



December 1, 2016

Cambridge Planning Board
c/o Community Development Department
344 Broadway
Cambridge, MA 02139

Re: Planning Board Case #318 / 55 Regent Street (Hearing held on October 18th 2016)

Dear CDD Staff and Members of the Planning Board:

In preparation for the continuation of the 55 Regent Street Special Permit Hearing I am forwarding the following information:

1. Revised Drawing Documents dated 12-05-16
2. Geotechnical Summary by Geotechnical Partnership, Inc.
3. Revised Dimensional Form dated 12-01-16
4. Community Meeting Summary, Meeting held on November 15th, 2016.
5. On-Street Parking Demand Study by Design Consultants, Inc.
6. Structural Report by Michael E. Waterman, PE.

At the conclusion of the Hearing held on October 18th, the Planning Board recommended that we get together with our neighbors at 55 Regent Street and find resolutions to their concerns. It was also requested that we provide the Structural Report, Parking Demand Study and Geotechnical Summary listed above.

Our meeting with the neighbors has led to the following revisions to the original development proposal. The following changes have been documented in the attached drawings dated 12-05-16:

1. The Proposal has been reduced to 3 Dwelling Units.
2. 6 Parking Spaces will be provided on site in the basement Garage.
3. Existing window openings on the Rear Elevation will be changed to obscured glass block. Type of block will be coordinated with direct abutters.
4. All of the original openings on the Left and Right Side Elevations will remain closed with brick.
5. Penthouse Level openings facing the rear of the property will be limited to high windows (approximately 5' sill).
6. There will be no outdoor deck space at the Penthouse Level facing the rear of the property.
7. Roof decks at the Penthouse Level will be protected from view using 6' high privacy fencing (exact location will be coordinated with direct abutters during construction)
8. There will be no exterior mounted mechanical equipment on the main roof or the penthouse roof. Heat Pump Condensing Units will be located at the interior on the garage level.
9. A hydrostatic slab will be installed in the basement garage to reduce or eliminate the risk of local groundwater depletion.
10. There will be no dewatering during construction. Groundwater exposed / collected during construction operations will be held on site and gradually released back into the site soils.

It was also requested that an alternative solution to Bike Parking be investigated. The reduction in Unit Count to 3 Dwelling Units eliminates the requirement for Bicycle Parking per Section 6.103.2.c. We have removed the Bicycle Parking Shed from the Front Setback though there will be ample storage area directly accessible from the lower level parking area that can be used as Bicycle Storage if desired.

Thank you for your consideration and please let us know if additional information is needed.

Stephen Hiserodt
Boyes-Watson Architects

No.	Description	Date

stamp

client
Client Name

title
COVER

project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS



thirty bow street
somerville, ma
02143
architects@boyes-watson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number19530

scale

date issued 12-05-16

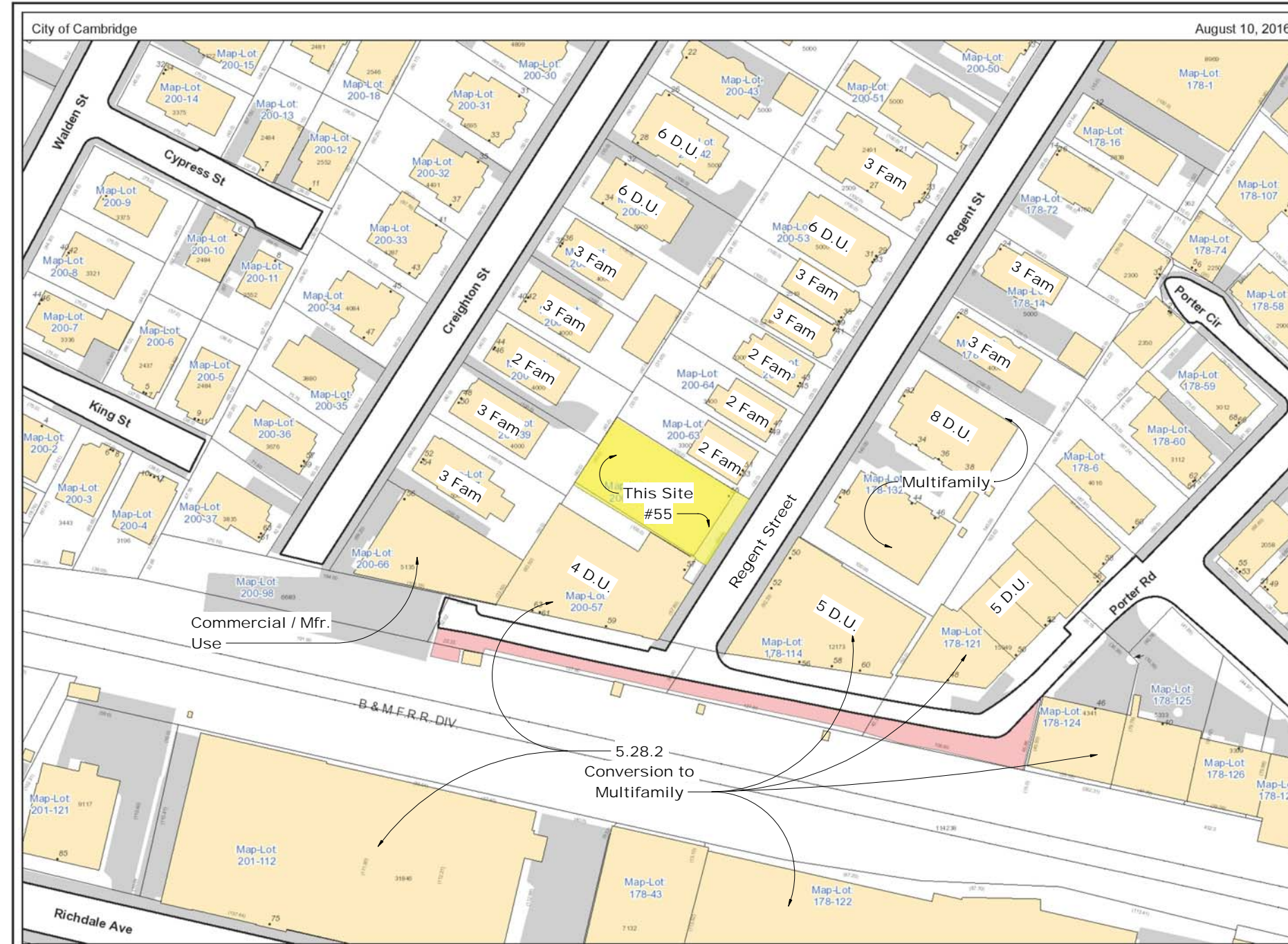
SPECIAL PERMIT
REVISION #1

sheet no.
A000



55 Regent Street

No.	Description	Date



City of Cambridge August 10, 2016

LEGEND

- Address
- Rail
- Building Footprints
- Parcels
- Paved Surfaces
 - Paved Roads
 - Bridges
 - Unpaved Roads
 - Unpaved Parking
 - Sidewalks
 - Driveways
 - Alleys
 - Other Paved Surface
 - Public Footpath

Graphic Scale: 1 inch = 60 feet

City of Cambridge Massachusetts 1" = 60 ft

All data is provided for graphic representation only. The City of Cambridge expressly disclaims all warranties of any type, expressed or implied, including, but not limited to, any warranty as to the accuracy of the data, merchantability, or fitness for a particular purpose.

www.cambridgema.gov/gis

stamp

client
Client Name

CONTEXT MAP / ASSESSORS MAP
55 REGENT STREET

BOYES-WATSON ARCHITECTS

thirty bow street
Somerville, ma 02143
architects@boyes-watson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

scale

date issued 12-05-16

SPECIAL PERMIT REVISION #1

sheet no.

A001



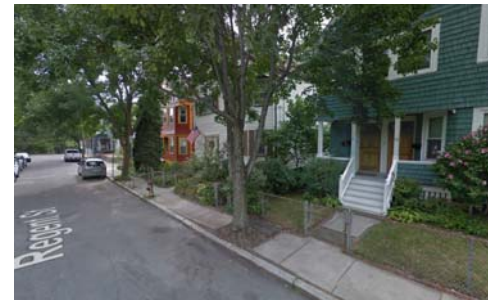
55 Regent Street



53 and 55 Regent Street



49 and 53 Regent Street



53 and 49 Regent Street



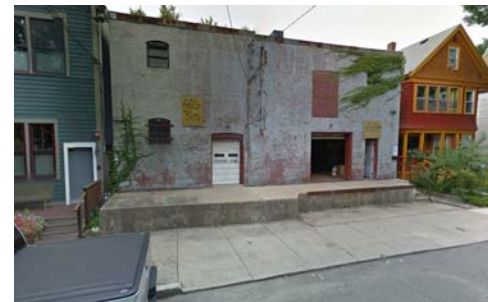
32-52 Regent Street



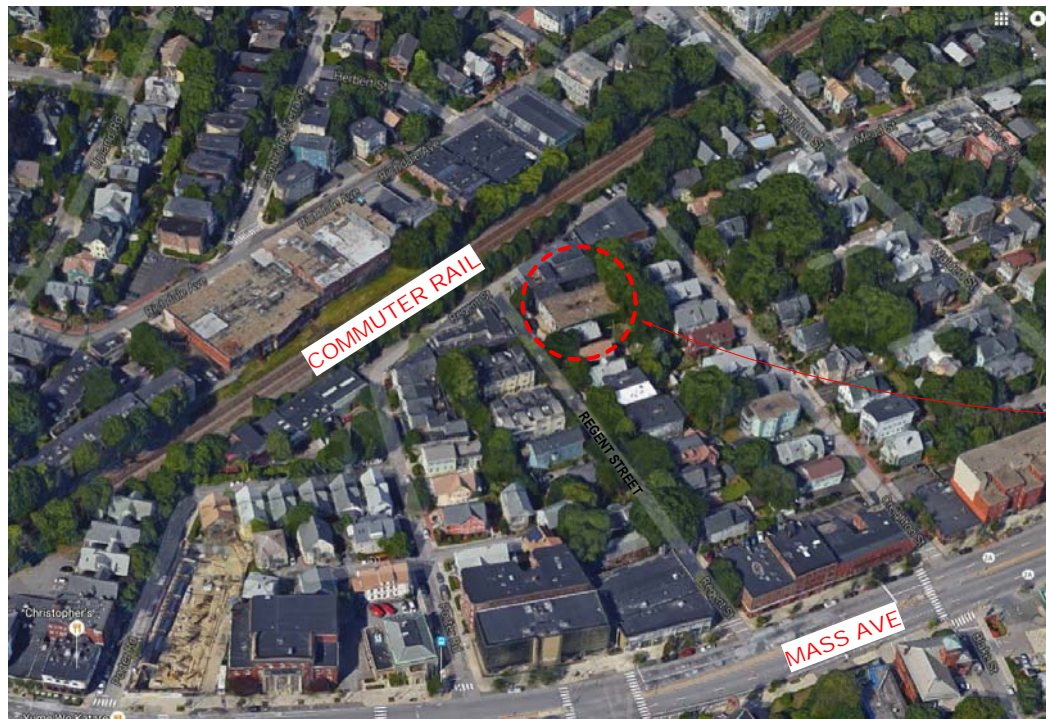
57 and 50 Regent Street



57 and 55 Regent Street



55 Regent Street



PROJECT SITE



32-46 Regent Street



50-52 Regent Street

No.	Description	Date

stamp

client
Client Name

title
CONTEXT PHOTOS

project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS

thirty bow street
Somerville, ma
02143
architects@boyeswatson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

scale

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.
A002

No.	Description	Date

stamp

client
Client Name

title
PROPERTY SURVEY
Project
55 REGENT STREET



job number 19530

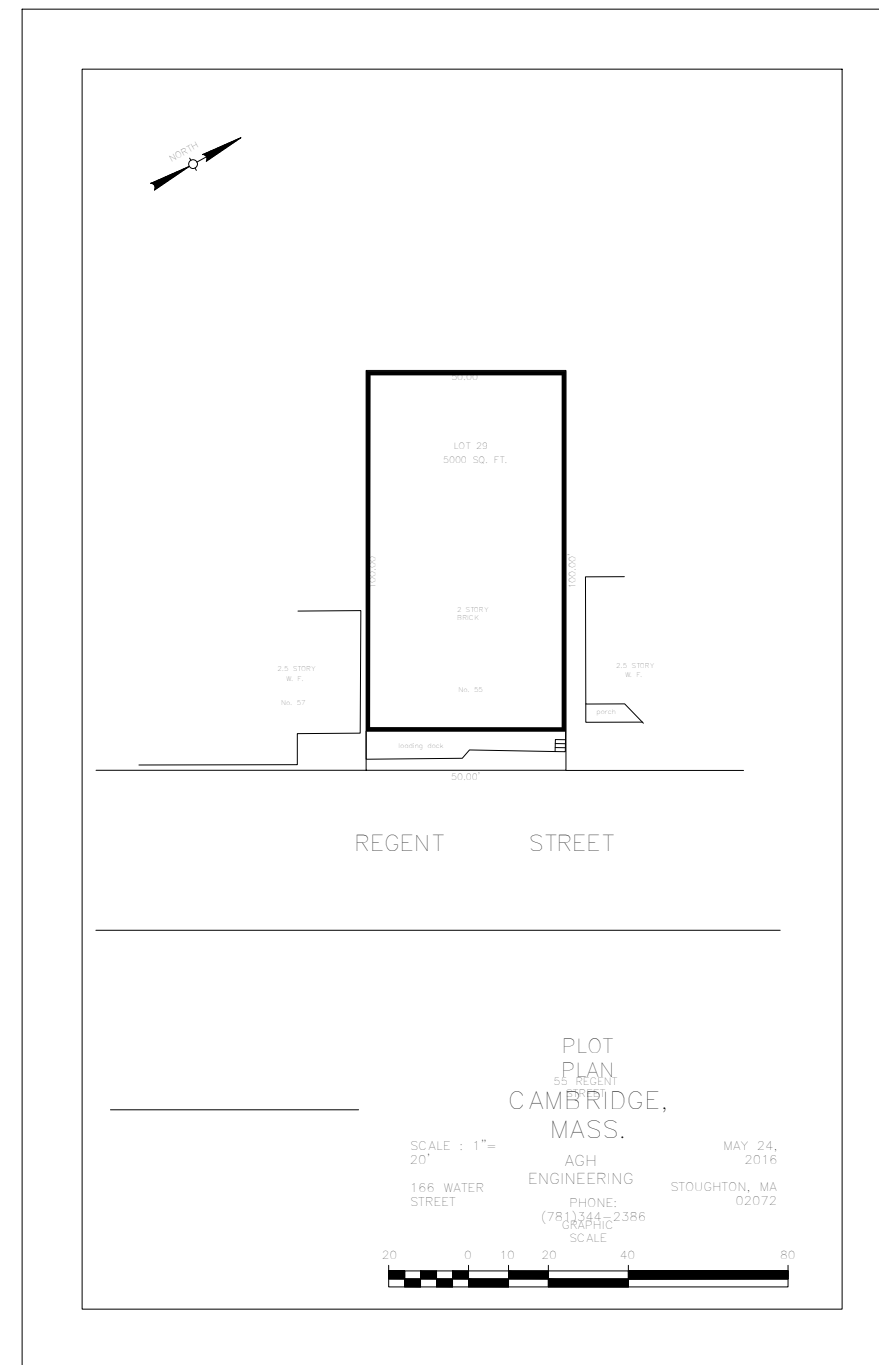
scale

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

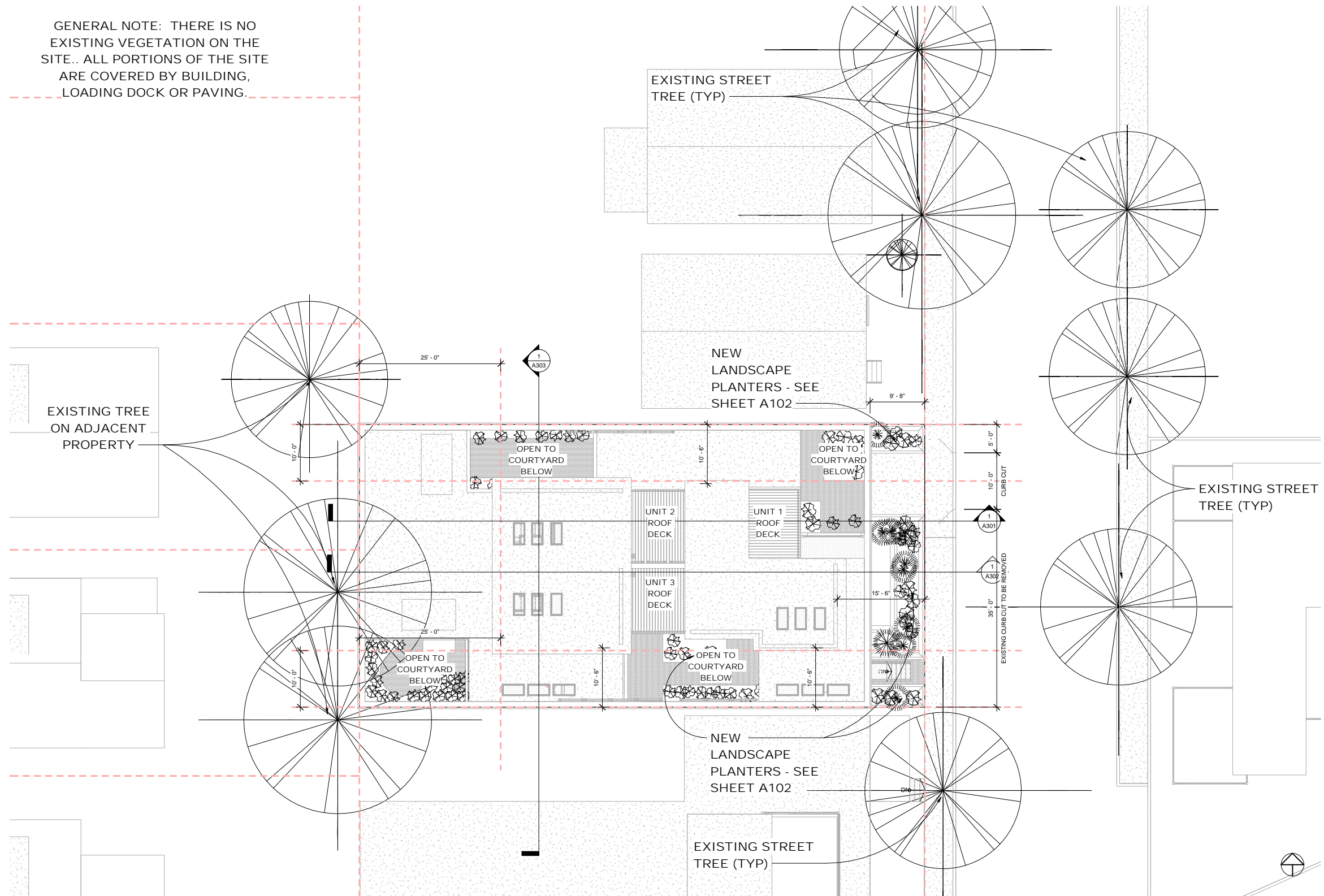
sheet no.

A003



GENERAL NOTE: THERE IS NO EXISTING VEGETATION ON THE SITE. ALL PORTIONS OF THE SITE ARE COVERED BY BUILDING, LOADING DOCK OR PAVING. EXISTING STREET TREES AND TREES ON ADJACENT PROPERTIES ARE SHOWN ON THE ASSESSORS / CONTEXT MAP.

GENERAL NOTE: THERE IS NO EXISTING VEGETATION ON THE SITE.. ALL PORTIONS OF THE SITE ARE COVERED BY BUILDING, LOADING DOCK OR PAVING.




No.	Description	Date

stamp

client
Client Name

title
ARCHITECTURAL SITE PLAN
Project
55 REGENT STREET

BOYES-WATSON ARCHITECTS

 thirty how street
 somerville, ma 02143
 architects@boyes-watson.com
 phone: (617) 629.8200
 fax: (617) 629.8201

job number 19530

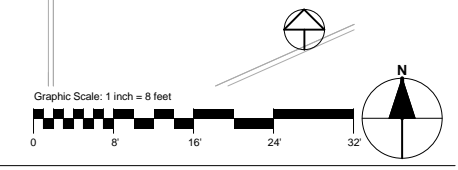
scale 1/8" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT REVISION #1

sheet no.

A100



1 PROPOSED SITE
1/8" = 1'-0"

12/12/2016 11:57:56 AM

No.	Description	Date

stamp

client
Client Name

title
BASEMENT
Project
55 REGENT STREET



job number 19530

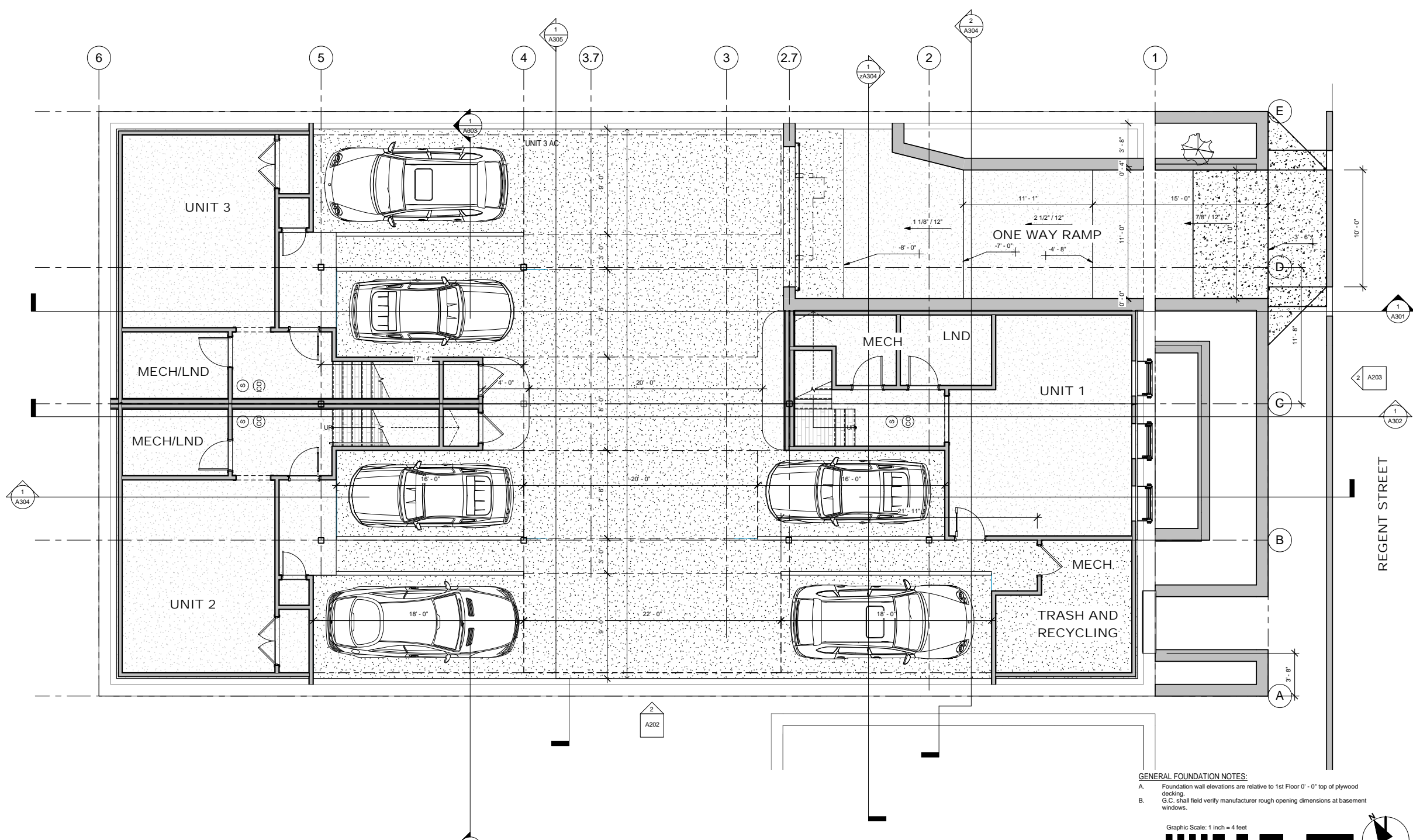
scale 1/4" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.

A101



1 PROPOSED BASEMENT
1/4" = 1'-0"

GENERAL FOUNDATION NOTES:
A. Foundation wall elevations are relative to 1st Floor 0' - 0" top of plywood decking.
B. G.C. shall field verify manufacturer rough opening dimensions at basement windows.

Graphic Scale: 1 inch = 4 feet

No.	Description	Date

stamp

client
Client Name

title
1ST FLOOR PLAN

project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS



thirty bow street
somerville, ma
02143
architects@boyes-watson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

scale 1/4" = 1'-0"

date issued 12-05-16

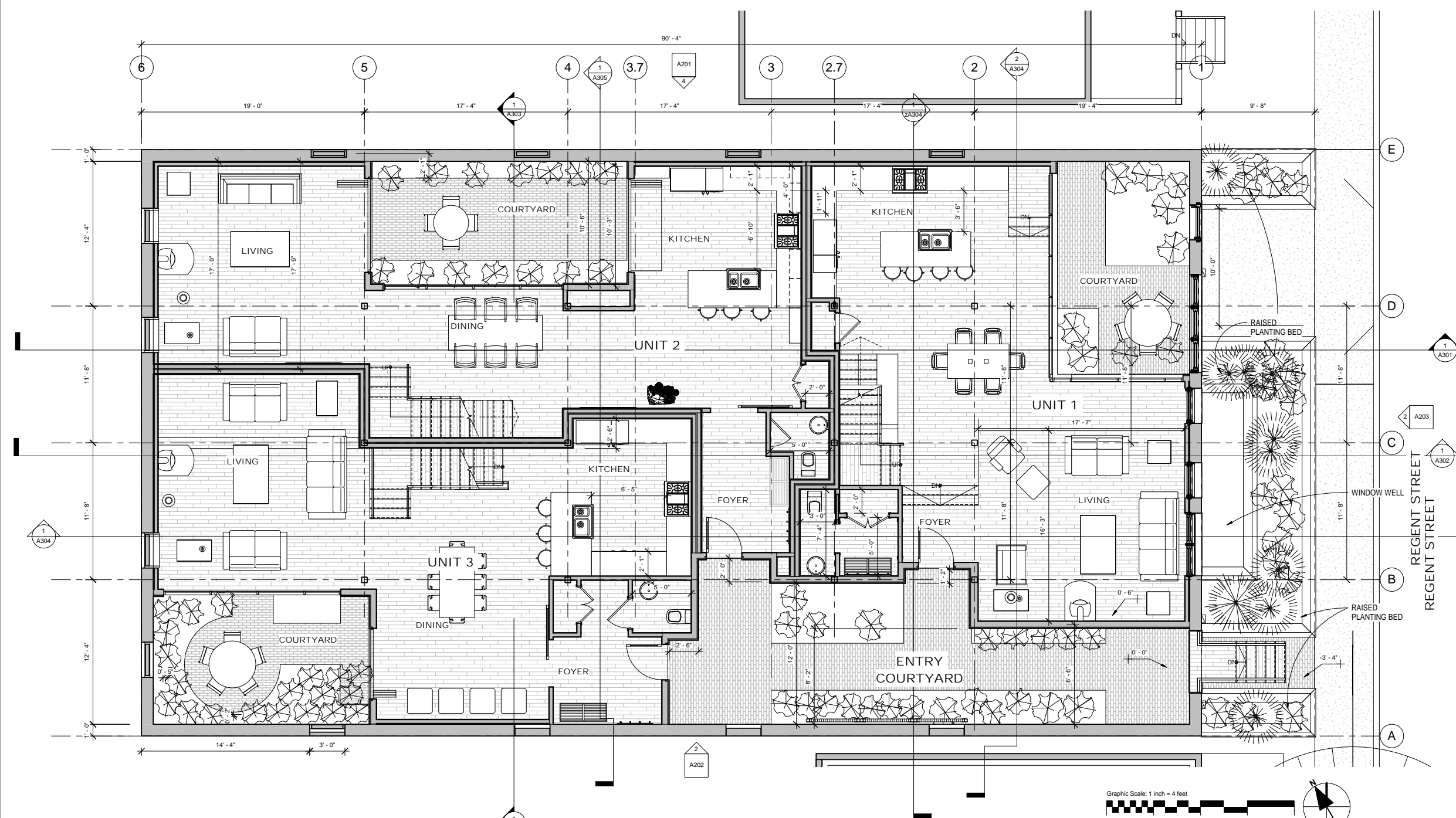
SPECIAL PERMIT
REVISION #1

sheet no.

A102

PLANTING SCHEDULE

- | | |
|---------------------------|---|
| CREeping JUNIPER | (JUNIPERUS HORIZONTALIS 'PRINCE OF WHALES') |
| SCARLET FLAME CAPET PHLOX | (PHLOX SUBULATA) |
| EVERGREEN VINCA | (VINCA MINOR) |
| LYNWOOD GOLD FORSYTHIA | (FORSYTHIA X INTERMEDIA) |
| HYDRANGEA | (HYDRANGEA MACROPHYLLA) |
| EVERGREEN AZALEA | (RHODODENDRON 'GIRARD'S HOT SHOT') |
| EVERGREEN AZALEA | (RHODODENDRON 'DELAWARE VALLEY WHITE') |



1 PROPOSED 1ST FLOOR
1/4" = 1'-0"

12/12/2016 11:58:10 AM

No.	Description	Date

stamp

client
Client Name

title
PENTHOUSE LEVEL PLAN
Project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS
thirty bow street
somerville, ma
02143
architects@boyeswatson.com
phone: (617) 623.8200
fax: (617) 623.8201

job number 19530

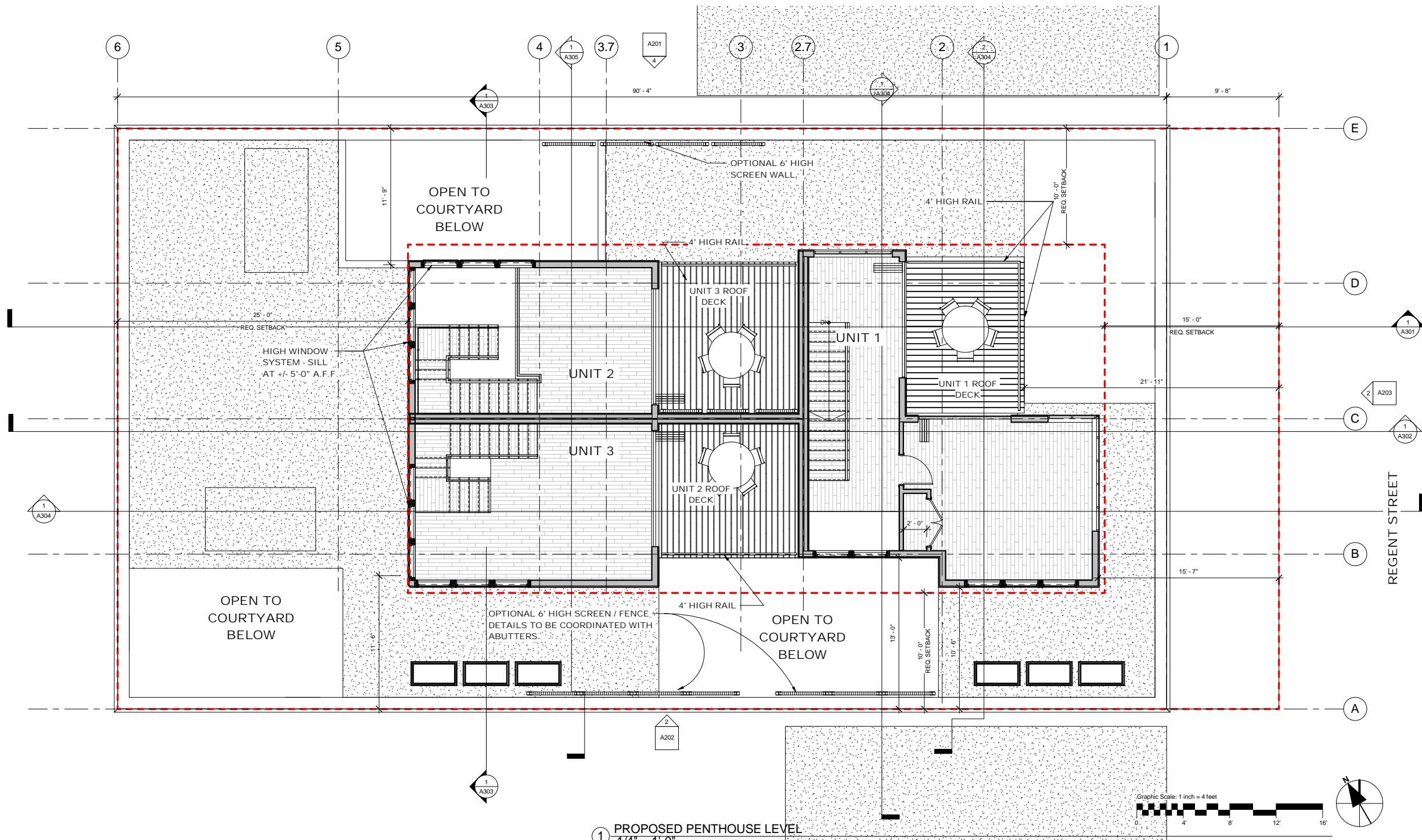
scale 1/4" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.

A104



① PROPOSED PENTHOUSE LEVEL
1/4" = 1'-0"

12/12/2016 11:58:20 AM

No.	Description	Date

stamp

client
Client Name

title
ROOF PLAN
project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS



thirty bow street
Somerville, ma 02143
architects@boyes-watson.com
phone: (617) 629.8200
fax: (617) 629.8201

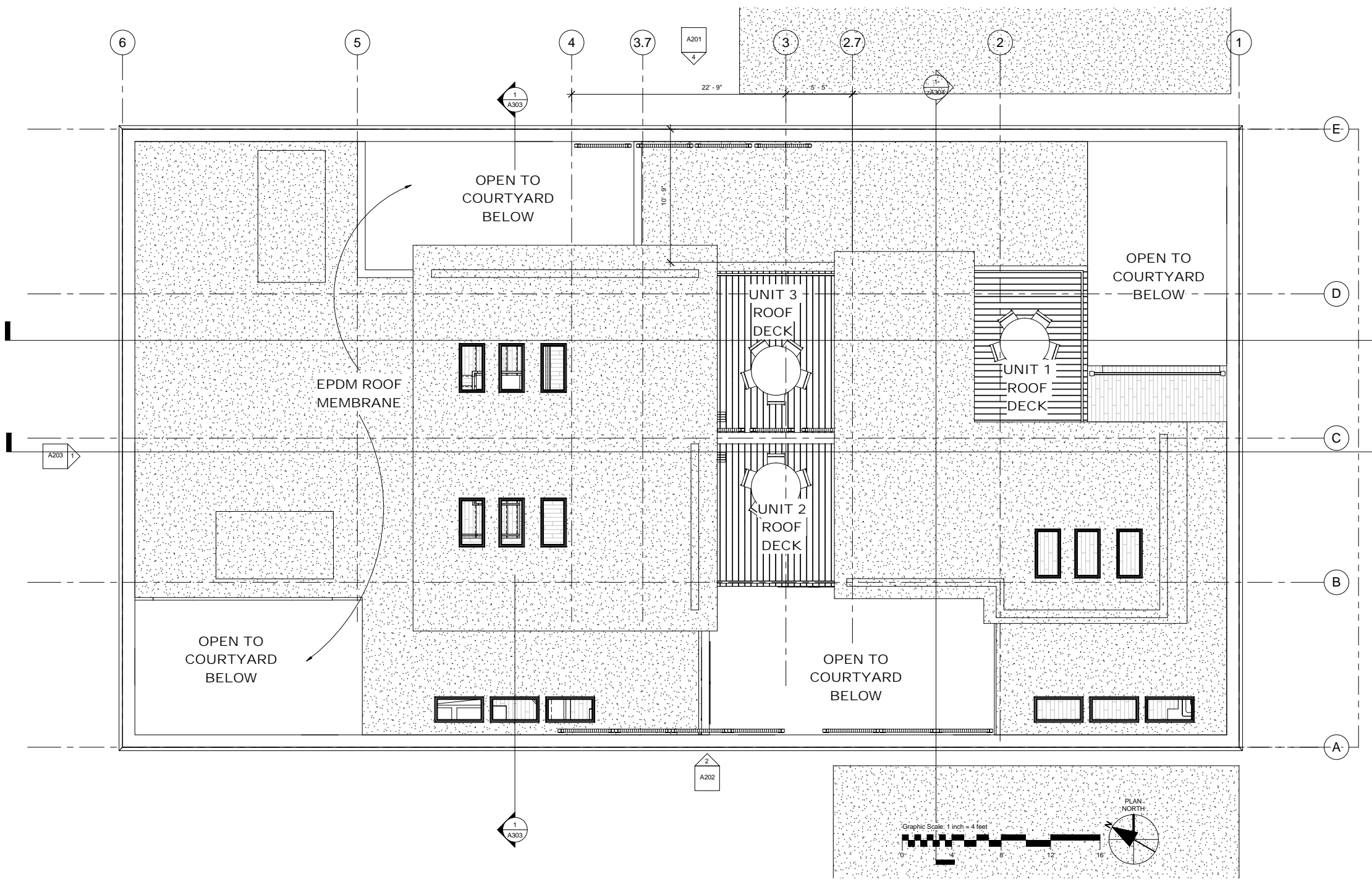
job number 19530

scale 1/4" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.
A105



1 PROPOSED ROOF LEVEL
1/4" = 1'-0"

12/12/2016 11:58:29 AM


No.	Description	Date

stamp

client
Client Name

55 REGENT STREET
ELEVATIONS

BOYES-WATSON
ARCHITECTS



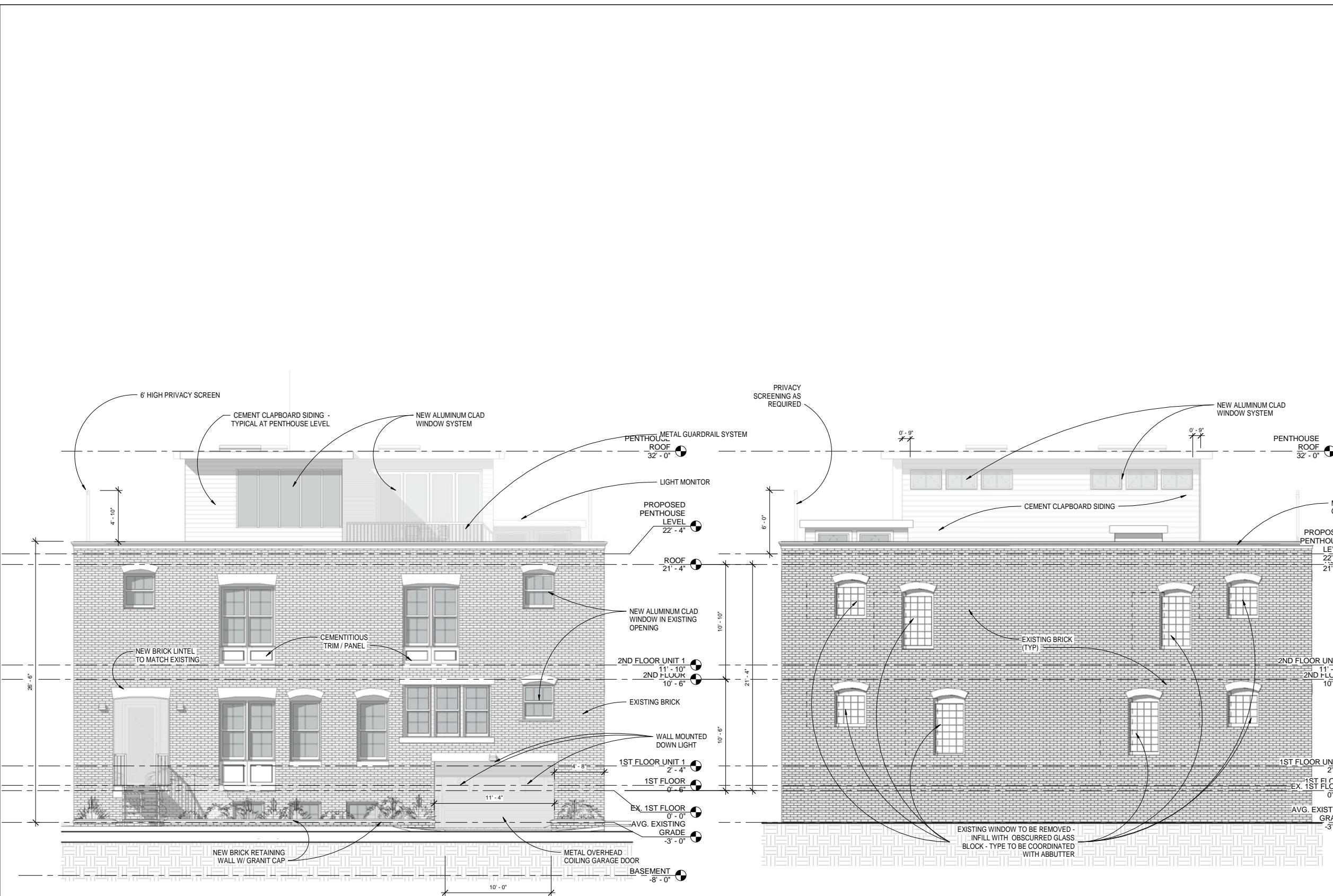
thirty bow street
somerville, ma 02143
architects@boyes-watson.com
phone: (617) 629.8200
fax: (617) 629.8201
job number 19530

scale 1/4" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.
A203



② PROPOSED FRONT ELEVATION
1/4" = 1'-0"

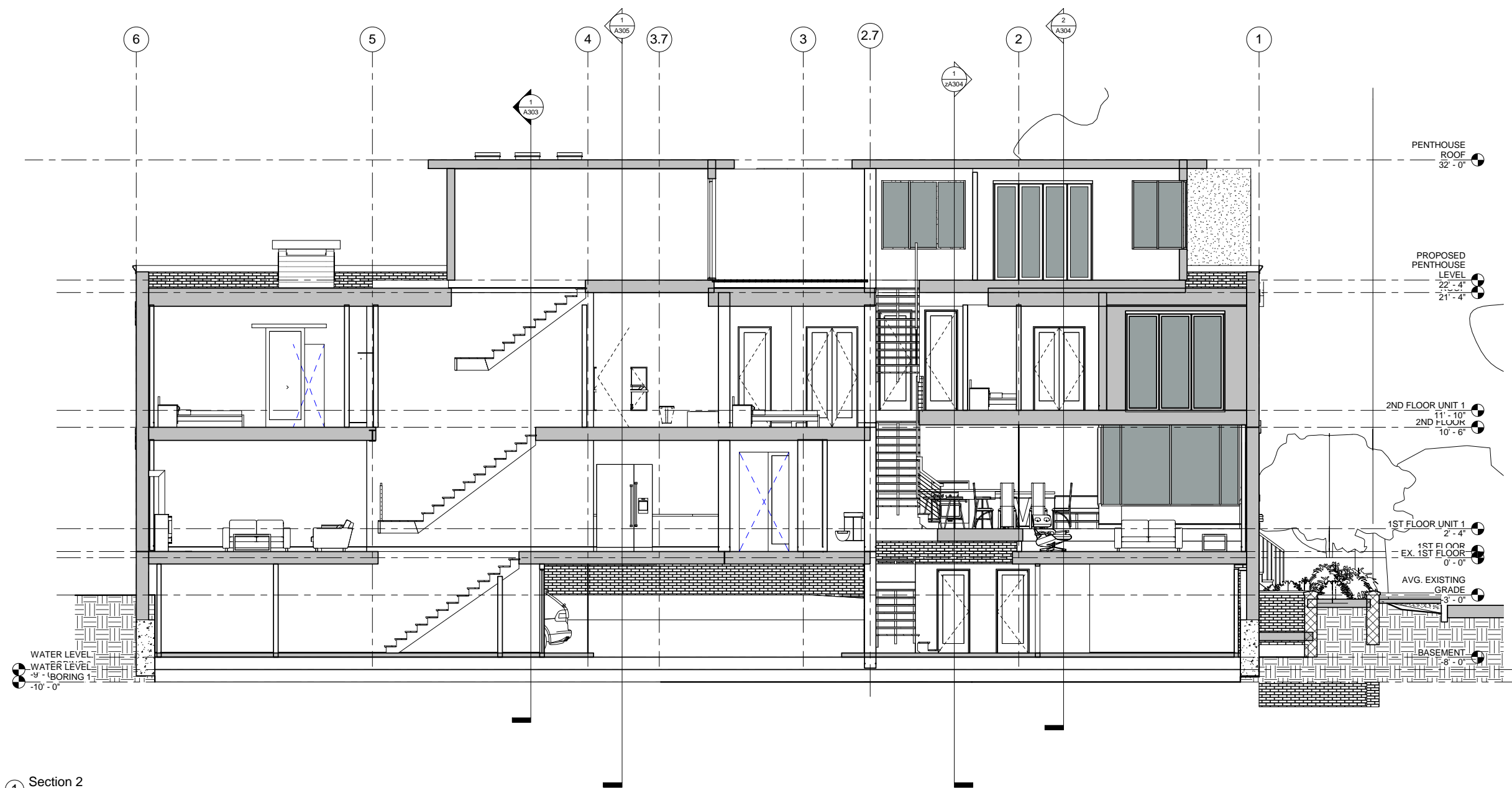
① PROPOSED REAR ELEVATION
1/4" = 1'-0"

12/12/2016 11:58:55 AM

No.	Description	Date

stamp

client
Client Name



title
BUILDING SECTION
Project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS

thirty bow street
Somerville, ma
02143
architects@boyeswatson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

scale 1/4" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.
A302

1 Section 2
1/4" = 1'-0"

12/12/2016 11:59:05 AM

No.	Description	Date

stamp

client
Client Name

title
BUILDING SECTIONS

project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS



thirty bow street
Somerville, MA
02143
architects@boyes-watson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

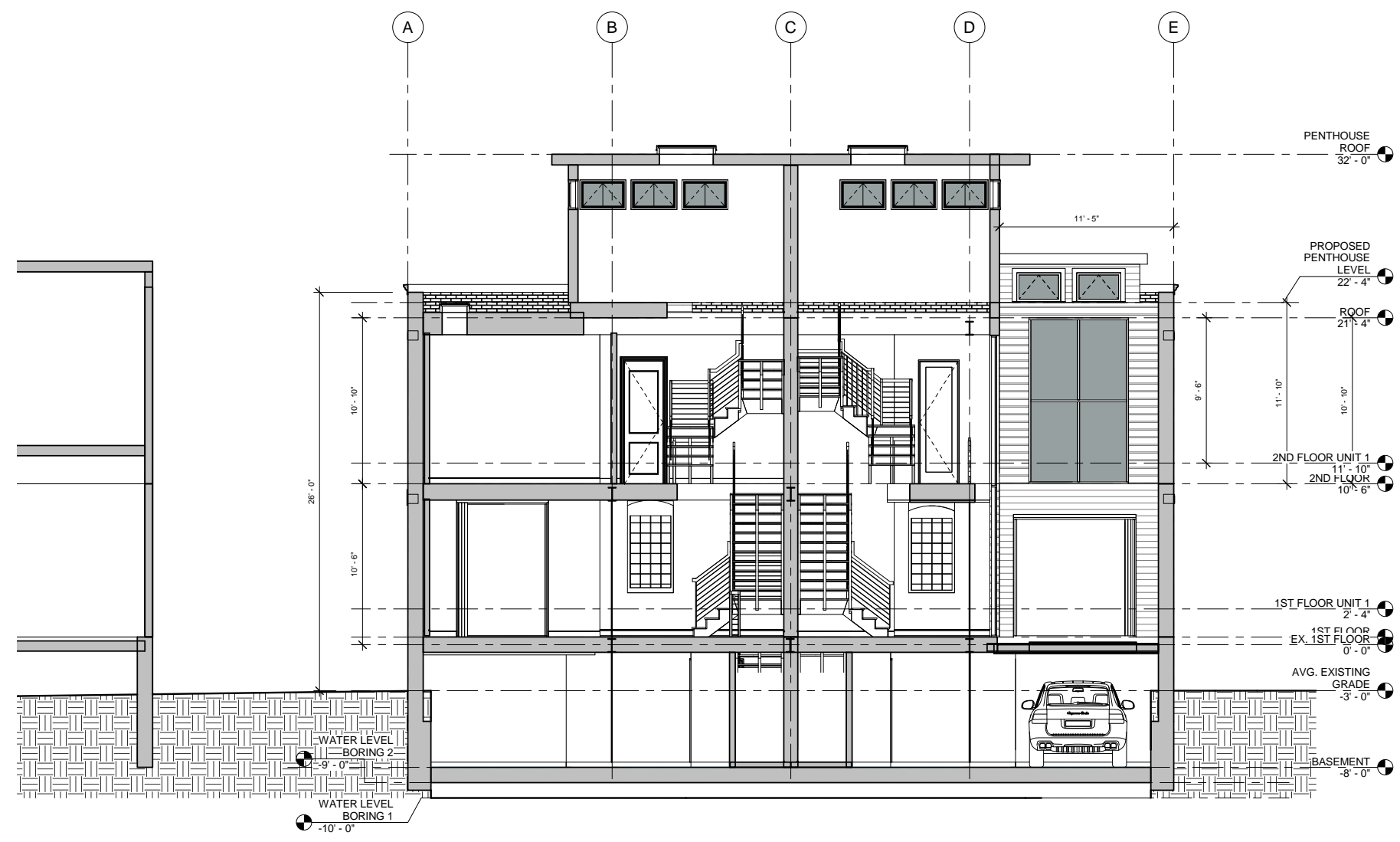
scale 1/4" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.

A303



① LATERAL SECTION
1/4" = 1'-0"

12/12/2016 11:59:06 AM

No.	Description	Date

stamp

client
Client Name

title
BUILDING SECTIONS
Project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS



thirty how street
somerville, ma
02143
architects@boyeswatson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

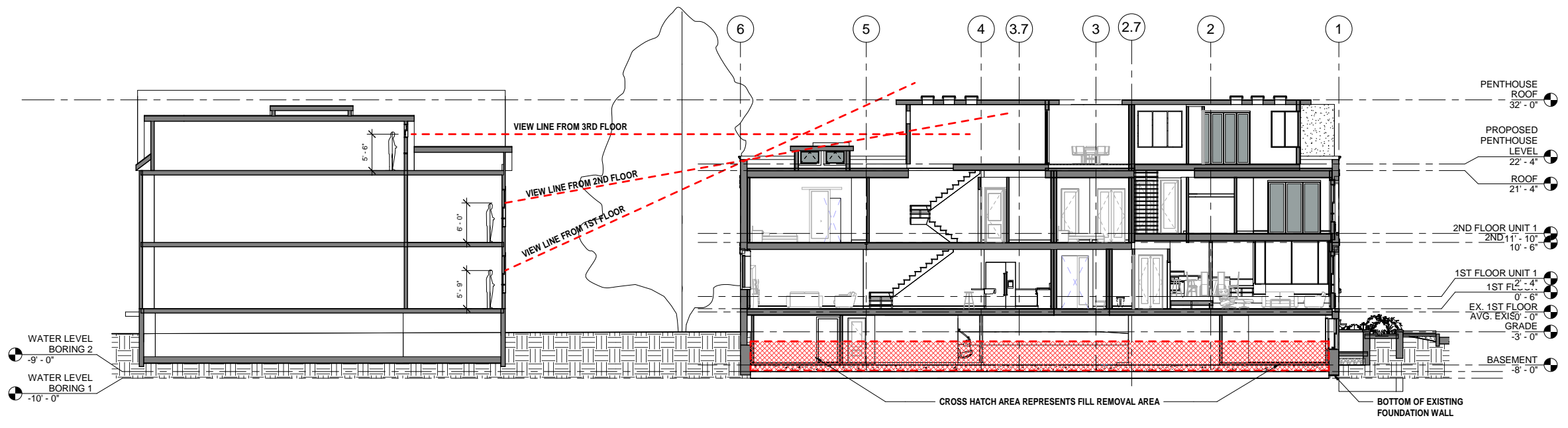
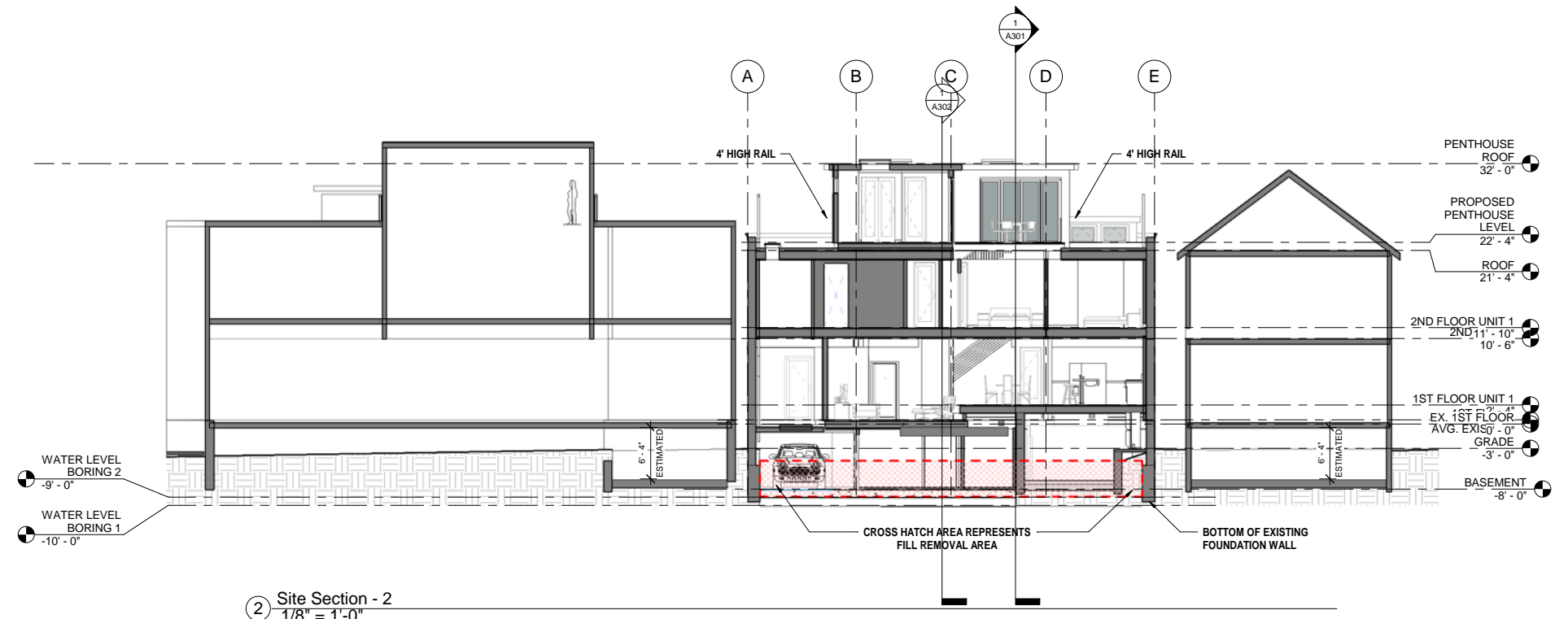
scale 1/8" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.

A304



12/12/2016 11:59:17 AM


No.	Description	Date

stamp

client
Client Name

title
BUILDING SECTIONS
Project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS



thirty bow street
Somerville, MA
02143
architects@boyes-watson.com
phone: (617) 623-8200
fax: (617) 623-8201

job number 19530

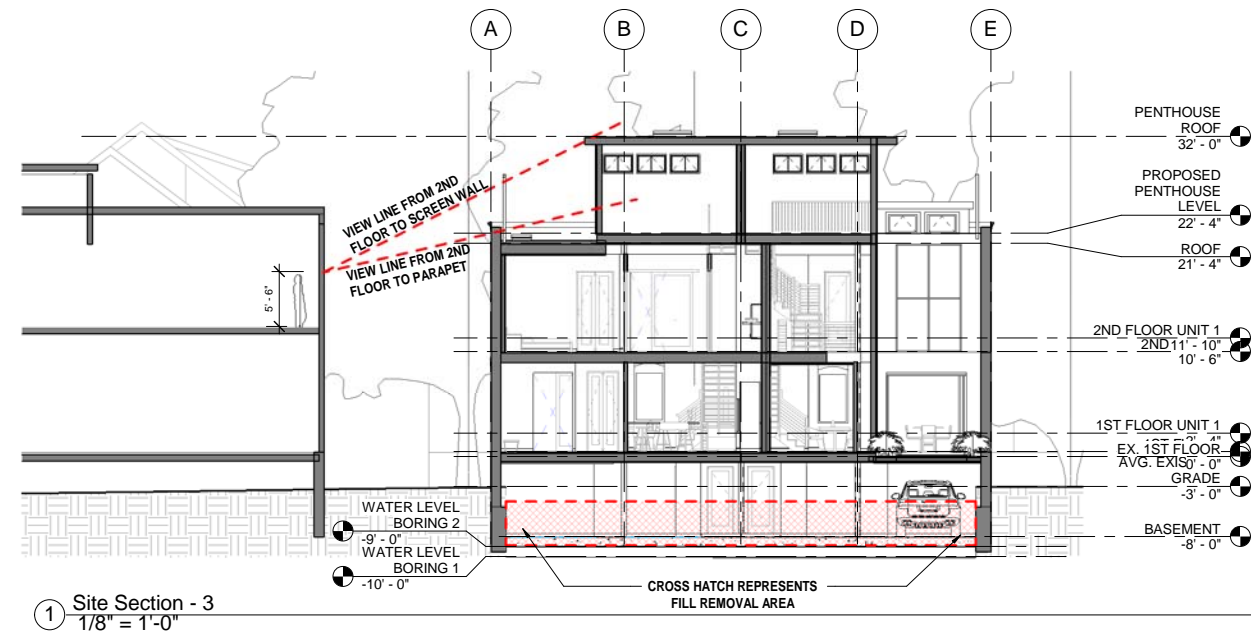
scale 1/8" = 1'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.

A305



① Site Section - 3
1/8" = 1'-0"

No.	Description	Date

stamp

client
Client Name

title
RENDERING - STREET VIEWS
project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS



thirty bow street
somerville, ma
02143
architects@boyeswatson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

scale

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.
A901



① SECOND FLOOR LEVEL VIEW



② STREET LEVEL VIEW



⑦ 12-21 AT 3
1" = 40'-0"

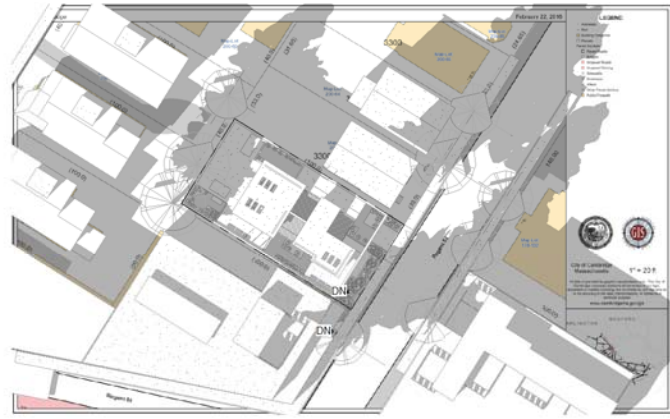


⑨ 12-21 AT 12
1" = 40'-0"



⑧ 12-21 AT 9
1" = 40'-0"

WINTER SOLSTICE - DECEMBER 21ST



⑥ 9-21 AT 3
1" = 40'-0"



⑤ 9-21 AT 12
1" = 40'-0"



④ 9-21 AT 9
1" = 40'-0"

EQUINOX - MARCH 21ST / SEPTEMBER 21ST



③ 6-21 AT 3
1" = 40'-0"



② 6-21 AT 12
1" = 40'-0"



① 6-21 AT 9
1" = 40'-0"

SUMMER SOLSTICE - JUNE 21ST

No.	Description	Date

stamp

client
Client Name

title
SHADOW STUDIES
project
55 REGENT STREET

BOYES-WATSON
ARCHITECTS
thirty how street
sonerville, ma
02143
architects@boyes-watson.com
phone: (617) 629.8200
fax: (617) 629.8201

job number 19530

scale 1" = 40'-0"

date issued 12-05-16

SPECIAL PERMIT
REVISION #1

sheet no.
A911

Geotechnical Partnership, Inc.



Since 1987

Geotechnical Engineering Services for New England

Lisa R. Casselli, PE Principal - A WBE Firm

**Subsurface Exploration
Foundation Specialty Systems**

**Laboratory Soil Testing
Ground Improvement**

**Geothermal Testing
Earthwork Testing**

3 November 2016
File No. 1627-02

Purdy Construction
15 Westwood Road
Somerville, MA 02143

Attention: Bob Purdy

Subject: **Groundwater Level Lowering Concerns during Construction Dewatering**

Dear Bob:

We have been asked to address a concern with respect to potential neighboring buildings settling during construction phase dewatering at 55 Regent St. in Cambridge, MA.

Groundwater Review:

Thickness and type of the host soil wherein groundwater was found were both variable (see *Table I*).

If one visualized underground water on this site and at adjacent parcels it is seen as perched above the permeably restrictive silty clay. It is thin and discontinuous leaving islands of dry soil throughout as seen at site test boring B3.

Table I: On-Site Depths to Water from Existing Grade:

Boring No.	Date	Depth to Water from Site Grade	Host Soil for Water	Aquifer Thickness on Date Recorded
B1	7/11/16	9.0 ft.	Silty Sand	0.2 ft.
B2	8/16/16	10.0 ft.	Sand	3.5 ft.
B3	8/16/16	Dry to >11.5 ft.	Peat -no water	dry
---	10/16/16	< 10 ft.		
---	Seasonal High*	Estimate=7 ft.		
---	Typical Yearly High	Estimate=8 ft.		

Note: "seasonal high" occurs during a sustained period of severe rains and is an atypical water level; it is important in determining building waterproofing needs. It is not the typical yardstick for earthwork phase construction dewatering. A typical yearly high is more suitable for the latter need.

Test boring water levels were recorded during an extended drought.

45 New Ocean Street – Suite A
Swampscott, MA 01907
Tel. 781/646-6982

805 Main Street
Sanford, ME 04073
Tel. 207/459-7800

New Structural Elements' Relationships to Groundwater:

The relationship of revised (raised) proposed structural elements (slab, footings) to site yearly high groundwater and seasonal high groundwater is summarized in *Table II*.

Table II: Depth to Below Grade Structural Elements from Existing Grade

Structural Element (revised embedment)	Design Depth to Element Base From Grade	Relation to Typical Yearly High Groundwater Level	Relation to Seasonal High Groundwater Level
Existing Masonry Wall Base	6.2 ft.	1.8 ft. above	0.8 ft. above
Lowest Level Slab (t=6 in.) plus membrane mat (t=3 in.)	5.9 ft.	2.1 ft. above	1.1 ft. above
Footing Base*	7.2 ft.	0.8 ft. above	0.2 ft. below

Construction Dewatering, Permanent Waterproofing and Groundwater:

Installation of structural elements require water levels to be maintained 6 inches below subgrade excavation for the particular structural element (footings, slab).

Excavation for the lowest level slab would require excavation of the entire building footprint. Subgrade for the lowest level slab and membrane system is expected to be 2.1 ft. above typical yearly water level and 1.1 ft. above seasonal high groundwater (*Table II*).

In general no construction dewatering is anticipated for slab installation.

A hydrostatic slab with a base waterproofing membrane has been selected by the design team for this structure to avoid the need for a permanent dewatering system.

The exception would occur with encountered isolated areas of peat to be removed and replaced with engineered fill. This can be performed using low velocity radially limited sumps pumping to an on-site recharge pit (or pits). Engineered fill is to be stockpiled within the building base to minimize time a peat excavation remain open so that backfilling can take place immediately upon completion of peat removal. Peat found to be water bearing in the borings was less than half of the peat volume encountered.

Excavation for any new wall and column footings is expected to occur over a limited percentage of the building rather than over the whole structure. Thus isolated shallow excavation pits are anticipated. Footing base subgrade is expected to be 0.8 ft. above the level of typical yearly high groundwater when groundwater is present at that level, and above groundwater level otherwise.

Expected maximum dewatering depth required would be on the order of 9 inches below footing subgrade if water level approaches expected seasonal high. This would occur piecemeal in small footprint areas. Use of a relatively low velocity sump would generally limit the radial extent of a 9 inch vertical drawdown dewatering to the building limits. Discharge of pumped water to an on-site recharge pit (or pits) would also help limit off-site groundwater level change.

Settlement of Existing Structural Units Caused by Groundwater Lowering:

Temporarily drawing the groundwater level down to levels needed to remove found isolated pockets of any water bearing peat (about 8 ft. maximum depth below site grade) in small sections by pumping from low velocity sumps to on-site discharge pits would be to do so to water levels less than those reached during the current drought (*Table I*). Current open test pits within the basement have remained dry to about 7 ft. depth have remained dry.

It is not expected that peat removal will occur within 3 feet laterally of the interior existing 55 Regent foundations as it was apparently mucked out during original building excavation in preparation for foundation construction. This would keep excavation outside of the 1H:1V foundation bearing zone of either on-site or neighboring building foundations. Note existing site foundation walls show no sign of movement or cracking.

Existing neighborhood structurally loaded groundwater host soils (silty sand, sand, peat) have settled during the low portion of previous natural cycles of groundwater rise and fall over the decades that neighborhood buildings and man-placed fill have loaded the settled subsoils. Limit of recharge due to impermeable surface coverage and the last decade of atypical drought cycles have contributed to this settlement.

Although groundwater lowering to depths below natural cycles such as the current record breaking drought can cause settlement of newly loaded areas (fills, buildings) the neighborhood buildings have largely settled due to fill and building loads present during past natural and man-created water table lowering cycles.

If groundwater pumping is necessary, new temporary, low velocity, radially limited groundwater pumping to on-site holding pits would not contribute to new settlement in either existing on-site or nearby structures.

Sincerely yours,
Geotechnical Partnership, Inc.

Lisa R. Casselli, PE
Principal

DIMENSIONAL FORM

Project Address: 55 REGENT STREET

Revised
Application Date: 12-01-16

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	5,000	5,000	5,000	
Lot Width (ft)	50'	50'	No Change	
Total Gross Floor Area (sq ft)	9180	2500 (9180 per 5.28.2)	9180	
Residential Base	n/a	n/a	n/a	
Non-Residential Base	n/a	n/a	n/a	
Inclusionary Housing Bonus	n/a	n/a	n/a	
Total Floor Area Ratio	1.84	.5 (1.84 per 5.28)	1.84	
Residential Base	n/a	.5 (1.84 per 5.28)	1.84	
Non-Residential Base	1.84	n/a	n/a	
Inclusionary Housing Bonus	n/a	n/a	n/a	
Total Dwelling Units	0	2 (8 D.U. per 5.28.2)	3	
Base Units	n/a	n/a	3	
Inclusionary Bonus Units	n/a	n/a	n/a	
Base Lot Area / Unit (sq ft)	n/a	n/a	n/a	
Total Lot Area / Unit (sq ft)	n/a	2500 (625 per 5.28.2)	1,667	
Building Height(s) (ft)	27'	35'	35'	
Front Yard Setback (ft)	9.8'	15'	No Change @ Exist. 15'-0" at Roof Addition	
Side Yard Setback (ft)	0'	7.5' min, sum of 20'	No Change @ Exist. 10'-6" at Roof Addition	
Side Yard Setback (ft)	0'	7.5' min, sum of 20'	No Change @ Exist. 10'-6" at Roof Addition	
Rear Yard Setback (ft)	0'	25'	No Change @ Exist. 25'-0" at Roof Addition	
Open Space (% of Lot Area)	0%	40%	40.5%	
Private Open Space	0%	20%	0%	
Permeable Open Space	0%	20%	7.5 %	
Other Open Space (Specify)	0%	n/a	22.8% @ Private Decks 10.2% @ Common Court	
Off-Street Parking Spaces	n/a	3	6	
Long-Term Bicycle Parking	n/a	n/a	n/a	
Short-Term Bicycle Parking	n/a	n/a	n/a	
Loading Bays	1	n/a	n/a	

Use space below and/or attached pages for additional notes:



55 Regent Street Community Meeting
6:00 at 55 Regent Street
11-15-16

Attending: Robert Purdy, Purdy Construction
Mark Boyes-Watson, Boyes-Watson Architects
Steve Hiserodt, Boyes-Watson Architects
Ann Collette, 48-50 Creighton Street, Direct Abutter
Steve Bodwell, 53 Regent Street, Direct Abutter
Elaine Soo Hoo, 45 Regent Street
Daniel A. Smith, 45 Regent Street

A. Discussion Key Points:

1. Parking

- a. Parking Study indicates adequate parking in the neighborhood to support 4 additional dwelling units.
- b. Will be adding 2 additional street spaces with the closing of the Curb Cut.
- c. Will be adding 2 additional spaces in the garage for a total of 6 on-site spaces.
- d. Addition of more will force the installation of Gas Trap. Gas Trap will increase dewatering necessary during construction and increase the likelihood on ongoing dewatering.

2. Density (LA per DU) of the Neighborhood and Proposed Project

- a. Proposed Lot Area per D.U. is 1250 S.F.
- b. Average LA / DU for the surrounding area on Creighton, Regent and the recent Rehab Projects on Richdale Avenue is approximately 1,370 S.F. of Lot Area per D.U.
- c. Existing dwellings on Regent vary from 833 to 5000 S.F. of Lot Area Per DU.
- d. Allowable with Special Permit is 1,100 S.F. of Existing Building Area per Unit or 8 Dwelling Units (Review of Calculation Methodology and Zoning Ordinance).

3. Privacy for Adjacent Properties

- a. Glass Block openings proposed at Side Yards will be left as solid brick.
- b. Openings at Rear Yard will be left as existing – existing windows will be replaced. No new openings will be created.
- c. Roof Decks
 - i. Roof Decks at Rear of the Building have been turned inward to minimize the impact on the Rear Abutters.
 - ii. 6' High Screen / Fencing can be installed at perimeter of deck areas that face adjacent building. We are willing to discuss additional measures as needed.
 - iii. All decking has been set back 10' at the side yards, 25' at the rear yard, and 15' at the Front Yard.

- iv. All lighting will be downward focused to limit light spread onto adjacent properties.

4. Water and Excavation Concerns

- a. The Garage depth (Top of Slab) has been raised 12" to stay above the measured water line (@ 9' below existing floor level per Geotechnical Report)
- b. A Hydrostatic Slab will be incorporated so that perimeter drainage will not be required.
- c. Excavation for interior pad footing will be kept as high as possible. These small areas may require dewatering during construction but all of the water will be stored on site and released gradually.

B. Comments and Discussion

- 1. Parking: Though the Parking Study indicated that proposed development could be supported by the available On-Street parking in the vicinity, it remains a very strong concern with the Neighbors. It was generally accepted that providing more than 6 spaces in the Garage was not advisable, because it would require the installation of a Gas and Oil Separator tank that would be far below the water table which could have potential negative impact on the the neighbor's groundwater issues. Reducing the project to 3 Dwelling Units with 6 Garage Parking spaces was strongly encouraged.
- 2. Density: Strong opposition to the project density was expressed. Neighbors requested a reduction to 3 Units.
- 3. Privacy: Neighbors to the rear of the property insisted that all of the windows facing the rear of the building be inoperable. Obscured glass block will replace the existing operable windows. It was further requested that windows at the Penthouse Level facing the rear of the property be limited to high sill windows to minimize visibility both to and from the neighboring properties. It was also agreed that the existing windows facing the side yard would remain closed with brick. The revised arrangement of the Roof Decks was seen as acceptable and it was agreed that specific privacy concerns could be addressed during construction with height and location modifications to the privacy fencing.
- 4. Strong concerns regarding the impact of soil conditions and groundwater issues on the adjacent properties were again expressed. The combination of the raising of the garage floor, the change to a hydrostatic slab system, removal of continuous sub-slab drainage system and the Geotechnical Evaluation has reduced concerns of the majority of the neighbors.

C. Conclusions:

- 1. The Proposal will be reduced to 3 Units
- 2. 6 Parking Spaces will be provided on site in the basement Garage. Up to 3 of the spaces may be tandem.
- 3. Existing window openings on the Rear Elevation will be replaced with Glass Block – the choice of glass block will be coordinated with the abutter.
- 4. All of the original openings on the Left and Right Side Elevations will remain closed with brick.
- 5. Penthouse Level openings facing the rear of the property will be limited to high sill windows (approximately 5' or higher).

6. There will be no outdoor deck space at the Penthouse Level facing the rear of the property.
7. Roof decks at the Penthouse Level will be protected from view using 6' high privacy fencing (exact location will be coordinated with direct abutters during construction)
8. There will be no exterior mounted mechanical equipment on the main roof or the penthouse roof. Heat Pump Condensing Units will be located at the garage level.
9. A hydrostatic slab will be installed in the basement garage. No sub-slab drainage system will be installed.
10. There will be no dewatering during construction. Groundwater exposed / collected during construction operations will be held on site and gradually released back into the site soils.

End of Meeting

Design Consultants, Inc.

120 Middlesex Avenue
Somerville, MA 02145
(617) 776-3350

MEMORANDUM

DCI JOB NO. 2016-129

TO: Stephen Hiserodt
Boyes-Watson Architects
30 Bow Street
Somerville, MA 02143

FROM: Tom Bertulis, P.E., PTOE
Design Consultants, Inc.

SUBJECT: **On-Street Parking Study**
55 Regent Street
Cambridge, MA

DATE: November 15, 2016

As requested by the Client, Design Consultants, Inc. (DCI) conducted a parking study for the project located at 55 Regent Street in Cambridge, Massachusetts. It is our understanding that the Client is proposing to redevelop the existing commercial property to a 4-unit residential building. The plan is to provide four (4) off-street parking spaces. Additionally, 35 feet of curb cut will be closed and made available for on-street parking.

As shown in Figure 1, the Cambridge Zoning Ordinance (CZO) requires one parking space per dwelling unit when non-residential structures are converted to residential structures, as per Section 5.28.27. Therefore the Client is seeking to determine the availability of on-street parking within the vicinity of the site.

This memorandum serves to demonstrate the availability of on-street parking within the local neighborhood parking supply, and that the proposed residential units at 55 Regent Street will not require more parking need than what is available.

5.28.27 Required Parking

Off-street parking shall be provided as required in the Schedule of Parking and Loading Requirements, Section 6.36. In instances where 6.36 does not apply due to the proposed use not being allowed in the base zoning district, required off-street parking for approved residential uses shall be provided at a rate of one space per dwelling unit, and required off-street parking for non-residential uses shall be determined by the Planning Board after reviewing the requirements for that use within other zoning districts.

Figure 1: Cambridge Zoning Ordinance Section 5.28.27

Off-Street Parking

The off-street parking will be accessed via one curb cut from Regent Street. As mentioned, the proposed site plan provides a total of four (4) off-street parking spaces. The project parking lot layout is shown in Figure 2.

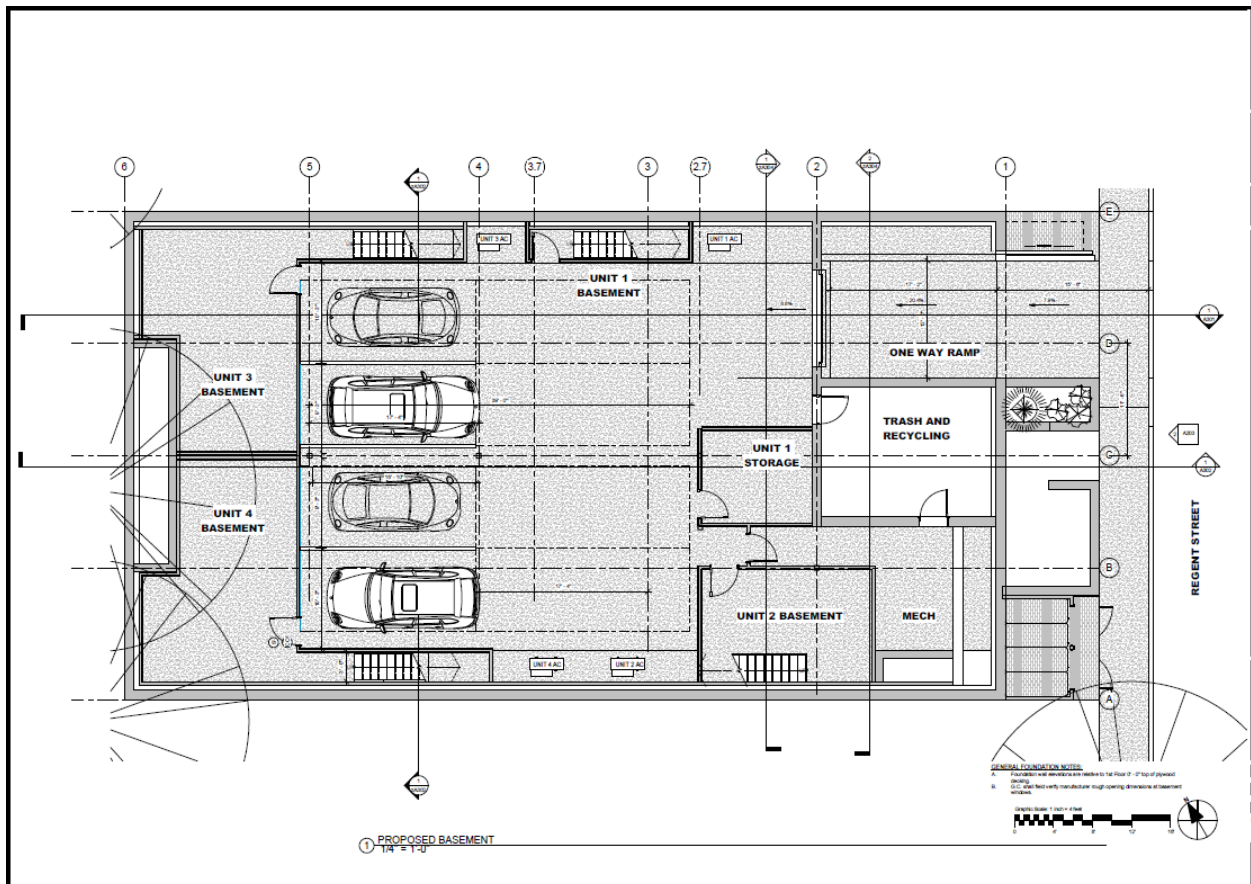


Figure 2: Parking Area Layout

Existing On-Street Parking Utilization

DCI performed a field parking survey of all available on-street parking to determine the existing parking utilization. The study area includes all on-street parking in the vicinity of 55 Regent Street within an approximate 250 foot radius. It was determined that residents would not park on the opposite side of the Commuter Rail tracks, as there is no feasible way to cross the tracks. Parking on-street in this area of Cambridge is limited to mostly permit parking or handicap parking. Parking permits can be bought by residents of Cambridge at a cost of \$25 for the year and it allows them to park on any street at any time within City limits. The study area is shown in Figure 3 and includes the following roadways:

- Regent Street
- Creighton Street
- Porter Road

DCI recorded the number of available parking spaces during a typical Thursday and Saturday. The parking data was collected during the following time periods:

- Thursday November 3, 2016 (9 to 11 PM)
- Saturday November 5, 2016 (2 to 4 PM)
- Saturday November 5, 2016 (7 to 9 PM)

The results of these surveys are shown in Table 1.

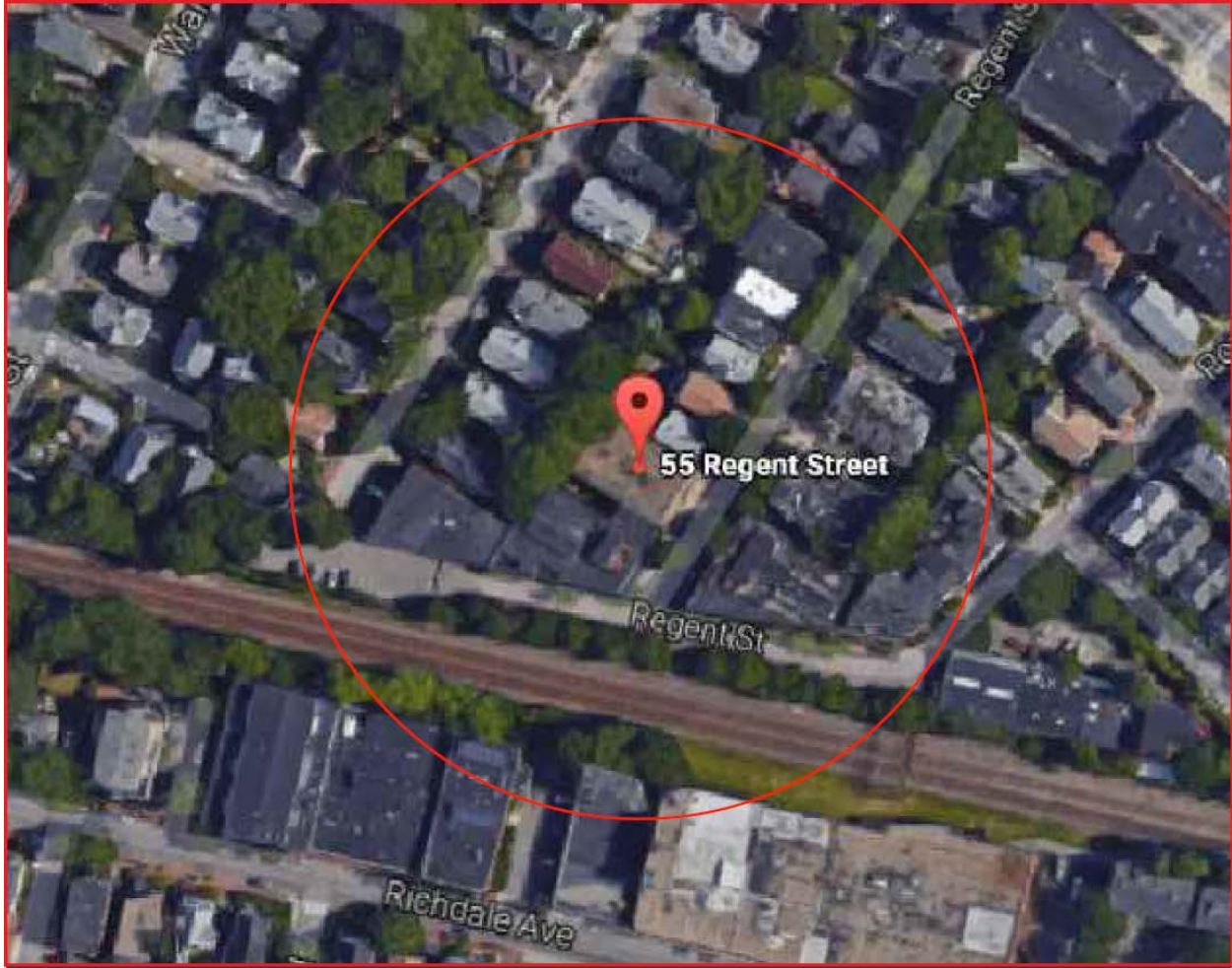


Figure 3: On-Street Parking Utilization Study Area

Table 1: On-Street Parking Survey Summary

	Street	Side	From	To	Parking Notes /Type	Total No. of Spaces	Maximum Number of Cars Parked		
							Weekday (7pm to 9pm)	Saturday (12pm to 2pm)	Saturday Evening (5pm to 7pm)
1	Creighton Street	Eastside	36 Creighton Street	56 Creighton Street	Permit Parking	10	7	8	10
		Westside	35 Creighton Street	61 Creighton Street	Permit Parking	11	11	11	11
2	Porter Road	Eastside	36 Porter Road	46 Porter Road	No Parking	--	--	--	--
		Westside	50 Porter Road	60 Porter Road	No Parking	--	--	--	--
3	Regent Street	Northside	48 Regent Street	56 Regent Street	No Parking	--	--	--	--
		Southside	49 Regent Street	57 Regent Street	No Parking	--	--	--	--
4	Regent Street	Eastside	26 Regent Street	54 Regent Street	Permit Parking	11	10	10	11
		Westside	27 Regent Street	57 Regent Street	Permit Parking	12	12	12	11
		Westside	27 Regent Street	57 Regent Street	Handicap Parking	1	1	1	1
<i>Permit Parking Only Totals</i>						44	40	41	43
<i># of Permit Parking Spaces Available</i>							4	3	1
<i>% of Permit Parking Spaces Available</i>							9%	7%	2%
<i>Handicap Parking Only Totals</i>						1	1	1	1
<i># of Handicap Parking Spaces Available</i>							0	0	0
<i>% of Handicap Parking Spaces Available</i>							0%	0%	0%
<i>Total Parking</i>						45	41	42	44
<i>Number of Total Parking Spaces Available</i>							4	3	1
<i>% of Total Parking Spaces Available</i>							10%	7%	2%

As shown in Table 1, on-street parking is underutilized in the vicinity of the project site. Since residents who purchase a parking permit are allowed to park in any parking space in the area,

except the Handicap spaces, the most important data is shown in “Permit Parking Spaces Available”. As shown in Table 3, there are four (4) permit parking spaces available within 250 feet of the project site during the weekday evening period, three (3) permit parking spaces available during the Saturday afternoon period, and one (1) permit parking space available during the Saturday evening period.

It should be noted that any resident that purchases a Resident Parking Permit also receives a Visitor Parking Permit, which allows a visitor to stay for up to two or three days in a row on any street within the designated zone. Each household is eligible to receive one Visitor Parking Permit with the purchase of a Resident Parking Permit, or apply for and purchase a Visitor Parking Permit if the household does not own a vehicle.

Vehicle Ownership Comparison and Mode Split

Commuting characteristics were analyzed from the 2010-2014 American Community Survey 5-Year Estimates. Data from Census Tract 3547, which covers the project site, was analyzed to estimate the average vehicle ownership per household and mode splits for journeys to work in the project area. Detailed Census Data is shown in the Appendix.

According to the data, the average vehicle ownership per household within the Census Tract is 1.42 vehicles per household. The average vehicle ownership per household within the City of Cambridge is only 1.14 vehicles per household. The proposed residential building will consist of four (4) residential units, which would equate to 5.42 total vehicles based on the more conservative Census Tract data. Figure 4 shows the vehicle ownership levels between the study area of 55 Regent Street, the City of Cambridge, and the State of Massachusetts.

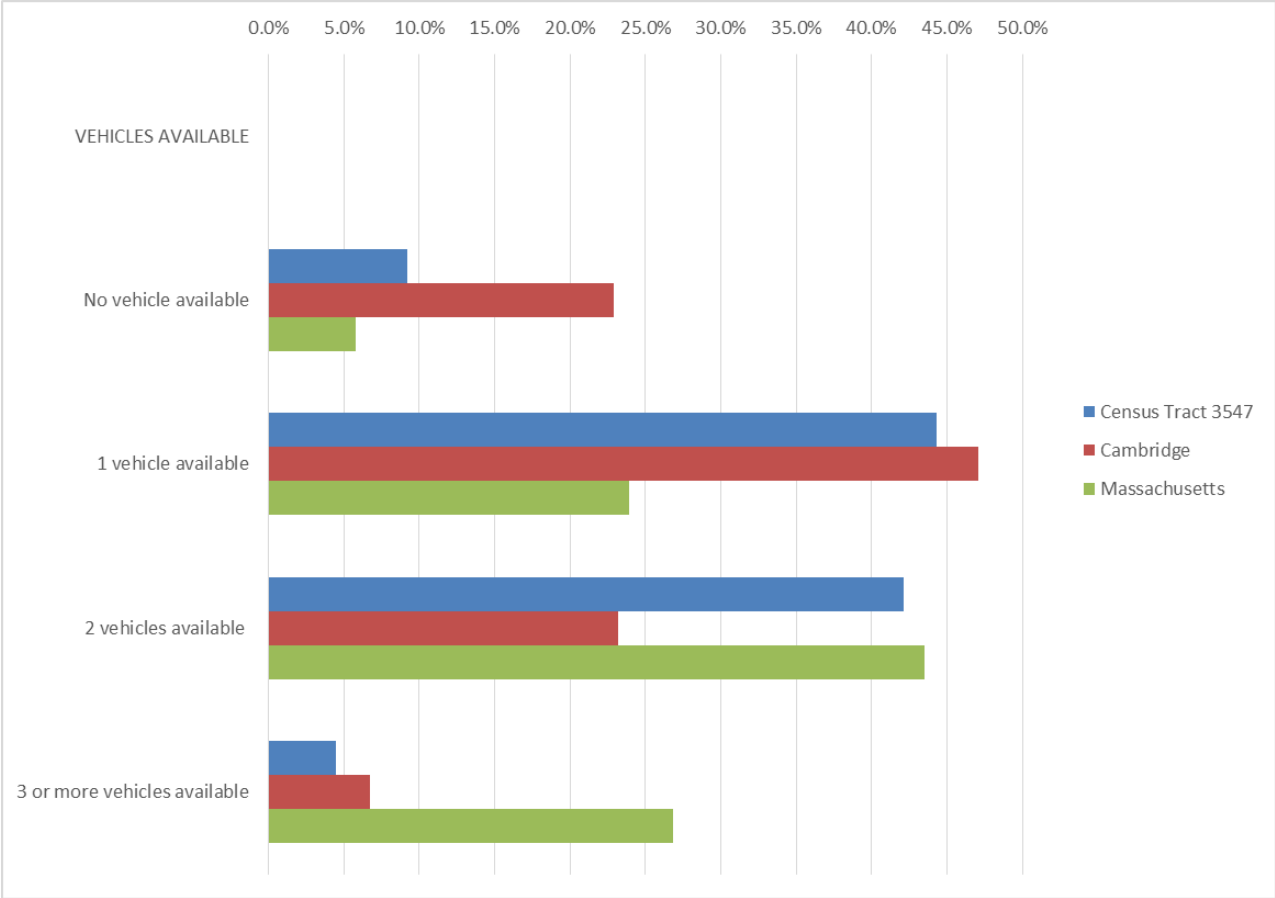


Figure 4: Vehicle Ownership Comparison

According to the Census Tract data, only 33.3% of residents in the study area use a vehicle to commute to work. Additionally, 43.9% of residents use public transportation, 11.3% walk, and 5.9% bike to commute to work. The high percentage of non-vehicular mode splits within the study area further reduces expectation for parking demand for the proposed site redevelopment. Figure 5 shows the average difference in mode split between the study area of 55 Regent Street, the City of Cambridge, and the State of Massachusetts.

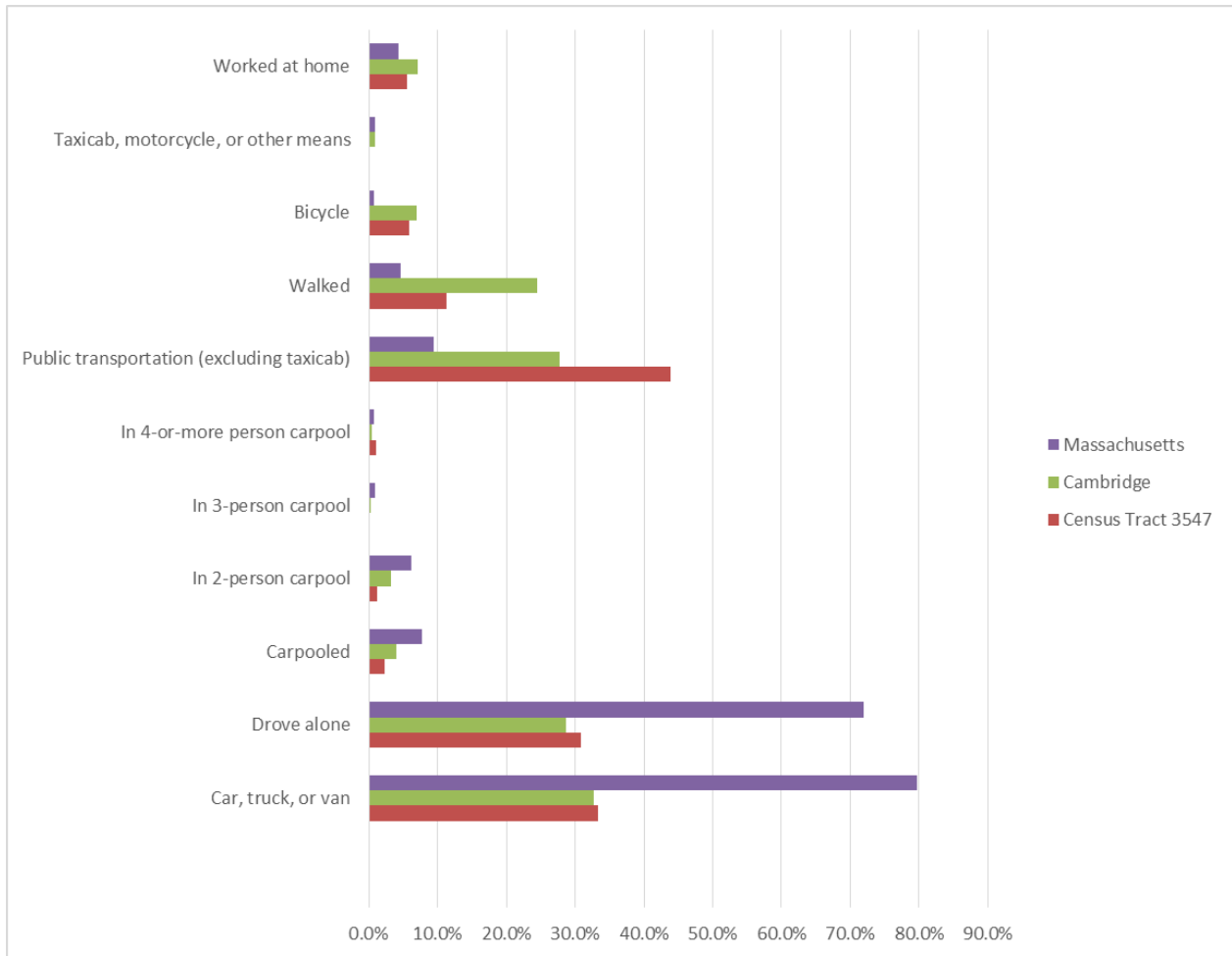


Figure 5: Mode Split Comparison

Proximity to Public Transit

The Massachusetts Bay Transit Authority (MBTA) services the study area with bus routes 77, 83, and 96. Bus route 77 runs along Massachusetts Avenue between Arlington Heights in Arlington and Harvard Square Station on the MBTA Red Line in Cambridge. Bus route 83 runs along Massachusetts Avenue near the Project site and runs between Rindge Avenue in Cambridge and Magazine Street in Cambridge. Bus route 96 runs along Massachusetts Avenue and runs between the Medford Square in Medford and Davis Square in Somerville, a stop on the MBTA Red Line. For all three bus lines, there is an inbound stop approximately 800 feet from the Project site on the south side of Massachusetts Avenue and an outbound stop approximately 1,100 feet from the Project site on the north side of Massachusetts Avenue.

The Massachusetts Bay Transportation Authority (MBTA) Red Line and the Commuter Rail run through Porter Square, with the stop being approximately 0.30 miles from the project site. The MBTA Red Line is a rapid transit line that connects Porter Square with downtown Boston and surrounding areas, with connections to other rapid transit lines. The MBTA Commuter Rail connects cities and towns to the downtown area of Boston, as well as to other neighboring cities and towns.

Consequently, given the average vehicle ownership per household, mode split data, and project proximity to multiple bus routes and the MBTA Red Line and Commuter Rail, it is expected that there will continue to be a high use of public transit in the area of the 55 Regent Street project. Combined with the low average vehicle ownership per household for residents of this Census Tract, it is anticipated that the four (4) proposed off-street parking spaces, combined with the 35 feet of closed curb cut, will meet the parking demand for this location.

Conclusion

The project located at 55 Regent Street will have four (4) residential units in total. According to the Cambridge Zoning Ordinance Section 5.28.27, four (4) off-street parking spaces will be required for the proposed property. Four (4) parking spaces will be provided on-site, with an additional 35 feet of closed curb cut that will become available for parking on-street. This parking study was performed to determine the availability of on-street parking within the vicinity of the project site.

On-street parking near the site is available for use by residents who purchase a Resident Parking Permit from the City of Cambridge. Additionally, the City of Cambridge also allows residents to buy Visitor Permits, which allows a visitor to park on the resident's street or an adjacent street, which will help mitigate the need for visitor spots on-site. An on-street parking study determined that the number of on-street parking spaces available within the vicinity of the project site during a weekday evening and Saturday afternoon and evening period is not fully utilized. There are four (4) permit parking spaces available within a 250 foot radius of the project site during the weekday evening period, the critical time period, and the proposed redevelopment will add up to two (2) on-street parking spaces by reducing the existing curb cut by approximately 35 feet.

Taking into account the average vehicle ownership per household, mode split, and proximity to public transportation, DCI believes that the four (4) parking spaces that will be provided on-site, in addition to the added space provided on-street resulting from the 35 feet of closed curb cut, will be sufficient for the project at 55 Regent Street in Cambridge, Massachusetts and will have a negligible impact on the local neighborhood's parking supply.

APPENDIX



S0801

COMMUTING CHARACTERISTICS BY SEX

2010-2014 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Census Tract 3547, Middlesex County, Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Workers 16 years and over	1,615	+/-200	856	+/-153	759
MEANS OF TRANSPORTATION TO WORK					
Car, truck, or van	33.3%	+/-6.4	33.3%	+/-9.3	33.3%
Drove alone	30.9%	+/-6.1	32.4%	+/-9.1	29.2%
Carpooled	2.4%	+/-1.6	0.9%	+/-1.4	4.1%
In 2-person carpool	1.3%	+/-1.2	0.0%	+/-4.0	2.8%
In 3-person carpool	0.0%	+/-2.1	0.0%	+/-4.0	0.0%
In 4-or-more person carpool	1.1%	+/-1.2	0.9%	+/-1.4	1.3%
Workers per car, truck, or van	1.04	+/-0.04	1.02	+/-0.05	1.08
Public transportation (excluding taxicab)	43.9%	+/-8.4	46.6%	+/-13.3	40.8%
Walked	11.3%	+/-4.7	6.4%	+/-4.1	16.9%
Bicycle	5.9%	+/-2.8	7.9%	+/-4.8	3.6%
Taxicab, motorcycle, or other means	0.0%	+/-2.1	0.0%	+/-4.0	0.0%
Worked at home	5.6%	+/-3.6	5.7%	+/-5.8	5.4%
PLACE OF WORK					
Worked in state of residence	99.3%	+/-1.1	98.6%	+/-2.1	100.0%
Worked in county of residence	61.6%	+/-7.4	68.9%	+/-9.3	53.4%
Worked outside county of residence	37.6%	+/-7.5	29.7%	+/-9.2	46.6%
Worked outside state of residence	0.7%	+/-1.1	1.4%	+/-2.1	0.0%
Living in a place					
Living in a place	100.0%	+/-2.1	100.0%	+/-4.0	100.0%
Worked in place of residence	40.7%	+/-7.5	41.4%	+/-10.2	39.9%
Worked outside place of residence	59.3%	+/-7.5	58.6%	+/-10.2	60.1%
Not living in a place	0.0%	+/-2.1	0.0%	+/-4.0	0.0%
Living in 12 selected states					
Living in 12 selected states	100.0%	+/-2.1	100.0%	+/-4.0	100.0%
Worked in minor civil division of residence	40.7%	+/-7.5	41.4%	+/-10.2	39.9%
Worked outside minor civil division of residence	59.3%	+/-7.5	58.6%	+/-10.2	60.1%
Not living in 12 selected states	0.0%	+/-2.1	0.0%	+/-4.0	0.0%
Workers 16 years and over who did not work at home	1,525	+/-208	807	+/-159	718
TIME LEAVING HOME TO GO TO WORK					

Subject	Census Tract 3547, Middlesex County, Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
12:00 a.m. to 4:59 a.m.	0.8%	+/-1.0	1.5%	+/-2.0	0.0%
5:00 a.m. to 5:29 a.m.	0.9%	+/-1.5	1.7%	+/-2.9	0.0%
5:30 a.m. to 5:59 a.m.	0.0%	+/-2.3	0.0%	+/-4.2	0.0%
6:00 a.m. to 6:29 a.m.	1.6%	+/-1.6	1.6%	+/-2.1	1.5%
6:30 a.m. to 6:59 a.m.	1.9%	+/-1.6	1.1%	+/-1.8	2.8%
7:00 a.m. to 7:29 a.m.	9.1%	+/-3.1	9.3%	+/-5.0	8.9%
7:30 a.m. to 7:59 a.m.	7.9%	+/-4.8	4.5%	+/-3.8	11.7%
8:00 a.m. to 8:29 a.m.	31.1%	+/-9.0	34.8%	+/-14.8	27.0%
8:30 a.m. to 8:59 a.m.	18.1%	+/-5.8	20.6%	+/-10.3	15.3%
9:00 a.m. to 11:59 p.m.	28.6%	+/-7.1	24.9%	+/-9.3	32.7%
TRAVEL TIME TO WORK					
Less than 10 minutes	2.0%	+/-1.7	2.6%	+/-2.6	1.4%
10 to 14 minutes	9.3%	+/-3.6	8.7%	+/-5.4	10.0%
15 to 19 minutes	14.2%	+/-5.2	14.7%	+/-7.0	13.5%
20 to 24 minutes	16.1%	+/-7.2	20.0%	+/-11.4	11.8%
25 to 29 minutes	5.7%	+/-3.1	9.4%	+/-5.8	1.5%
30 to 34 minutes	22.3%	+/-6.6	19.5%	+/-8.4	25.5%
35 to 44 minutes	14.8%	+/-4.3	14.1%	+/-5.7	15.6%
45 to 59 minutes	9.8%	+/-4.4	7.7%	+/-5.0	12.3%
60 or more minutes	5.7%	+/-3.2	3.3%	+/-3.1	8.4%
Mean travel time to work (minutes)	28.7	+/-2.2	26.5	+/-2.2	31.3
VEHICLES AVAILABLE					
Workers 16 years and over in households	1,614	+/-199	856	+/-153	758
No vehicle available	9.2%	+/-5.5	10.2%	+/-8.3	8.0%
1 vehicle available	44.3%	+/-8.9	34.2%	+/-10.4	55.7%
2 vehicles available	42.1%	+/-8.6	50.2%	+/-13.0	32.8%
3 or more vehicles available	4.5%	+/-4.2	5.4%	+/-5.6	3.4%
PERCENT IMPUTED					
Means of transportation to work	6.6%	(X)	(X)	(X)	(X)
Private vehicle occupancy	7.1%	(X)	(X)	(X)	(X)
Place of work	5.8%	(X)	(X)	(X)	(X)
Time leaving home to go to work	11.8%	(X)	(X)	(X)	(X)
Travel time to work	6.8%	(X)	(X)	(X)	(X)
Vehicles available	1.7%	(X)	(X)	(X)	(X)

Subject	Census Tract 3547, Middlesex County, Massachusetts	Cambridge city, Massachusetts				
		Female	Total		Male	
		Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Workers 16 years and over	+/-156	59,003	+/-1,119	29,932	+/-918	
MEANS OF TRANSPORTATION TO WORK						
Car, truck, or van	+/-10.1	32.7%	+/-1.3	31.6%	+/-1.7	
Drove alone	+/-9.1	28.7%	+/-1.3	28.4%	+/-1.6	
Carpooled	+/-3.0	4.0%	+/-0.6	3.2%	+/-0.6	
In 2-person carpool	+/-2.5	3.3%	+/-0.5	2.6%	+/-0.5	
In 3-person carpool	+/-4.5	0.3%	+/-0.1	0.2%	+/-0.1	
In 4-or-more person carpool	+/-1.8	0.5%	+/-0.2	0.4%	+/-0.3	
Workers per car, truck, or van	+/-0.06	1.07	+/-0.01	1.06	+/-0.01	
Public transportation (excluding taxicab)	+/-9.0	27.7%	+/-1.3	26.4%	+/-1.7	
Walked	+/-7.5	24.5%	+/-1.2	24.1%	+/-1.6	
Bicycle	+/-2.7	6.9%	+/-0.7	9.0%	+/-1.0	
Taxicab, motorcycle, or other means	+/-4.5	1.0%	+/-0.3	1.2%	+/-0.4	
Worked at home	+/-4.2	7.2%	+/-0.7	7.7%	+/-1.1	
PLACE OF WORK						
Worked in state of residence	+/-4.5	98.4%	+/-0.3	97.8%	+/-0.6	
Worked in county of residence	+/-8.5	64.7%	+/-1.2	65.3%	+/-1.6	
Worked outside county of residence	+/-8.5	33.7%	+/-1.2	32.5%	+/-1.5	
Worked outside state of residence	+/-4.5	1.6%	+/-0.3	2.2%	+/-0.6	
Living in a place						
Living in a place	+/-4.5	100.0%	+/-0.1	100.0%	+/-0.1	
Worked in place of residence	+/-9.7	46.2%	+/-1.3	47.1%	+/-1.7	
Worked outside place of residence	+/-9.7	53.8%	+/-1.3	52.9%	+/-1.7	
Not living in a place	+/-4.5	0.0%	+/-0.1	0.0%	+/-0.1	
Living in 12 selected states						
Living in 12 selected states	+/-4.5	100.0%	+/-0.1	100.0%	+/-0.1	
Worked in minor civil division of residence	+/-9.7	46.2%	+/-1.3	47.1%	+/-1.7	
Worked outside minor civil division of residence	+/-9.7	53.8%	+/-1.3	52.9%	+/-1.7	
Not living in 12 selected states	+/-4.5	0.0%	+/-0.1	0.0%	+/-0.1	
Workers 16 years and over who did not work at home	+/-156	54,766	+/-1,133	27,641	+/-957	
TIME LEAVING HOME TO GO TO WORK						
12:00 a.m. to 4:59 a.m.	+/-4.8	1.1%	+/-0.2	1.2%	+/-0.3	
5:00 a.m. to 5:29 a.m.	+/-4.8	0.6%	+/-0.2	1.0%	+/-0.4	
5:30 a.m. to 5:59 a.m.	+/-4.8	1.4%	+/-0.3	1.6%	+/-0.4	
6:00 a.m. to 6:29 a.m.	+/-2.5	2.8%	+/-0.4	2.7%	+/-0.6	
6:30 a.m. to 6:59 a.m.	+/-2.9	4.6%	+/-0.5	4.9%	+/-0.8	
7:00 a.m. to 7:29 a.m.	+/-4.9	7.8%	+/-0.8	8.0%	+/-1.1	
7:30 a.m. to 7:59 a.m.	+/-8.3	10.2%	+/-0.9	9.8%	+/-1.2	
8:00 a.m. to 8:29 a.m.	+/-9.9	20.3%	+/-1.2	19.9%	+/-1.7	
8:30 a.m. to 8:59 a.m.	+/-5.7	16.2%	+/-1.1	14.9%	+/-1.2	
9:00 a.m. to 11:59 p.m.	+/-9.0	35.2%	+/-1.8	35.9%	+/-2.2	
TRAVEL TIME TO WORK						
Less than 10 minutes	+/-2.0	11.0%	+/-0.9	10.9%	+/-1.3	
10 to 14 minutes	+/-5.3	14.2%	+/-0.9	14.6%	+/-1.4	
15 to 19 minutes	+/-6.0	14.7%	+/-1.1	15.2%	+/-1.3	
20 to 24 minutes	+/-6.2	14.6%	+/-1.0	14.5%	+/-1.4	
25 to 29 minutes	+/-2.3	7.1%	+/-0.7	6.6%	+/-0.9	
30 to 34 minutes	+/-9.4	17.5%	+/-1.0	17.8%	+/-1.6	
35 to 44 minutes	+/-7.1	8.4%	+/-0.7	9.6%	+/-1.1	
45 to 59 minutes	+/-6.5	7.4%	+/-0.7	6.2%	+/-0.8	
60 or more minutes	+/-5.5	5.1%	+/-0.6	4.7%	+/-0.8	
Mean travel time to work (minutes)	+/-3.4	24.7	+/-0.5	24.4	+/-0.8	

Subject	Census Tract 3547, Middlesex County, Massachusetts	Cambridge city, Massachusetts			
	Female	Total		Male	
	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
VEHICLES AVAILABLE					
Workers 16 years and over in households	+/-155	52,235	+/-1,126	26,903	+/-821
No vehicle available	+/-6.9	22.9%	+/-1.4	22.8%	+/-1.8
1 vehicle available	+/-10.8	47.1%	+/-1.6	46.1%	+/-2.1
2 vehicles available	+/-9.7	23.2%	+/-1.4	23.2%	+/-1.9
3 or more vehicles available	+/-5.2	6.7%	+/-1.0	7.9%	+/-1.3
PERCENT IMPUTED					
Means of transportation to work	(X)	10.0%	(X)	(X)	(X)
Private vehicle occupancy	(X)	10.4%	(X)	(X)	(X)
Place of work	(X)	12.0%	(X)	(X)	(X)
Time leaving home to go to work	(X)	16.1%	(X)	(X)	(X)
Travel time to work	(X)	12.2%	(X)	(X)	(X)
Vehicles available	(X)	1.5%	(X)	(X)	(X)

Subject	Cambridge city, Massachusetts	
	Female	
	Estimate	Margin of Error
Workers 16 years and over	29,071	+/-970
MEANS OF TRANSPORTATION TO WORK		
Car, truck, or van	33.8%	+/-1.8
Drove alone	29.0%	+/-1.8
Carpooled	4.8%	+/-0.9
In 2-person carpool	4.0%	+/-0.9
In 3-person carpool	0.3%	+/-0.2
In 4-or-more person carpool	0.5%	+/-0.3
Workers per car, truck, or van	1.08	+/-0.02
Public transportation (excluding taxicab)	29.1%	+/-1.7
Walked	24.8%	+/-1.5
Bicycle	4.8%	+/-0.7
Taxicab, motorcycle, or other means	0.8%	+/-0.3
Worked at home	6.7%	+/-0.8
PLACE OF WORK		
Worked in state of residence	99.0%	+/-0.3
Worked in county of residence	64.1%	+/-1.8
Worked outside county of residence	34.9%	+/-1.8
Worked outside state of residence	1.0%	+/-0.3
Living in a place		
Living in a place	100.0%	+/-0.1
Worked in place of residence	45.3%	+/-1.8
Worked outside place of residence	54.7%	+/-1.8
Not living in a place	0.0%	+/-0.1
Living in 12 selected states		
Living in 12 selected states	100.0%	+/-0.1
Worked in minor civil division of residence	45.3%	+/-1.8
Worked outside minor civil division of residence	54.7%	+/-1.8
Not living in 12 selected states	0.0%	+/-0.1
Workers 16 years and over who did not work at home	27,125	+/-1,003
TIME LEAVING HOME TO GO TO WORK		
12:00 a.m. to 4:59 a.m.	1.0%	+/-0.4
5:00 a.m. to 5:29 a.m.	0.1%	+/-0.1
5:30 a.m. to 5:59 a.m.	1.2%	+/-0.5
6:00 a.m. to 6:29 a.m.	2.9%	+/-0.7
6:30 a.m. to 6:59 a.m.	4.3%	+/-0.8
7:00 a.m. to 7:29 a.m.	7.6%	+/-1.1
7:30 a.m. to 7:59 a.m.	10.5%	+/-1.0
8:00 a.m. to 8:29 a.m.	20.6%	+/-1.5
8:30 a.m. to 8:59 a.m.	17.4%	+/-1.6
9:00 a.m. to 11:59 p.m.	34.5%	+/-2.2
TRAVEL TIME TO WORK		
Less than 10 minutes	11.2%	+/-1.2
10 to 14 minutes	13.8%	+/-1.3
15 to 19 minutes	14.1%	+/-1.6
20 to 24 minutes	14.6%	+/-1.5
25 to 29 minutes	7.5%	+/-1.0
30 to 34 minutes	17.3%	+/-1.4
35 to 44 minutes	7.2%	+/-0.9
45 to 59 minutes	8.7%	+/-1.0
60 or more minutes	5.5%	+/-0.9
Mean travel time to work (minutes)	25.1	+/-0.7
VEHICLES AVAILABLE		
Workers 16 years and over in households	25,332	+/-1,006

Subject	Cambridge city, Massachusetts	
	Female	
	Estimate	Margin of Error
No vehicle available	23.0%	+/-2.0
1 vehicle available	48.2%	+/-2.1
2 vehicles available	23.3%	+/-1.7
3 or more vehicles available	5.5%	+/-1.2
PERCENT IMPUTED		
Means of transportation to work	(X)	(X)
Private vehicle occupancy	(X)	(X)
Place of work	(X)	(X)
Time leaving home to go to work	(X)	(X)
Travel time to work	(X)	(X)
Vehicles available	(X)	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

While the 2010-2014 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.



S0801

COMMUTING CHARACTERISTICS BY SEX

2010-2014 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Workers 16 years and over	3,284,998	+/-8,324	1,672,359	+/-5,803	1,612,639
MEANS OF TRANSPORTATION TO WORK					
Car, truck, or van	79.7%	+/-0.2	79.9%	+/-0.2	79.5%
Drove alone	72.0%	+/-0.2	72.3%	+/-0.2	71.7%
Carpooled	7.7%	+/-0.1	7.7%	+/-0.2	7.8%
In 2-person carpool	6.2%	+/-0.1	6.1%	+/-0.1	6.3%
In 3-person carpool	0.9%	+/-0.1	0.9%	+/-0.1	0.9%
In 4-or-more person carpool	0.7%	+/-0.1	0.7%	+/-0.1	0.6%
Workers per car, truck, or van	1.06	+/-0.01	1.06	+/-0.01	1.06
Public transportation (excluding taxicab)	9.5%	+/-0.1	9.2%	+/-0.2	9.8%
Walked	4.7%	+/-0.1	4.5%	+/-0.1	5.0%
Bicycle	0.8%	+/-0.1	1.0%	+/-0.1	0.4%
Taxicab, motorcycle, or other means	0.9%	+/-0.1	1.0%	+/-0.1	0.8%
Worked at home	4.4%	+/-0.1	4.3%	+/-0.1	4.5%
PLACE OF WORK					
Worked in state of residence	96.0%	+/-0.1	95.2%	+/-0.1	96.8%
Worked in county of residence	65.3%	+/-0.2	62.3%	+/-0.2	68.5%
Worked outside county of residence	30.7%	+/-0.2	33.0%	+/-0.2	28.3%
Worked outside state of residence	4.0%	+/-0.1	4.8%	+/-0.1	3.2%
Living in a place					
Living in a place	69.8%	+/-0.1	69.2%	+/-0.2	70.3%
Worked in place of residence	23.8%	+/-0.1	22.1%	+/-0.2	25.5%
Worked outside place of residence	46.0%	+/-0.2	47.1%	+/-0.2	44.9%
Not living in a place	30.2%	+/-0.1	30.8%	+/-0.2	29.7%
Living in 12 selected states					
Living in 12 selected states	100.0%	+/-0.1	100.0%	+/-0.1	100.0%
Worked in minor civil division of residence	31.1%	+/-0.2	29.2%	+/-0.2	33.0%
Worked outside minor civil division of residence	68.9%	+/-0.2	70.8%	+/-0.2	67.0%
Not living in 12 selected states	0.0%	+/-0.1	0.0%	+/-0.1	0.0%
Workers 16 years and over who did not work at home	3,139,018	+/-8,339	1,599,644	+/-5,961	1,539,374
TIME LEAVING HOME TO GO TO WORK					

Subject	Massachusetts				
	Total		Male		Female
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
12:00 a.m. to 4:59 a.m.	2.8%	+/-0.1	4.0%	+/-0.1	1.6%
5:00 a.m. to 5:29 a.m.	2.9%	+/-0.1	4.1%	+/-0.1	1.7%
5:30 a.m. to 5:59 a.m.	4.0%	+/-0.1	5.3%	+/-0.1	2.7%
6:00 a.m. to 6:29 a.m.	8.1%	+/-0.1	9.7%	+/-0.2	6.4%
6:30 a.m. to 6:59 a.m.	9.9%	+/-0.1	10.6%	+/-0.2	9.2%
7:00 a.m. to 7:29 a.m.	14.6%	+/-0.1	14.8%	+/-0.2	14.3%
7:30 a.m. to 7:59 a.m.	12.5%	+/-0.1	10.9%	+/-0.2	14.1%
8:00 a.m. to 8:29 a.m.	13.6%	+/-0.2	12.0%	+/-0.2	15.3%
8:30 a.m. to 8:59 a.m.	6.9%	+/-0.1	5.6%	+/-0.1	8.3%
9:00 a.m. to 11:59 p.m.	24.6%	+/-0.2	22.9%	+/-0.3	26.4%
TRAVEL TIME TO WORK					
Less than 10 minutes	11.5%	+/-0.1	10.4%	+/-0.2	12.6%
10 to 14 minutes	12.8%	+/-0.1	11.7%	+/-0.2	14.0%
15 to 19 minutes	13.4%	+/-0.1	12.6%	+/-0.2	14.2%
20 to 24 minutes	13.2%	+/-0.2	12.8%	+/-0.2	13.7%
25 to 29 minutes	5.9%	+/-0.1	5.9%	+/-0.1	5.9%
30 to 34 minutes	14.1%	+/-0.1	14.5%	+/-0.2	13.7%
35 to 44 minutes	7.9%	+/-0.1	8.5%	+/-0.1	7.3%
45 to 59 minutes	9.9%	+/-0.1	10.7%	+/-0.2	9.1%
60 or more minutes	11.1%	+/-0.1	12.8%	+/-0.2	9.5%
Mean travel time to work (minutes)	28.3	+/-0.1	30.0	+/-0.1	26.6
VEHICLES AVAILABLE					
Workers 16 years and over in households	3,222,591	+/-7,804	1,648,211	+/-5,529	1,574,380
No vehicle available	5.8%	+/-0.1	5.6%	+/-0.2	6.0%
1 vehicle available	23.9%	+/-0.2	21.9%	+/-0.3	26.0%
2 vehicles available	43.5%	+/-0.3	44.9%	+/-0.3	42.1%
3 or more vehicles available	26.8%	+/-0.2	27.7%	+/-0.3	25.9%
PERCENT IMPUTED					
Means of transportation to work	7.7%	(X)	(X)	(X)	(X)
Private vehicle occupancy	8.6%	(X)	(X)	(X)	(X)
Place of work	10.3%	(X)	(X)	(X)	(X)
Time leaving home to go to work	16.2%	(X)	(X)	(X)	(X)
Travel time to work	11.4%	(X)	(X)	(X)	(X)
Vehicles available	1.1%	(X)	(X)	(X)	(X)

Subject	Massachusetts
	Female
	Margin of Error
Workers 16 years and over	+/-5,192
MEANS OF TRANSPORTATION TO WORK	
Car, truck, or van	+/-0.2
Drove alone	+/-0.2
Carpooled	+/-0.2
In 2-person carpool	+/-0.1
In 3-person carpool	+/-0.1
In 4-or-more person carpool	+/-0.1
Workers per car, truck, or van	+/-0.01
Public transportation (excluding taxicab)	+/-0.2
Walked	+/-0.1
Bicycle	+/-0.1
Taxicab, motorcycle, or other means	+/-0.1
Worked at home	+/-0.1
PLACE OF WORK	
Worked in state of residence	+/-0.1
Worked in county of residence	+/-0.3
Worked outside county of residence	+/-0.2
Worked outside state of residence	+/-0.1
Living in a place	
Living in a place	+/-0.2
Worked in place of residence	+/-0.2
Worked outside place of residence	+/-0.3
Not living in a place	+/-0.2
Living in 12 selected states	
Living in 12 selected states	+/-0.1
Worked in minor civil division of residence	+/-0.3
Worked outside minor civil division of residence	+/-0.3
Not living in 12 selected states	+/-0.1
Workers 16 years and over who did not work at home	+/-5,017
TIME LEAVING HOME TO GO TO WORK	
12:00 a.m. to 4:59 a.m.	+/-0.1
5:00 a.m. to 5:29 a.m.	+/-0.1
5:30 a.m. to 5:59 a.m.	+/-0.1
6:00 a.m. to 6:29 a.m.	+/-0.1
6:30 a.m. to 6:59 a.m.	+/-0.2
7:00 a.m. to 7:29 a.m.	+/-0.2
7:30 a.m. to 7:59 a.m.	+/-0.2
8:00 a.m. to 8:29 a.m.	+/-0.2
8:30 a.m. to 8:59 a.m.	+/-0.2
9:00 a.m. to 11:59 p.m.	+/-0.3
TRAVEL TIME TO WORK	
Less than 10 minutes	+/-0.2
10 to 14 minutes	+/-0.2
15 to 19 minutes	+/-0.2
20 to 24 minutes	+/-0.2
25 to 29 minutes	+/-0.1
30 to 34 minutes	+/-0.2
35 to 44 minutes	+/-0.1
45 to 59 minutes	+/-0.2
60 or more minutes	+/-0.2
Mean travel time to work (minutes)	+/-0.1
VEHICLES AVAILABLE	
Workers 16 years and over in households	+/-5,023

Subject	Massachusetts
	Female
	Margin of Error
No vehicle available	+/-0.1
1 vehicle available	+/-0.3
2 vehicles available	+/-0.3
3 or more vehicles available	+/-0.3
PERCENT IMPUTED	
Means of transportation to work	(X)
Private vehicle occupancy	(X)
Place of work	(X)
Time leaving home to go to work	(X)
Travel time to work	(X)
Vehicles available	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

While the 2010-2014 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

Michael E. Waterman, PE.

STRUCTURAL ENGINEERING
2A Austin Kelly Lane
Southborough, MA. 01772

tel. 508-229-3100
mw@michaelwaterman.com
www.michaelwaterman.com



October 28, 2016

Robert Purdy
Purdy Construction

Ref: **55 Regent Street**
Cambridge, MA

STRUCTURAL REPORT

We have investigated the existing structure at the above referenced address, and have performed the analysis and calculations required by the Massachusetts State Building Code, Eighth Edition, Chapter 34, and the 2009 IEBC, Chapter 8, Section 807, the structural design for the building is in accordance with the requirements for Level 3 Alterations.

The existing building is two story above grade with a crawl space, the floors and roof are framed with 2x10 wood floor joists spaced at 16" on center, with a 12 foot span. The interior beams are 10x12 heavy timber supported on interior steel columns on a 12' by 17' bay. The exterior walls are brick bearing. We have analyzed this existing framing and found that is capable of supporting the loads required for proposed residential use. The condition of the existing framing and exterior brick masonry walls that will remain is good. Any unsuitable brick masonry will be replaced or re-pointed as necessary. Excavation of fill in the basement will not adversely affect the existing foundation walls.

The proposed alterations require that some of the areas, including the roof, be reframed with new wood framing, and some interior columns relocated with new steel transfer beams.

All of the new work has been designed in accordance with the above referenced Building Code requirements.

Signed,

Michael E. Waterman, PE.