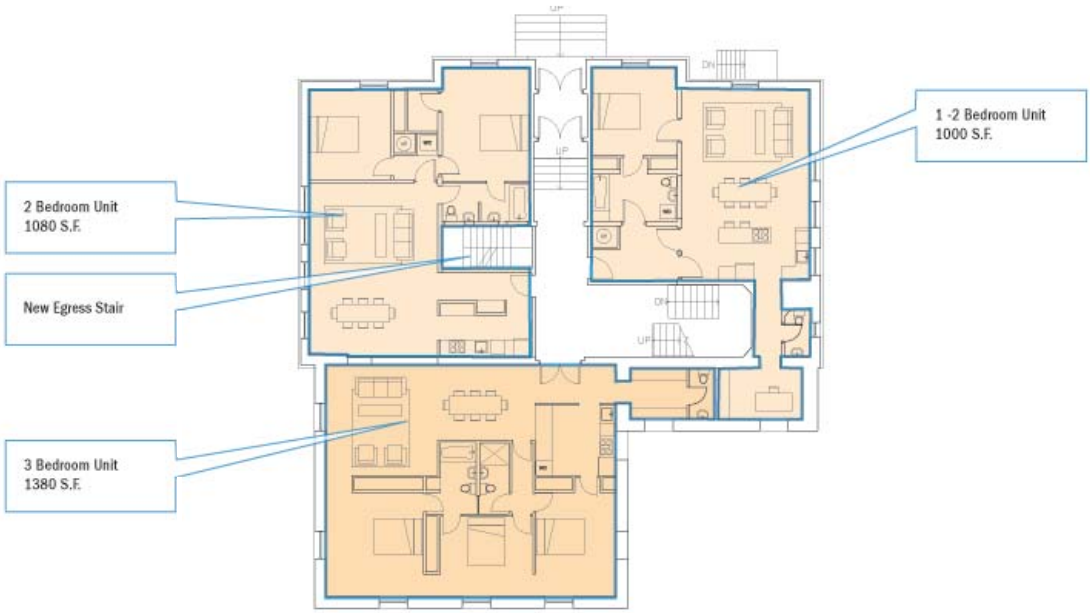
19 Walnut Street
Ground floor | Proposed

Main entryway



19 Walnut Street
First floor | Existing

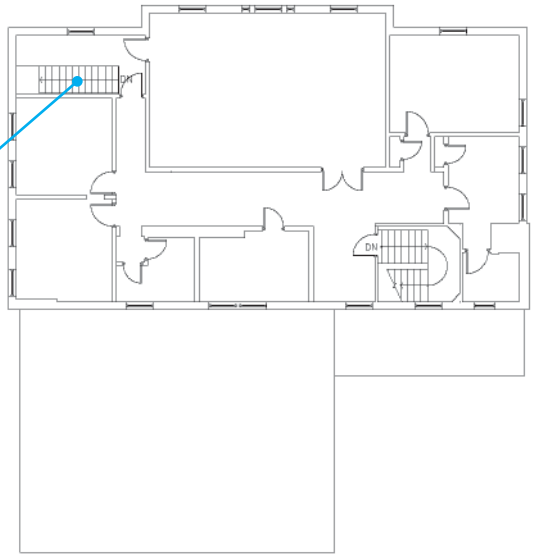
Courtroom space with 15' ceilings



N 0' 5' 10' 20'

19 Walnut Street
First floor | Proposed

Existing stairwell



19 Walnut Street
Second floor | Existing

N 0' 5' 10' 20'

19 Walnut Street
Second floor | Proposed

The most extraordinary space on the first floor of the Recreation Building is the former courtroom, with 15' ceilings, which faces the back of the site. In this residential renovation scheme, the space is allowed to remain relatively unbroken, with minimal partitioning to create a more loft-like feel. The remaining two units are 2-bedroom corner apartments that enjoy ample natural light deep into the plans. The top floor of the building has only two units - one 2-bedroom, one 3-bedroom. By minimizing the common circulation space to the two egress stairs, living space is maximized. Each of these units has exposure on three sides of the building.

RECREATION BUILDING

Financial Pro Forma

Residential Reuse Scheme

Development Program

Structure Type	Unit Count	Bed room Count	nsf/unit	gsf	Effic'y
Residential					
Multi-family condominium					
Ground Floor 1 BR	3	3	762		
Upper Floor 1 BR	1	1	1,000		
Upper Floor 2 BR	2	4	1,097		
Upper Floor 3 BR	2	6	1,360		
Total	**8**	14	8,199	**12,539**	65%

Parking	parking spaces/ unit target	available parking spaces	parking spaces target
Surface	1.25	**6**	**10**

Revenue Assumptions (Building Re-use)

	Market Sales			
	Price/SF	Price	Affordable	Total Mkt Sales
	$ 420	$ 319,900	$ -	$ 959,700
	435	$ 435,000		$ 435,000
	425	$ 466,225		$ 932,450
	420	$ 571,200		$ 1,142,400
			$ -	$ 3,469,550

Cost Assumptions

Unit Type	$/sf
Multi-family rehab	$ 130.00
Parking	*$/space*
Surface	$ 2,500

Proforma

	$	
INCOME		
Residential		
Market Rate Housing		
Multifamily	3,469,550	
Affordable Rate Housing	-	12.5% of units (>8 units)
Total Revenue	**3,469,550**	
Less 5% Cost of Sales	(173,478)	5% of market units only
Net Sales Rev.	**3,296,073**	
DEVELOPMENT COSTS		
Hard Costs		
Building	1,630,070	
Parking	15,000	
Environmental Remediation	25,000	assumption
Contingency	83,504	5% of hard cost
Total Hard Cost	**1,753,574**	
Soft Cost	438,393	25% of hard cost
Total Development Cost	**2,191,967**	
Required Developer Return for Feasibility	**438,393**	20% of TDC
RESIDUAL LAND VALUE	**665,712**	

RECREATION BUILDING

Zoning Recommendations

Residential Reuse Scheme

Zoning district:	RA
Land area:	10,019 sf
Gross building area:	12,539 sf
Residential use:	8 units
Retail use:	none
On-site parking:	6 spaces

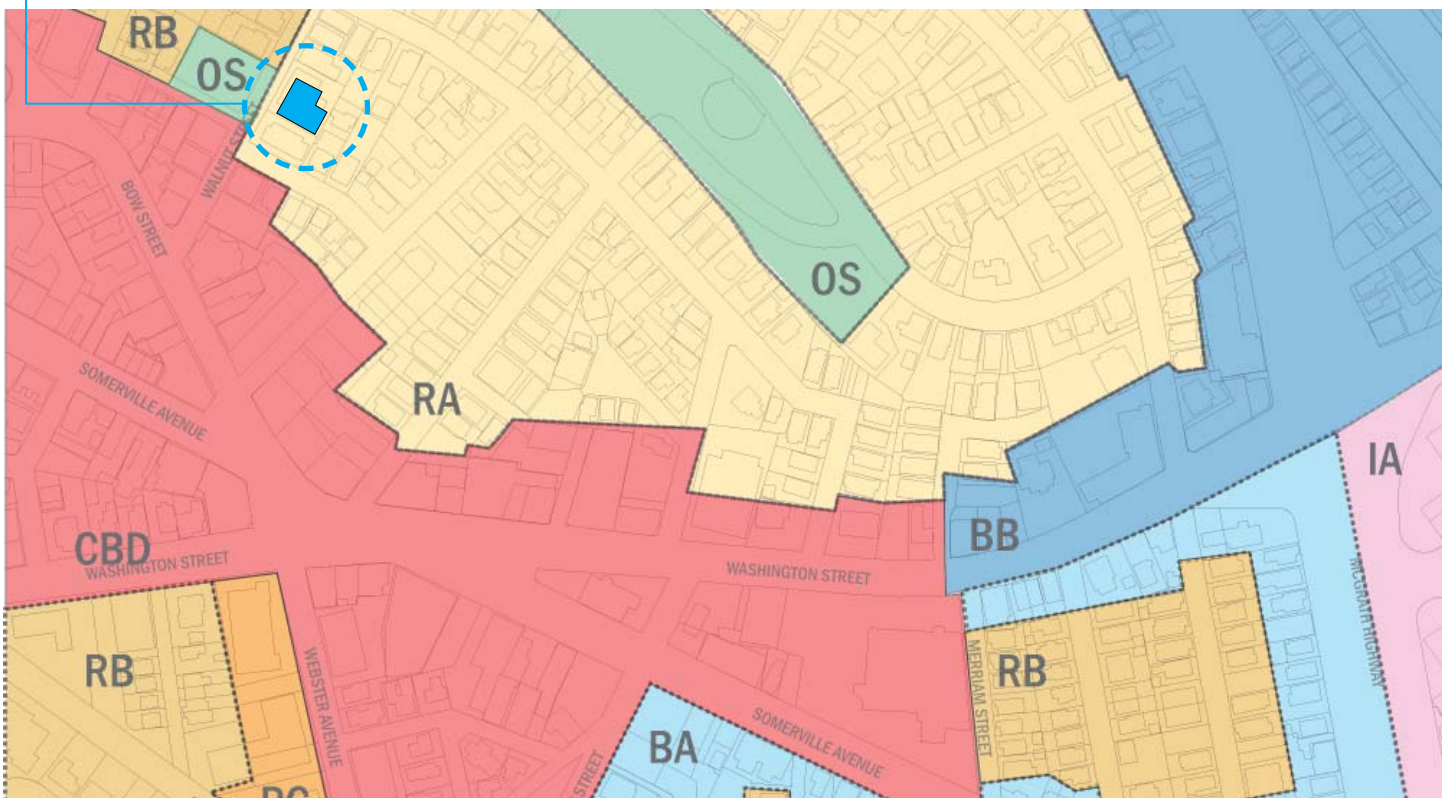
Relief required under current zoning per the Somerville Zoning Ordinance 3/10/05:

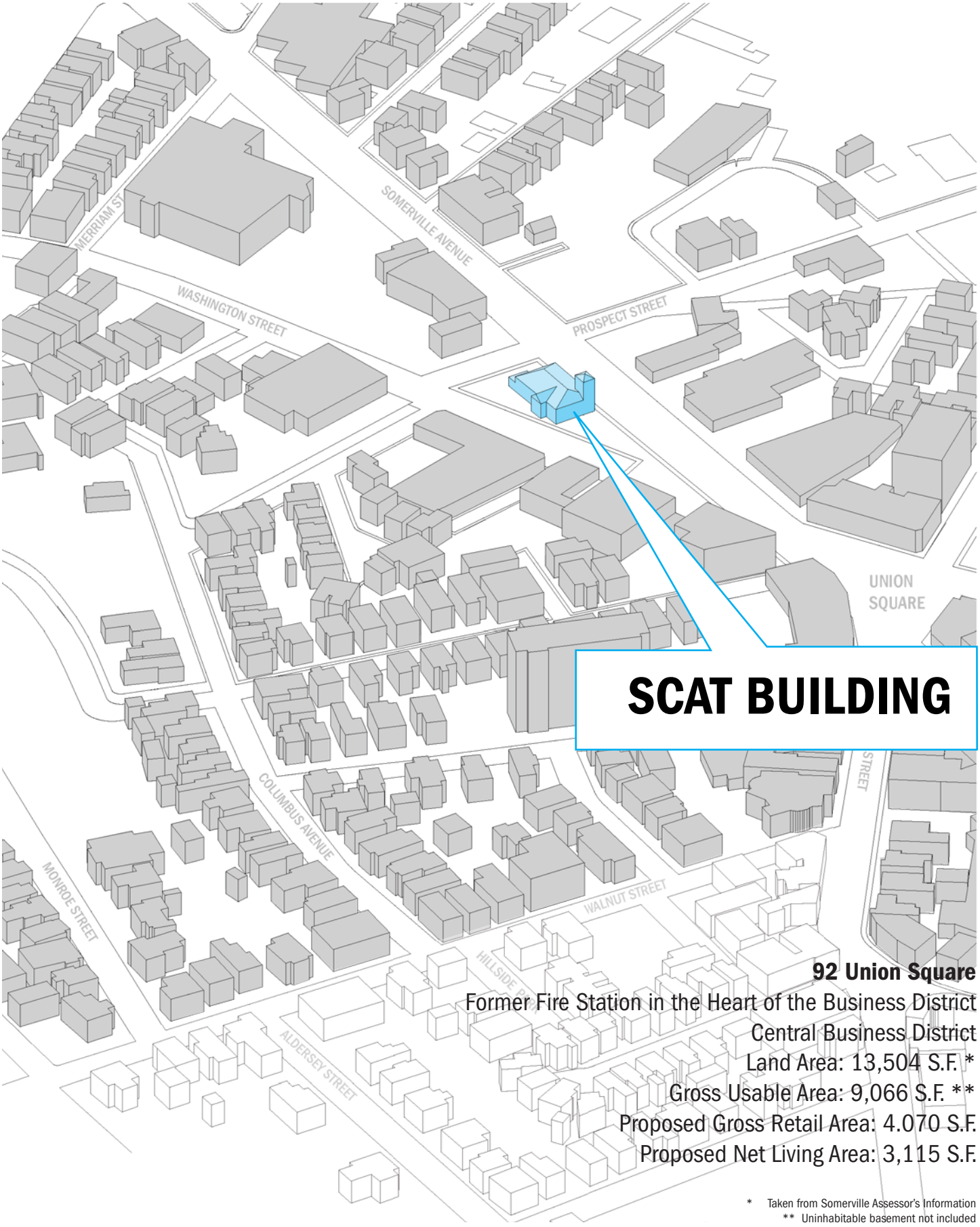
> Variance needed for multi-family housing (not permitted in RA district)

> Probably no variance required from parking requirements, due to grandfathering under Section 9.4.1.

New use requirement = (6 @ 1&2BR units x 1.5 spaces/unit = 9 units) +
(2 @ 3BR units x 2 spaces/unit = 4 units) +
1 visitor space
= **14 spaces**

Previous use requirement (Recreation Center) = (12,539 gross sf x 1 space/500 gross sf) = 25 spaces





SCAT BUILDING

92 Union Square

Former Fire Station in the Heart of the Business District

Central Business District

Land Area: 13,504 S.F. *

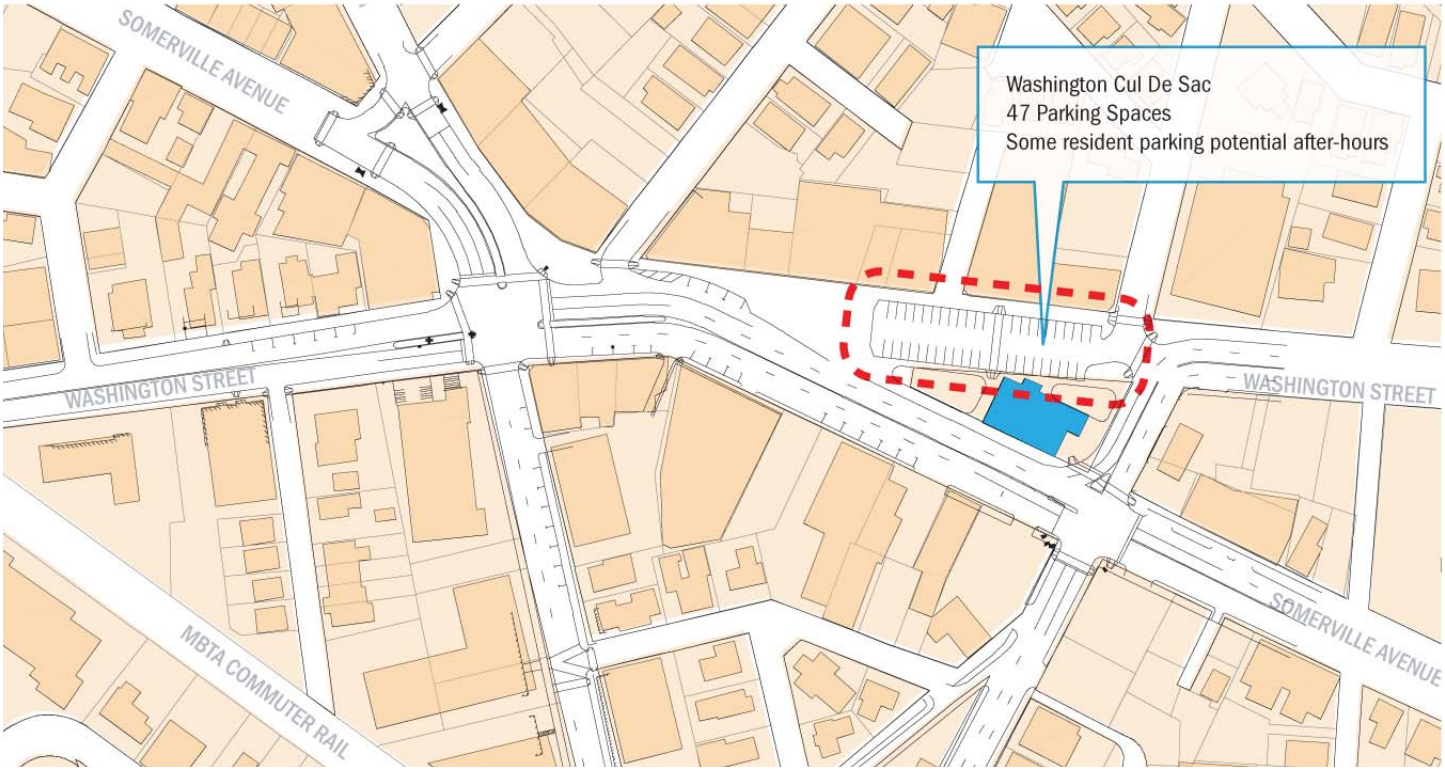
Gross Usable Area: 9,066 S.F. **

Proposed Gross Retail Area: 4.070 S.F.

Proposed Net Living Area: 3,115 S.F.

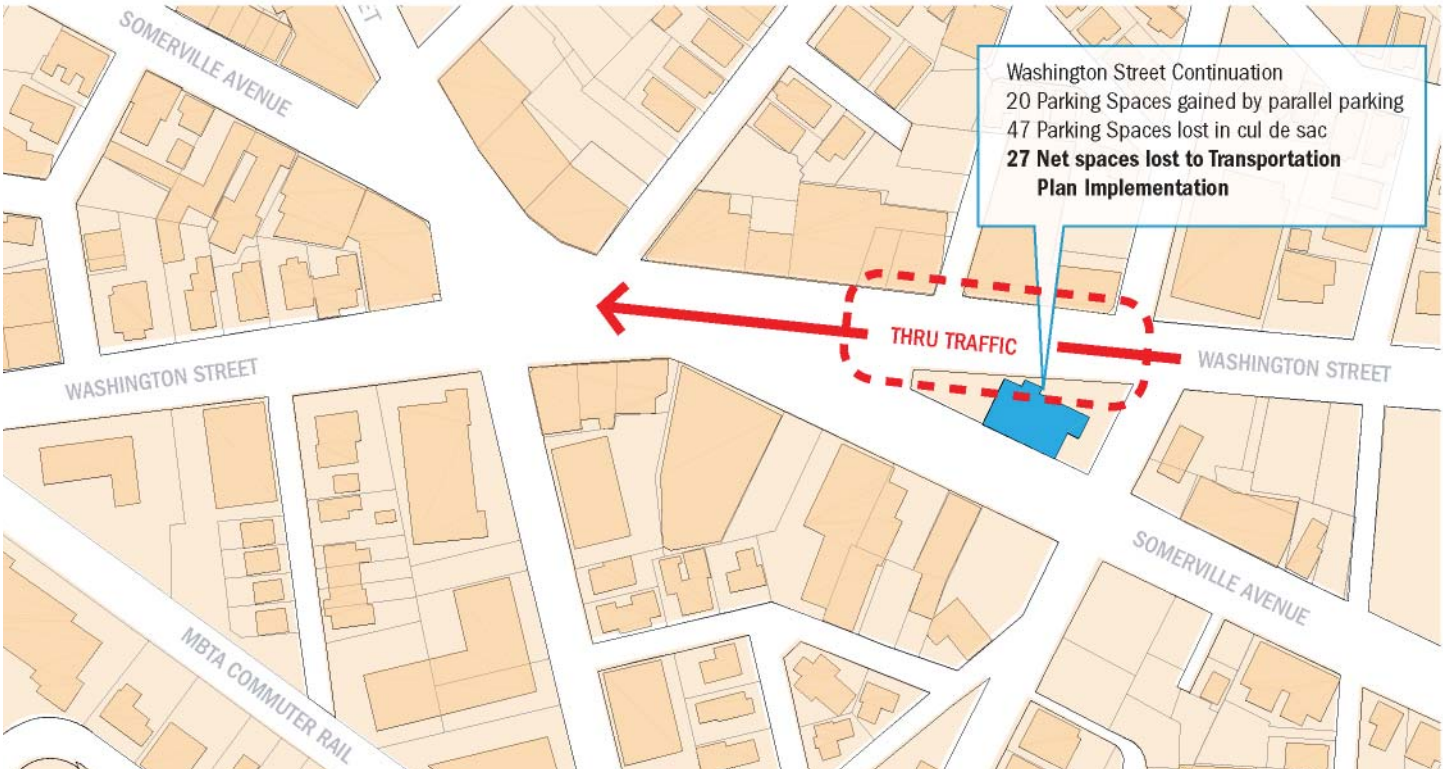
* Taken from Somerville Assessor's Information

** Uninhabitable basement not included



Union Square | SCAT Building
Existing Parking Conditions

N



Union Square | SCAT Building
Proposed Parking Conditions
Union Square Transportation Plan

N

SCAT BUILDING | 92 UNION SQUARE

SITE + CONTEXT

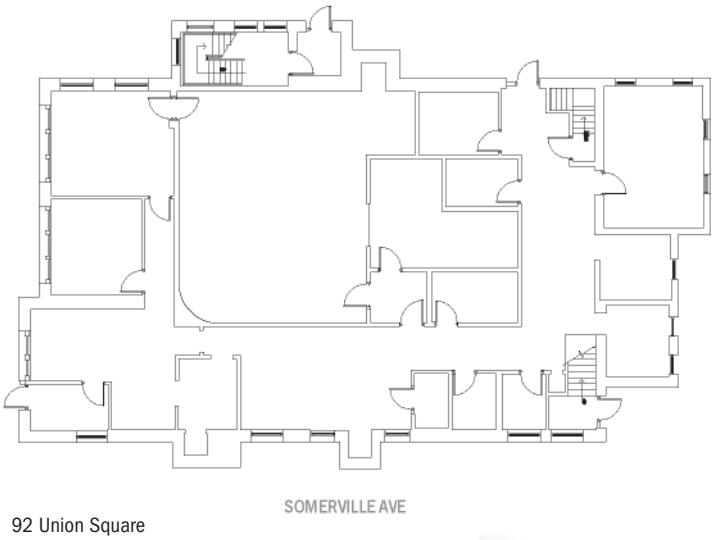
92 Union Square (the SCAT Building) is a former firehouse, located directly in the center of the Union Square Central Business District. The building sits in a triangular site, surrounded by the heavily-trafficked streets of Somerville Avenue, Prospect and Washington Streets. Existing uses include the Somerville Community Access Television (SCAT) station and offices, as well as offices for the Massachusetts Alliance of Portugese Speakers. The ground floor entrance for the current tenant was recently renovated to create a welcoming facade on the landscaped west side of the building. The scale of these new windows, the public location, and the potential of the park (as yet untapped) all suggest that the ground floor of the building remain commercial. A restaurant or cafe would do well to occupy this lower portion of the building, activating the square and expanding into the park for exterior seating in the mild months.

PROPOSED RESIDENTIAL CONVERSION

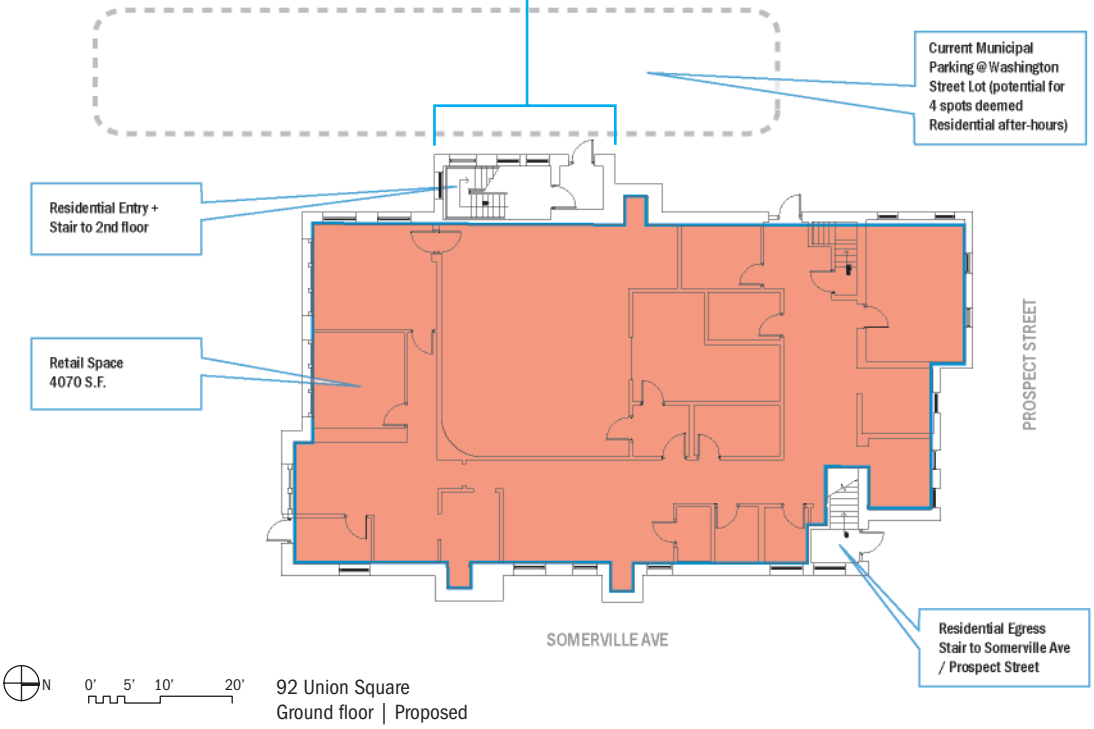
Whereas the ground floor is better-suited for commercial use, the second floor of the building could be considered for a housing conversion. The central location, and the building's high quality of construction make this location potentially attractive for those looking for a dense urban living experience. There is an existing entrance and stairwell on the Washington Street side of the building that could be set aside as a private lobby for four second-floor housing units. In the proposed scenario, each unit is a corner unit, making the most of the building's large historic windows and the natural light they will offer to the interior. Existing stairs provide the requisite 2 means of egress, and there is currently no elevator or lift in the building. Because it is an historic building being renovated / reused, however, it may not be subject to the same handicapped accessibility requirements as are ground-up building projects.

BARRIERS TO DEVELOPMENT

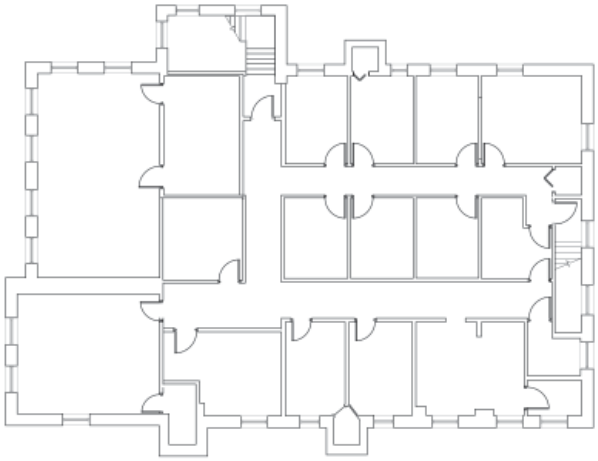
The disadvantages to the location for housing include ambient noise and lack of parking. Were the 2001 Union Square Transportation Plan implemented, the parking spaces currently adjacent to the building would be limited to parallel parking along Washington Streeet and Somerville Avenue, and traffic would surround the building on all sides, effectively creating an island of the site.



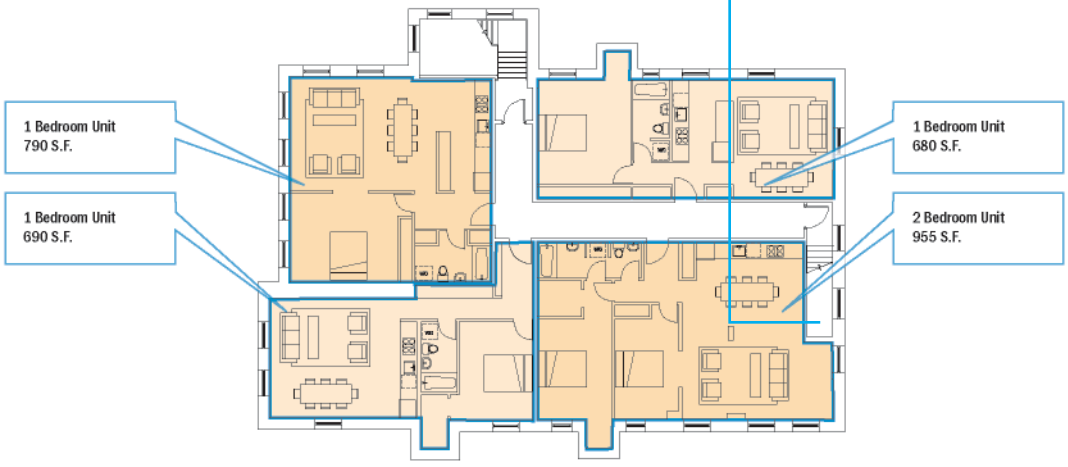
92 Union Square
Ground floor | Existing



92 Union Square
Ground floor | Proposed



92 Union Square
Second floor | Existing



N 0' 5' 10' 20'

92 Union Square
Second floor | Proposed

SCAT BUILDING

Financial Pro Forma

Residential Reuse Scheme

Development Program

Structure Type	Unit Count	Bed room Count	nsf/unit	gsf per structure type	Effic'y
Residential					
Multi-family condominium					
Upper Floor 1 BR	3	3	720		
Upper Floor 2 BR	1	2	955		
Total	**4**	5	3,115	**4,996**	62%
Retail					
Total			4,070	**4,070**	
TOTAL SF			7,185	**9,066**	

Parking	parking spaces/ unit target	available parking spaces	parking spaces target	Retail parking spaces target	Total Target
Surface	1.25	**5**	5	8	**13**

Revenue Assumptions (Building Re-use)

	Price /SF	Market Sales Price	Affordable	Total Mkt Sales
	$ 415	$ 298,800	$ -	$ 896,400
	400	$ 382,000		$ 382,000
			$ -	$ 1,278,400
	$ 25.00			

Cost Assumptions

Unit Type	$/sf
Multi-family rehab	$ 130.00
Retail	$ 65.00
Parking	*$/space*
Surface	$ 2,500

Proforma

	$	
INCOME		
Residential		
Market Rate Housing		
Multifamily	1,278,400	
Affordable Rate Housing	-	12.5% of units (> 8 units)
Total Revenue	**1,278,400**	
Less 5% Cost of Sales	(63,920)	5% of market units only
Net Sales Rev.	**1,214,480**	
Retail		
Stabilized Gross Income	101,750	
less Vacancy	(5,088)	5% of Gross Income
less operating expenses	-	
Net Operating Income	96,663	
Capitalized Value	**1,074,028**	9.0%
DEVELOPMENT COSTS		
Hard Costs		
Building	914,030	
Parking	12,500	
Environmental Remediation	25,000	assumption
Contingency	47,577	5% of hard cost
Total Hard Cost	**999,107**	
Soft Cost	249,777	25% of hard cost
Total Development Cost	**1,248,883**	
Required Developer Return for Feasibility	**249,777**	20% of TDC
RESIDUAL LAND VALUE	**789,848**	

SCAT BUILDING

Zoning Recommendations

Residential Reuse Scheme

Zoning district:	CBD
Land area:	13,504 sf
Gross building area:	9,066 sf
Residential use:	4 units
Retail use:	4,070 sf
On-site parking:	0 spaces

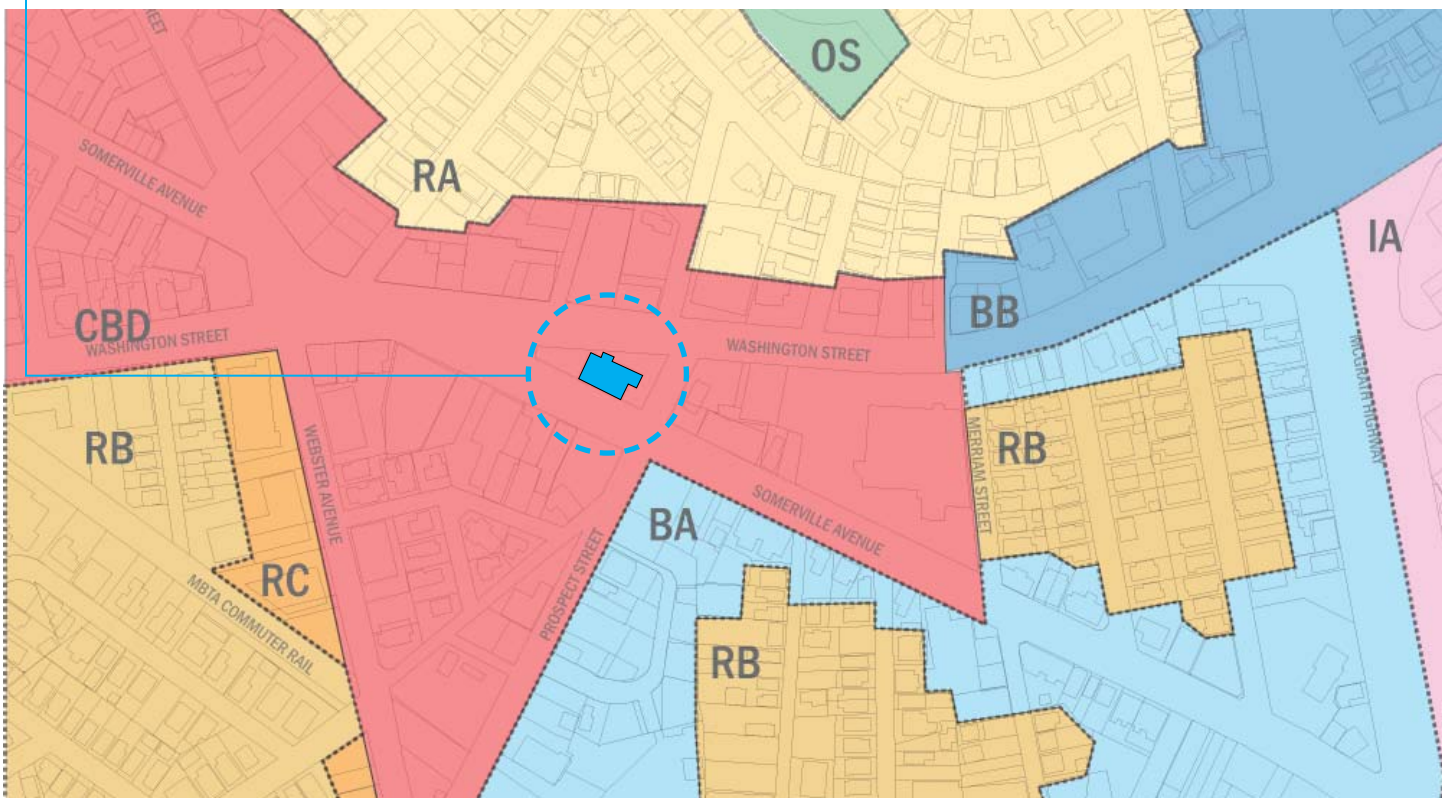
Relief required under current zoning per the Somerville Zoning Ordinance 3/10/05:

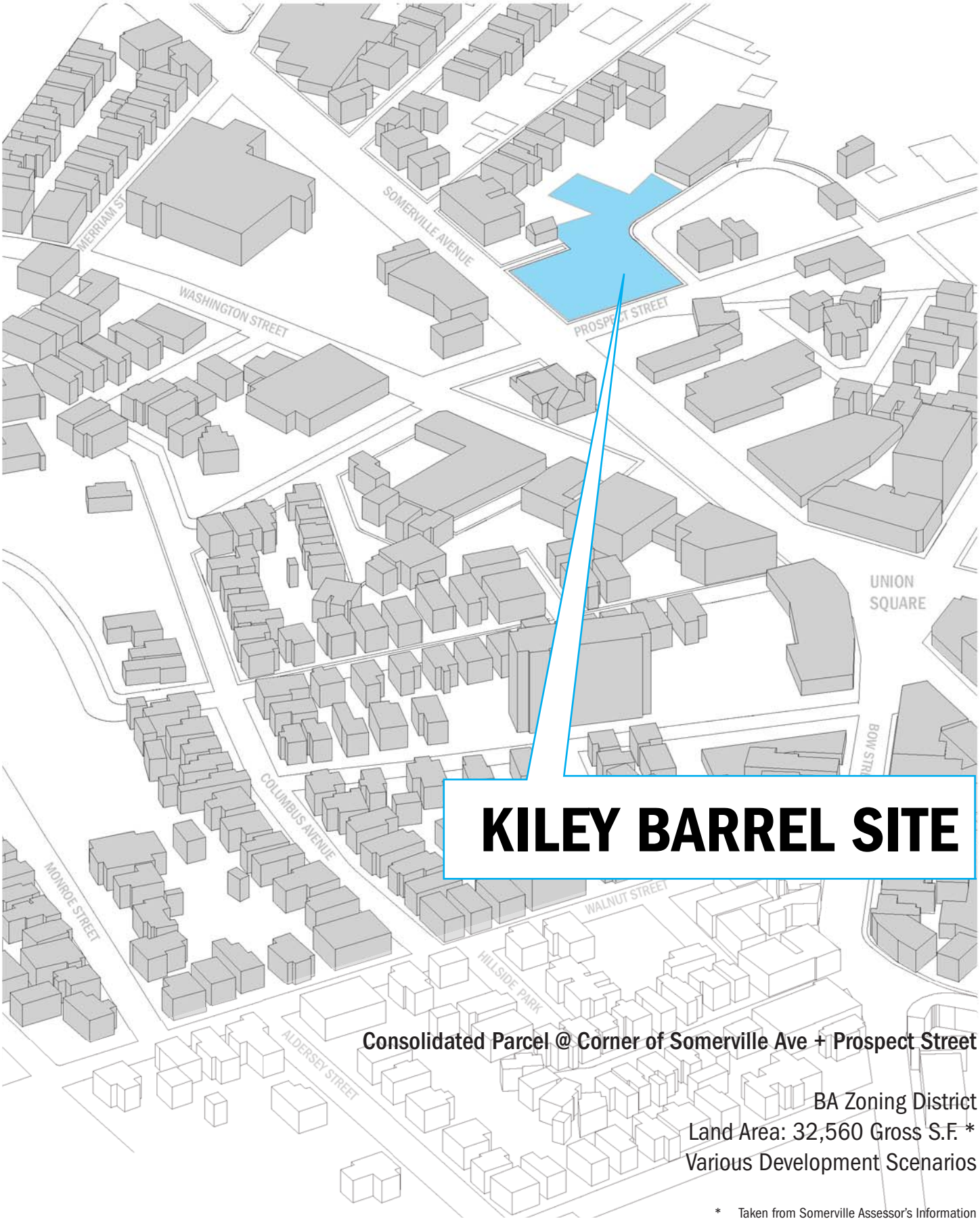
> 4 residential units require Special Permit within CBD district

> Probably no variance required from parking requirements, due to grandfathering under Section 9.4.1.
New use requirement = (4 @ 1&2BR units x 1.5 spaces/unit = 6 spaces) +
(4,070 gross sf x 1 space/500 sf retail x 90% per Section 9.6.3 = 8 spaces)
= **14 spaces**
Previous use requirement (assumed to be office) = (9,066 gross sf x 1 space/575 gross sf) = 16 spaces.

Alternative: create new PUD C district (See Conclusion)

> Although increases in density are not required to develop SCAT Building site on stand-alone basis, ability to combine parcels may make possible cross-subsidization of different uses and public amenities



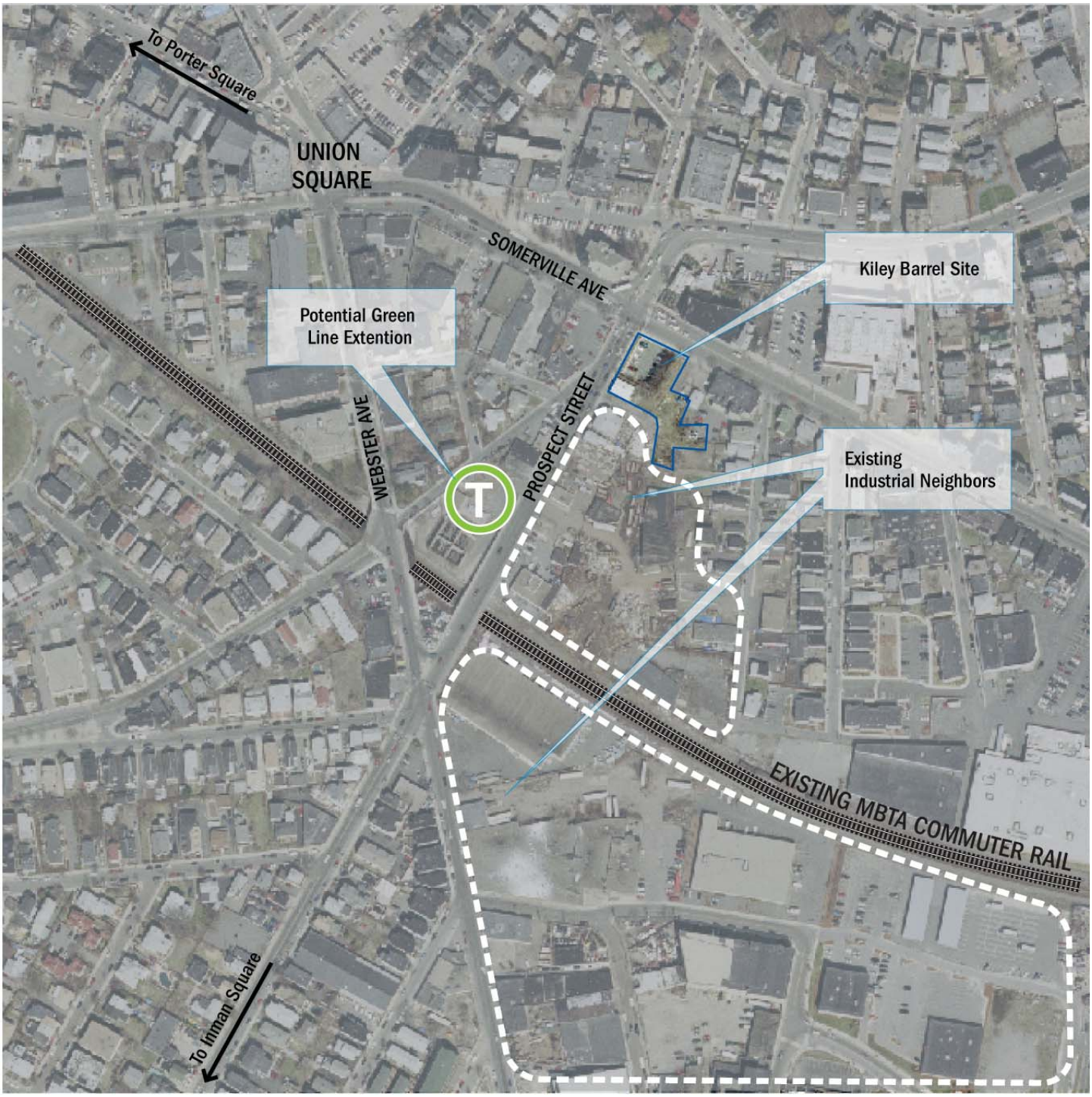


KILEY BARREL SITE

Consolidated Parcel @ Corner of Somerville Ave + Prospect Street

BA Zoning District
Land Area: 32,560 Gross S.F. *
Various Development Scenarios

* Taken from Somerville Assessor's Information



Kiley Barrel Site
Site Adjacency Issues

KILEY BARREL SITE | PROSPECT STREET + SOMERVILLE AVENUE

SITE + CONTEXT

The Kiley Barrel Site is an irregularly-shaped consolidated parcel at the corner of Prospect Street and Somerville Avenue. The corner on which it sits is one of the current entrances into Union Square from Cambridge through Inman Square and from Boston via Somerville Avenue, but its impact as a "gateway" is sapped by poorly designed, one-way traffic flow. The parcels, which are owned by both the City of Somerville and the Somerville Redevelopment Authority, have been cleared of structures and are currently being used as an overflow municipal parking lot. The site has generated substantial interest from outside development teams since the MBTA suggested one possibility for the projected Union Square stop on the Green Line extension may be located down Prospect Street near the existing Commuter rail tracks. Were this development to come to fruition, and were Prospect Street transformed into a two-way street (as is suggested by the 2001 Union Square Transportation Plan), the Kiley Barrel corner would truly become an anchor to a four-corners gateway into the Square. South of the parcels, Prospect Street becomes quite industrial. Some of the neighbors to the South include a used radiator specialty business, and a scrap yard. In addition, the site is known to be a "Brownfield" site, which would force a developer to undertake environmental remediation before residential use could be considered.

PROPOSED RESIDENTIAL DEVELOPMENT

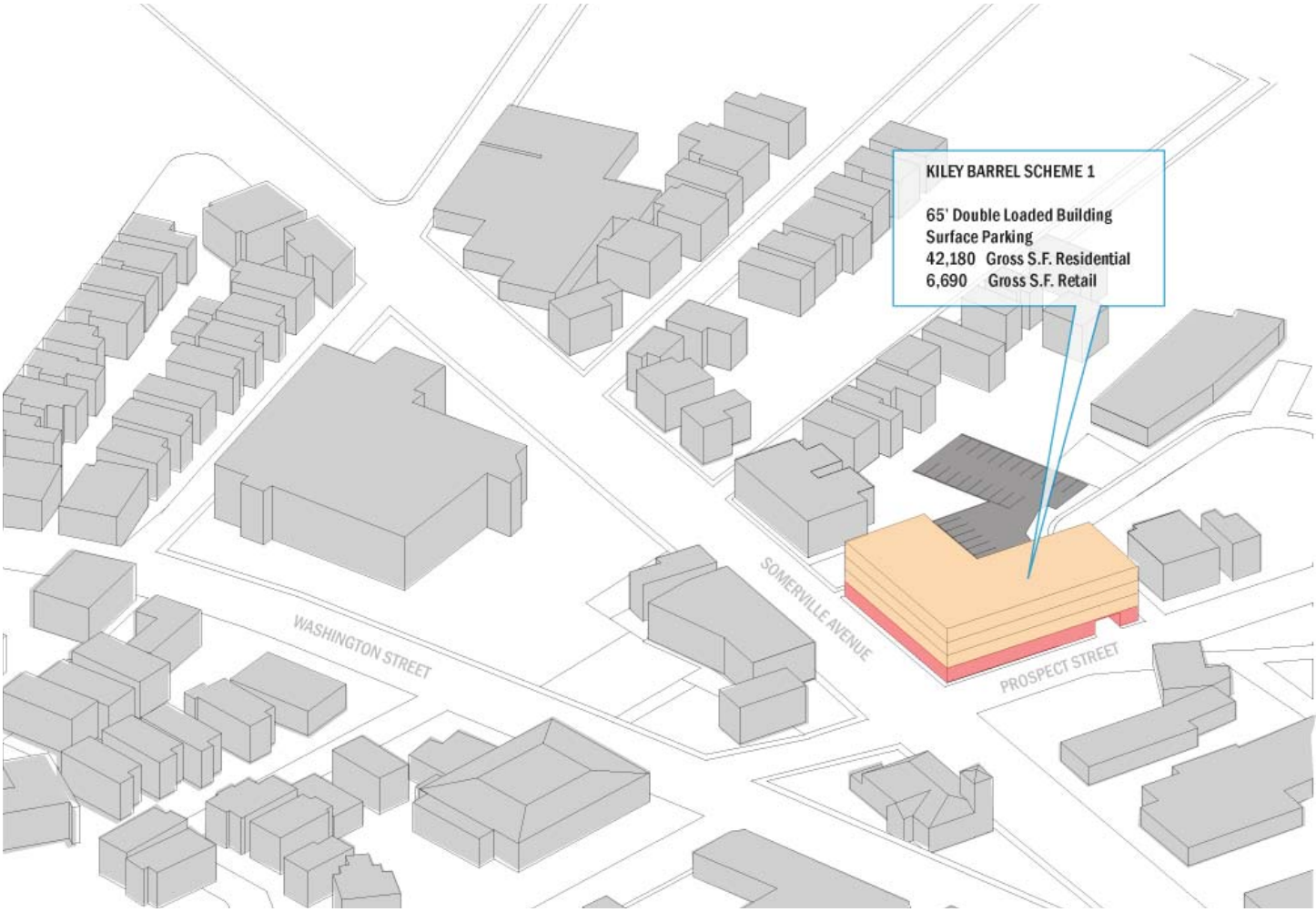
Both mixed-use commercial / residential schemes discussed here propose wood-frame buildings with surface parking at the back of the site. It was assumed that, given the potential prominence of the site, street frontage should be maximized, and that small-scale commercial spaces that approximate the scale of existing Union Square retail would be preferable.

Scheme 1 proposes a single L-shaped building with commercial space on the ground floor and 46 total 1-and 2-bedroom apartments on the upper three floors. Surface parking is accessed through an archway on Prospect Street and is entirely hidden from view.

Scheme 2 proposes a mix of two building types: an L-shaped mixed-use building (commercial + residential) at the primary corner, and townhouses at the back of the site. In this scheme, the small existing dirt road behind the site would be widened and transformed into a proper side street, lined with the single-family townhouses.

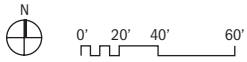
BARRIERS TO DEVELOPMENT

It is generally agreed that the Kiley Barrel site is well-suited for a mixed-used commercial / residential development. The irregularity of the site, and its relatively small size do make it difficult to meet the requisite parking needs that a dense development could generate. Overall development feasibility has centered on an understanding that the site could not financially support an underground or structured parking scenario, nor could it support steel-frame construction. These two circumstances limit density on the site, as does the cost of environmental remediation, which may be a deterrent to some development teams. Federal grants are available, however, to developers to mitigate against site cleanup costs.

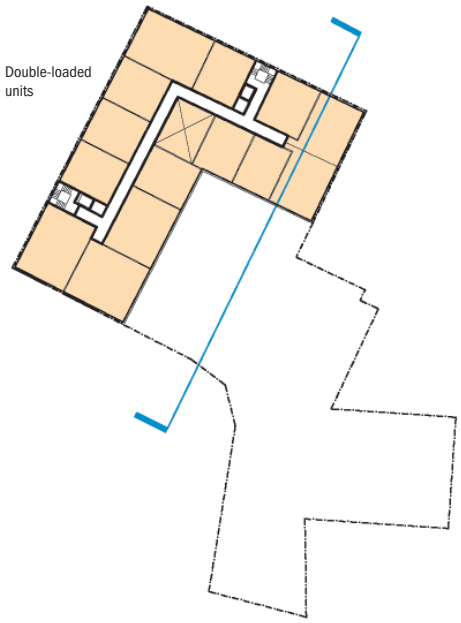


Kiley Barrel Scheme 1
Axonometric Massing

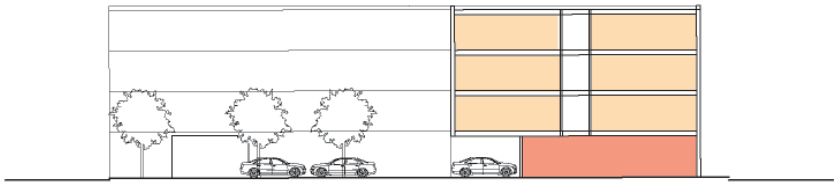
Kiley Barrel Scheme 1
Site Plan



Kiley Barrel Scheme 1
Ground floor | Proposed



Kiley Barrel Scheme 1
Typical Upper Floor | Proposed



Kiley Barrel Scheme 1
Site Section | Proposed

Scheme 1 proposes a simple L-shaped building, 65' deep. Commercial space wraps the ground floor, offering street-front activity on both Prospect Street and Somerville Avenue. There are two through-building residential entrances accessible from either the street or the parking area in the back. By filling out the remainder of the site with surface parking, this scheme manages to provide 1.25 spaces per unit, although there are no spaces available for the commercial tenants. The residential units are typical one-sided 1- and 2-bedroom apartments, accessed by a main corridor that links them to vertical circulation (stair and elevator) and two means of egress.

KILEY BARREL SITE | SCHEME 1

Financial Pro Forma

65' Double-Loaded Corner Residential Building

Development Program

Structure Type	Unit Count	Bedroom Count	nsf/unit	gsf/unit	gsf per structure type	Efficiency
Residential						
Multi-family condominium						
single-loaded corridor		-	-		-	81%
double-loaded corridor	46	69	767	914	42,021	84%
Total	**46**				**42,021**	
Retail						
Total					**6,610**	
TOTAL SF					**48,631**	

Parking	parking spaces/unit target	availabke parking spaces	Res. parking spaces target	Retail parking spaces target	Total Target
Surface	1.25	58			
Surface (Covered)					
Structured					
Total		**58**	58	13	**71**

Cost Assumptions

Unit Type	$/sf
Four-story Multi-family	$ 145.00
Retail	$ 120.00
Parking	*$/space*
Surface	$ 2,500
Surface (Covered)	$ 7,500
Structured	$ 20,000

Revenue Assumptions (New Construction)

Residential	Sales Price	Revenue/sf
Unit type		
Townhouse	510,000	$ 322.00
Multifamily	299,263	$ 390.00
Affordable Housing	165,000	
	$/sf	
Retail	$ 20.00	

Proforma

INCOME	$	
Residential		
Market Rate Housing		
Multifamily	12,045,320	
Townhouse	-	
Total	**12,045,320**	
Affordable Rate Housing	948,750	12.5% of units
Total Revenue	**12,994,070**	
Less Cost of Sales	(602,266)	5% of market units only
Net Sales Rev.	**$ 12,391,804**	
Retail		
Stabilized Gross Income	132,200	
less Vacancy	(6,610)	5% of Gross Income
less operating expenses	-	
Net Operating Income	125,590	
Capitalized Value	**1,477,529**	8.5%
DEVELOPMENT COSTS		
Hard Costs		
Building	6,886,245	
Parking	145,000	
Environmental Remediation	500,000	assumption
Contingency	376,562	5% of hard cost
Total Hard Cost	**7,907,807**	
Soft Cost	1,581,561	20% of hard cost
Total Development Cost	**9,489,369**	
Required Developer Return for Feasibility	**1,897,874**	20% of TDC
RESIDUAL LAND VALUE	**$ 2,482,091**	

KILEY BARREL SITE | SCHEME 1

Zoning Recommendations

65' Double-Loaded Corner Residential Building

Zoning district:	BA
Land area:	32,560 sf
Building Height:	4 stories, 45 feet
Gross building area:	48,631 sf
FAR:	1.49
Residential use:	46 units
Units / acre:	62
Affordable units:	6 units (@ 12.5%)
Retail use:	6,690 sf
On-site parking:	58 spaces

Relief required under current zoning per the Somerville Zoning Ordinance 3/10/05 (same for Scheme 1 and Scheme 2):

> 7+ residential units requires Special Permit with Site Plan Review

> Need variance from housing density, if 12.5% of units are affordable:
Currently allowed =(9 @ 875 sf/unit) + (25 @ 1000 sf/unit) = 34 total as-of-right (4 affordable units)
However, under Section 13.5, on-site density could rise to about 46 units, if up to 20% were affordable (8 – 9 affordable units)

> May need variance from Side/Rear Yard Setbacks (10' + (2'/story x 4 stories)) = 18'

> Need variance from parking:
Currently req'd = (46 @1&2BR units x 1.5 spaces/unit = 69 spaces) +
8 visitor spaces +
(6,690 gross sf x 1 space/500 sf retail x 90% per Section 9.6.3 = 13 spaces)
= **90 spaces**

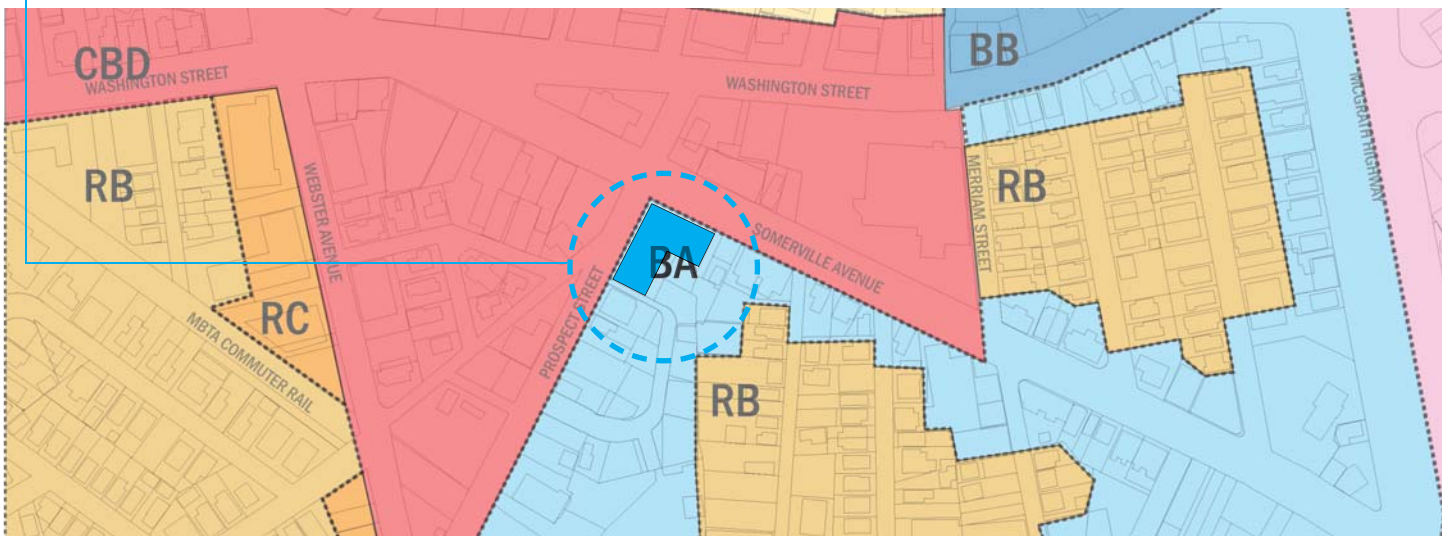
Alternative: create new PUD C district (See Conclusion)

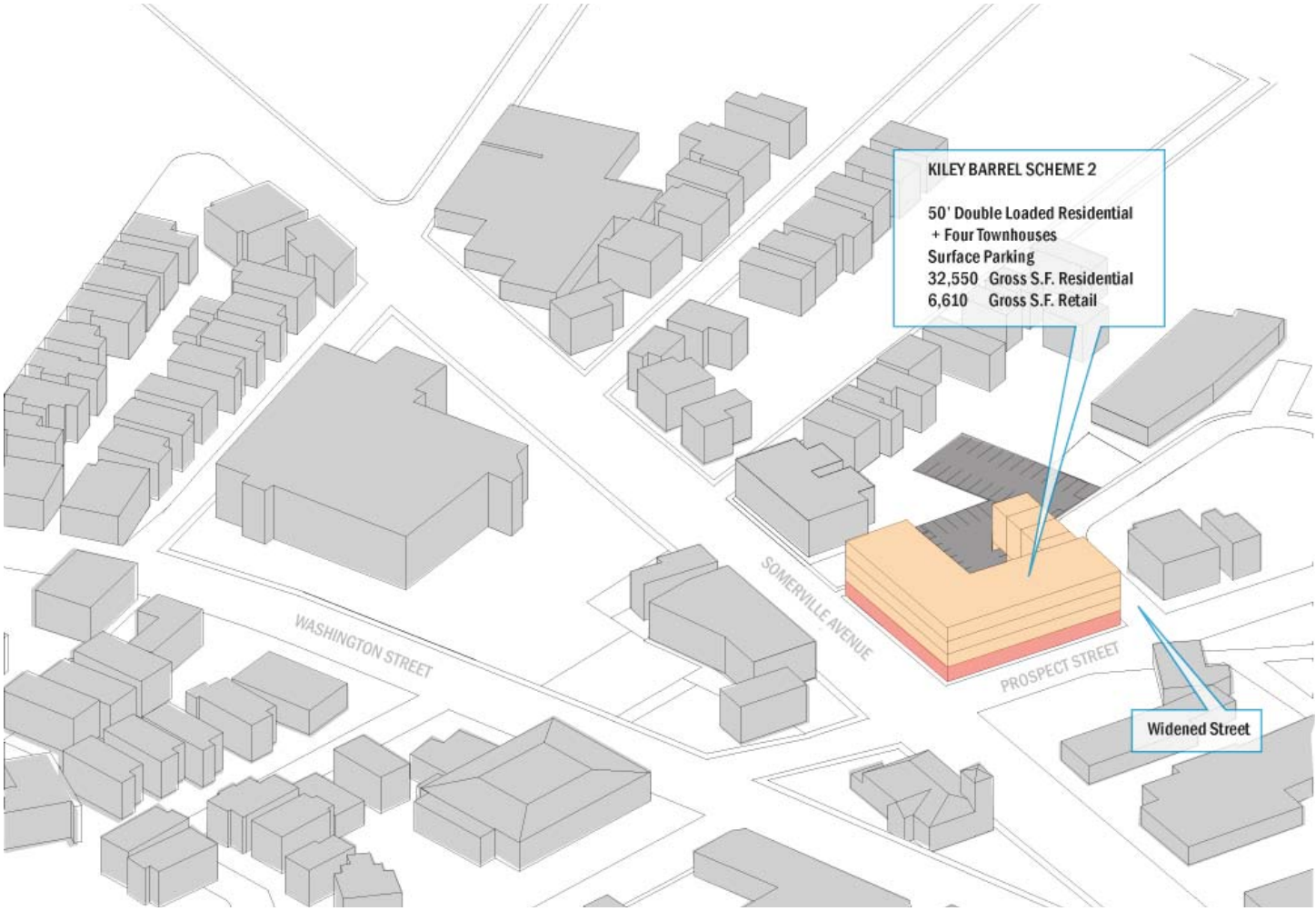
> Housing density increased to 70 units / acre
Residential FAR cap of 1.5 ensures limit on total number of BRs (i.e., maximum density only achievable @ 1,000 sf /unit)

> FAR increased to between 2.5 and 3.0

> Height limit increased to 5 - 7 stories, 75' – 100'

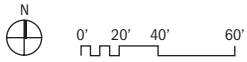
> Minimum parking requirement decreased to 0.75 spaces / unit, and maximum parking capped at 1.25 spaces / unit



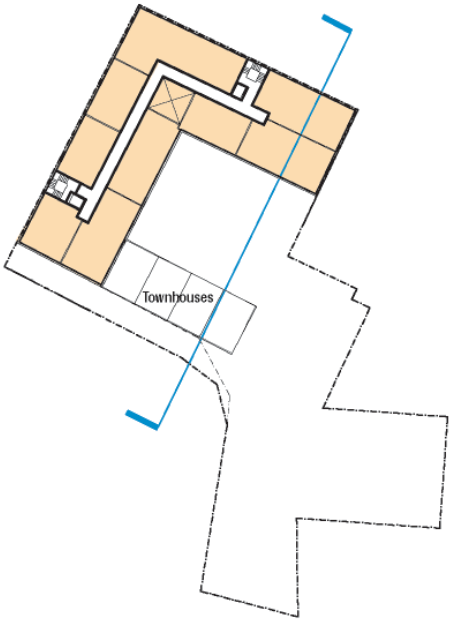


Kiley Barrel Scheme 2
Axonometric Massing

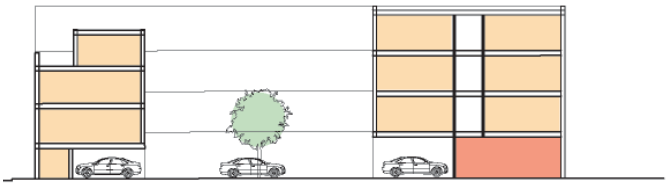
Kiley Barrel Scheme 2
Site Plan



Kiley Barrel Scheme 2
Ground floor | Proposed



Kiley Barrel Scheme 2
Typical Upper Floor | Proposed



Townhouses | Surface Parking | Commercial Residential Above | Somerville Avenue

Kiley Barrel Scheme 2
Site Section | Proposed

Scheme 2 suggests a mix of two building types: an L-shaped mixed-use building (commercial + residential) at the primary corner, and townhouses at the back of the site. In this scheme, the existing narrow dirt road behind the site would be widened and transformed into a proper side street, lined with the single-family townhouses. Although the current state of the street and its industrial abutters make the back of the site inhospitable for residential use, the cluster of townhouses could be considered "pioneers" of a new Prospect Street corridor beginning at the MBTA tracks and moving toward Union Square. Once again, parking provides the most significant barrier to development. In this scheme, there are 4 fewer residential spaces than required (assuming a desirable ratio of 1.25 spaces per unit), and can offer no additional parking for the commercial tenants on the ground floor.

KILEY BARRELL SITE | SCHEME 2

Financial Pro Forma

50' Double-Loaded Corner Building / Townhouses / Widened Back Street

Development Program

Structure Type	Unit Count	Bedroom Count	nsf/unit	gsf/unit	gsf per structure type	Efficiency
Residential						
Multi-family condominium						
single-loaded corridor		-	-		-	81%
double-loaded corridor	35	53	767	914	31,973	84%
Townhouse	4		1,581	1,664	6,657	95%
Total	**39**				**38,629**	
Retail						
Total					**6,690**	
TOTAL SF					**45,319**	

Parking	parking spaces/unit target	available parking spaces	Res. parking spaces target	Retail parking spaces target	Total Target
Surface	1.25	48	52		
Surface (Covered)					
Structured					
Total		**48**	52	13	**65**

Cost Assumptions

Unit Type	$/sf
Four-story Multi-family	$ 145.00
Retail	$ 120.00
Parking	*$/space*
Surface	$ 2,500
Surface (Covered)	$ 7,500
Structured	$ 20,000

Revenue Assumptions (New Construction)

Residential	Sales Price	Revenue/sf
Unit type		
Townhouse	513,825	$ 325.00
Multifamily	299,263	$ 390.00
Affordable Housing Unit	165,000	
	$/sf	
Retail	$ 20.00	

Proforma

INCOME	$	
Residential		
Market Rate Housing		
Multifamily	8,977,878	
Townhouse	2,055,300	
Total	**11,033,178**	
Affordable Rate Housing	825,000	12.5% of units
Total Revenue	**11,858,178**	
Less Cost of Sales	(551,659)	5% of market units only
Net Sales Rev.	**$ 11,306,519**	
Retail		
Stabilized Gross Income	133,800	
less Vacancy	(6,690)	5% of Gross Income
less operating expenses	-	
Net Operating Income	127,110	
Capitalized Value	**1,495,412**	8.5%
DEVELOPMENT COSTS		
Hard Costs		
Building	6,404,055	
Parking	120,000	
Environmental Remediation	500,000	assumption
Contingency	351,203	5% of hard cost
Total Hard Cost	**7,375,257**	
Soft Cost	1,475,051	20% of hard cost
Total Development Cost	**8,850,309**	
Required Developer Return for Feasibility	**1,770,062**	20% of TDC
RESIDUAL LAND VALUE	**$ 2,181,560**	

KILEY BARREL SITE | SCHEME 2

Zoning Recommendations

50' Double-Loaded Corner Building / Townhouses / Widened Back Street

Zoning district:	BA
Land area:	32,560 sf
Building Height:	4 stories, 45 feet
Gross building area:	45,319 sf
FAR:	1.39
Residential use:	39 units (35 apts, 4 townhouses)
Units / acre:	52
Affordable units:	5 units (@ 12.5%)
Retail use:	6,690 sf
On-site parking:	48 spaces

Relief required under current zoning per the Somerville Zoning Ordinance 3/10/05 (same for Scheme 1 and Scheme 2):

> 7+ residential units requires Special Permit with Site Plan Review

> Need variance from housing density, if 12.5% of units are affordable:
Currently allowed =(9 @ 875 sf/unit) + (25 @ 1000 sf/unit) = 34 total as-of-right (4 affordable units)
However, under Section 13.5, on-site density could rise to about 46 units, if up to 20% were affordable (8 – 9 affordable units)

> May need variance from Side/Rear Yard Setbacks (10' + 2'/story x 4 stories) = 18'

> Need variance from parking:
Currently req'd = (46 @1&2BR units x 1.5 spaces/unit = 69 spaces) +
8 visitor spaces +
(6,690 gross sf x 1 space/500 sf retail x 90% per Section 9.6.3 = 13 spaces)
= **90 spaces**

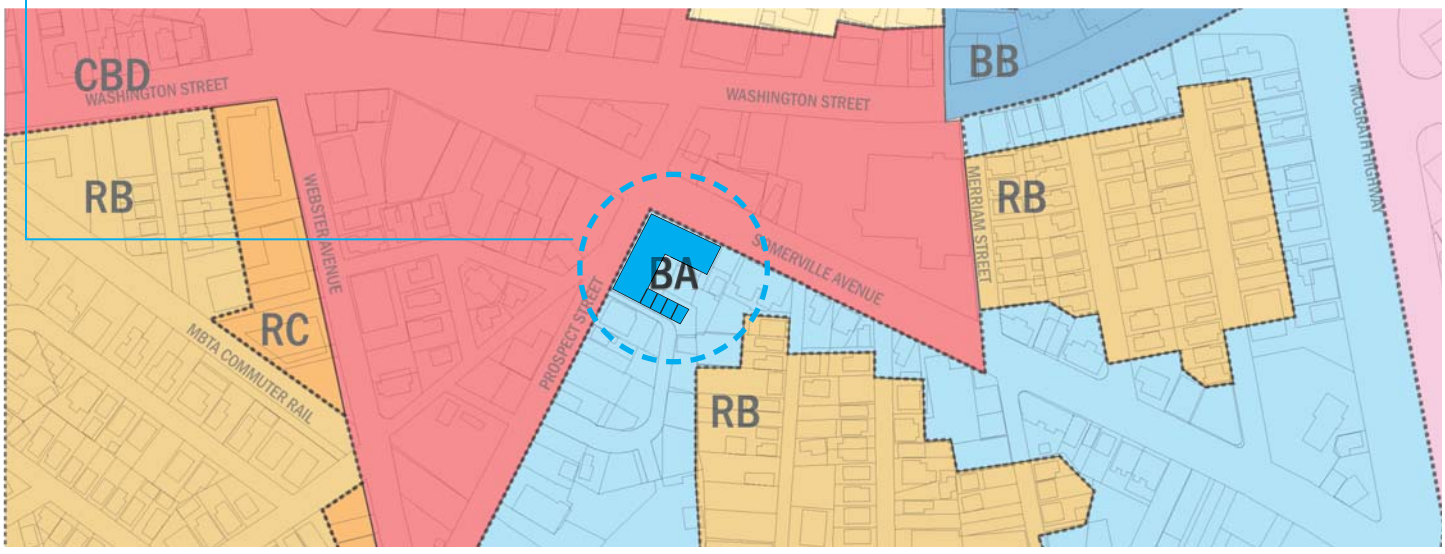
Alternative: create new PUD C district

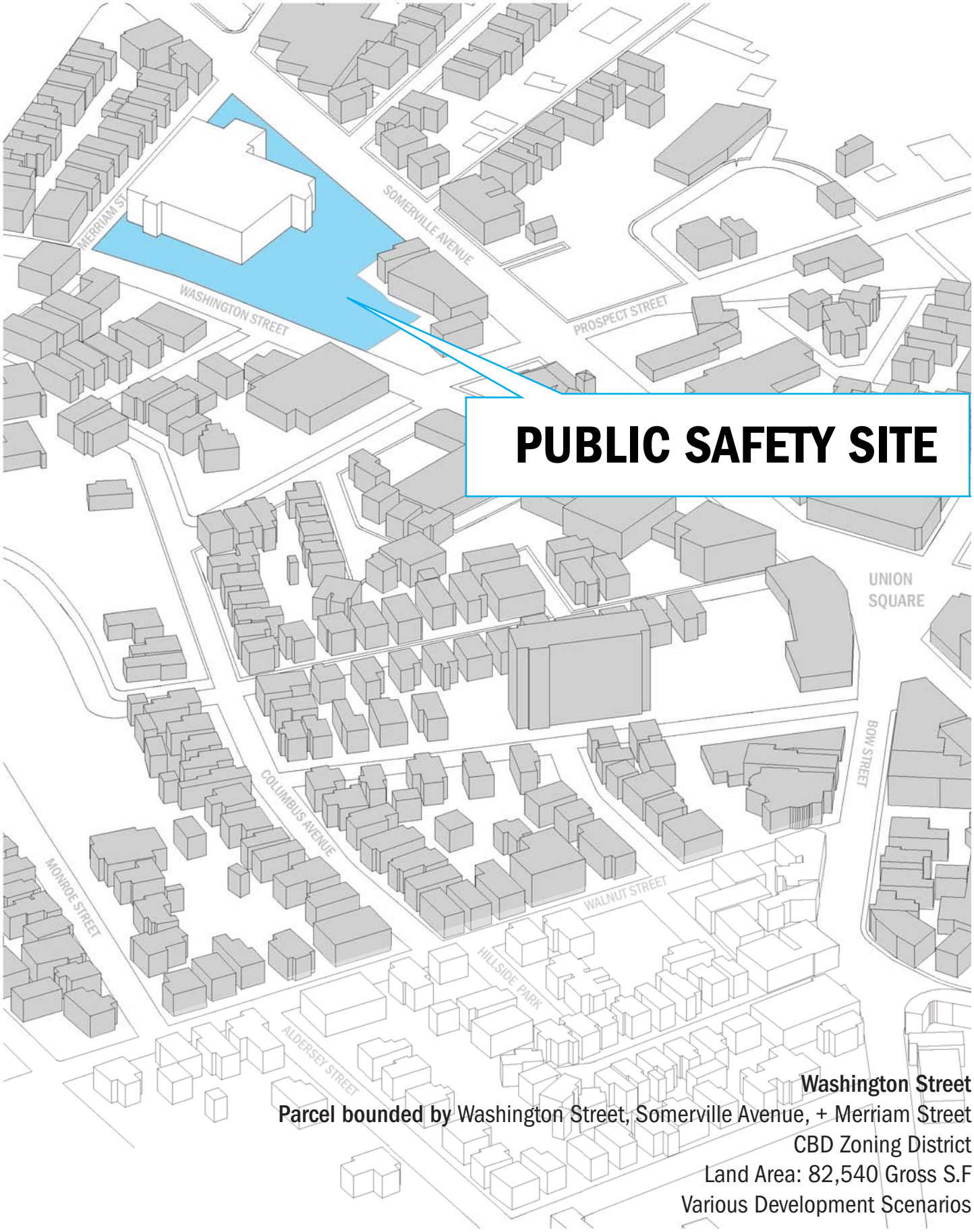
> Housing density increased to 70 units / acre
Residential FAR cap of 1.5 ensures limit on total number of BRs (i.e., maximum density only achievable @ 1,000 sf /unit)

> FAR increased to between 2.5 and 3.0

> Height limit increased to 5 - 7 stories, 75' – 100'

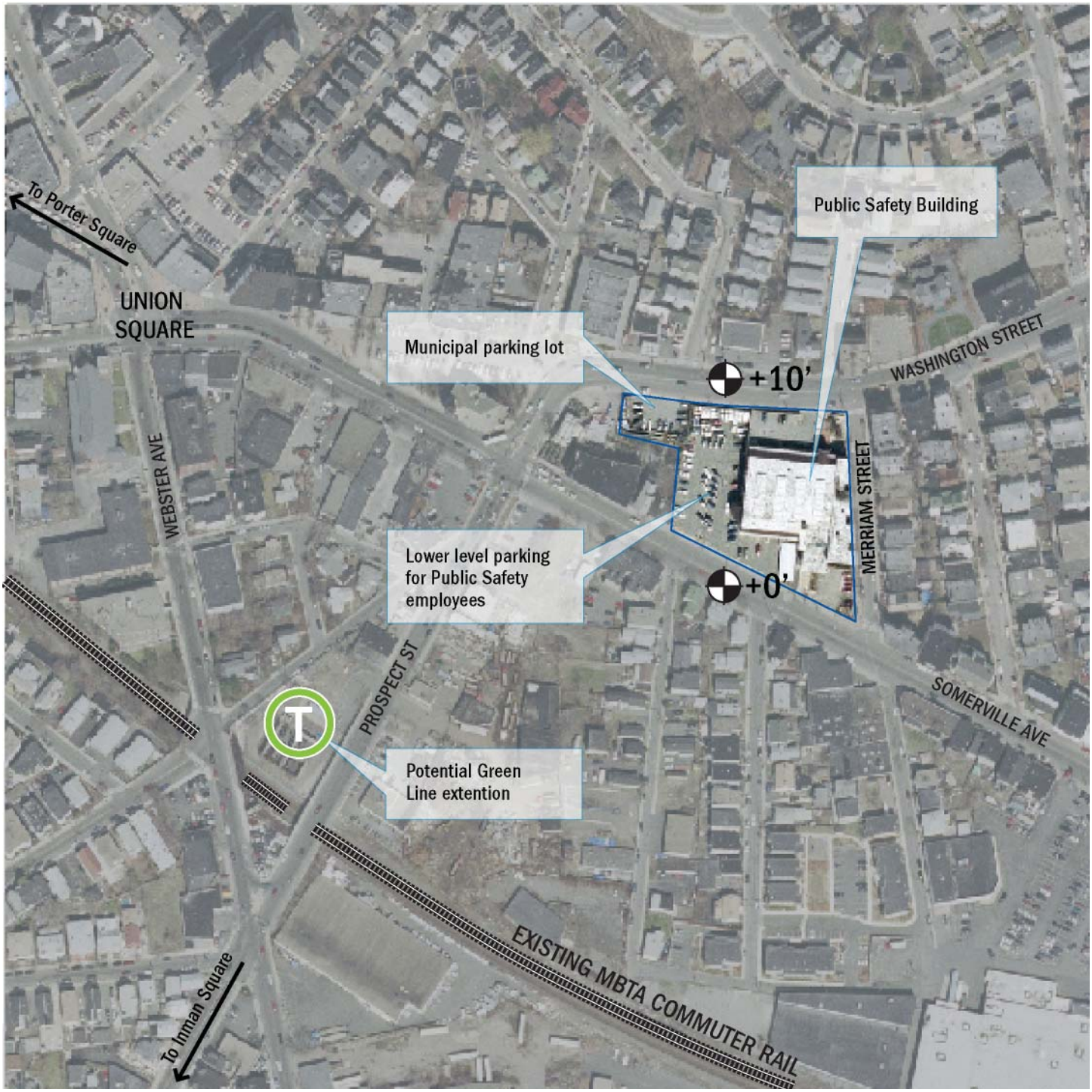
> Minimum parking requirement decreased to 0.75 spaces / unit, and maximum parking capped at 1.25 spaces / unit





PUBLIC SAFETY SITE

Washington Street
Parcel bounded by Washington Street, Somerville Avenue, + Merriam Street
CBD Zoning District
Land Area: 82,540 Gross S.F
Various Development Scenarios



Public Safety Site
Site Adjacency Issues

PUBLIC SAFETY SITE | SOMERVILLE AVE, WASHINGTON ST. + MERRIAM ST.

SITE + CONTEXT

The Public Safety Site is the largest of the parcels considered as part of this housing study. It sits slightly outside – to the East – of the center of Union Square, but it is bounded by the busy arteries of Washington Street and Somerville Ave, the two main entry corridors into the Square from the McGrath Highway and other points East. The site is a city block unto itself. It is broad enough that it navigates a full story (approximately 10') of grade change between the high side of Washington Street to the low side of Somerville Ave. There is a small municipal parking that occupies the Northwest corner of the site, across from the post office.

Currently the City of Somerville Public Safety Building occupies the site, which is home to the Somerville Police and Fire Departments. The building, while not particularly old, is inadequate to serve properly the City's public safety departments. It is also considered by many to be a "sick" building – one in which the interior environment is so poor that it can cause illness to the occupants. In October 2000, the City of Somerville undertook a feasibility study to demolish, redesign and rebuild the building on the same site. That plan has since been discarded, and it is expected that the City will demolish the building and relocate the programs currently housed on the site to other parts of the city, leaving the site open for other types of development, such as housing.

RESIDENTIAL DEVELOPMENT

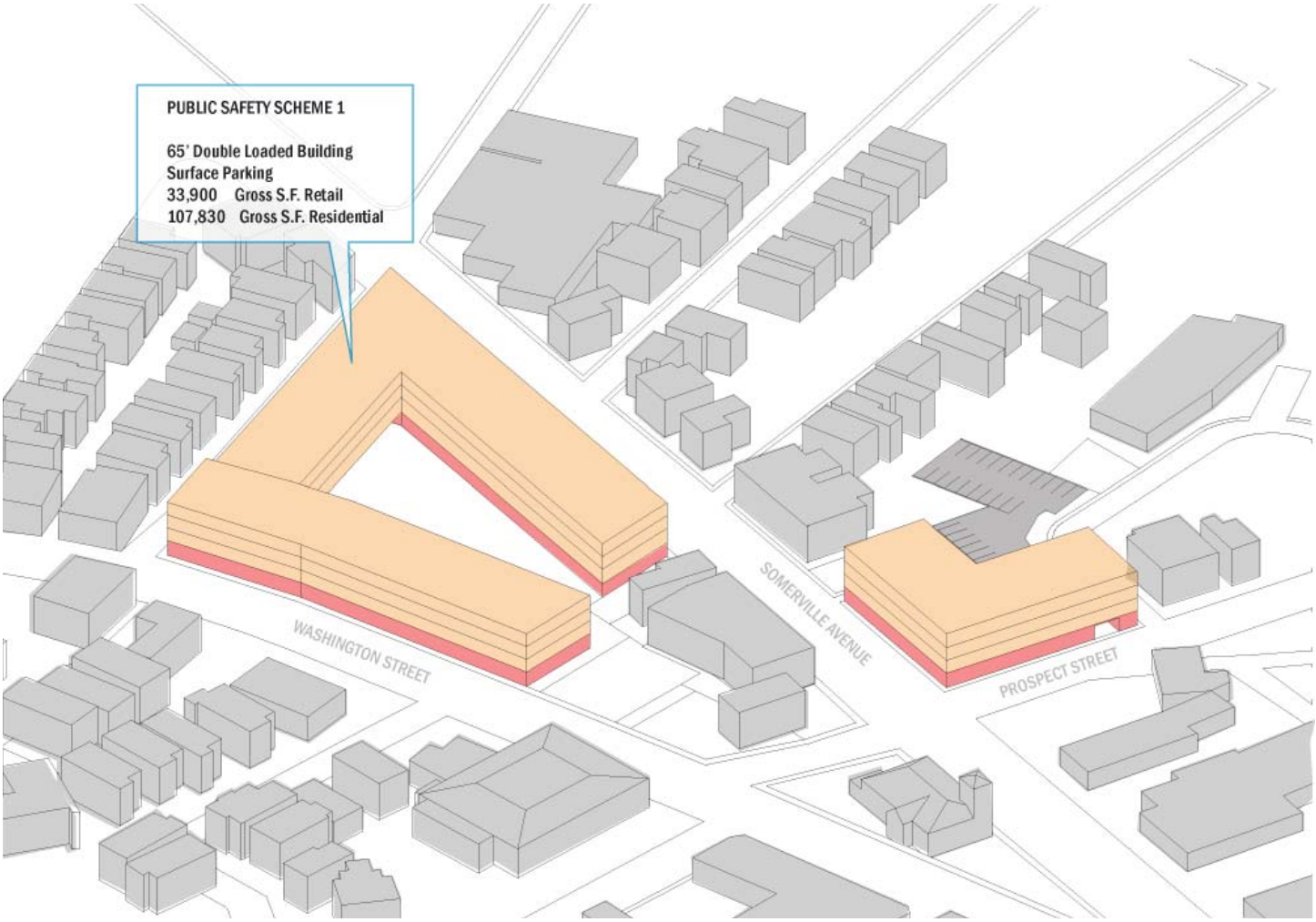
Scheme 1 proposes to wrap the three active sides of the site with a simple 65' deep building. In this scenario, the natural change in grade is used to create an inexpensive parking solution. Cars can enter from Somerville Ave. only, to park on a hidden surface lot tucked underneath the entire site. The lot itself is covered by a courtyard above, at the grade of Washington Street, that can be used as an amenity for the residents. Commercial space rings the ground level of the building, and is topped by three levels of residential units.

Scheme 2 once again suggests a 65' deep building type for a mixed commercial and housing development, but in this scenario an efficient structured parking garage is added to the western side of the site. The potential combination of both the Kiley Barrel and the Public Safety Site being developed, plus the implementation of the Union Square Transportation Plan, would lead to a net loss of municipal parking spaces in Union Square. A scenario such as this, which offers both residential parking spaces and metered municipal spaces, begins to address the continued need for parking in the Square.

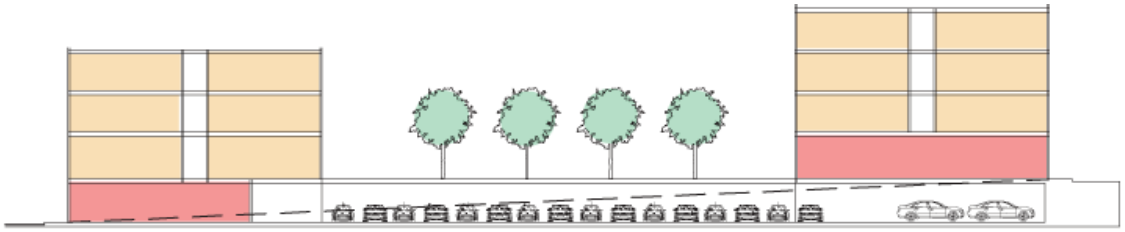
Scheme 3 imagines a powerful symbol for Union Square on the scale of the skyline. Here the development consists of three components: a 12-story residential tower, a thin mixed-use building wrapping the site perimeter, and a parking garage embedded in the center of the site. In order to make this scenario feasible, a new street would have be cut through the existing block on the western side of the Public Safety Site. The entrance to both the tower and the garage would be on this new street.

BARRIERS TO DEVELOPMENT

The only significant barrier to development is the potential lack of on-site parking. Since the site is located outside the heart of Union Square, it should be considered a poor location for significant commercial activity *unless* there is substantial accommodation for additional on-site parking. Were a developer to build a dedicated parking structure, as explored in Schemes 2 and 3, the parking requirements for the housing component could be met while allowing a sizable commercial tenant to occupy the Somerville Avenue street front.

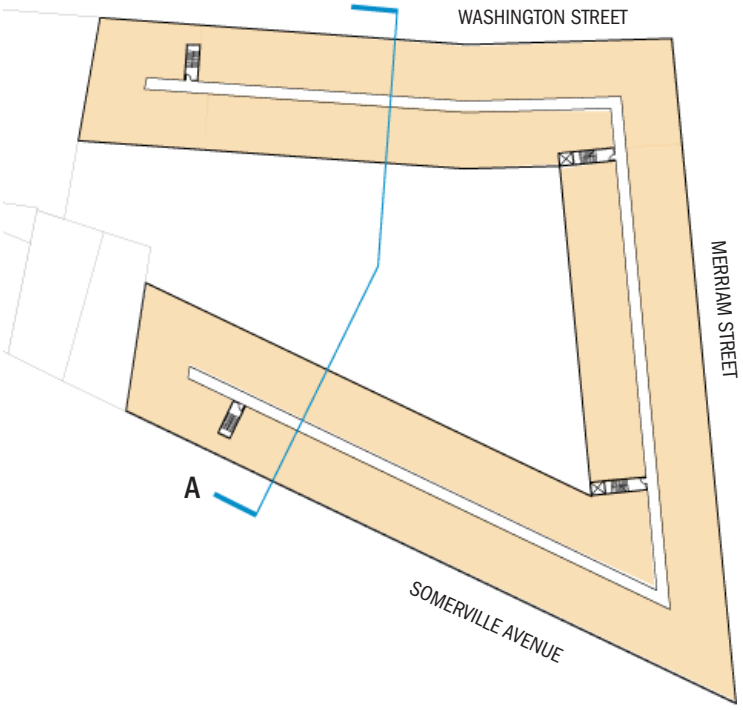


Public Safety Scheme 1
Axonometric Massing

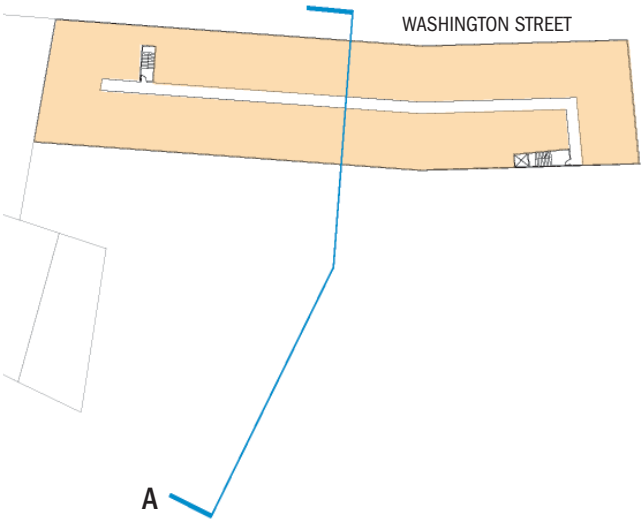


Public Safety Scheme 1
Site Section **A** | Proposed

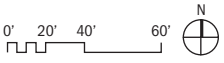
Scheme 1 is the simplest scheme of the three, which proposes a 65'-deep building (the optimal depth for residential use) wrapping the three active sides of the site. The natural topography of the site - rising approximately 10' from Somerville Avenue to Washington Street - allows for an economic parking solution. In its current state, much of the site has been excavated to the lower grade, to allow for surface parking off Somerville Avenue. In this scheme, cars enter parking from the Somerville Avenue side, and are deposited into a hidden lot beneath a landscaped courtyard at the Washington Street grade. The ground floors of both busy streets are occupied by commercial / retail space, and the upper three stories are maximized with 1- and 2-bedroom apartments. All residential entryways drop into the surface garage for easy access to parking, and also exit at street level for the ease of pedestrian traffic.



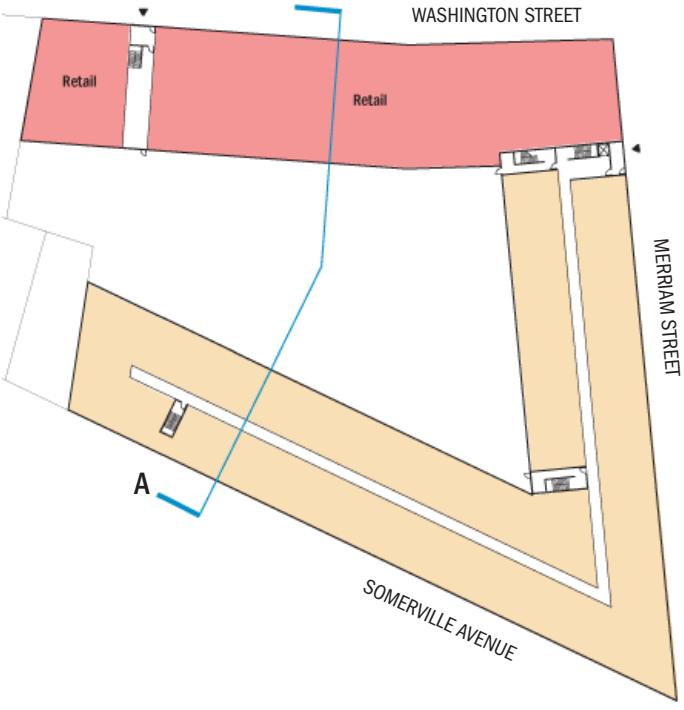
Public Safety Site Scheme 1
Typical Upper Floor | Proposed



Public Safety Site Scheme 1
Fifth Floor | Proposed



Public Safety Site Scheme 1
Somerville Avenue Ground Floor | Proposed



Public Safety Site Scheme 1
Washington Street Ground Floor | Proposed

PUBLIC SAFETY SITE | SCHEME 1

Financial Pro Forma

65' Double-Loaded Corridor Building / Surface Parking

Development Program	Unit Count	Bedroom Count	nsf/unit	gsf/unit	gsf per structure type	Efficiency
Residential						
Multi-family condominium						
single-loaded corridor		-	-		-	81%
double-loaded corridor	118	177	767	914	107,793	84%
Total	**118**				**107,793**	
Retail						
Total					**33,900**	

Parking	parking spaces/ unit target	available parking spaces	parking spaces target	Retail parking spaces target	Total Target
Surface	0	0	0		
Surface (Covered)	1.25	194	148	68	
Structured	0				
Total		**194**	148	68	**215**

Cost Assumptions	
Unit Type	*$/sf*
Four-story Multi-family	$ 145.00
Retail	$ 120.00
Parking	*$/space*
Surface	$ 2,500
Surface (Covered)	$ 7,500
Structured	$ 20,000

Revenue Assumptions (New Construction)	Sales Price	Revenue/sf
Residential		
Unit type		
Townhouse	510,000	$ 322.00
Multifamily	299,263	$ 390.00
Affordable Housing Unit	165,000	
	$/sf	
Retail	$ 20.00	

Proforma		
INCOME	*$*	
Residential		
Market Rate Housing		
Multifamily	30,898,863	
Townhouse	-	
Total	**30,898,863**	
Affordable Rate Housing	2,433,750	12.5% of units
Total Revenue	**33,332,613**	
Less 5% Cost of Sales	(1,544,943)	5% of market units only
Net Sales Rev.	**$ 31,787,670**	
Retail		
Stabilized Gross Income	678,000	
less Vacancy	(33,900)	5% of Gross Income
less operating expenses	-	
Net Operating Income	644,100	
Capitalized Value	**7,577,647**	8.5%
DEVELOPMENT COSTS		
Hard Costs		
Building	19,697,985	
Parking	1,455,000	
Environmental Remediation	250,000	assumption
Contingency	1,070,149	5% of hard cost
Total Hard Cost	**22,473,134**	
Soft Cost	4,494,627	20% of hard cost
Total Development Cost	**26,967,761**	
Required Developer Return for Feasibility	**5,393,552**	20% of TDC
RESIDUAL LAND VALUE	**$ 7,004,004**	

PUBLIC SAFETY SITE | SCHEME 1

Zoning Recommendations

65' Double-Loaded Corridor Building / Surface Parking

Zoning district:	CBD
Land area:	82,540 sf
Building Height:	4 stories, 45 feet
Gross building area:	107,793 sf
FAR:	1.30
Residential use:	118 units
Units / acre:	62
Affordable units:	15 units (@ 12.5%)
Retail use:	33,900 sf
On-site parking:	194 spaces

Relief required under current zoning per the Somerville Zoning Ordinance 3/10/05:

> 7+ residential units requires Special Permit with Site Plan Review

> Need variance from housing density, if 12.5% of units are affordable
Currently allowed = (9 @ 875 sf/unit) + (75 @ 1000 sf/unit) = 84 total as-of-right (11 affordable units)
However, under Section 13.5, on-site density could rise to about 123 units, if up to 20% were affordable (24 affordable units)

> May need variance from Rear Yard Setback (10' + 2'/story x 4 stories) = 18'

> Need variance from parking:
Currently req'd = (118 @1&2BR units x 1.5 = 177 spaces) +
20 visitor spaces +
(33,900 gross sf x 1 space/500 sf retail x 90% per Section 9.6.3 = 61 spaces)
= **258 spaces**

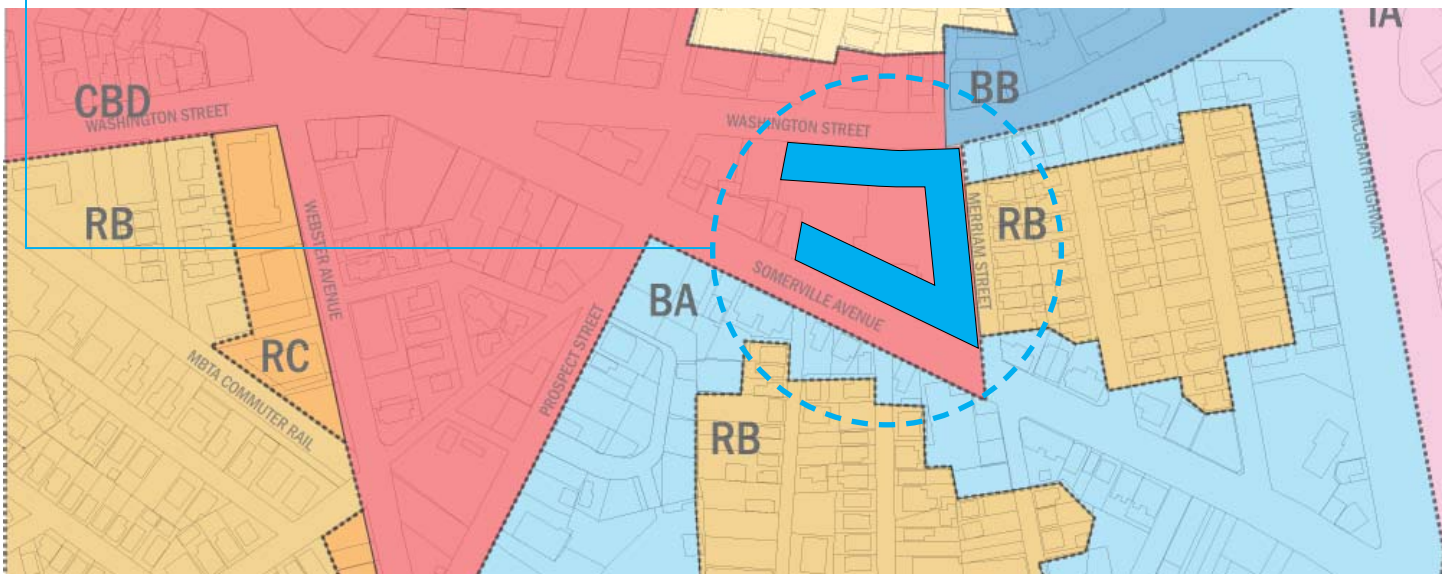
Alternative: create new PUD C district (See Conclusion)

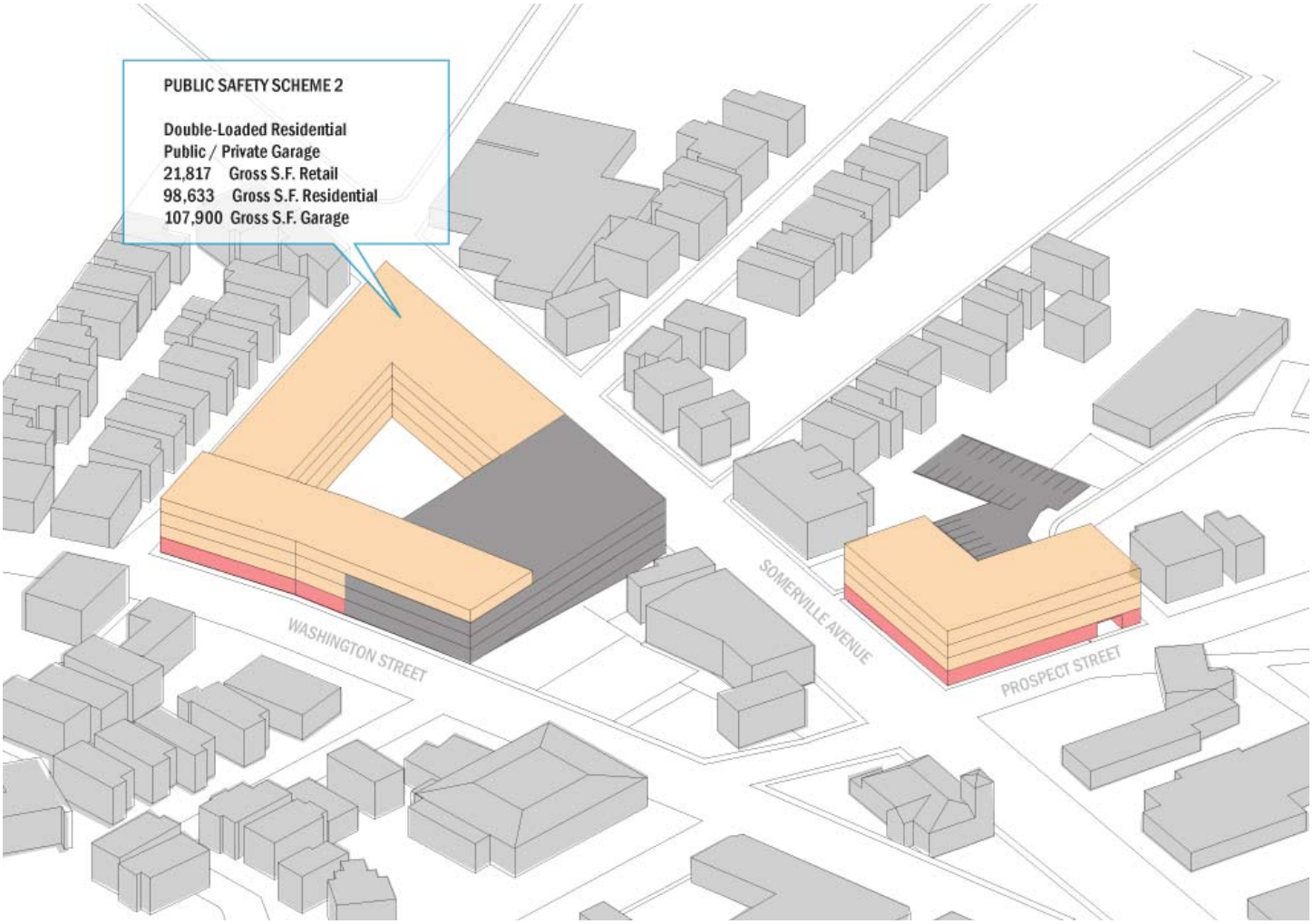
> Housing density increased to 100 units / acre; residential FAR cap of 2.25 ensures limit on total number of BRs

> FAR increased to 3.0

> Height limit increased to 15 stories, 150' at Public Safety subzone only

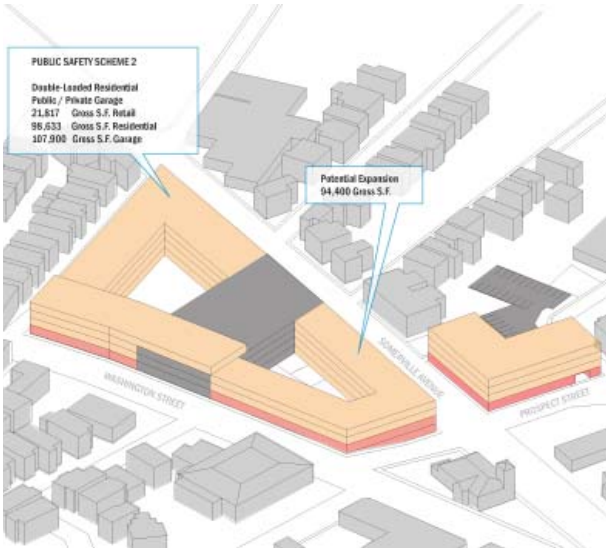
> Minimum parking requirement decreased to 0.75 spaces / unit, and maximum parking capped at 1.25 spaces / unit



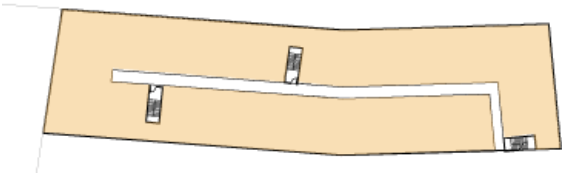


Public Safety Scheme 2
Axonometric Massing

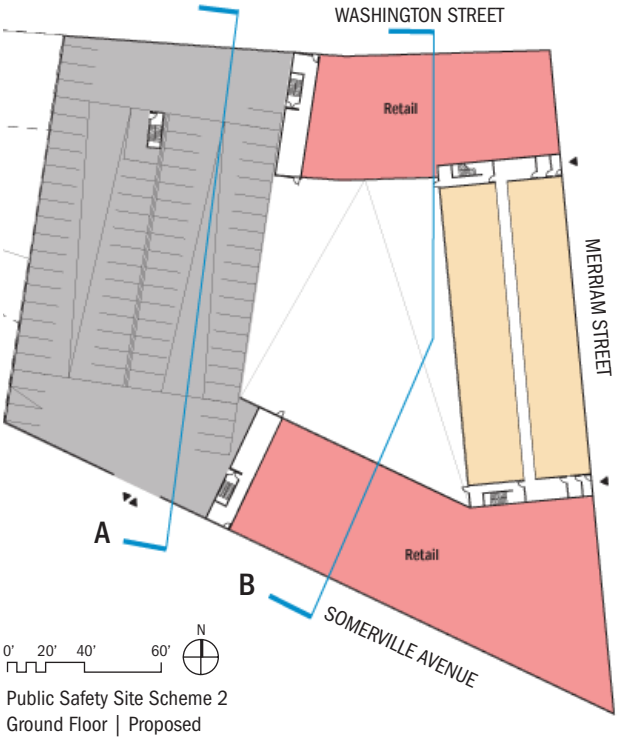
Scheme 2 proposes a mixed-use scheme that blends commercial, residential, and a private / municipal parking garage on the site. This scenario assumes that the Union Square Transportation Plan of 2001 will be implemented, resulting in a net loss of parking spaces in the Square that could be accommodated by this mixed residential / municipal lot. Once again, the ground floors of the building that face the main streets of Somerville Ave and Washington Street are set aside for retail use. In this scenario a direct connection could be made from the retail to covered metered parking spaces in the garage, enhancing the attractiveness of the retail space. The main lobbies into the residential portion of the building are accessed from Merriam Street, a quiet residential street to the East. Four stories of 65' deep residential sit atop the retail. Direct connection from the common corridor to the dedicated residential parking spaces exists on all but one floor. The scheme offers both residential parking spaces and metered municipal spaces, addressing the future need for parking in the Square.



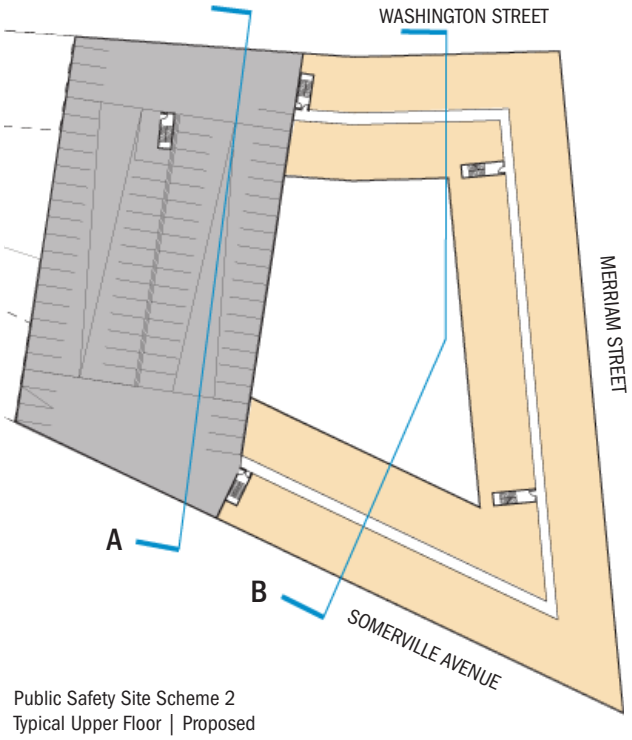
Public Safety Site Scheme 2
Potential Phase 2 Development



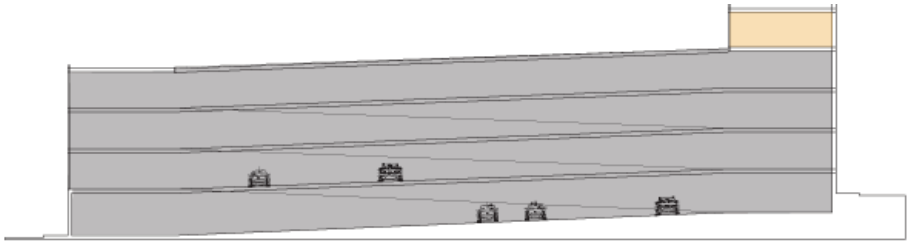
Public Safety Site Scheme 2
Fifth Floor | Proposed



Public Safety Site Scheme 2
Ground Floor | Proposed

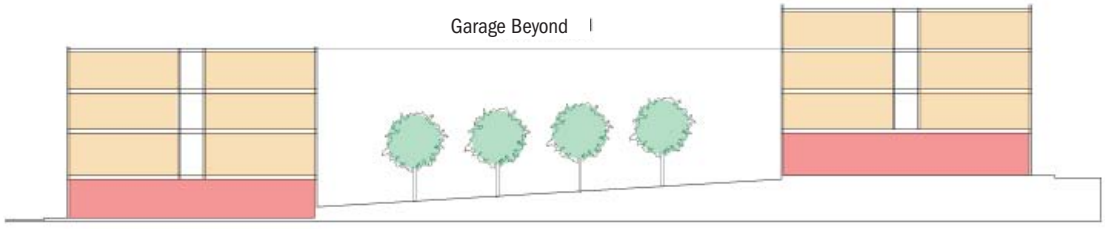


Public Safety Site Scheme 2
Typical Upper Floor | Proposed



Somerville Ave | Parking Garage | Units Above | Washington Street

Public Safety Scheme 2
Site Section **A** | Proposed



Somerville Ave | Double-Loaded Units Above Retail Below | Sloped Courtyard | Double-Loaded Units Above Retail Below | Washington Street

Public Safety Scheme 2
Site Section **B** | Proposed

PUBLIC SAFETY SITE | SCHEME 2

Financial Pro Forma

65' Double-Loaded Corridor Building / Structured Parking West End of Site

Development Program

Structure Type	Unit Count	Bedroom Count	nsf/unit	gsf/unit	gsf per structure type	Efficiency
Residential						
Multi-family condominium						
single-loaded corridor		-	-		-	
double-loaded corridor	108	162	767	914	98,658	84%
Total	**108**				**98,658**	
Retail						
Total					**21,817**	**100%**

Parking	parking spaces/ unit target	available parking spaces	parking spaces target	Retail parking spaces target	Total Target	metered parking spaces
Surface						
Surface (Covered)						
Structured	1.25	284	135	44		
Total		**284**	135	44	**179**	105

Cost Assumptions

Unit Type	$/sf
Four-story Multi-family	$ 145.00
Retail	$ 120.00
Parking	**$/space**
Surface	$ 2,500
Surface (Covered)	$ 7,500
Structured	$ 20,000

Revenue Assumptions (New Construction)

Residential	Sales Price	Revenue/sf
Unit type		
Townhouse	510,000	$ 322.00
Multifamily	299,263	$ 390.00
Affordable Housing Unit	165,000	
	$/sf	
Retail	$ 20.00	

Proforma

	$	
INCOME		
Residential		
Market Rate Housing		
Multifamily	28,280,316	
Townhouse	-	
Total	**28,280,316**	
Affordable Rate Housing	2,227,500	12.5% of units
Total Revenue	**30,507,816**	
Less 5% Cost of Sales	(1,414,016)	5% of market units only
Net Sales Rev.	**$ 29,093,800**	
Retail		
Stabilized Gross Income	436,340	
less Vacancy	(21,817)	5% of Gross Income
less operating expenses		
Net Operating Income	414,523	
Capitalized Value	**4,876,741**	8.5%
Parking		
Annual Gross Income	164,371	*# of metered spaces*$5/day*6days/week*52week*
less Operating expenses (20% of Gross Income)	(32,874)	
Net Operating Income	131,497	
Capitalized Value	**1,878,525**	7%
DEVELOPMENT COSTS		
Hard Costs		
Building	16,923,450	
Parking	5,680,000	
Environmental Remediation	250,000	assumption
Contingency	1,142,673	5% of hard cost
Total Hard Cost	**23,996,123**	
Soft Cost	4,799,225	20% of hard cost
Total Development Cost	**28,795,347**	
Required Developer Return for Feasibility	**5,759,069**	20% of TDC
RESIDUAL LAND VALUE	**$ 1,294,650**	

PUBLIC SAFETY SITE | SCHEME 2

Zoning Recommendations

65' Double-Loaded Corridor Building / Structured Parking West End of Site

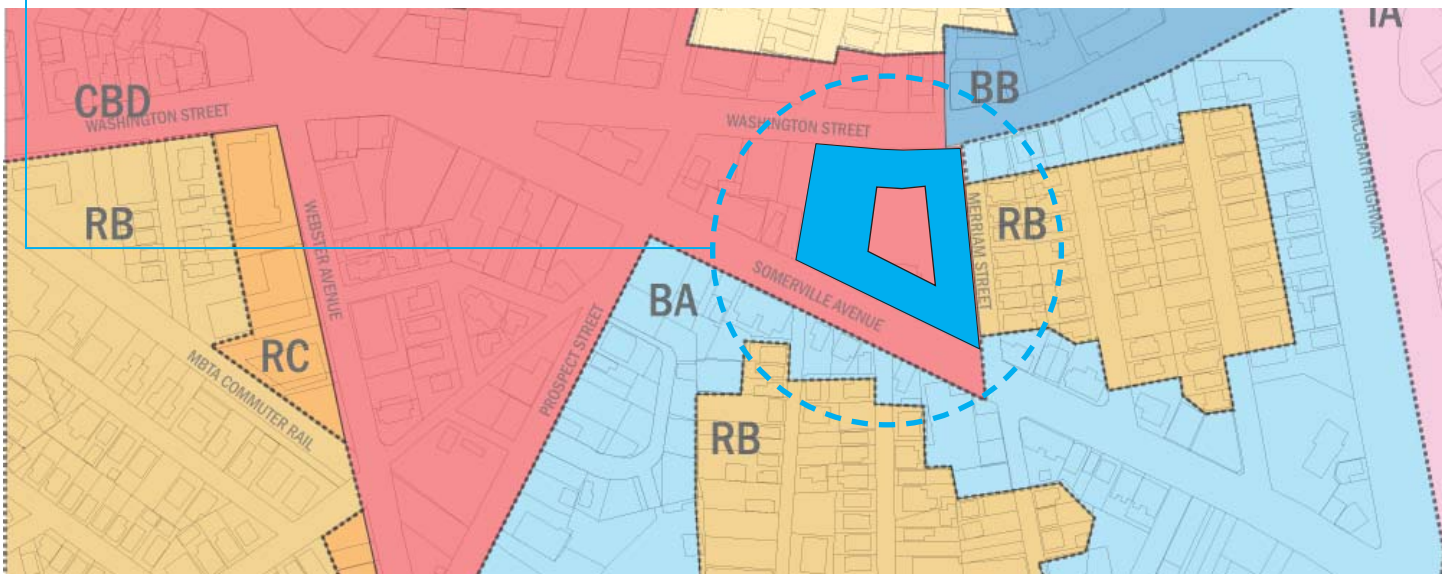
Zoning district:	CBD
Land area:	82,540 sf
Building Height:	4 stories, 45 feet
Gross building area:	106,790 sf
FAR:	1.29
Residential use:	108 units
Units / acre:	57
Affordable units:	14 units (@ 12.5%)
Retail use:	21,817 sf
On-site parking:	284 spaces

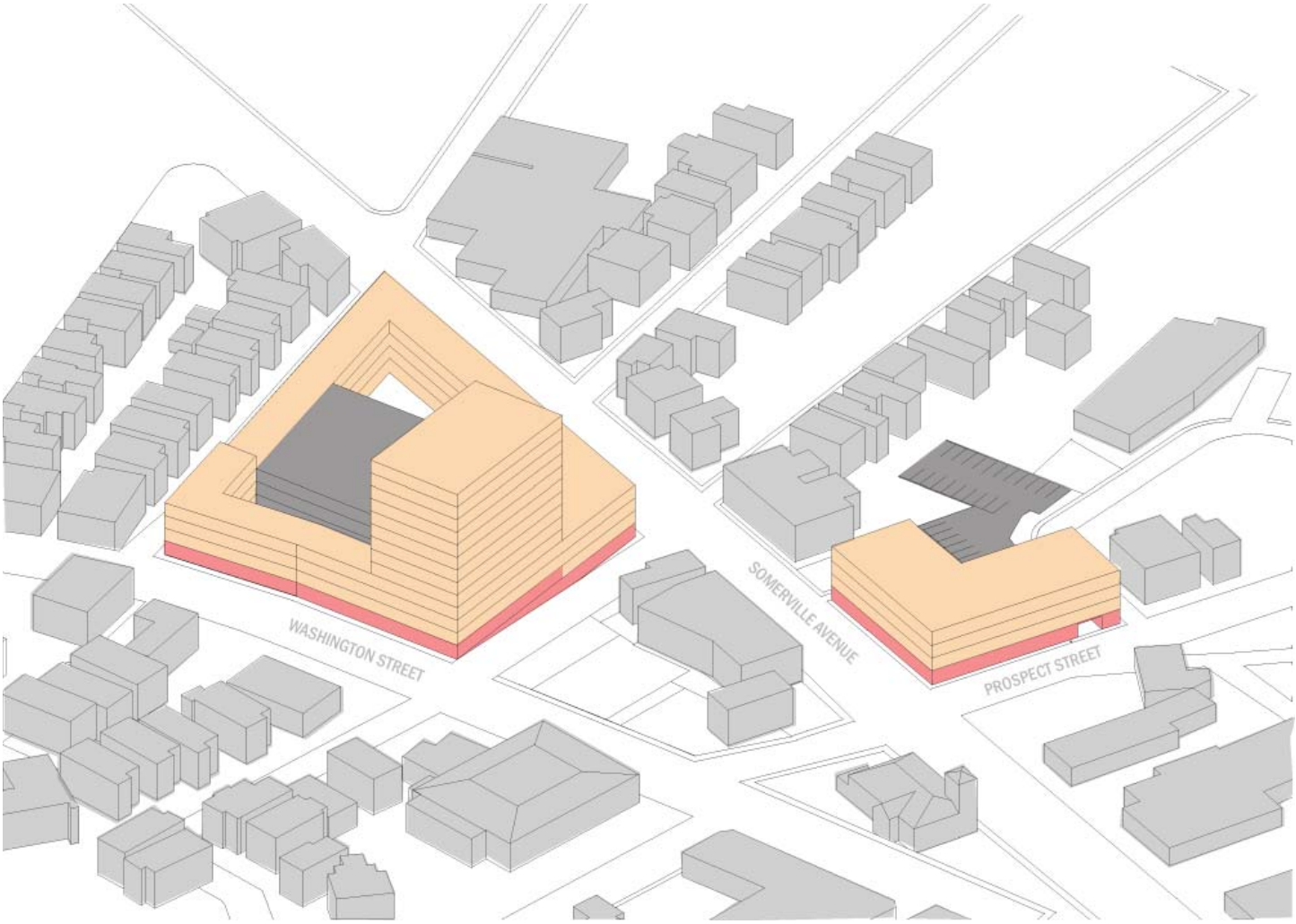
Relief required under current zoning per the Somerville Zoning Ordinance 3/10/05:

> 7+ residential units requires Special Permit with Site Plan Review
> Need variance from housing density, if 12.5% of units are affordable
Currently allowed = (9 @ 875 sf/unit) + (75 @ 1000 sf/unit) = 84 total as-of-right (11 affordable units)
However, under Section 13.5, on-site density could rise to about 123 units, if up to 20% were affordable (24 affordable units)
> May need variance from Rear Yard Setback (10' + 2'/story x 4 stories) = 18'
> No varience needed for parking (241 spaces for development, 43 for public use)

Alternative: create new PUD C district (See Conclusion)

> Housing density increased to 100 units / acre; residential FAR cap of 2.25 ensures limit on total number of BRs
> FAR increased to 3.0
> Height limit increased to 15 stories, 150' at Public Safety subzone only
> Minimum parking requirement decreased to 0.75 spaces / unit, and maximum parking capped at 1.25 spaces / unit

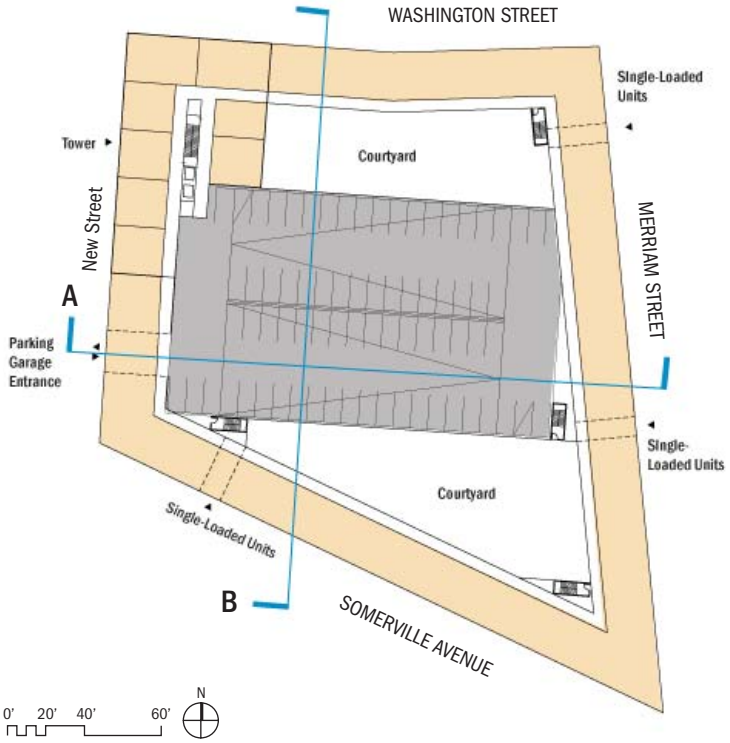




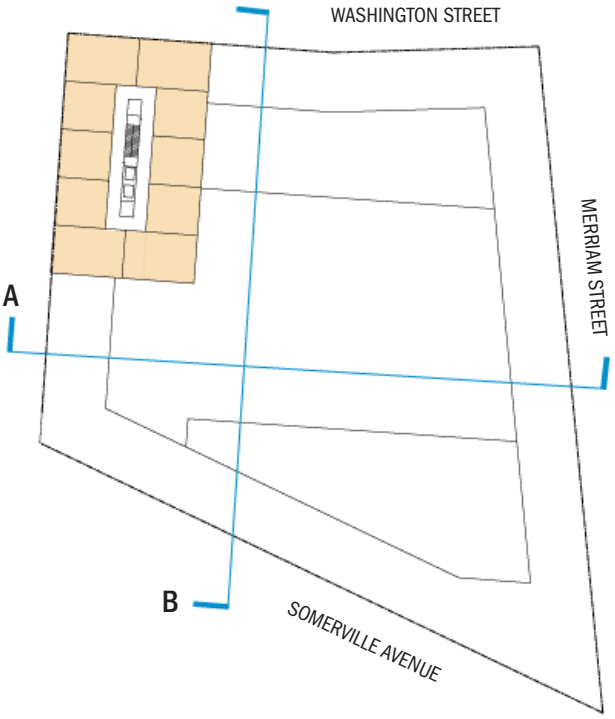
Public Safety Scheme 3
Axonometric Massing

Scheme 3 describes a complex that features a "signature" tower building, which would help to locate Union Square on the scale of the skyline. In this scheme, there are three main building components: a 12-story residential tower, a thin residential / commercial building that wraps the site, and a structured parking garage sandwiched in the middle of the site, hidden from public view. In order to achieve this layout, it was necessary to cut a new street along the western edge of the site. This street is a direct continuation of Columbus Ave to the north, and Allen Street to the south. The entrance to the parking garage, as well as the main entrance to the residential tower, would be from this new street. While there are considerable benefits to introducing a taller, more robust building to Union Square, the financial pro forma produced a *loss* in profit, making it a difficult scenario to realize unless subsidies or some other incentives could be offered to the developer. The price of steel for the tower construction, the low efficiency of the single-loaded corridor residential building wrapping the site, and the relatively small structured parking garage all contributed to the high cost of development in this scenario.

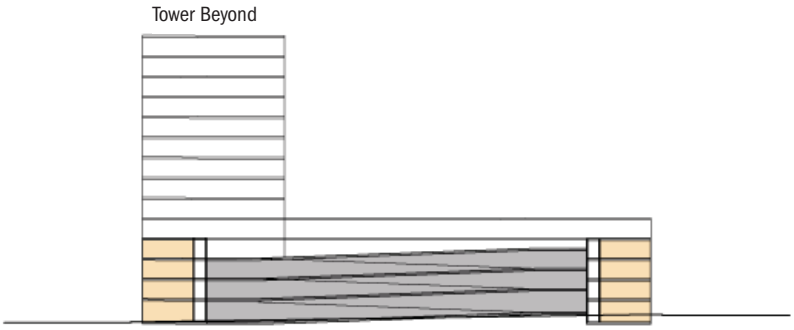
Signature Building Prototype
Yerba Buena Lofts, San Francisco, CA
Stanley Saitowitz Office / Natoma Architects



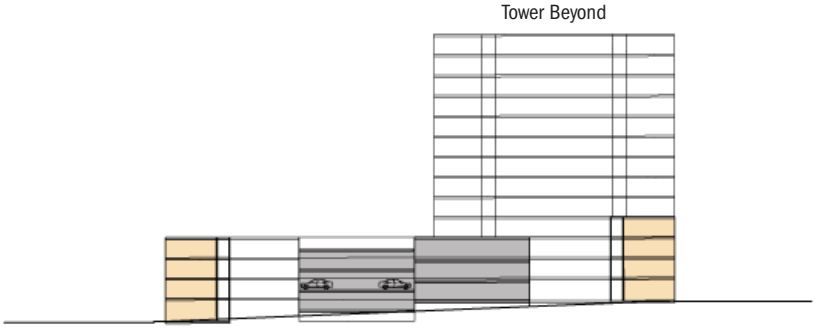
Public Safety Site Scheme 3
Typical Intermediate Floor| Proposed



Public Safety Site Scheme 3
Typical Upper Floor | Proposed



Public Safety Scheme3
Site Section **A**| Proposed



Public Safety Scheme 3
Site Section **B**| Proposed

PUBLIC SAFETY SITE | SCHEME 3

Financial Pro Forma

12-Story Tower / Single-Loaded Residential Building / Structure Parking Embedded Mid-Block

Development Program

Structure Type	Unit Count	Bedroom Count	nsf/unit	gsf/unit	gsf per structure type	Efficiency
Residential						
Multi-family condominium						
single-loaded corridor	78	117	759	937	73,096	81%
double-loaded corridor	122	183	767	914	111,447	84%
Total	**200**				184,543	
Retail						
Total					**20,400**	**100%**

Parking	parking spaces/ unit target	available parking spaces	parking spaces target	Retail parking spaces target	Total Target	metered parking spaces
Surface						
Surface (Covered)						
Structured	1.25	244	250	41		
Total		**244**	250	41	**291**	0

Cost Assumptions

Unit Type	$/sf
Four-story Multi-family	$ 145.00
Retail	$ 120.00
Tower	$ 185.00
Parking	*$/space*
Surface	$ 2,500
Surface (Covered)	$ 7,500
Structured	$ 20,000

Revenue Assumptions (New Construction)

Residential	Sales Price	Revenue/sf
Unit type		
Townhouse	510,000	$ 322.00
Multifamily	299,263	$ 390.00
Affordable Housing Unit	165,000	
	$/sf	
Retail	$ 20.00	

Proforma

INCOME	$	
Residential		
Market Rate Housing		
Multifamily	52,370,955	
Townhouse	-	
Total	**52,370,955**	
Affordable *(assuming 12.5% of units affordable)*	4,125,000	12.5% of units
Total Revenue	**56,495,955**	
Less 5% Cost of Sales	(2,618,548)	5% of market units only
Net Sales Rev.	**$ 53,877,407**	
Retail		
Stabilized Gross Income	408,000	
less Vacancy	(20,400)	5% of Gross Income
less operating expenses		
Net Operating Income	387,600	
Capitalized Value	**4,560,000**	8.5%
Parking		
Annual Gross Income	-	*# of metered spaces*$5/day*6days/week*52week*
less Operating expenses (20% of Gross Income)	-	
Net Operating Income	-	
Capitalized Value	**-**	7%
DEVELOPMENT COSTS		
Hard Costs		
Building	33,664,635	
Parking	4,880,000	
Environmental Remediation	250,000	assumption
Contingency (@ 5% of Hard Cost)	1,939,732	5% of hard cost
Total Hard Cost	**40,734,367**	
Soft Cost	8,146,873	20% of hard cost
Total Development Cost	**48,881,240**	
Required Developer Return for Feasibility	**9,776,248**	20% of TDC
RESIDUAL LAND VALUE	**$ (220,081)**	

PUBLIC SAFETY SITE | SCHEME 3

Zoning Recommendations

12-Story Tower / Single-Loaded Residential Building / Structure Parking Embedded Mid-Block

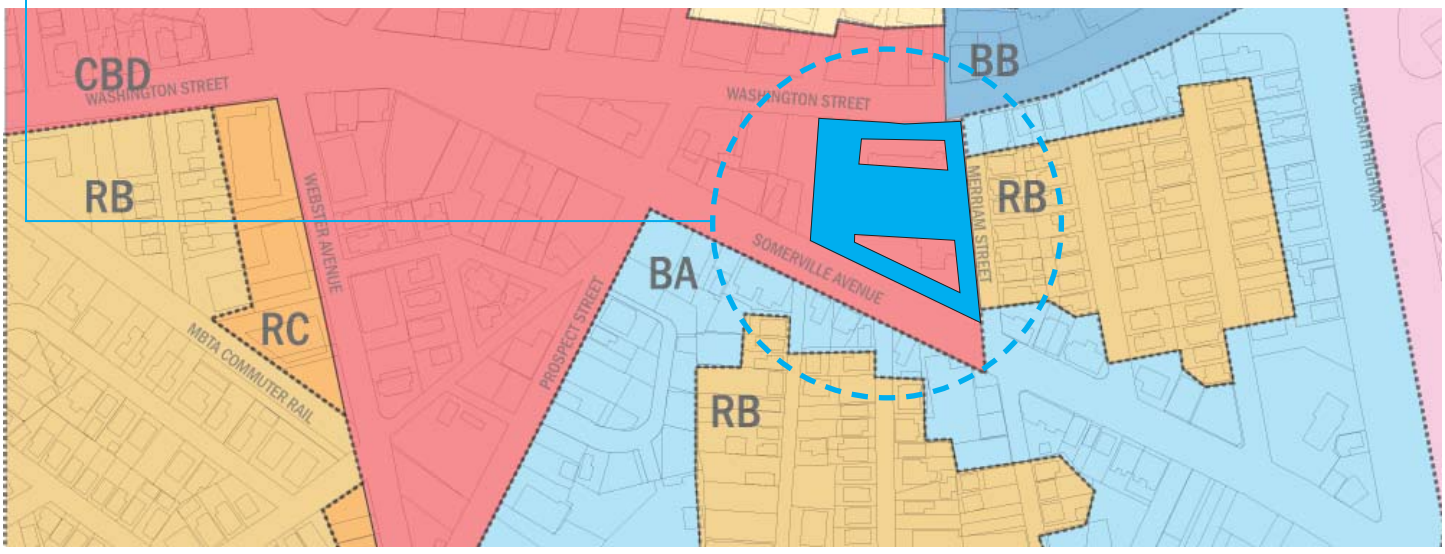
Zoning district:	CBD
Land area:	82,540 sf
Building Height:	13 stories, 135 feet
Gross building area:	204,943 sf
FAR:	2.48
Residential use:	187 units
Units / acre:	99
Affordable units:	23 units (@ 12.5%)
Retail use:	20,400 sf
On-site parking:	244 spaces

Relief required under current zoning per the Somerville Zoning Ordinance 3/10/05:

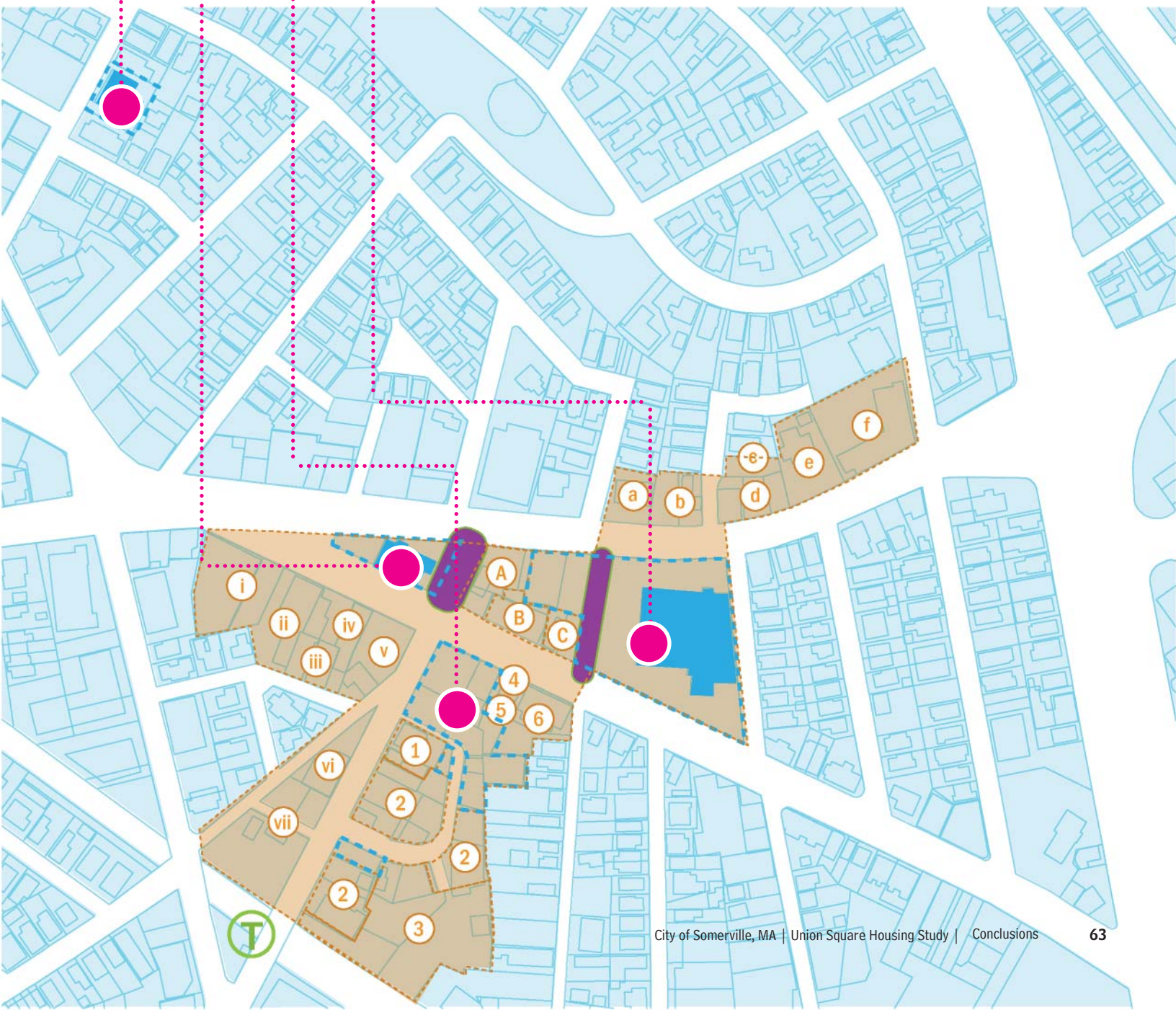
> 7+ residential units requires Special Permit with Site Plan Review
> Need variance from housing density, if 12.5% of units are affordable
Currently allowed = (9 @ 875 sf/unit) + (75 @ 1000 sf/unit) = 84 total as-of-right (11 affordable units)
However, under Section 13.5, on-site density could rise to about 123 units, if up to 20% were affordable (24 affordable units)
> May need variance from Rear Yard Setback (10' + 2'/story x 4 stories) = 18'
> Need variance from FAR
> Need variance from height
> No variance needed for parking (244 spaces)

Alternative: create new PUD C district (See Conclusion)

> Housing density increased to 100 units / acre; residential FAR cap of 2.25 ensures limit on total number of BRs
> FAR increased to 3.0
> Height limit increased to 15 stories, 150' at Public Safety subzone only
> Minimum parking requirement decreased to 0.75 spaces / unit, and maximum parking capped at 1.25 spaces / unit



RECOMMENDATIONS + CONCLUSIONS



DIMENSIONAL REQUIREMENTS (SECTIONS 8.5, 9.5)
PER SOMERVILLE ZONING ORDINANCE 3/10/05 (EXCEPT PROPOSED PUD C)

REQUIREMENT	Central Bus. District (CBD)	Commercial (BA)	1-2 Family Residential (RA)	Planned Unit Development (PUD B)*	Proposed PUD C*	Proposed PUD C* Public Safety subzone
Units / acre (10+ units) (8.5.B)	43	43	19	43*	70 (res FAR 1.75)	100 (res FAR 2.25)
Affordable units (per 13.3.4, for projects with 8+ units requiring SPSR)	12.5%	12.5%	12.5%	12.5%	12.5% (incentive for artists units?)	12.5% (incentive for artists units?)
Max. ground coverage (8.5.C)	80%	80%	50%	65%		
Floor Area Ratio (FAR) (8.5.E)	2.0	2.0	0.75	3.0*	2.5	3.0
Maximum Height (8.5.F)	4st. / 50’	4 st. / 50’	2.5 st. / 35’	7 st. / 100’ 5 - 7 st. / 75 -100’	15 st. / 150’	
Front Yard Setback (8.5.G)	0’	0’	15’	0**	0**	0**
Side Yard Setback (8.5.H)	0’	0’	6-10’	0**	0**	0**
Rear Yard Setback (8.5.I)	10’ + (2’/st.)	10’ + (2’/st.)	20’	0**	0**	0**
Parking: Residential (9.5.1.a)	1.5 / unit + 1 visitor / 6 units	1.5 / unit + 1 visitor / 6 units	1.5 / unit + 1 visitor / 6 units	1.5 / unit + 1 visitor / 6 unit	0.75 / unit min. 1.25 / unit max.	0.75 / unit min. 1.25 / unit max.
Parking: Retail (9.5.9)***	1 / 500 s.f.	1 / 425 s.f.	1 / 500 s.f.			
Parking: Restaurant (9.5.10.a)***	1 / 110 s.f. or 1 / 4 seats	1 / 110 s.f. or 1 / 4 seats		1 / 110 s.f. or 1 / 4 seats		
Parking: Bar, Nightclub (9.5.10.f)***	1 / 4 persons	1 / 4 persons		1 / 4 persons		

* Density limits may be exceeded in certain portions, so long as overall density within PUD complies (16.5.2.2)
** In PUD-B, 15’ setback around perimeter of entire district; no interior setback requirements (16.5.2.5)
*** Non-residential parking requirements reduced by 10% for sites within 650’ of municipal lot or garage (9.6.3).

Scenarios for residential density in proposed PUD C:
- @ 1000 sf / unit, residential FAR 2.25 = 98 units / acre maximum
- @ 1,500 sf / unit, residential FAR 2.25 = 65 units / acre maximum
- @ 2,000 sf / unit, residential FAR 2.25 = 49 units / acre maximum

SUMMARY OF ZONING RELIEF FOR DEVELOPMENT SITES UNDER CURRENT REQUIREMENTS

The following chart summarizes the current zoning requirements for four city-owned housing parcels in Union Square, and the zoning relief that would be identified to develop each site under the proposed development program.

SITE	ZONING DISTRICT	PROGRAM: HOUSING UNITS	PROGRAM: FAR	PROGRAM : PARKING	ZONING RELIEF REQUIRED
Recreation Building	Residence RA	8 units	N/A	6 spaces	Variance for multi-family housing
SCAT Building	Central Business District CBD	4 units	N/A	0 spaces	Special Permit for multi-family housing
Kiley Barrel Site	Business BA	39 – 46 units	1.39 – 1.49	48 – 58 spaces	Special Permit w/ Site Plan Review for multi-family housing Variances for housing density, setbacks, and parking
Public Safety Building Site	Central Business District CBD	108 – 187 units	1.29 – 2.48	194 – 244 spaces	Special Permit w/ Site Plan Review for multi-family housing Variances for housing density, FAR, height, setbacks, and parking

Zoning Relief Under Current Requirements

Each of the scenarios tested in this study would require some relief from the current Somerville Zoning Code. Above is a basic summary of the precise points which would need to be overcome to achieve the scenarios presented. At the left is a chart which describes all dimensional requirements arranged by zoning district (only those districts addressed in this study have been included, plus PUD B).

At the far right of the Dimensional Requirements chart are comparisons of the existing PUD B District with the proposed PUD C District (further explained in the following pages). While the PUD B does not occur within the boundary of this study, it was referred to as a template for a more ambitious zoning subdistrict that would encompass 3 of the sites in this study.

SUMMARY OF PROPOSED PUD-C OVERLAY DISTRICT

Realizing the development potential of the three largest sites, plus adjacent properties, could be realized through creation of a new PUD-C overlay district in the eastern half of the Square, under a new Section 6.1.22. Development under the PUD requirements would require the grant of a Special Permit with Site Plan Review (SPSR). PUD-C development projects would be eligible for height and density bonuses, reduced parking requirements, and other incentives, contingent on mandatory or voluntary inclusionary zoning requirements to provide live/work artists housing (both affordable and market-rate), along with other arts-related uses.

The potential PUD-C overlay district would include the portions of the CBD district south of Washington Street and east of Webster Avenue (including the SCAT Building and Public Safety Building sites), with a potential expansion along the north side of Washington Street as well. Within the BA district, it would include the area south of Somerville Avenue and immediately east of Prospect Street (including the Kiley Barrel site). More intensity of development would be allowed in a PUD-C1 subdistrict comprising the triangle between Washington Street and Somerville Avenue.

In summary, key provisions of the PUD zoning would include (see following pages for specific Zoning Ordinance language):

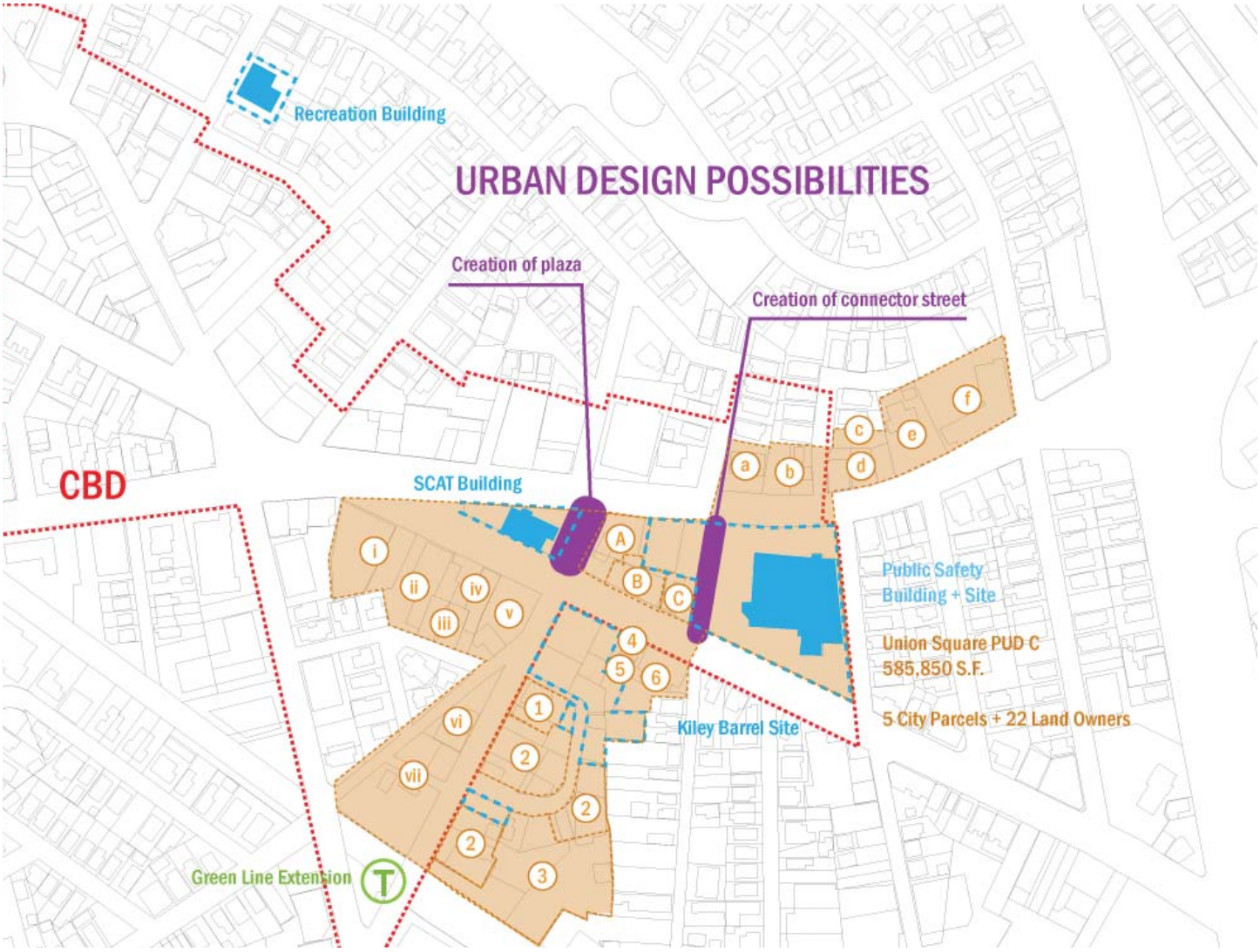
Maximum FAR:	2.5 3.0 in triangle subdistrict
Maximum residential FAR:	1.75 2.25 in triangle subdistrict
Maximum residential density:	600 sf lot area / unit (70+ units / acre) 425 sf lot area / unit (100+ units / acre) in triangle subdistrict
Maximum building height:	5-7 stories / 75-100' 15 stories / 150' in triangle subdistrict
Parking:	0.75 spaces / 1-2 BR unit (minimum) 1.25 spaces / 1-2 BR unit (maximum)
Affordable housing:	12.5% of units
Arts-related uses:	Need to discuss mandatory / voluntary inclusion of arts-related uses – e.g., artists live/work spaces, performance spaces, artsrelated retail, etc.

Note: residential density.

Setting a maximum residential FAR, as well as a maximum site-wide FAR, accomplishes two goals. First, it ensures that the full buildout of any site is only achievable through a mixed-use development. Second, it helps control the density of bedrooms and residents. For example, at the proposed residential FAR limit in the triangle of 2.25, if a developer chose to build 1 and 2- bedroom units at an average size of 980 sf, he could achieve the maximum density of 100 units / acre. But if he chose to build 3-bedroom units with an average size of 1,500 sf, the maximum density would decrease to 65 units / acre.

Note: parking requirements.

By setting minimum and maximum parking requirements, the zoning would allow a developer flexibility within the demands of the market. If 1.25 spaces / unit are required by the market, that would be allowed under the zoning; but if the developer can successfully market the units with less parking, that may permit him to achieve higher densities on the site.



Proposed PUD C District (in orange)
Overlayed with urban design opportunities

PUD C Issues

The large parcel size in this area of Union Square means that relatively few landowners would be affected by, and incorporated into, the proposed PUD C District. There are 4 major groupings of landowners as the diagram above demonstrates: owners 1-6, i-vii, A-C, and a-f.

In the event that a PUD C were created, a more macro-scaled district could be envisioned, which would allow for larger interventions into the fabric of the Square. Two such interventions discussed with the Advisory Committee were first, the creation of a public plaza on the east side of the SCAT Building (the pass-through between Washington Street and Somerville Avenue would not be necessary if the Transportation Plan were implemented), and second, the insertion of a small side street that would cut along the western side of the Public Safety Site. This street would make the site more accessible, and would allow for more overall development opportunity.

In order to fund desired capital improvements in the Square, the creation of a DIF (District Increment Financing) was also discussed. The DIF boundary would encompass only those parcels in Union Square that will be positively affected by the improvements.

ZONING ORDINANCE LANGUAGE FOR PROPOSED PUD-C OVERLAY DISTRICT

Describe the district as follows:

"6.1.22. Planned Unit Development Overlay District C (PUD-C).

"1. Purpose.
See Section 16.1.

"2. Standards and Guidelines."
[Same language as 6.1.20, substituting PUD-C for PUD-B]

Then add more detailed provisions to Article 16, as follows:

3.A Dimensional Requirements

In Section 16.5.1, add the following specific dimensional requirements for the PUD-C district, and for the PUD-C1 subdistrict (triangle area):

	PUD-C	PUD-C1
Minimum lot size	50,000 s.f	50,000 s.f.
Minimum lot area / dwelling unit	600 s.f. / unit	425 s.f. / unit
Maximum ground coverage	TBD	TBD
Landscaped area (minimum % of lot)	TBD	TBD
Floor area ratio (FAR)	2.5	3.0
Residential FAR	2.0	2.5
Non-residential FAR	1.0	1.0
Maximum height (stories / feet)	10 stories / 100'	15 stories / 150'
Setbacks	TBD	TBD

Setting maximum residential and non-residential FARs, as well as a maximum site-wide FAR, accomplishes two goals. First, it ensures that the full buildout of any site is only achievable through a mixed-use development, while residential uses predominate. Second, it helps control the density of bedrooms and residents. For example, at the proposed residential FAR limit in the triangle of 2.25, if a developer chose to build 1 and 2-bedroom units at an average size of 980 sf, one could achieve the maximum density of 100 units / acre. But if one chose to build 3-bedroom units with an average size of 1,500 sf, the maximum density would decrease to 65 units / acre.

3.B Parking Requirements

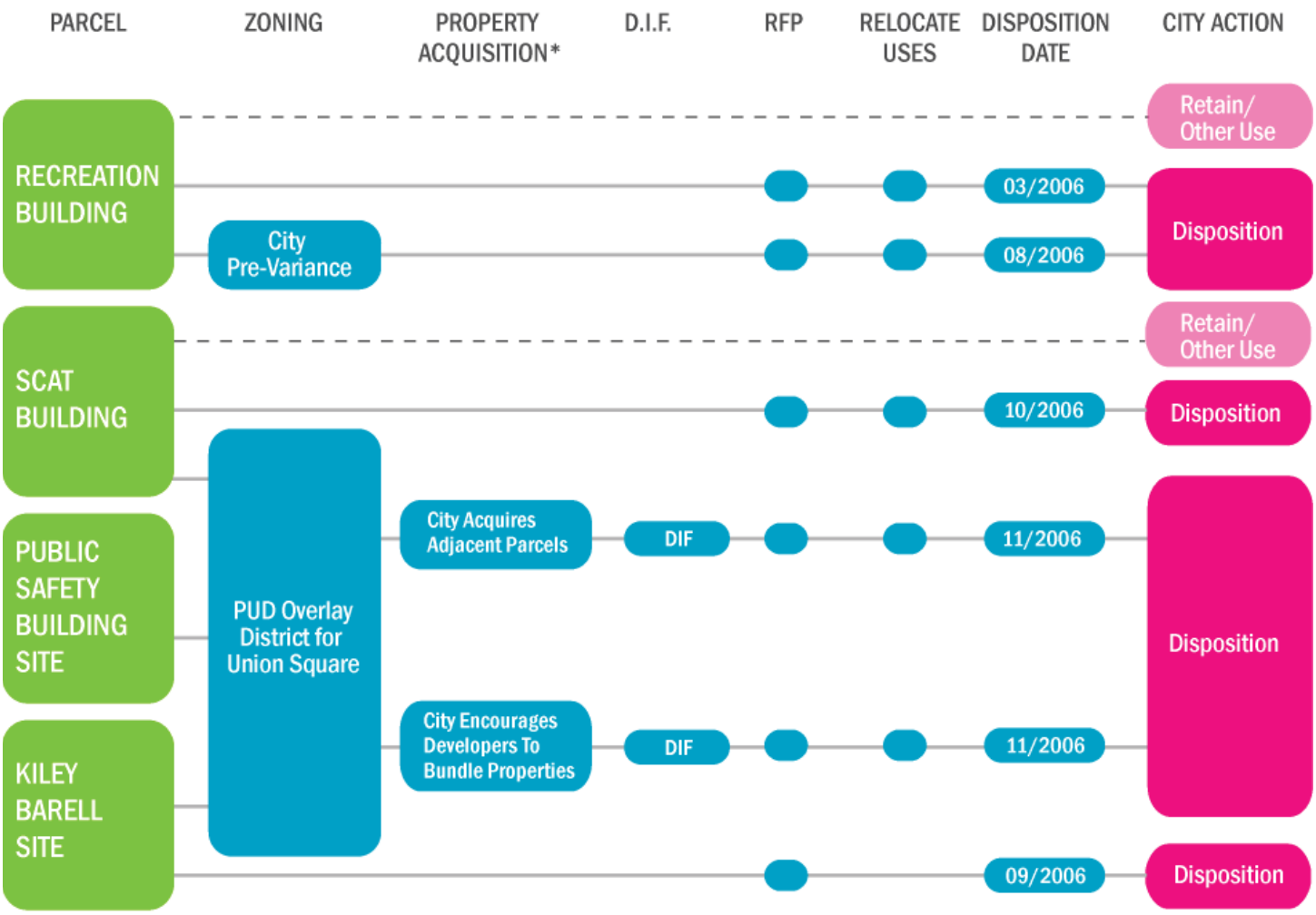
Add a new Section 16.5.5 for PUD-C parking requirements:

	Minimum Spaces	Maximum Spaces
Artists Housing	0.75 / unit	1.25 / unit
Other Residential Uses	0.75 / unit	1.25 / unit
Artists Studio	1 / 1,500 s.f.	1 / 1,000 s.f.
Office Uses	1 / 1,000 s.f.	1 / 500 s.f.
Retail Uses	1 / 1,000 s.f.	1 / 500 s.f.
Restaurants	1 / 500 net s.f.	1 / 250 net s.f.
Other Uses	See 9.15.2	See 9.15.2

By setting both minimum and maximum parking requirements, the PUD-C zoning would allow a developer flexibility within the demands of the market. If 1.25 spaces / unit are required by the market, that would be allowed under the zoning; but if the developer can successfully market the units with less parking, that may permit him to achieve higher densities on the site.

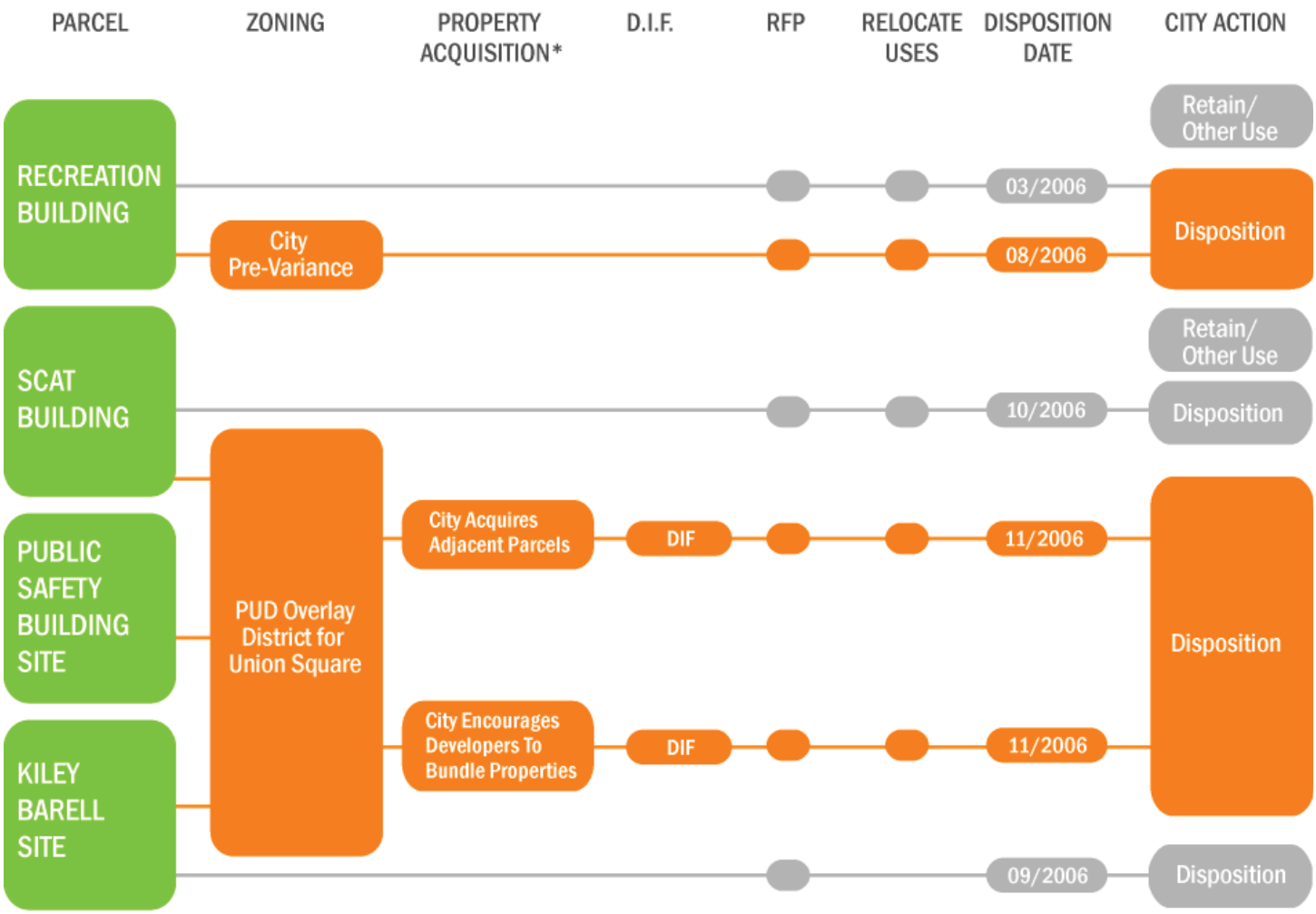
3.C Affordable Artists' Housing

Clarify in Section 16 that the provision that at least 50% of affordable housing units for SPSR projects within the Overlay District must be set aside as affordable artists housing, as described in Section 2.E above, would also apply to PUD-C projects.



* Assumed that additional acquisition will not be effective or in the interest of the City without PUD C overlay

Chart 1
Objective Path of Decisions regarding Municipal Parcels within Union Square
No recommendations proposed



* Assumed that additional acquisition will not be effective or in the interest of the City without PUD C overlay

Chart 2
Path of Decisions regarding Municipal Parcels within Union Square
Recommended paths to disposition in orange

Recommended Paths to Disposition

Each of the municipal parcels addressed in this study were finally assessed to determine likely paths to and dates for City disposition. The schematic designs, financial pro-formas, and zoning analyses that were undertaken all informed the final recommendations. For the purposes of this study, the City did not consider retaining the properties.

The Recreation Building was set aside as the property that could be put out to RFP soonest. The current tenants are scheduled to vacate the building within the next year, at which time the building would be immediately ready for development. Given the schematic design proposed, however, it is recommended that the City apply for pre-variances for the various zoning hurdles such residential development would have to clear. This pre-variance would make the parcel more attractive for development, and would likely garner the City a more hearty response to the RFP.

It is recommended that the remaining three parcels be bundled into the proposed PUD C district. Two disposition paths are possible from that point. First, the City could itself acquire key adjacent parcels to ensure success of the new PUD, and then draft a comprehensive RFP for all parcels acquired. Second (and more highly recommended), the City could put the PUD C in place, and encourage developers to acquire and bundle properties on their own. At a critical moment, an RFP for the municipal parcels could be released. In this scenario, the City would not be forced to tie up municipal funds acquiring additional property and instead would allow the free market to assist in creating a more vibrant Union Square.

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