Exhibit 1

Overview of Residential Reconstruction in Needham

Lee Newman
Town of Needham
Director of Planning and Community Development

Dimensional Regulations: Single Residence B & General Residence Zoning Districts

	Minimum Lot Area (sq ft)	Minimum Frontage (feet)	Front Setback (feet)	Side Setback (feet)	Rear Setback (feet)	Maximum Floor Area Ratio (FAR)	Maximum Lot Coverage %	Maximum Stories	Maximum Height (feet)
Single Residence B & General Residence Zoning Districts (post-1986 lots)	10,000	80	20	12.5 [a]	10	NR	NR	2.5	35
Single Residence B & General Residence Zoning Districts (pre-1986 lots)	10,000	80	20	10	10	NR	NR	2.5	35
Single Residence B Zoning District (New Construction)	10,000	80	20	12.5 * [a]	20	NR	25%-30%	2.5	35
General Residence Zoning District (New Construction)	10,000	80	20	12.5 * [a]	20	NR	30%-35%	2.5	35

* 10’ side setback for non-conforming lots

[a] Increased to 14.5’ for any length over 28’

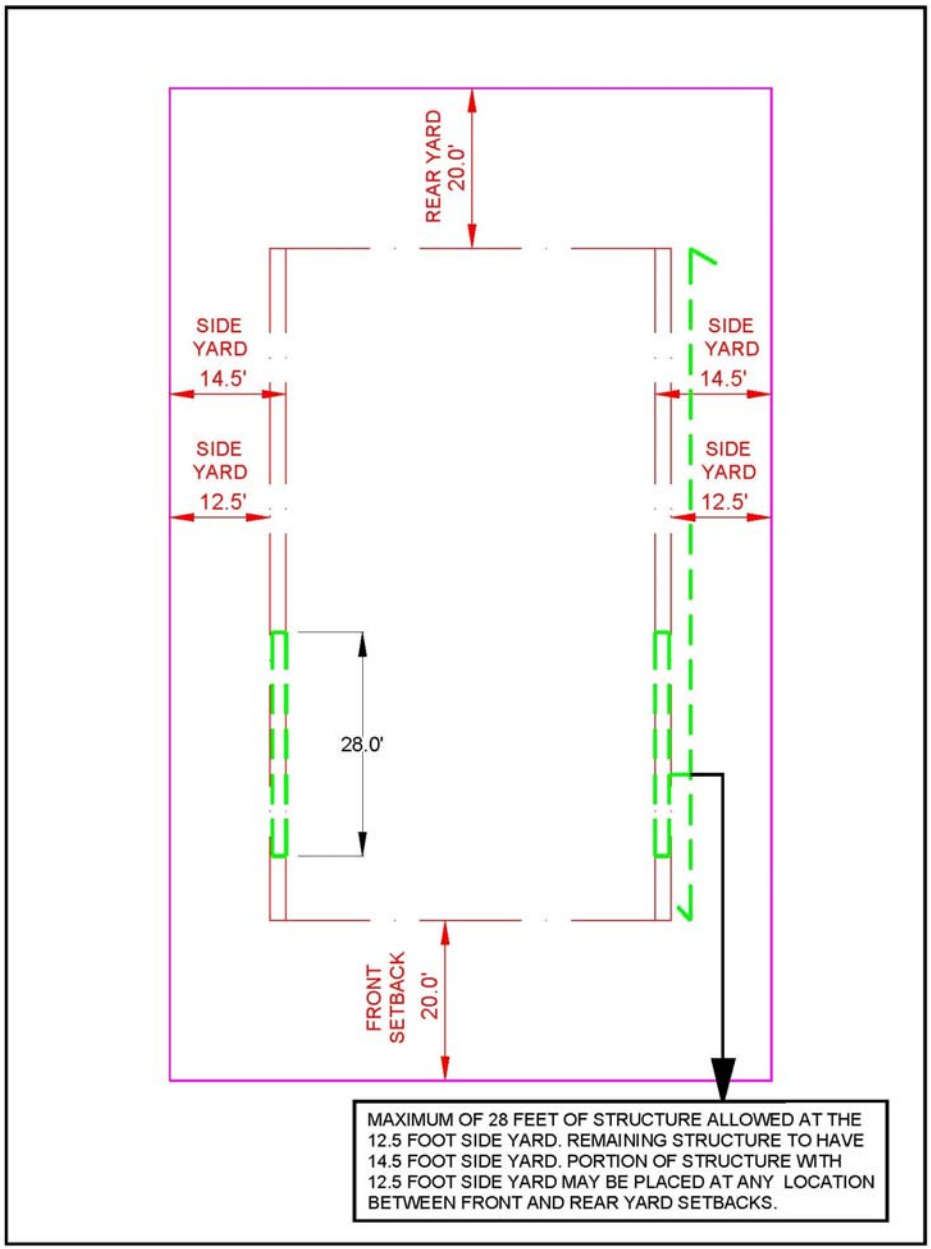
Definition of New Construction

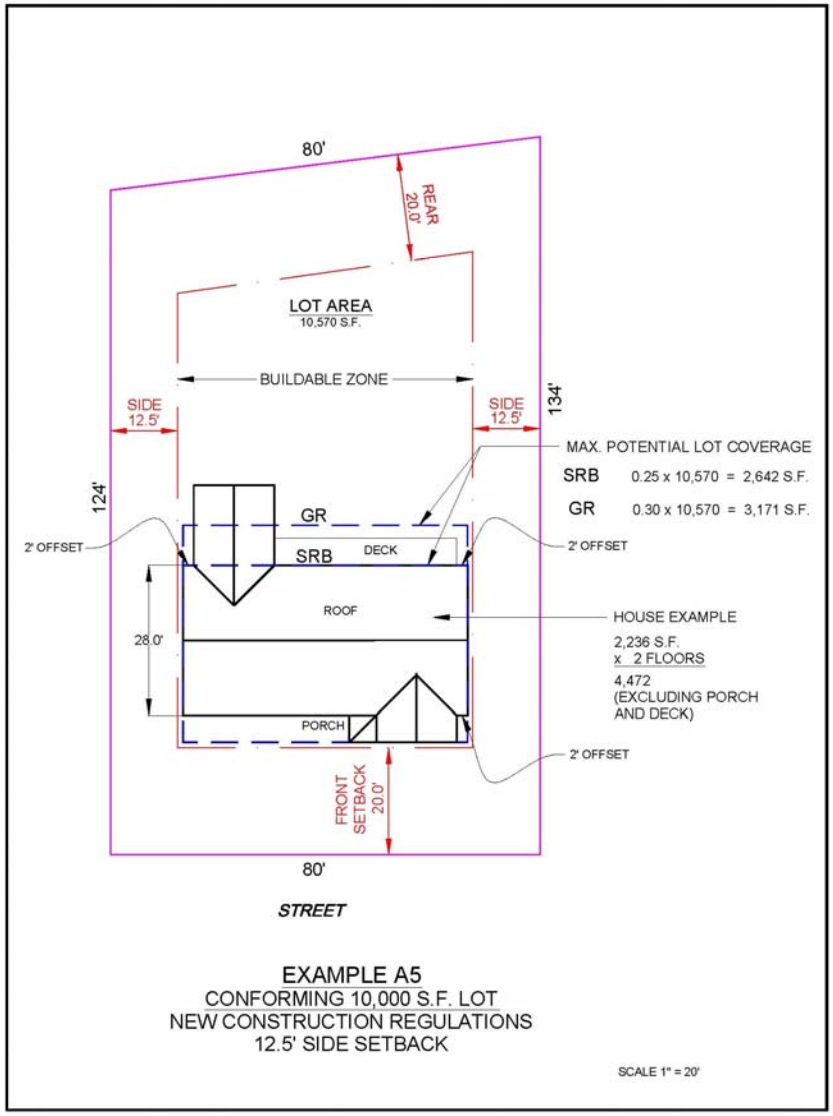
1. Any construction of a structure on a vacant lot.
2. Any construction which involves demolition of more than 50% (fifty percent) of the exterior frame or exterior envelope of an existing structure.
3. Any addition to an existing one-story structure which results in a gross floor area greater than 240% (two hundred forty percent) of the gross floor area of the existing structure.
4. Any addition to an existing one and one-half story structure which results in a gross floor area greater than 220% (two hundred twenty percent) of the gross floor area of the existing structure.
5. Any addition to an existing two-story or two and one-half story structure which results in a gross floor area greater than 175% (one hundred seventy-five percent) of the gross floor area of the existing structure.

For purposes of calculating the percentages of any construction, addition or demolition under this definition, all construction shall be taken into account which commenced, or could have commenced, pursuant to an issued permit within two (2) years prior to the date of any request for any permit to construct, reconstruct, alter, add, extend or otherwise structurally change any structure.

Table of Lot Size Ranges

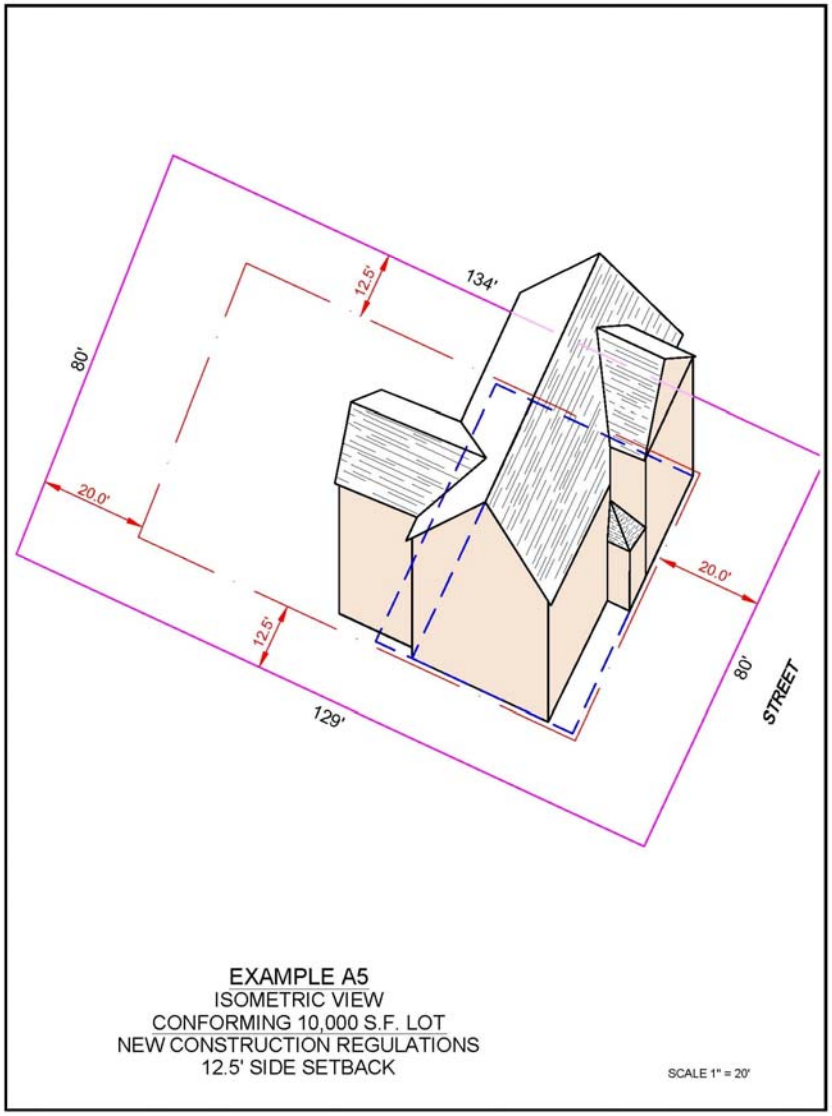
	Lot Size (SF)	% Coverage	Allowable Coverage (SF)
Single Residence B	7500 or more	25	1875 or more
	7000-7499	26	1820-1950
	6500-6999	27	1755-1890
	6000-6499	28	1680-1820
	5500-5999	29	1595-1740
	5499 or less	30	1650 or less
General Residence	9000 or more	30	2700 or more
	8500-8999	31	2635-2790
	8000-8499	32	2560-2730
	7500-7999	33	2475-2640
	7000-7499	34	2380-2550
	6999 or less	35	2450 or less


REAR YARD
20.0'
SIDE
YARD
14.5'
SIDE
YARD
14.5'
SIDE
YARD
12.5'
SIDE
YARD
12.5'
28.0'
FRONT
SETBACK
20.0'
MAXIMUM OF 28 FEET OF STRUCTURE ALLOWED AT THE
12.5 FOOT SIDE YARD. REMAINING STRUCTURE TO HAVE
14.5 FOOT SIDE YARD. PORTION OF STRUCTURE WITH
12.5 FOOT SIDE YARD MAY BE PLACED AT ANY LOCATION
BETWEEN FRONT AND REAR YARD SETBACKS.



EXAMPLE A5
CONFORMING 10,000 S.F. LOT
NEW CONSTRUCTION REGULATIONS
12.5' SIDE SETBACK

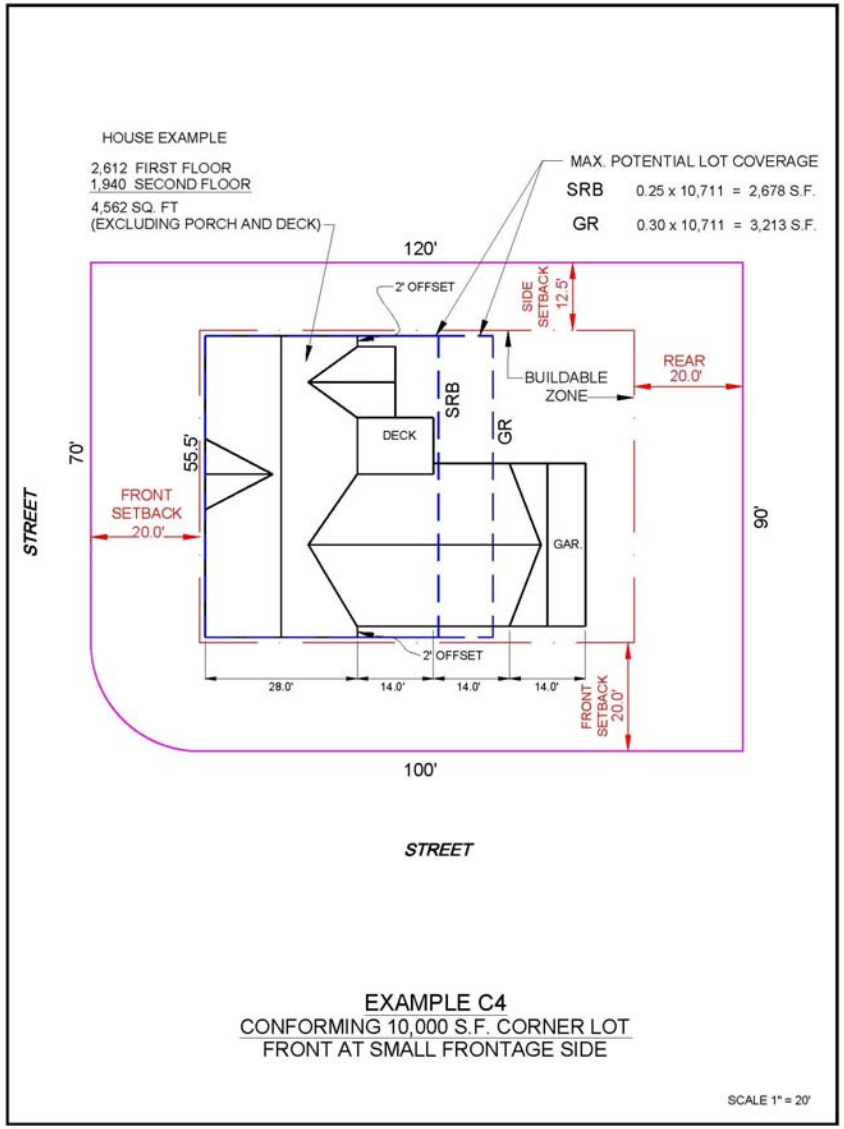
SCALE 1" = 20'



EXAMPLE A5
ISOMETRIC VIEW
CONFORMING 10,000 S.F. LOT
NEW CONSTRUCTION REGULATIONS
12.5' SIDE SETBACK

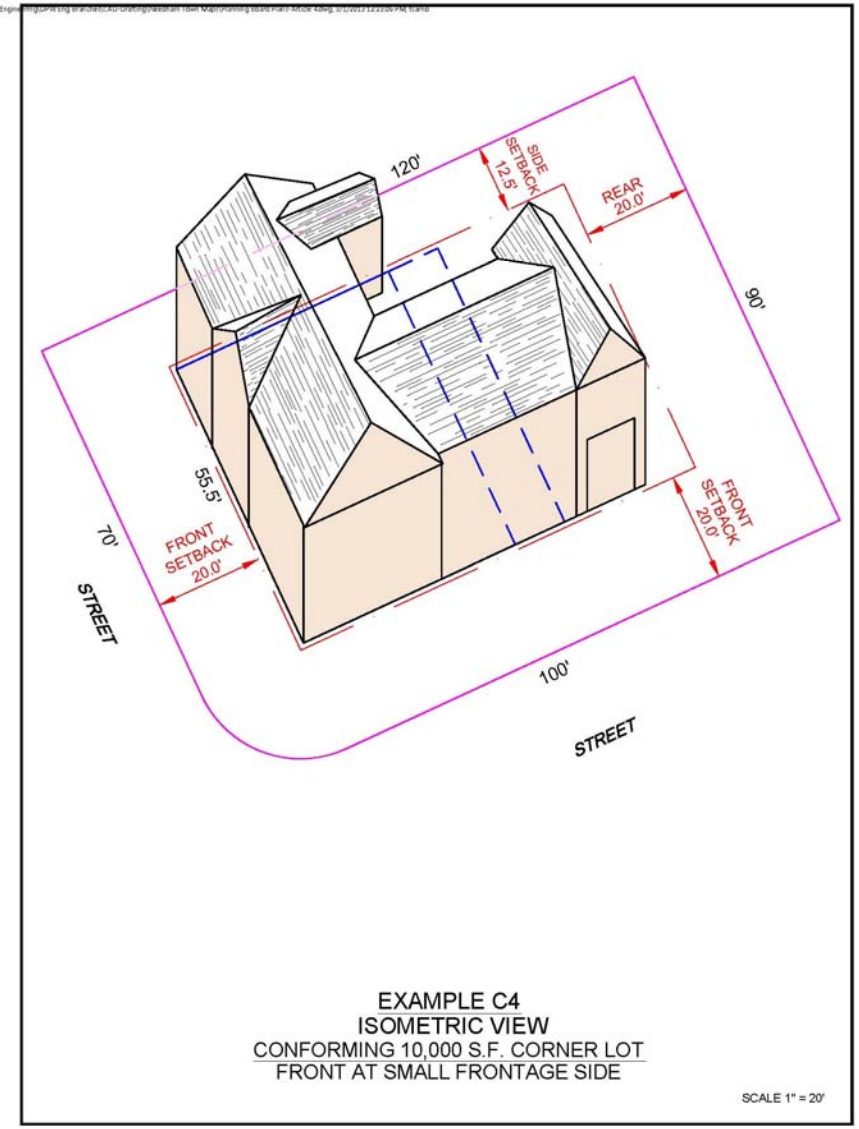
SCALE 1" = 20'

Based on Sketch By Mark Gluesing



EXAMPLE C4
CONFORMING 10,000 S.F. CORNER LOT
FRONT AT SMALL FRONTAGE SIDE

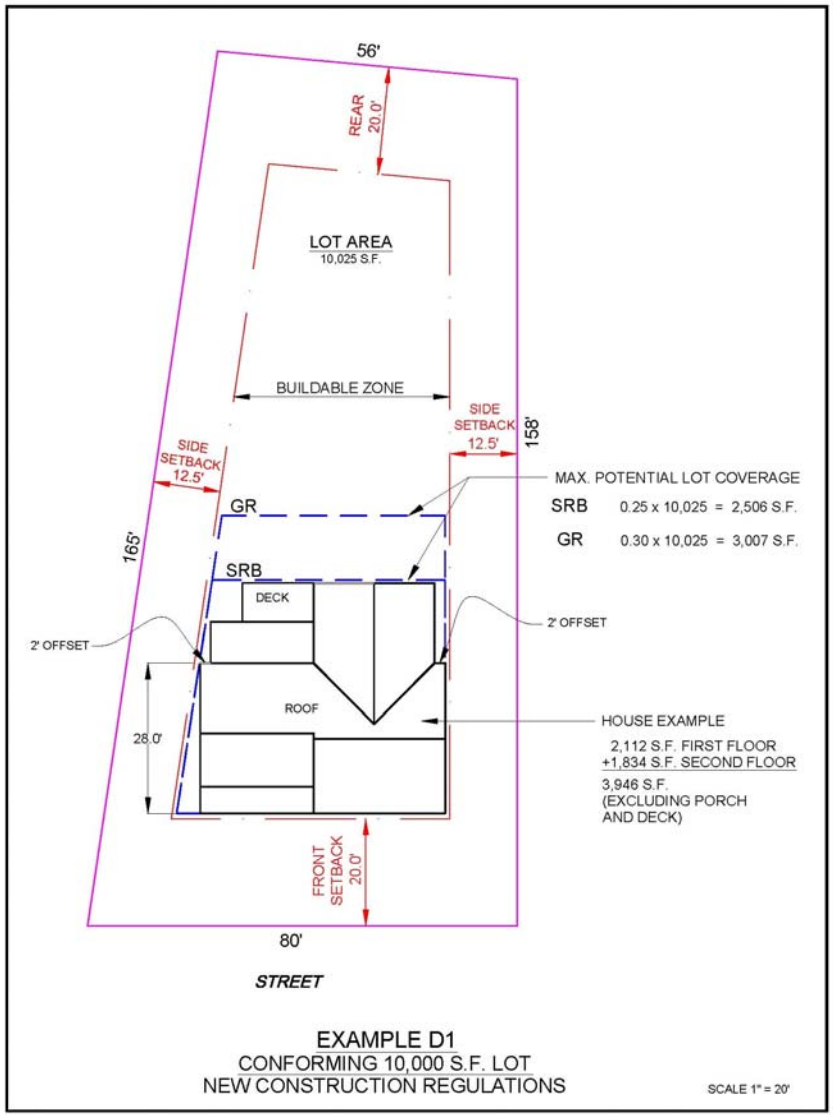
SCALE 1" = 20'



EXAMPLE C4
ISOMETRIC VIEW
CONFORMING 10,000 S.F. CORNER LOT
FRONT AT SMALL FRONTAGE SIDE

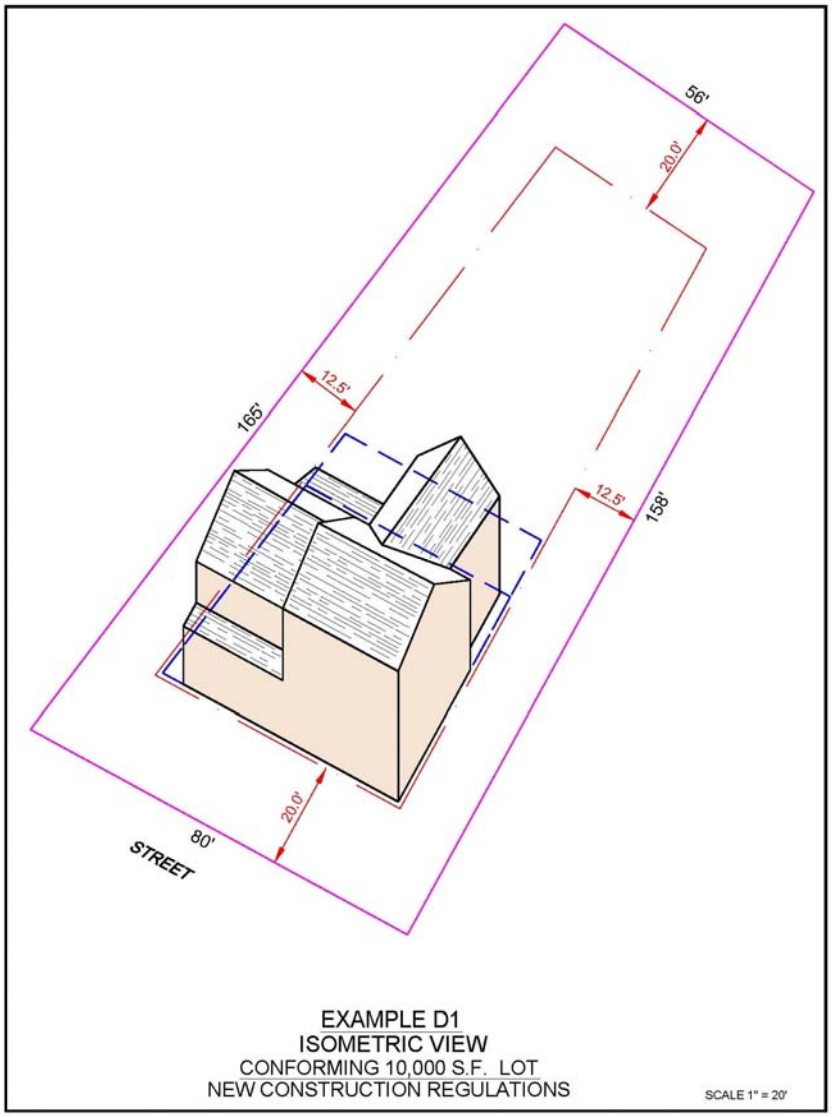
SCALE 1" = 20'

Based on Sketch By Mark Gluesing



EXAMPLE D1
CONFORMING 10,000 S.F. LOT
NEW CONSTRUCTION REGULATIONS

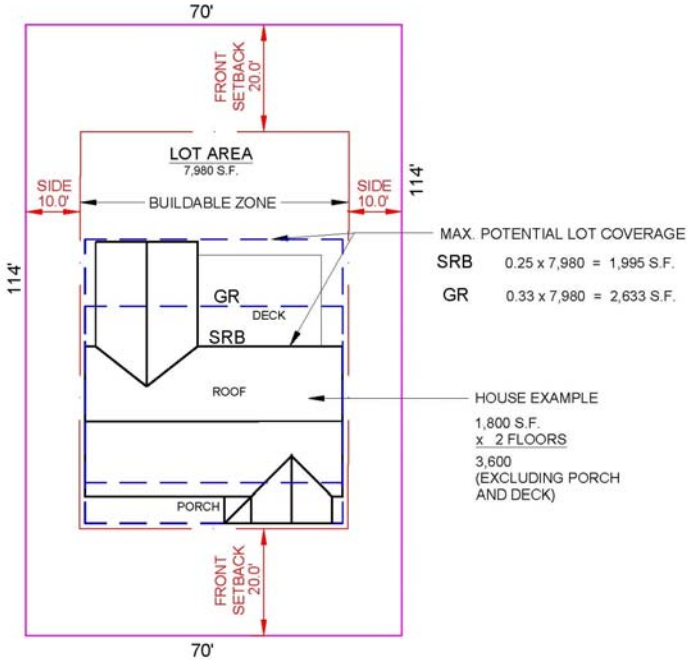
SCALE 1" = 20'



EXAMPLE D1
ISOMETRIC VIEW
CONFORMING 10,000 S.F. LOT
NEW CONSTRUCTION REGULATIONS

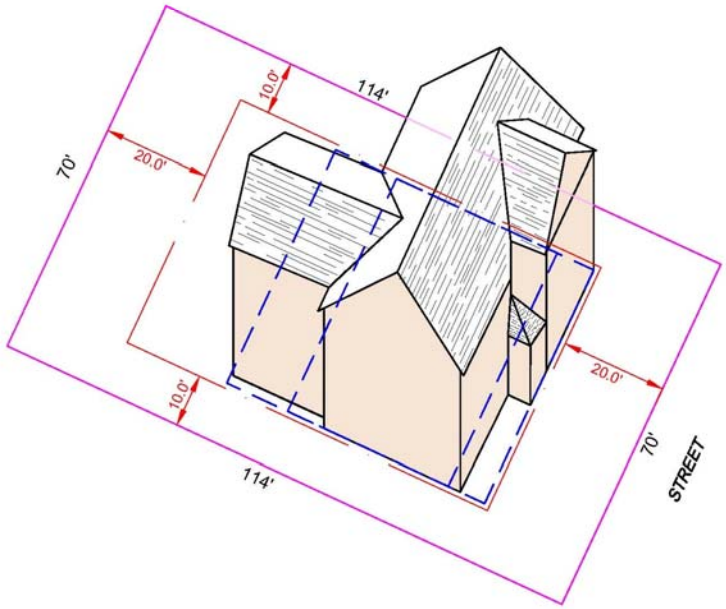
SCALE 1" = 20'

Based on Sketch By Mark Gluesing



EXAMPLE B5
NON-CONFORMING LOT
NEW CONSTRUCTION REGULATIONS
10' SIDE SETBACK

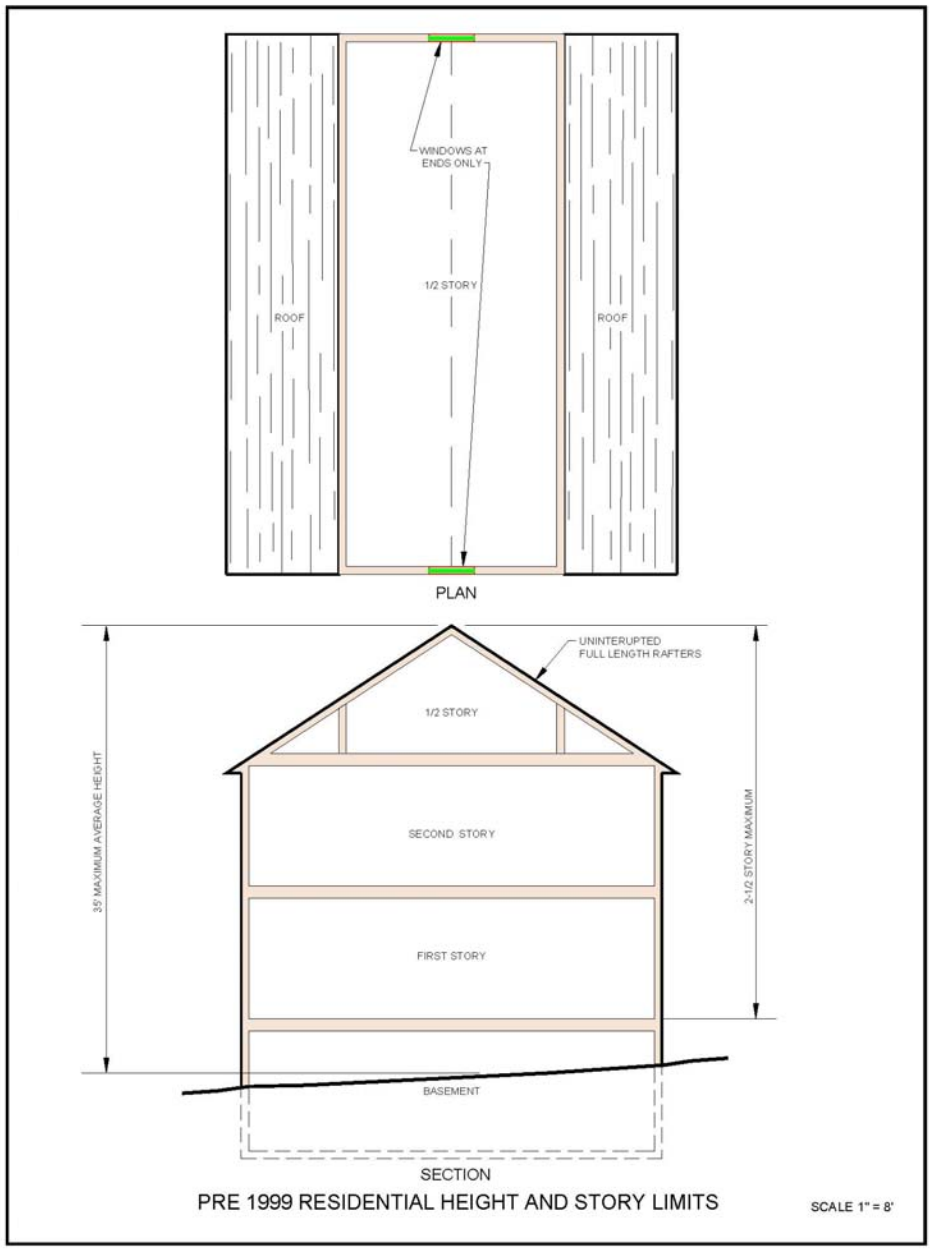
SCALE 1" = 20'



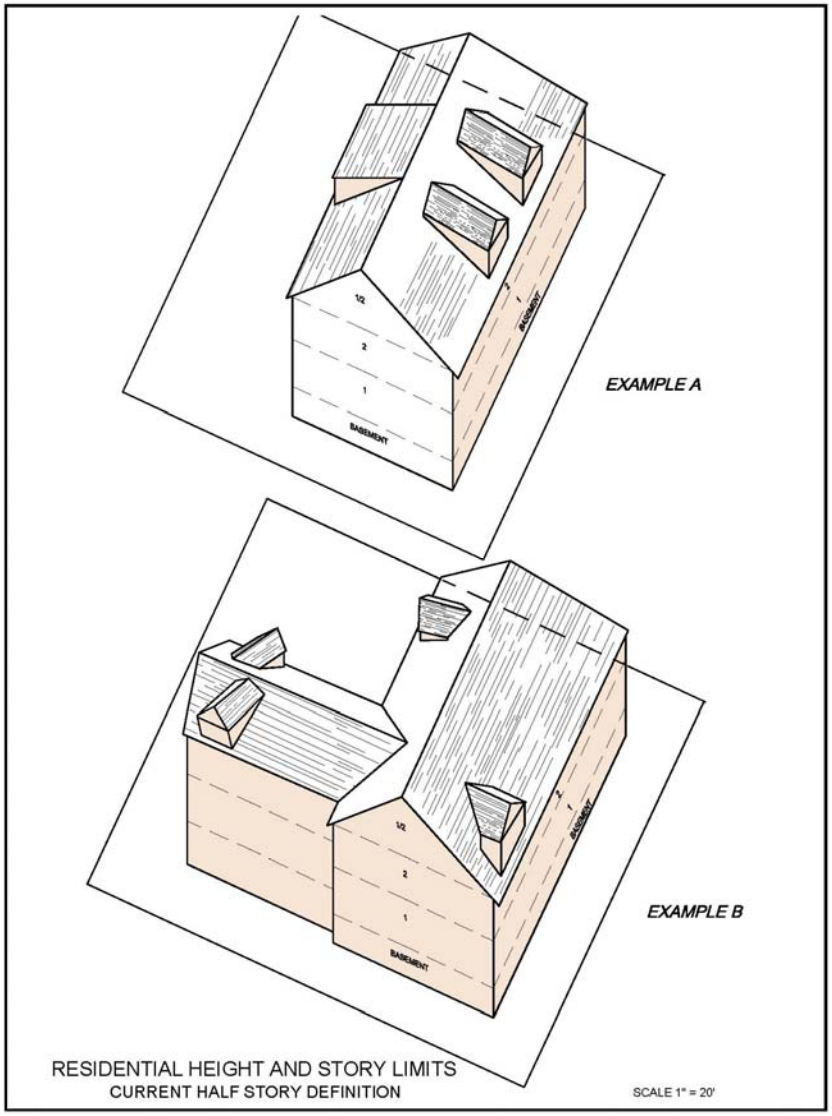
EXAMPLE B5
ISOMETRIC VIEW
NON-CONFORMING LOT
NEW CONSTRUCTION REGULATIONS
10' SIDE SETBACK

SCALE 1" = 20'

Based on Sketch By Mark Gluesing



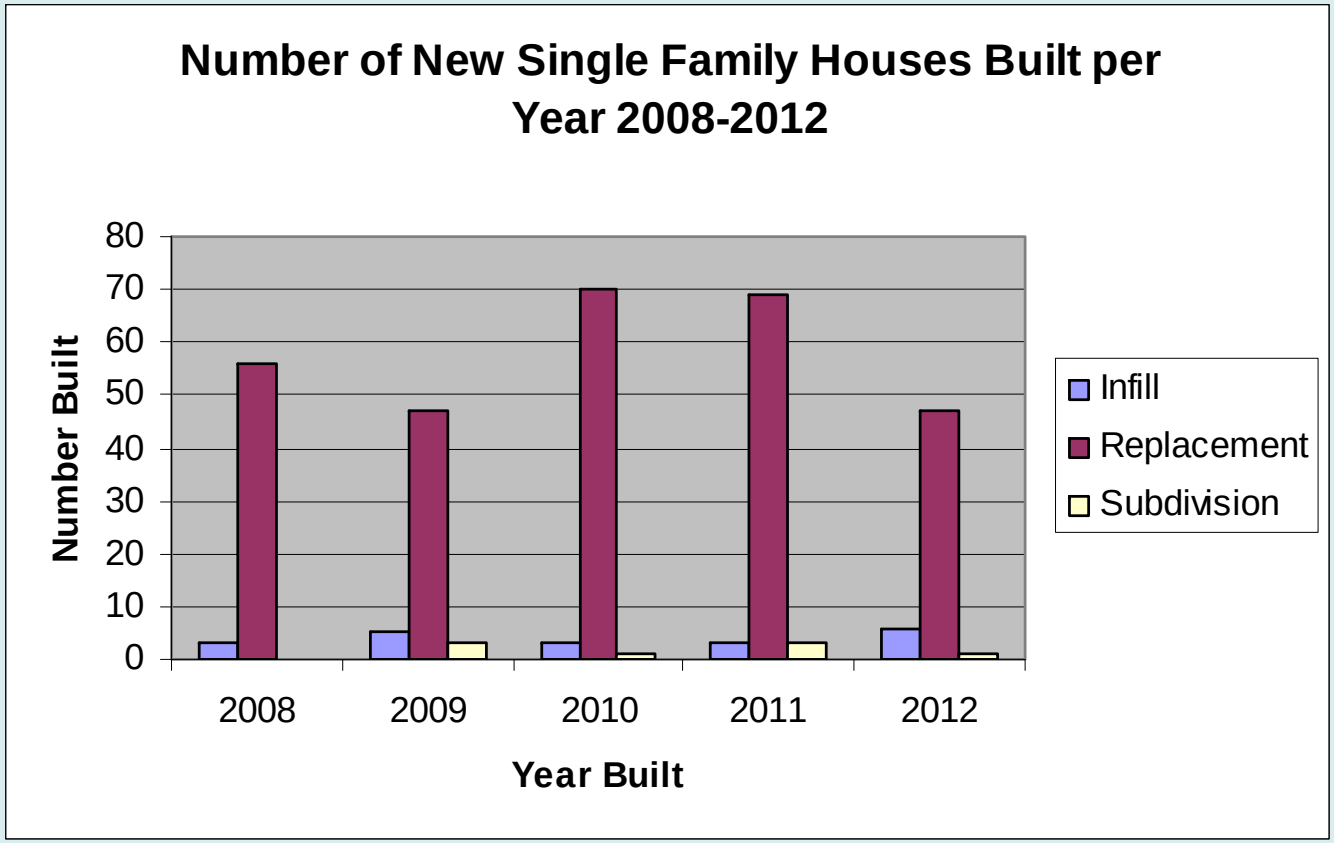
Based on Sketch By Mark Gluesing



Based on Sketch By Mark Gluesing

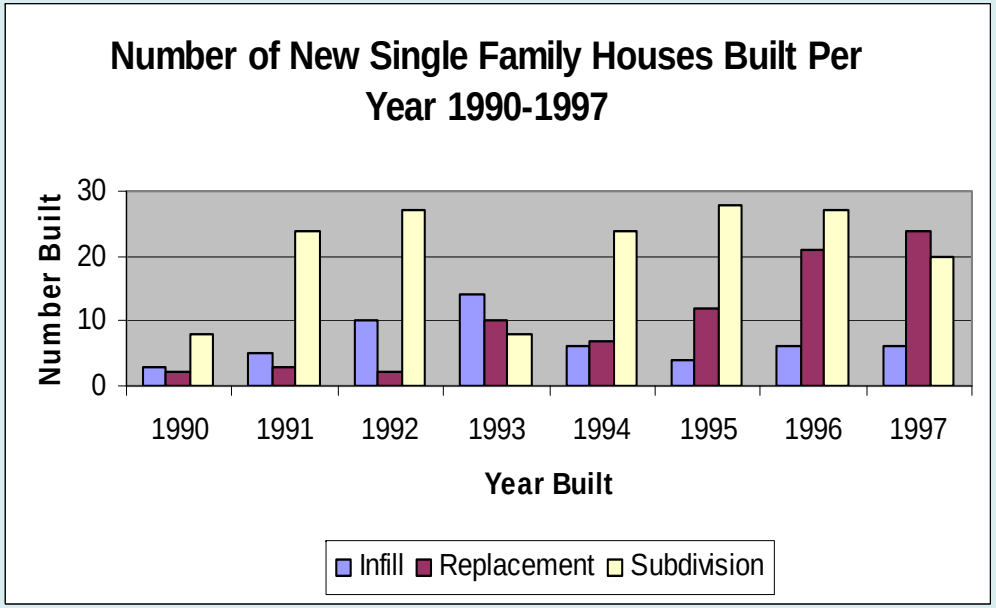
New Single Family Homes

Year	Infill	Replacement	Subdivision	Total
2008	3	56	0	59
2009	5	47	3	55
2010	3	70	1	74
2011	3	69	3	75
2012	6	47	1	54
Total	**20**	**289**	**8**	**317**



New Single Family Homes

Year	Infill	Replacement	Subdivision	Total
1990	3	2	8	13
1991	5	3	24	32
1992	10	2	27	39
1993	14	10	8	32
1994	6	7	24	37
1995	4	12	28	44
1996	6	21	27	54
1997	6	24	20	50
Total	54	81	166	301



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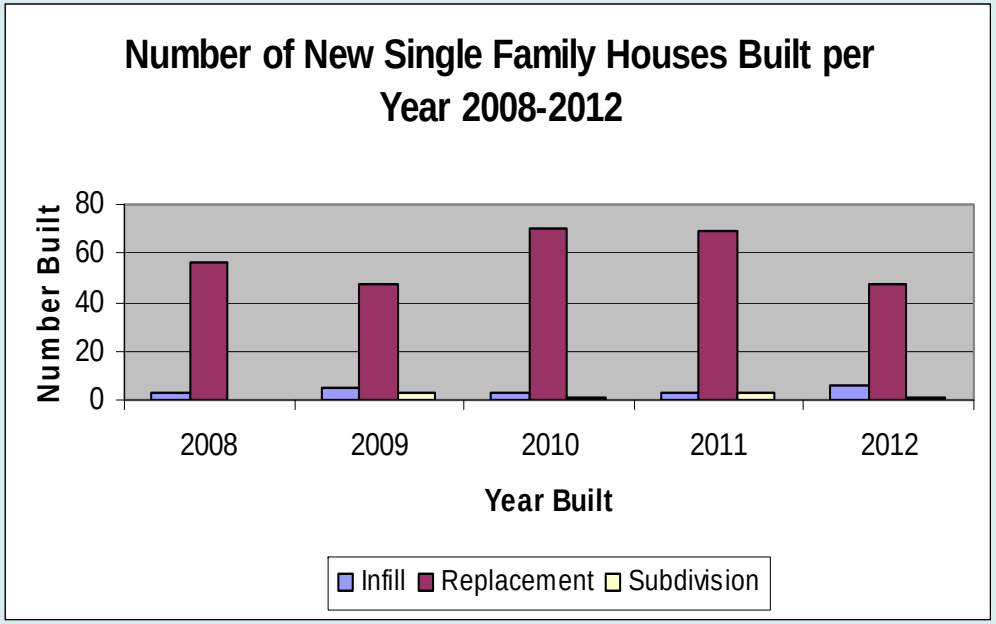


Exhibit 3

May 15, 2014

TO: Lee Newman, Director of Planning and Community Development
Alex Clee, Assistant Planner

FROM: Karen Sunnarborg, Community Housing Specialist

RE: Demolition/Replacement Activity for Residential Units

I thought it would be useful to review updated data on the level of demolition and replacement activity since this analysis was last conducted as of the end of 2012. This information should provide some useful input into the Large House Review Study Committee and the Housing Production Plan.

As expected, Christina in the Building Department was extremely helpful in providing back-up data for this analysis. The results are as follows:

Summary of Demo/Replacement Activity
January 1, 2013 through May 12, 2014

Period	# New Residential Units	# Residential Units Demolished	Net New Units
2013	104	96* 92.3% of all new units	8
2014 through 5-12-14	42	30 71.4% of all new units	12
Total	146	126 86.3% of all new units	20

*One of the demolitions involved a two-family house that counts as a loss of two units.

This data suggests that the total number of housing units in Needham is now up to about 11,200 units. It also indicates the recycling of residential property remains high, involving the replacement of smaller homes with much larger and expensive ones.

While the data shows that teardown activity decreased somewhat in 2014, going from 92.3% of all new residential building in 2013 to 71.4% in 2014 as of May 12th, it should be noted that not all teardown activity involves a one for one replacement of units. For example, the teardown of two (2) houses to make way for the Greendale Village 40B development will ultimately be replaced with 20 new homes with four (4) of the new units counted thus far in this analysis (the other buildings have not yet been permitted). Additionally, a single-family home was demolished at 28 Webster Street for the Webster Street Green 40B development, and four (4) of the planned 10 units were included in this analysis (only one building has been permitted thus far). Also, the demolition of a building at 50 Dedham Avenue will create 10 units, and the demolition of a house at 1285 South Street made way for a group home that is counted as a single unit in this analysis but will be counted as five (5) units in the Subsidized Housing Inventory (SHI). Consequently more units have involved demo/replacement than these figures reveal. It is also worth noting that 92% of all new single-family homebuilding between 2010 and 2012 involved demo/replacement activity, the same as the 2013 level.

I also examined the sizes of units that are being demolished to those that are being built in comparison to lot sizes. This data for January 1st through May 12th of this year is provided below.

Floor Area Ratios for Demolished Units and New Replacement Homes
January 1, 2014 through May 12, 2014

Lot Size in Square Footage	Size of Demo House	Previous Floor Area Ratio (%)	Size of New House**	New Floor Area Ratio (%)
31,798	1,846	5.8	3,904	12.3
10,019	908	9.1	5,353	53.4
10,454	1,944	18.6	5,317	50.9
12,197	1,608	13.2	6,679	54.8
10,454	1,608	15.4	5,732	54.8
11,761	1,388	11.8	5,346	45.5
10,890	1,248	11.5	6,376	58.5
6,970	1,416	20.3	4,651	66.7
11,761	989	8.4	6,338	63.9
15,682	2,258	14.4	8,066	51.4
15,682	1,764	11.2	5,116	32.6
43,996	*	*	7,479	17.0
11,326	1,536	13.6	4,382	38.7
54,450	*	*	8,473	15.6
25,700	*	*	5,369	20.9
11,326	2,544	22.5	5,008	44.2
10,019	1,588	15.8	3,780	37.7
9,148	*	*	5,314	58.1
13,068	1,574	12.0	4,902	37.5
9,583	2,400	25.0	5,944	62.0
13,068	1,953	14.9	5,688	43.5
10,019	*	*	6,138	61.3
17,424	1,080	6.2	4,265	24.5
10,890	988	9.1	2,890	26.5
10,019	1,592	15.9	5,008	50.0
6,970	1,232	17.7	5,009	71.9
10,019	1,121	11.2	4,338	43.3
10,019	1,485	14.8	6,228	62.2
11,326	1,845	16.3	5,855	51.7
17,242	1,652	9.6	6,132	35.6

*No record of a previous unit so most likely not a teardown. **Does not include the size of decks.
The analysis does not include four (4) units at Greendale Village.

This information suggests the following key findings:

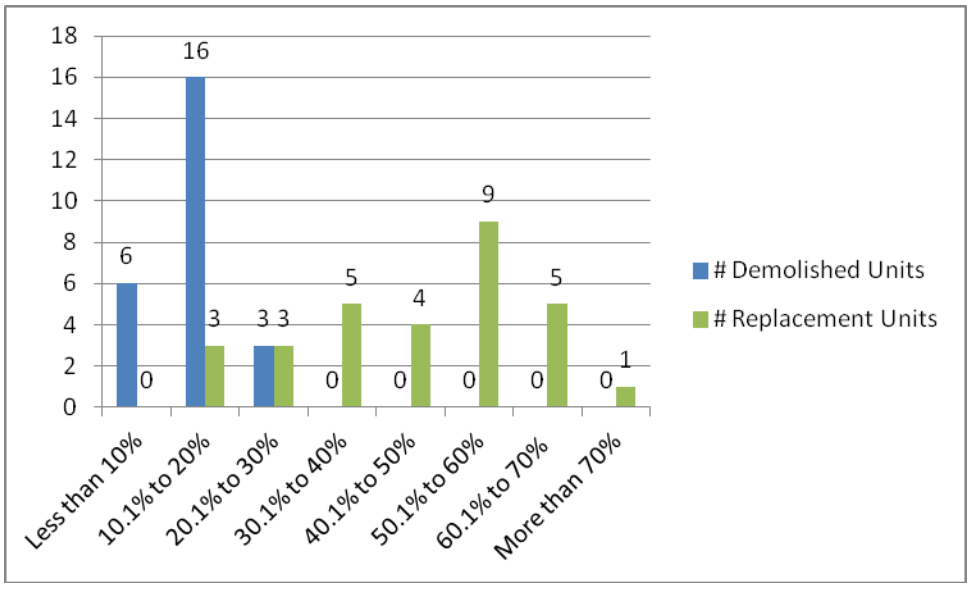
- Not surprisingly, teardown activity has focused on the smaller and consequently relatively more affordable units in Needham's private housing stock. Home sizes ranged from a low of 908 square feet to 2,544 with the median size of 1,608 square feet. It should be noted that one of the largest homes that was demolished was a beautiful Victorian home of 2,258 square feet (valued at $801,400), replaced by a home of 8,066 square feet that is on the market for $2.5

million.[1] Another demolition involved a two-family Victorian of 2,400 square that was replaced by a very large single-family with 5,944 square feet, thus resulting in the likely loss of both a relatively affordable ownership and rental unit.

- Corresponding to the small sizes of the demolished units are floor area ratios ranging from 5.8% to 25% with a median of 14.9%.
- The new homes are very large. Only one property contained less than 3,000 square feet in living space with seven (7), or less than one-quarter, with less than 5,000 square feet. The median size of these replacement homes was 5,353 square feet.
- Clearly many of the new homes are being squeezed onto relatively small lots with half of the 30 properties having floor area ratios greater than 50% and almost two-thirds greater than 40%.
- It should also be noted that unlike quite a few other suburban communities Needham's zoning allows development on smaller lots, which is a "smart" thing in appropriate locations.

A comparison of the number of units involving demolition and replacement within ranges of floor area ratios is presented in the following graph clearly demonstrating the dramatic shifts in the consumption of land as a result of demolition/replacement activity in Needham neighborhoods.

Numbers of Demolished and Replacement Units by FAR
January 1, 2014 through May 12, 2014



Note: Five (5) of the lots did not involve demolition.

[1] Town Building Department records indicate that the house is 8,066 square feet but the real estate listing suggests 6,091 square feet.

Exhibit 3

Planning and Community Development Department
Large House Study Review Committee

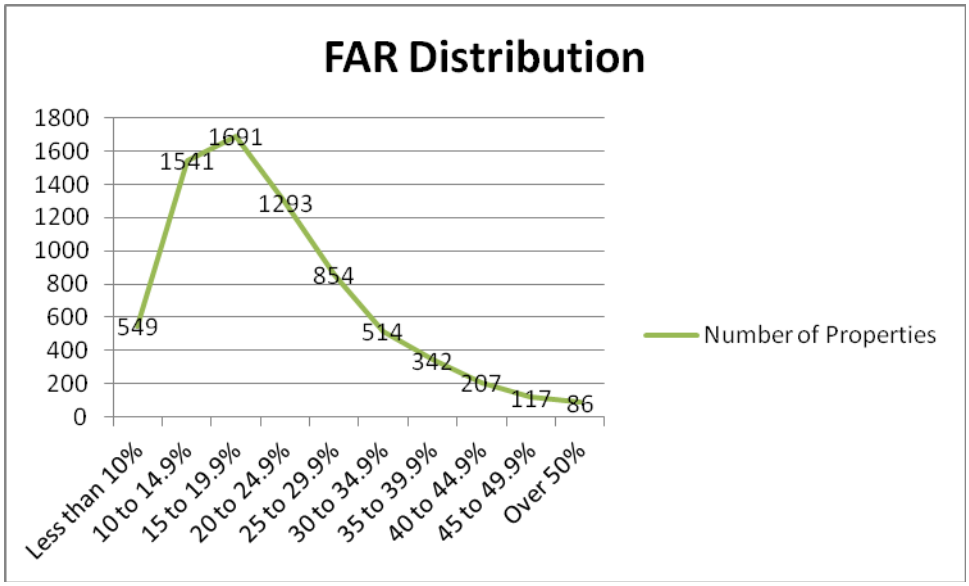
Working with the Town Assessor and the Information Technology Unit, the Planning and Community Development Department has conducted an analysis of various features of the single-family housing stock in the Residence B districts as input into the work of the Large House Study Review Committee. This analysis, summarized below, involved a review of FAR, lot coverage, conforming versus nonconforming lots, and amounts of finished space. Some of this data has also been mapped.

FAR Distribution

The table and figure below analyze the Floor Area Ratios (FAR) of single-family homes in the Residence B districts. This data suggests that the majority of such properties were within an FAR of 20% with a median of 19.4%. About 30% of the properties had FARs above 25.0% and of these 5.6% were more than 40%. In comparison, the 25 properties we previously examined that involved demolition and replacement activity from January through Mary 12, 2014, the FARs ranged between 24.5% and 71.9%, with almost three-quarters over 40%.

FAR Distribution

FAR	Number of Properties	Percentage of Properties
Less than 10.0%	549	7.6%
10.0-14.9%	1,541	21.4%
15.0-19.9%	1,691	23.5%
20.0-24.9%	1,293	18.0%
25.0-29.9%	854	11.9%
30.0-34.9%	514	7.1%
35.0-39.9%	342	4.8%
40.0-44.9%	207	2.9%
45.0-49.9%	117	1.6%
More than 50.0%	86	1.2%
	7,194	100.0%



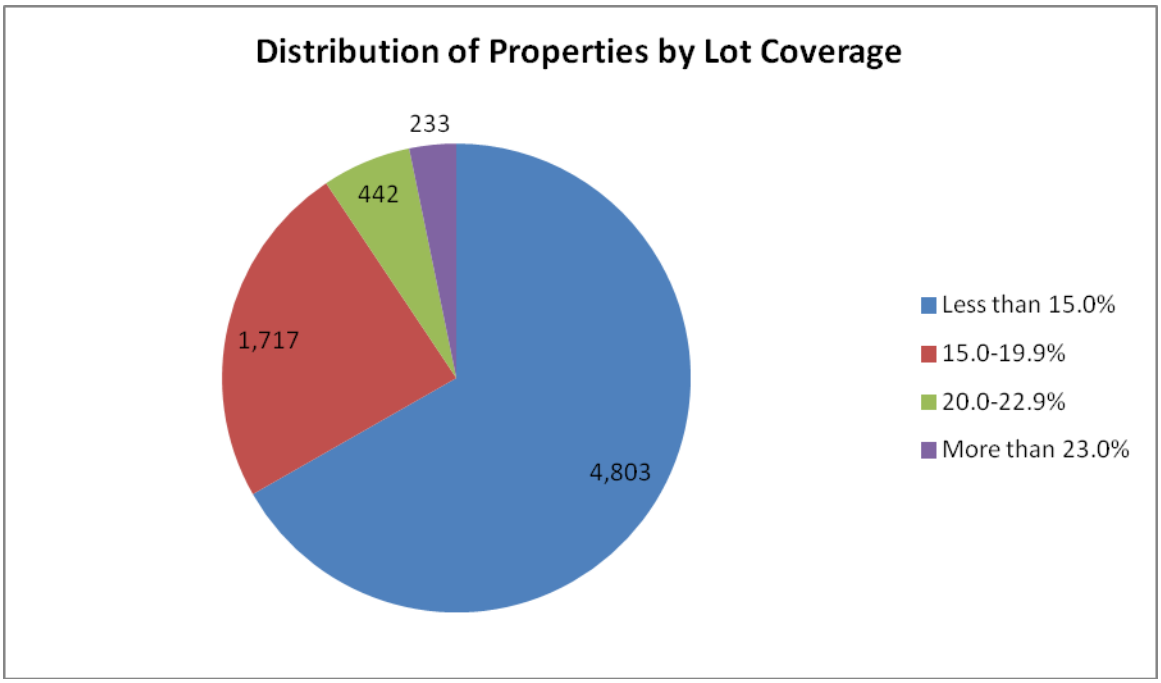
Lot Coverage

Data indicates that about two-thirds of the properties had lot coverage percentages of less than 15.0% with a median of 12.96% in comparison to a median of 23% for the 25 demo/replacement units that were previously examined. Only 233 properties had percentages of 23% or more, 80 of which involved percentages of more than 25%.

Distribution of Properties by Lot Coverage

Lot Coverage	Number of Properties	Percentage of Properties
Less than 15.0%	4,803	66.8%
15.0 to 19.9%	1,717	23.9%
20.0 to 22.9%	442	6.1%
23.0 to 24.9%	153	2.1%
More than 25.0%	80	1.1%
	7,195	100.0%

Total size of structure reflects finished space that includes attached garages



Conforming and Nonconforming Properties

The table below summarizes Assessor's data in regard to conforming and nonconforming properties. Conforming properties have lot sizes of at least 10,000 square feet in size and frontages of 80 feet or more. About three-quarters of Needham's single-family properties in the Residence B Districts are conforming with respect to lot size as well as frontage. Additionally data indicates that 1,237 properties, or 17.2% of all single-family residences in Residence B, are nonconforming for both lot size and frontage. Accommodating larger replacement homes on these properties is more challenging.

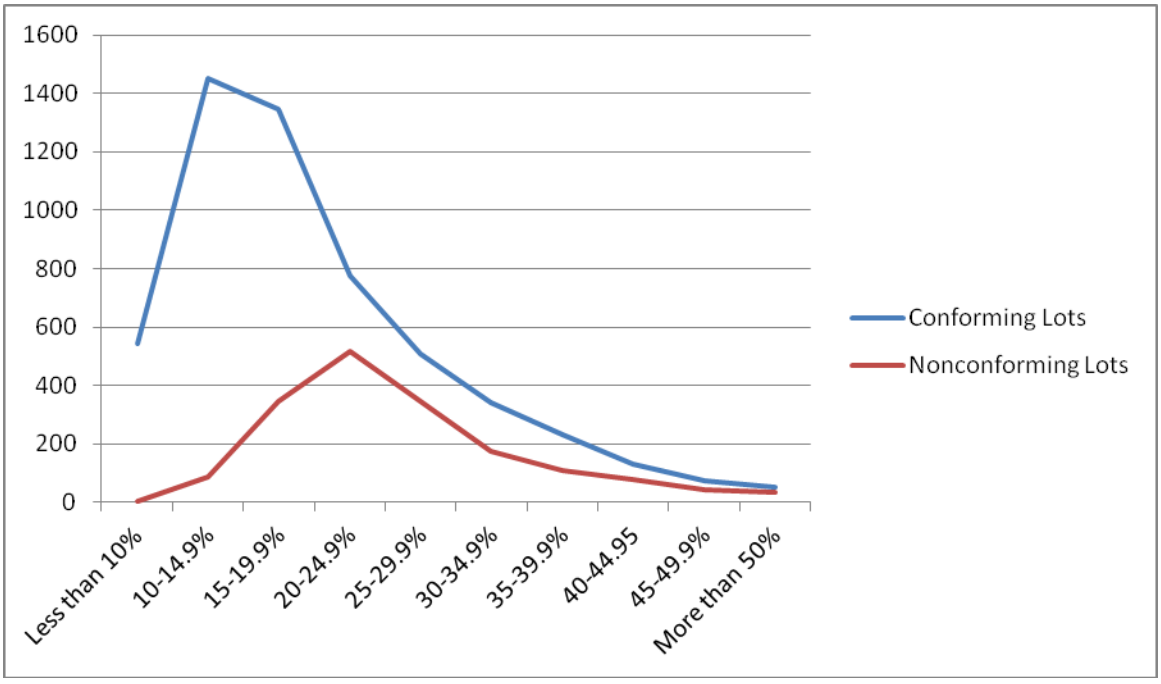
Conforming and Nonconforming Properties

Conforming				Nonconforming				Total			
Lot Size		Frontage		Lot Size		Frontage		Conforming for Lot Size and Frontage		Nonconforming for Lot Size and Frontage	
#	%	#	%	#	%	#	%	#	%	#	%
5,450	75.7	5,390	74.9	1,750	24.3%	1,810	25.1%	4,688	75.7%	1,237	17.2%

The table and figure below identify the distribution of units according to whether they are conforming as to lot size and FAR. More than half of the conforming lots involve FARs ranging from 10% to 20% while about half of the nonconforming lots have FARs between 20% and 30%. Approximately 15% of the conforming lots had FARs of more than 30% in comparison to one-quarter of the nonconforming lots.

Conforming and Nonconforming Properties Based on Lot Size and FAR

FAR	Conforming Lots		Nonconforming Lots		Total	
	#	%	#	%	#	%
Less than 10.0%	544	10.0	5	0.3	549	7.6
10.0 to 14.9%	1,452	26.6	89	5.1	1,541	21.4
15.0 to 19.9%	1,344	24.7	347	19.9	1,691	23.5
20.0 to 24.9%	774	14.2	519	29.8	1,293	18.0
25.0 to 29.9%	508	9.3	346	19.8	854	11.9
30.0 to 34.9%	341	6.3	173	9.9	514	7.1
35.0 to 39.9%	231	4.2	111	6.4	342	4.8
40.0 to 44.9%	130	2.4	77	4.4	207	2.9
45.0 to 49.9%	75	1.4	42	2.4	117	1.6
50.0% or more	51	0.9	35	2.0	86	1.2
Total	5,450	100.0	1,744	100.0	7,194	100.0



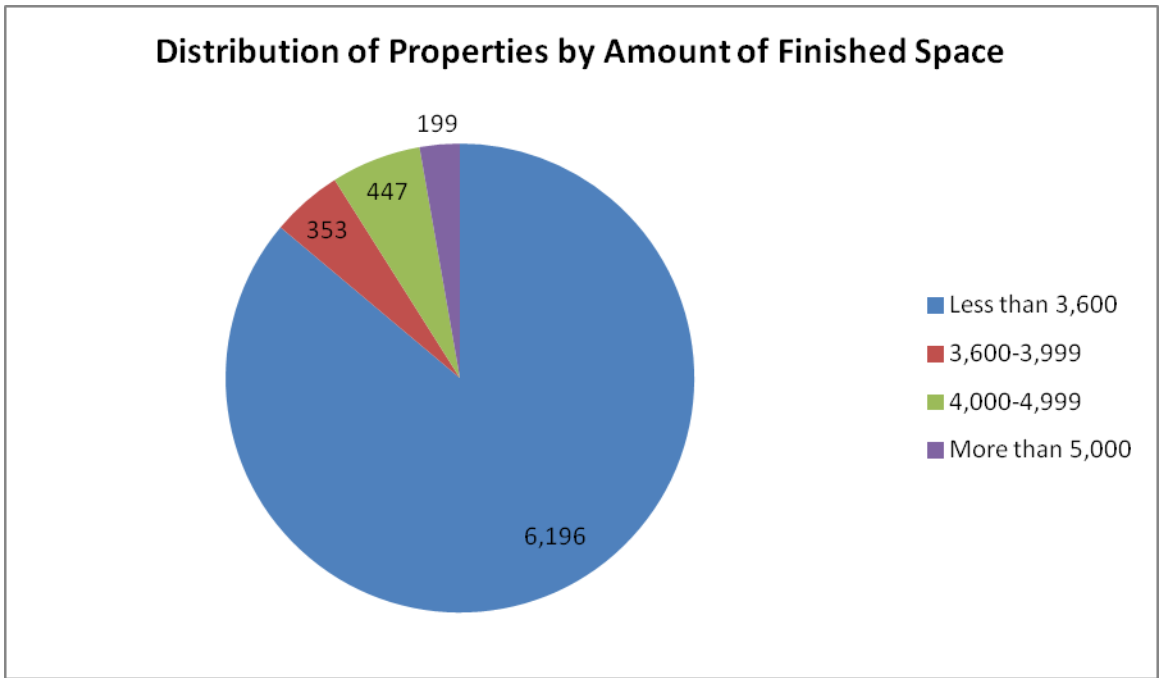
Amount of Finished Space

As the following table and chart indicate, the substantial majority of Needham's properties have less than 3,600 square feet of finished space (includes attached garages) with a median of 2,092 square feet. Nine percent involve large houses of 4,000 square feet or more which likely includes many of the new replacement homes.

Distribution of Properties by Amount of Finished Space

Finished Space (square footage)	Number of Properties	Percentage of Properties
Less than 3,600	6,196	86.1%
3,600 to 3,999	353	4.9%
4,000 to 4,999	447	6.2%
More than 5,000	199	2.8%
	7,195	100.0%

Finished space includes attached garages



Note: Some of the totals from the above tables and charts deviate somewhat due to the inclusion of a number of zero figures for the particular type of data we were examining.

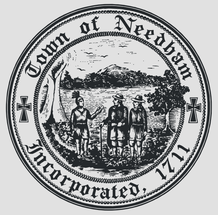
Exhibit 4

Town of Needham

Massachusetts

Dwelling Demolitions

Select Locations 2010-2014



WELLESLEY

NEWTON

BOSTON

DEDHAM

DOVER

WESTWOOD

Charles River

Cutler Lake

Rosemary Lake

Sabrina Lake

Morse Pond

Walker Pond

EXIT 20

EXIT 19

EXIT 18

EXIT 17

N

W E

S

Miles

0 0.25 0.5 1 1.5

1 inch = 1,000 feet

Legend

- Interstate Highways
- Major Roads
- Minor Roads & Ramps
- Railroads
- Waterbodies
- Streams
- Town Boundaries
- Road Index Grid

Dwellings, Year Demolished

- 2010
- 2011
- 2012
- 2013
- 2014

Demolition data compiled and provided by the Planning and Community Development Department. Points for 2014 are through the month of May.

ROAD INDEX

All data is for display and planning purposes only and should not be considered accurate, current or complete. The Town of Needham assumes no liability for misuse or alteration of this data.

This map portrays roads that have been constructed and are in general use for vehicular traffic. Marked portions of one-way roads should not be considered comprehensive.

Road data was updated based on April 2009 aerial photographs & includes data from the Town of Needham Department of Public Works, Engineering Division.

Town of Needham GIS

Information Technology Center

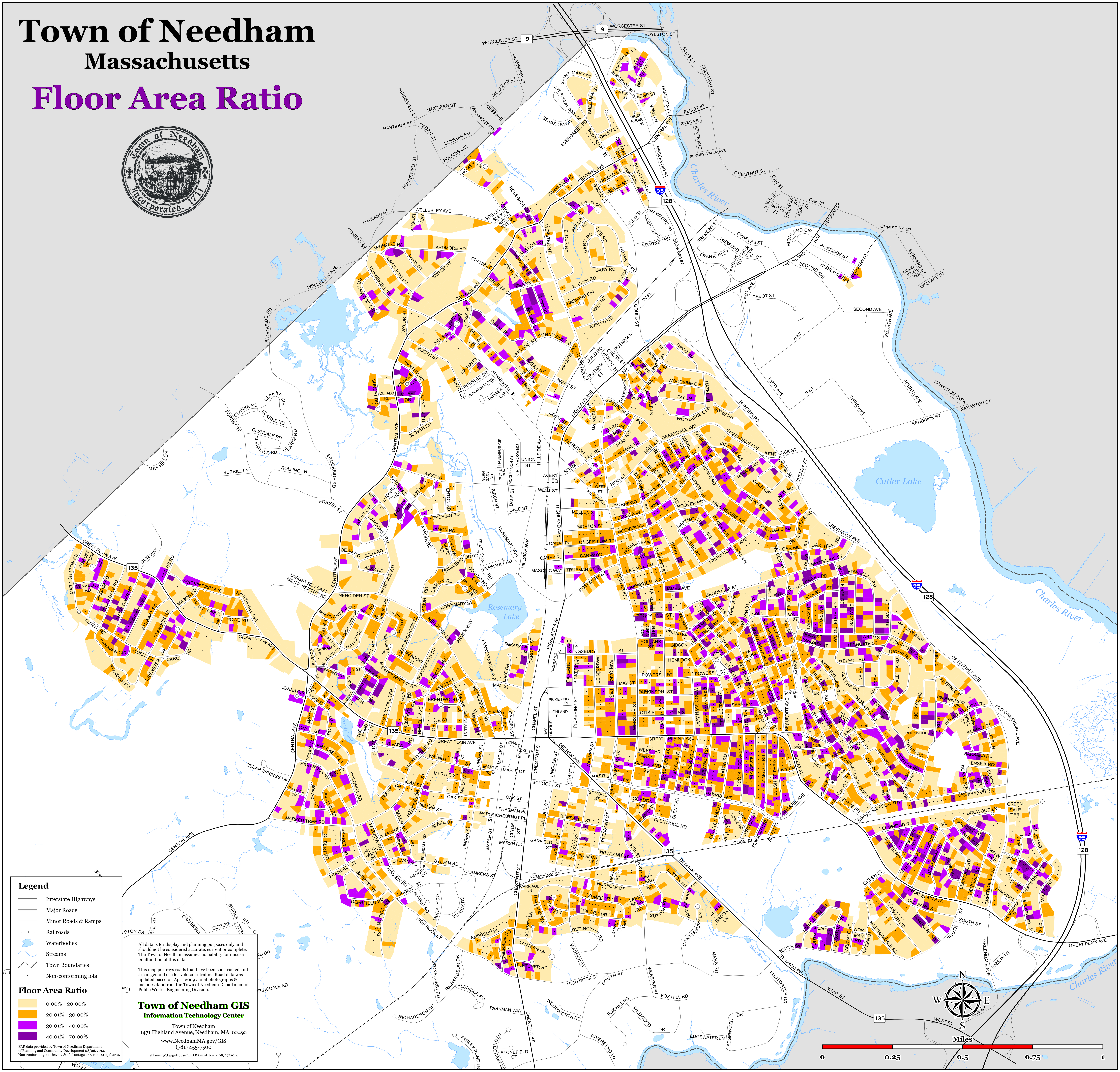
Town of Needham
1471 Highland Avenue, Needham, MA 02492
www.NeedhamMA.gov/GIS
(781) 455-7500

\Projects\RoadMap\TearDowns2010to2014.mxd b.w.a 06/19/2014

Town of Needham

Massachusetts

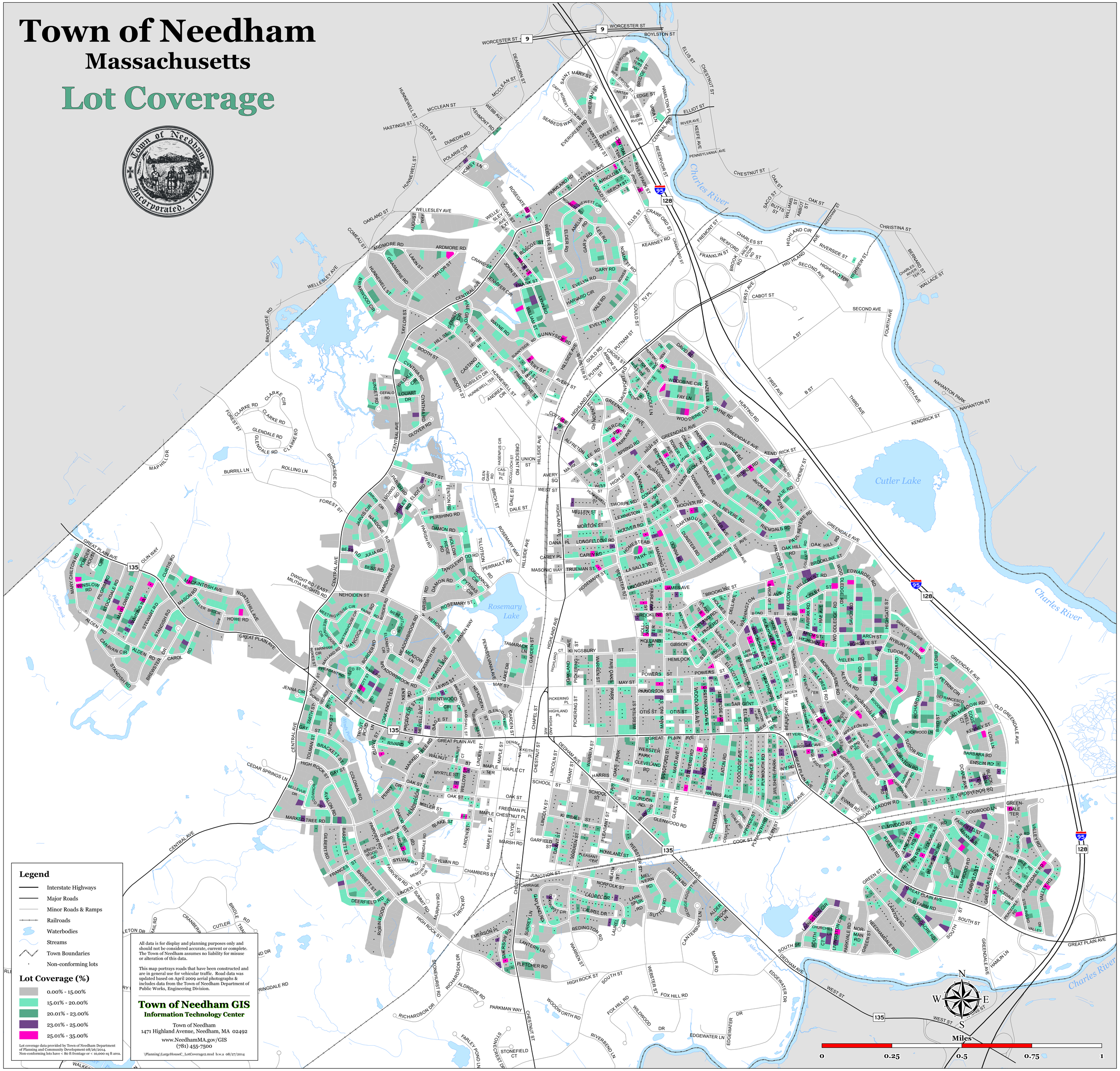
Floor Area Ratio



Town of Needham

Massachusetts

Lot Coverage



Legend

- Interstate Highways
- Major Roads
- Minor Roads & Ramps
- Railroads
- Waterbodies
- Streams
- Town Boundaries
- Non-conforming lots

Lot Coverage (%)

- 0.00% - 15.00%
- 15.01% - 20.00%
- 20.01% - 23.00%
- 23.01% - 25.00%
- 25.01% - 35.00%

Lot coverage data provided by Town of Needham Department of Planning and Community Development 08/26/2014.
Non-conforming lots have < 80 ft frontage or < 10,000 sq ft area.

All data is for display and planning purposes only and should not be considered accurate, current or complete. The Town of Needham assumes no liability for misuse or alteration of this data.

This map portrays roads that have been constructed and are in general use for vehicular traffic. Road data was updated based on April 2009 aerial photographs & includes data from the Town of Needham Department of Public Works, Engineering Division.

Town of Needham GIS
Information Technology Center
Town of Needham
1471 Highland Avenue, Needham, MA 02492
www.NeedhamMA.gov/GIS
(781) 455-7500

\Planning\LargeHouseC_LotCoverage2.mxd b.w.a 08/27/2014

N W E S

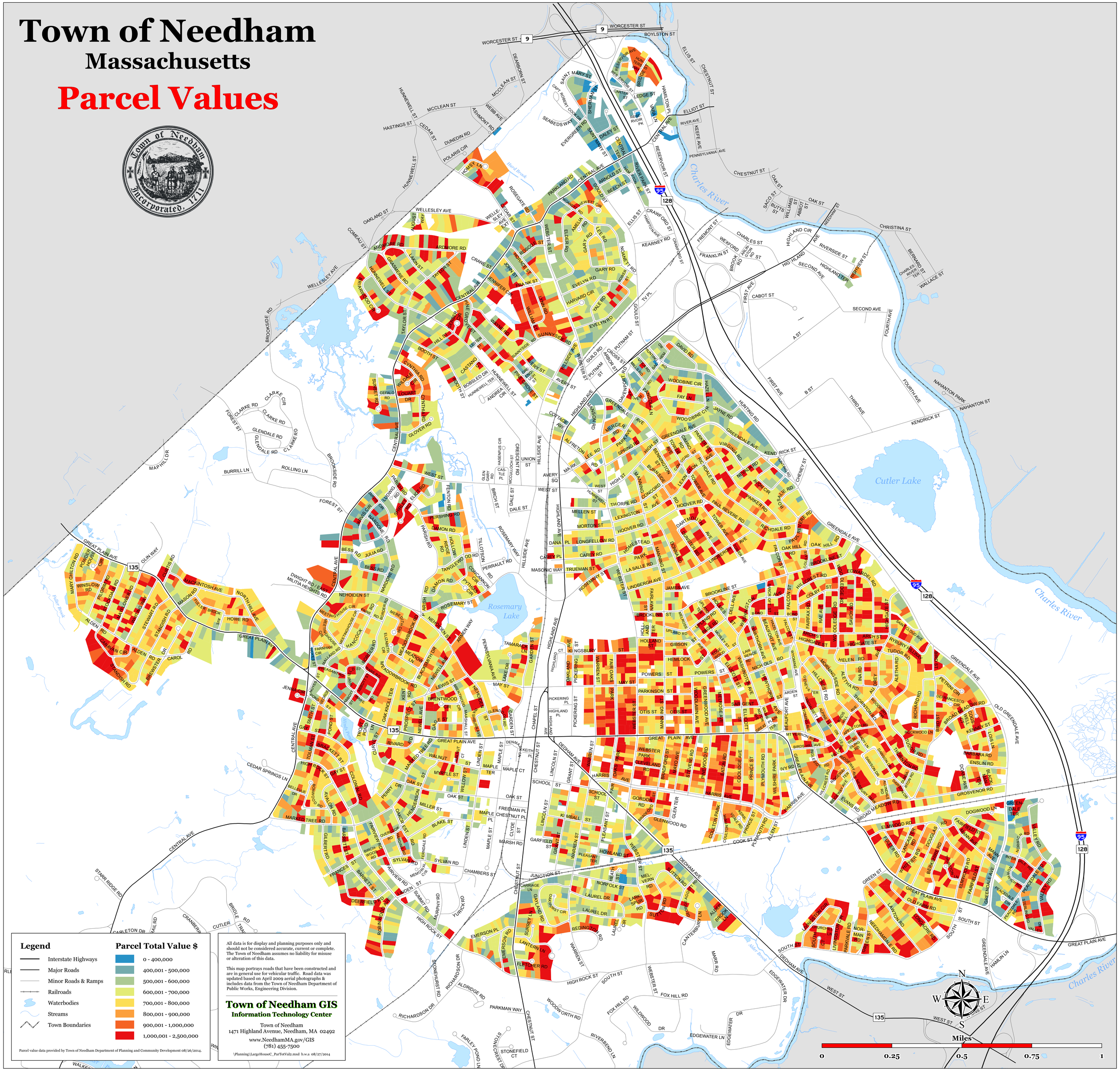
Miles

0 0.25 0.5 0.75 1

Town of Needham

Massachusetts

Parcel Values



Legend

- Interstate Highways
- Major Roads
- Minor Roads & Ramps
- Railroads
- Waterbodies
- Streams
- Town Boundaries

Parcel Total Value $

- 0 - 400,000
- 400,001 - 500,000
- 500,001 - 600,000
- 600,001 - 700,000
- 700,001 - 800,000
- 800,001 - 900,000
- 900,001 - 1,000,000
- 1,000,001 - 2,500,000

Parcel value data provided by Town of Needham Department of Planning and Community Development 08/26/2014.

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This map portrays roads that have been constructed and are in general use for vehicular traffic. Road data was updated based on April 2009 aerial photographs & includes data from the Town of Needham Department of Public Works, Engineering Division.

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\Planning\LargeHouseC_ParTotVal2.mxd b.w.a 08/27/2014

Exhibit 5

Community	How is Gross Floor Area defined?	What is being regulated?	What FAR/square footage is being utilized?	What type of process?
Newton	**Gross Floor Area Shall Include:** i. First and second stories; ii. Any floor area above the second story, whether finished or unfinished, that meets all of the following criteria: 1. It lies within the area of a horizontal plane that is five (5) feet above the floor and which touches the side walls and/or the underside of the roof rafters; 2. Is at least seven (7) feet in any horizontal dimension, as measured within the area having a wall height of five feet or more; 3. Has a minimum ceiling height of seven (7) feet on at least 50 percent of its required floor area; and 4. Has a floor area of not less than 70 square feet as measured within the area having a wall height of five feet or more. iii. Atria, open wells, and other vertical open spaces, where floor area shall be calculated by multiplying the floor level area of such space by a factor equal to the average height in feet divided by ten (10); iv. Enclosed porches; v. Attached garages; vi. Detached garages and any space above the first story of a detached garage that has a ceiling height of 7' or greater; vii. Other detached accessory buildings, such as sheds or cabanas, except as exempted in (iii) below. viii. A portion of mass below the first story, to be calculated as follows: The lesser of 50% of the floor area of mass below first story OR the following: XIY * floor area of mass below first story Where: X = Sum of the width of those sections of exposed walls below the first story having an exterior height equal to or greater than four (4) feet as measured from existing or proposed grade, whichever is lower, to the top of the subfloor of the first story Y = Perimeter of exterior walls below first story **Gross floor area sha1l not include:** i. Unenclosed porches; ii. Carports; and iii. One detached accessory building equal to or less than 120 square feet in size.	FAR for building an addition, replacing a portion of an existing home or new construction (not for finishing existing space within an existing building shell)	Ranges depending on lot size and zoning district. For Single and Two-family houses: from .26 to .46 (in the Single Residence zones) and from .38 to .58 (in the Multi Residence Zones)	Special Permit (by Board of Alderman) for FAR above allowed limit.

Community	How is Gross Floor Area defined?	What is being regulated?	What FAR/square footage is being utilized?	What type of process?
Wellesley	"Total Living Area plus Garage Space" - This term includes: (i) The sum of the horizontal area(s) of the above-grade floors, including portions of attics, in the residential building(s) on a lot, measured from the exterior face of the exterior walls; and (ii) Area(s) of attic(s) measured from the floor to the interior roofline if 7 ft. or greater in height, and 5 ft. or greater in height on a sloped interior roofline; and (iii) Garage and storage space, whether in principal or accessory structures, in excess of 600 sq ft.; and (iv) Basement areas multiplied by a fraction, the numerator of which is the external above ground surface of basement walls and the denominator of which is the total surface (both above and below ground) of external basement walls, provided that if such fraction is less than .25, then the basement areas shall not be included. Exemptions: (1) Pursuant to Section XVID, C, 3, in attics where the pitch or construction renders the attic space unable to be finished, therefore uninhabitable under the MA Building Code, the floor area shall not count; however, where the pitch or construction does not render an attic uninhabitable under the MA Building Code and the attic could be converted into habitable space without exterior alterations shall count. (2) Exterior areas occupied by a chimney, covered or uncovered patios or stairs, areas under a canopy, decks, unheated porches and bay or bow windows having no foundation will not count toward TLAG. (3) Attics in existing structures where the completion or finishing of the attic does not require any exterior alterations associated with the construction are exempt. If new exterior alterations such as windows, skylights, cupolas or dormers are necessary and/or desired in the proposed finished space a TLAG Affidavit must be submitted for calculations to the Building Department. Ordinary maintenance and repair, replacement in kind, the addition of a vent pipe, and reshingling of the roof will not be considered exterior alterations for the purposes of finishing the attic.	Applies to all building permits issued after January 1, 2008 for new single family dwellings where the Total Living Area Plus Garage Space of the dwelling, after completion exceeds a certain square footage.	3,600 square feet for dwellings within the Single Residence 10,000 Square Foot Area Regulation District; 4,300 square feet for dwellings within the Single Residence 15,000 Square Foot Area Regulation District; 5,900 square feet for dwellings within the Single Residence 20,000 Square Foot Area Regulation District; and 7,200 square feet for dwellings within the Single Residence 30,000 and 40,000 Square Foot Area Regulation Districts. Also applies to all building permits issued after January 1, 2008 for alteration of single family dwellings where the alteration will increase the TLAGS of the dwelling by more than 10%, and the TLAG of the dwelling, after completion of the project, will exceed the applicable threshold, as listed above.	Large Design Review Board recommendation to the Planning Board. Large House Review process through Planning Board (includes notice to abutters), Decision issued by Planning Board with 30-day appeal period.

Community	How is Gross Floor Area defined?	What is being regulated?	What FAR/square footage is being utilized?	What type of process?
Weston	**Residential Gross Floor Area** Included in calculation: • Area of all above grade floors, measured from exterior wall to exterior wall • Finished or unfinished area above garages, finished or unfinished 1/2 story above 2nd floor and finished attics • Garages (detached, attached, drive-under) and accessory buildings, enclosed porches, basements when considered a story above grade Exemptions from RGFA: • Unfinished attics when located above the uppermost story of the building. A 1/2 story is only considered and attic when built in pitched roof construction. If dormers or similar features are built through the roof, the area shall not be considered an attic and therefore is included in the RGFA calculation.	The RGFA applies to: • new home construction including after an existing home has been demolished • Demolition or replacement of more than 50% of an existing home's roof or more than 50% of an existing home's walls by one or more building permit dated after October 28, 1998 • building an addition to an existing home which received a building permit as a new or replacement home dated after October 28,1998	The Residential Gross Floor Area "RGFA" of any new or replacement single family dwelling use constructed pursuant to a building permit issued on or after October 29, 1998, may not exceed the greater of 3,500 s.f. or 10% of the lot area up to a maximum of 6,000 s.f.	Allowed with Site Plan Approval : New or replacement single-family dwelling, together with accessory buildings not containing a housekeeping unit, in conformity with Section VI, subsection F.2, which is constructed pursuant to a building permit issued on or after October 29,1998 and which exceeds the RGFA limit provided in Section V.B.1.a.

Exhibit 6

TO: Members of the Large House Study Review Committee

FROM: Lee Newman, Planning and Community Development Director

DATE: April 23, 2015

RE: Field Assessments of Identified Demolition/Replacement Properties

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During our recent meeting, it was generally agreed that members of the Large House Review Study Committee would take a look at some of the properties that involved demolition and replacement activity since January 2014. Given the significant number of these properties (76 properties in our analysis), the Committee's Working Group thought it would be useful to focus site visits on a sample of properties within several categories, as noted below. In this way we might more efficiently share our collective impressions at **our next meeting scheduled for May 1st.**

The properties that have been identified are listed on Page 2. To further assist you in these visits, please see attached questionnaire on Page 3. This brief survey should be used as a guide to help you review each property. It would be very helpful to have you record your thoughts, ideally using this format for each property. At our meeting of May 1, we will discuss the properties, and if you wish to submit your notes to us prior to or following the meeting, we can keep them and compile them. It's a lot, we realize, so just do the best you can.

Site Visit Locations

*House size listed below only constitutes first and second floor living space

Non-conforming lots that do NOT meet the proposed FAR standard:

29 Hawthorne Avenue (finished Basement), Lot size 6,970 sf, House size 3,404 sf, 48.8% FAR
10 Birchwood Road (finished Basement), Lot size 9,258 sf, House Size 3,848 sf, 41.6% FAR
10 Melrose Avenue (finished Attic), Lot size 7,193 sf, House size 3,002 sf, 41.7% FAR

Nonconforming lot that does meet the proposed FAR standard:

98 Grosvenor (finished Attic), Lot size 9,825, House size 3,726, 37.9% FAR
169 Laurel Drive (finished Basement), Lot size 9,900 sf, House size 3,244 sf, 32.7% FAR
122 Grosvenor Road (finished Attic), Lot size 9,825 sf, House size 3,726 sf, 37.9% FAR

Conforming lot that does meet the proposed FAR standard:

100 Damon Street (finished Basement), Lot size 10,000 sf, House size 3,748 sf, 37.5% FAR
105 Damon Road (finished Attic), Lot size 11,326 sf, House size 3,748 sf, 33.1% FAR
43 Norfolk Street (finished Attic), Lot size 10,007 sf, House size 3,586 sf, 35.8% FAR

Conforming lots that do NOT meet the proposed FAR standard:

40 Hazel Lane (finished Basement & Attic), Lot size 10,019 sf, House Size 3,902 sf, 38.9% FAR
33 Longacre Road (finished Basement & Attic), Lot size 10,890 sf, House size 4,262 sf, 39.1% FAR
24 Gary Road (finished Attic), Lot size 10,000 sf, House size 4,865 sf, 48.6% FAR
23 Dogwood Lane (neither finished), Lot size 10,350 sf, House size 4,590 sf, 39.7% FAR

Large Lot with Large House:

50 Robinwood Avenue (finished Attic), Lot size 20,000 sf, House size 3,388 sf, 16.9% FAR
99 Ellicott Street (data unknown), Lot size 13,068 sf, House size 3,690 sf, 28.2%b FAR
89 Fair Oaks Park (finished Attic), Lot size 15,682 sf, House size 4,983 sf, 31.8% FAR

LARGE HOUSE STUDY REVIEW COMMITTEE
PROPERTY ASSESSMENT FORMAT

This brief survey should be used as a guide to help you review the suggested properties. It would be very helpful to have you record your thoughts, ideally using this format for each property. At our meeting of May 1, we will discuss the properties, and if you wish to submit your notes to us prior to or following the meeting, we can keep them and compile them. It's a lot, we realize, so do the best you can.

Name: _____

Address: _____

1. What is your gut feeling about the property in five words or less. This is your overall impression of the home, including the context it sits in.

2. If the house complies with the proposed FAR standard, do you agree that is a good outcome? If the house does not comply with the proposed FAR standard, do you feel the circumstance would have benefited by this regulation?

3. How does this house relate to its neighbors? How does the front setback compare? How does the side setback spacing relate to other spacing typical for the immediate area? Are the setbacks adequate?

4. How do you feel about the location/prominence of the garage as well as any space above the garage?
   If there is a front porch, does the introduction of this element assist in breaking up of the mass of the structure from the street view?
   Are architectural features contributing to how the house is perceived?

Exhibit 7

Theodora K. Eaton, MMC
Town Clerk

TOWN OF NEEDHAM
Office of the Town Clerk

1471 Highland Avenue, Needham, MA 02492-0909
Telephone (781) 455-7500 x216
Fax (781) 449-1246
Email: Teaton@needhamma.gov

AT THE ADJOURNED ANNUAL TOWN MEETING

HELD ON WEDNESDAY, MAY 6, 2015

UNDER ARTICLE 23

It was

VOTED: That the Town vote to amend the Needham Zoning By-Law as follows:

(a) In Section 1.3, Definitions, by revising the existing definition of the term "Half-Story or ½ Story", so that the entire definition shall now read as follows: (new language underlined):

"Half-Story or ½ Story – For all single-family detached dwellings and two-family detached dwellings located in all Districts, and apartment and multi-family dwelling units permitted by Special Permit in the Center Business District and located in the half-story directly above the second floor, that portion of a building included between the upper surface of a floor and the lower surface of a sloping roof next above where the area contained therein has a finished ceiling height exceeding 5'-0". Dormers installed in a sloping roof directly above the second story of a structure shall be limited in size as follows: (1) The total length of the front wall(s) of a dormer(s) shall not exceed fifty percent (50%) of the eve length of the portion of the roof in which the dormer is built. In no case shall a single dormer exceed twenty feet (20') in width. (2) A roof line overhang shall be continued between the dormer and the story next below so as to avoid the appearance of an uninterrupted wall plane extending beyond two stories. (3) The vertical plane of the side wall of any dormer shall not be closer than eighteen inches (18") from the vertical plane of the intersection of the roof and the main building end wall nearest the dormer. (4) No dormer may project above the main ridgeline of the building. There are no restrictions on dormers installed in a sloping roof directly above the first story of a structure. This definition shall apply to all single-family detached dwellings, two-family detached dwellings, and apartment and multi-family dwelling units permitted by Special Permit in the Center Business District and located in the half-story directly above the second floor. For all other buildings the definition is, that part of a building under a sloping roof where the full-length rafters rest on the top beam of the story below."

(b) In Section 1.3, Definitions, by adding the following term and definition in the appropriate alphabetical location as follows:

"Dormer – A projection built out from a sloping roof, usually containing a window or vent."

Two-Thirds Vote Declared
On A Voice Vote

A true copy
ATTEST: Theodora K. Eaton
Theodora K. Eaton, MMC, Town Clerk

Exhibit 8

INSERTED BY: Planning Board
FINANCE COMMITTEE RECOMMENDS THAT: Recommendation to be Made at Town Meeting

Article Information: Historically, the Planning Board has had sole jurisdiction as relates to the issuance of special permits in the Center Business District. When this Section 7.4.2 of the Needham Zoning By-Law was amended in 2014 to lower the threshold requirement for the issuance of a site plan special permit in the Center Business District, the Planning Board's singular special permit jurisdiction was inadvertently affected. The purpose of this article is to reinstate such jurisdiction by specifically naming the Planning Board as the special permit granting authority for all permits related to use irrespective of whether site plan review has been triggered.

ARTICLE 23: AMEND ZONING BY-LAW – RETAINING WALLS

To see if the Town will vote to amend the Needham Zoning By-Law, as follows:

(a) Amend Section 1.3 Definitions, by adding the following term and definition in the appropriate alphabetical location as follows:

"Retaining Wall - A wall or terraced combination of walls used at a grade change to hold soil and other earth material at a higher position. Retaining walls may be attached to or independent from other structures. The exposed side of a retaining wall shall be known as a "face". The area between a lower wall and a successive higher wall shall be known as a "terrace."

(b) Amend Section 1.3 Definitions, by revising the existing definition of the term "Structure", so that the entire definition shall now read as follows: (new language underlined):

"Structure – anything constructed or erected, the use of which requires a fixed location on the ground or attached to something located on the ground including an artificial or a constructed swimming pool having a depth of water of two (2) feet or more or a water surface area of at least one hundred (100) square feet when filled to capacity, but excluding a fence, boundary wall, retaining wall, public utility pole, public utility supporting device or a structure with less than one hundred square foot ground coverage and a height of less than eight (8) feet."

(c) Amend Section 6, Special Regulations, by a inserting a new Subsection 6.11, Retaining Walls, to read as follows:

"6.11 Retaining Walls

6.11.1 Purpose and Intent

The Town of Needham adopts this section to accomplish and ensure the following:

(a) To allow for the review of retaining walls of a size that may impact surrounding buildings, land, and uses;

(b) To require the construction of retaining walls in a manner consistent with engineering and construction best practices; and

(c) To lessen the impact of large retaining walls on abutting properties and the public by encouraging the use of landscaping and aesthetically pleasing design elements.

6.11.2 Applicability

The regulations and requirements contained herein shall apply to all retaining walls erected in the Town of Needham.

6.11.3 General Provisions

(a) Determining Retaining Wall Height - The height of a retaining wall shall be the distance from the grade at the base of the face of the wall to the top of the finished wall. Terraced walls shall be measured in the same manner.

(b) Walls Within Yard Setbacks – No retaining wall shall be built within the required yard setback except a retaining wall (i) with a face not greater than four (4) feet in height at any point and a length that does not exceed forty (40) percent of the lot's perimeter, or (ii) as allowed by a Special Permit issued in accordance with Subsection 6.11.5 of this Section. Notwithstanding the above, retaining walls may graduate in height from four (4) to seven (7) in height when providing access to a garage or egress entry doors at the basement level, measured from the basement or garage floor to the top of the wall. The wall is limited to seven (7) feet in height for not more than 25% of the length of the wall.

(c) Walls Outside Yard Setbacks. No retaining wall with a face greater than twelve (12) feet in height shall be built except as allowed by Special Permit issued in accordance with Subsection 6.11.5 of this Section.

(d) Fall Protection - All retaining walls over four (4) feet in height shall be required to provide fall protection if so determined by the Building Inspector. Fall protection systems may include, but shall not be limited to, permanent landscaping or fencing as approved by the Building Inspector.

(e) Terracing - Terracing of retaining walls is allowed and encouraged. In a terraced retaining wall system, if two (2) retaining walls are separated by a distance at least one times (1x) the height of the higher of the two (2) walls, the walls shall be considered as separate walls; if two (2) retaining walls are separated by a distance less than one times (1x) the height of the higher of the two (2) walls, the walls shall be considered as a single wall.

(f) Nonconforming Retaining Walls - Retaining walls legally constructed prior to the adoption of these regulations shall be allowed to remain in their existing state; however, significant changes or alterations to such walls shall be made in conformity with these regulations. The repair and routine maintenance, as determined by the Building Inspector, of nonconforming retaining walls shall be allowed without requiring conformity with these regulations.

6.11.4 Design Review and Permitting

(a) Design Review - Design Review shall be required for all retaining walls requiring a special permit. The Design Review Board shall review retaining walls in accordance with Section 7.7, Design Review, and shall consider such requests under those criteria contained in Subsection 7.7.4, Design Criteria, of Section 7.7. The Design Review Board shall submit an advisory recommendation to the applicant and the permit granting authority prior to the issuance of a special permit.

(b) Permitting - A building permit shall be required, consistent with the requirements of the Town of Needham Building Department, for all retaining walls that retain four (4) or more feet of unbalanced fill.

6.11.5 Special Permit Provisions

The Board of Appeals shall consider requests for special permits in accordance with this Section and Section 7.5 of the Zoning Bylaw and a Special Permit for a retaining wall may be issued provided the Board of Appeals finds:

(a) That the retaining wall will not cause an increase of water flow off the property;

(b) That the requested retaining wall will not adversely impact adjacent property or the public;

(c) That the report of the Design Review Board has been received and considered.

(d) Amend Section 7.7 Design Review, Subsection 7.7.2, Design Review Board, Subparagraph 7.7.2.2, Authority and Specific Powers, by revising the first paragraph, so that the entire paragraph shall now read as follows: (new language underlined):

"The Design Review Board shall review requests for site plan review and approval submitted in accordance with Section 7.4 Site Plan Review and requests for special permits in accordance with Section 4.2.5 Planned Residential Development, Section 4.2.4 Flexible Development and Section 6.11 Retaining Walls and, for a minor project that only involves a change in the exterior façade of a building in the Center Business District, shall review and may approve such façade change."

(e) Amend Section 7.7 Design Review, Subsection 7.7.2, Design Review Board, Subparagraph 7.7.2.2, Authority and Specific Powers, by revising the fourth paragraph, so that the entire paragraph shall now read as follows: (new language underlined):

"It shall evaluate such requests based on Subsection 7.7.4 Design Criteria below. Its findings and recommendations, along with any suggested restrictions and conditions, shall be transmitted to the applicant and Planning Board, acting as a special permit granting authority for "Major Projects" under Site Plan Review, Planned Residential Developments and Flexible Developments and to the applicant and Board of Appeals, acting as a special permit granting authority, under Section 6.11 Retaining Walls. Such advisory reports of the Design Review Board shall be transmitted to the Building Inspector and applicant in all other instances as described in the two paragraphs above for "Minor Projects" under Site Plan Review, building permits in all non-residential districts and sign permits. For a minor project that only involves a change in the exterior of a building in the Center Business District, the Design Review Board shall be the review and approval entity for such façade changes."

Or take any other action relative thereto.

INSERTED BY: PLANNING BOARD
FINANCE COMMITTEE RECOMMENDS THAT: Recommendation to be Made at Town Meeting

Article Explanation: This article would amend the Zoning By-Law by adding a new section (Section 6) creating a tiered approach for regulating retaining walls over four feet in height. Under current zoning regulations, retaining walls covering less than one hundred square feet and having a height of less than

eight feet are unrestricted as to location on the lot. Retaining walls exceeding the noted parameters are defined as structures governed by the building height and setback standards of the zoning district in which they are located. This later provision effectively permits a retaining wall having a height of 35 feet to be placed five feet from a side property line as-of-right in the Single Residence B zoning district.

In recent years, the construction of retaining walls has increased, most notably in and around terrain-challenged lots creating irreversible, permanent effects on the Town's overall landscape, its neighborhoods, and abutting properties. Often, retaining walls are used to create or expand usable open space on residential lots to accommodate parking areas, play areas, and other outdoor landscape features and uses (e.g., patios). The expansion of land through the use of large retaining walls can create unsightly structures along property lines, and these large structures can impact safety and the aesthetics of public spaces along streets, and create stormwater run-off issues. The proposed amendment provides for formal review of these potential impacts and modest setback requirements. The retaining wall provisions would be applicable to all districts and uses including residential, commercial, and institutional properties, including those below the already established thresholds for review under the Town's existing Site Plan Review approval by-law.

In summary, the proposed retaining wall regulations would allow retaining walls less than four feet in height and having a length not exceeding 40 percent of the lot's perimeter to proceed as-of-right; such shorter walls would be exempt from the building permit, design review and setback requirements of the underlying district. Taller walls greater than four feet in height would require an increased level of review depending on height and required setback from front, side and rear property lines.

The review process would begin with retaining walls over four feet in height, and as the walls increase in height so would the level of review. The review process requires retaining walls between four and 12 feet to acquire a building permit from the Town's Building Department prior to construction. Any of these retaining walls located within the setback area also require a special permit. This requirement is consistent with the State Building Code requirement for retaining walls over four feet in height. A special permit is also required for all retaining walls over 12 feet in height from the Zoning Board of Appeals, prior to the issuance of the building permit. As part of the special permit process the retaining walls will be reviewed by the Design Review Board. The Board of Appeals and Design Review Board would assess the preservation and enhancement of landscaping, including how proposed retaining walls would be harmonious with the general appearance of neighboring properties through location, design, and proposed landscaping. The Board of Appeals and Design Review Board would also assess whether the height, scale, materials, textures, and colors of proposed retaining walls are harmonious with the terrain, use, scale and architecture of existing buildings (and hardscapes/landscapes) within their vicinity. A finding would further be required by the Board of Appeals stating that the requested retaining wall did not adversely impact adjacent property or the public.

In the setback areas terraced retaining walls that are four feet or less in height and are separated by a distance at least one times the height of the taller wall would be considered separate walls and would be exempt from review. Terraced retaining walls that are separated by a distance less than one times the height of the taller wall are considered as a single wall having a height equal to the sum total of the heights of each wall and would need to meet applicable provisions of the regulations. Allowance is provided for retaining walls located within the required setback area which provide access to a garage or egress doors at the basement level. In those circumstances the height of the retaining wall may graduate in height from four to seven feet with the wall limited to seven feet in height for not more than 25% of the wall's overall length.

A survey of the zoning by-laws of comparable communities to Needham indicates that most of these communities have by-laws restricting retaining walls. Usually these by-laws simply classify retaining walls in excess of four feet as structures, which requires all such walls to comply with building setback

requirements. The Planning Board believes that in many cases retaining walls greater than four feet are justified to improve the use of property while not adversely affecting neighboring properties. As a result, the proposed by-law does not impose any absolute limitations but seeks to impose increasing levels of review as walls increase in height.

ARTICLE 24: AMEND ZONING BY-LAW – MINIMUM SIDE AND REAR LINE SETBACKS: ACCESSORY STRUCTURES

To see if the Town will vote to amend the Needham Zoning By-Law , Section 4.2, Dimensional Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, General Residence, and Institutional Districts, Subsection 4.2.3, Minimum Side and Rear Line Setbacks: Accessory Structures, by revising the paragraph, so that the entire subsection shall now read as follows (new language underlined):

"4.2.3 Minimum Side and Rear Line Setbacks: Accessory Structures

No accessory building or structure, excepting fences, shall be constructed, altered or relocated so that any part thereof shall be less than ten (10) feet from any other building or structure or less than five (5) feet from the side or rear lines of the lot on which such building or structure is located. Notwithstanding the foregoing five (5) foot setback from the rear or side lines of the lot, any accessory building or structure which exceeds fifteen (15) feet in height must comply with the underlying district's rear and/or side setback requirements. Notwithstanding the foregoing, an accessory pergola need not comply with the requirements of the preceding sentences but said pergola must comply with all dimensional setback requirements from abutting properties and from streets and ways, and said pergola shall not be constructed or placed in a position where it would prevent the use of a designated fire lane or reduce access to any building. For purposes of this paragraph, "pergola" means an open frame structure consisting of colonnades or posts with a latticework roof designed to support climbing plants, either standing alone or attached to another building or structure. Notwithstanding the foregoing, an accessory building or structure associated with a pool use which is less than eleven (11) feet in height and has less than one-hundred (100) square feet of ground coverage need not comply with the foregoing ten (10) foot distance from any other building or structure requirement as said requirement pertains to the placement of the accessory building or structure from the edge of the pool, provided that such accessory building or structure is placed no less than eight (8) feet from the edge of the pool."

Or take any other action relative thereto.

INSERTED BY: Planning Board
FINANCE COMMITTEE RECOMMENDS THAT: Recommendation to be Made at Town Meeting

Article Information: Accessory structures, like sheds and detached garages, are allowed under the current Zoning By-Law to be within five feet of the side or rear property line in the Rural Residence-Conservation, Single Residence A, Single Residence B, General Residence, and Institutional districts. With the proliferation of construction, the Building Commissioner and the Planning and Community Development Department have received numerous complaints about such accessory structures being built within five feet of a neighboring property even though they are two or two and a half stories tall. Allowing 35 foot structures to be constructed so close to the property line is not consistent with the spirit of the Zoning By-Law with regard to accessory structures and creates a massing not intended. The amendment would require any accessory structure over 15 feet in height to comply with the zoning district's rear and/or side setback requirements.

Exhibit 9

Memorandum

To: Large House Review Study Committee
From: Lee Newman
Date: November 30, 2015, revised December 30, 2015
Re: Alternative Zoning Approaches Recommended by the Working Group

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Over the course of the summer the Working Group has been reviewing alternative zoning strategies to address the concerns the full Committee expressed following the site visits which occurred in the spring. The strategies developed seek to address the siting of the structure on the lot in terms of its setback to the property line and street and the type of projections that would be permitted into the required setback to break-up the overall massing of the structure. The Working Group also reviewed strategies to control building height by revising how building height is to be measured. The recommended dimensional and regulatory approach for each of these elements is described below.

Setback

Present Requirements

"Setback" is currently defined in the Zoning By-Law as the "Minimum horizontal distance from a street line or a lot line to any part of a building or structure, including overhang, but not uncovered steps, fences or awnings." Presently, buildings created through "new construction" in the Single Residence B and General Residence districts are required to have a front and a rear yard setback of 20 feet. On lots which are conforming relative to area and frontage, a stepped side yard setback of 12.5 feet is required. This 12.5 foot stepped sideline setback standard works as follows: If the side of the house is placed directly along the setback line, it can extend for a distance of only 28 feet at the 12.5 foot setback line. Any additional length must be set back an additional 2 feet. So under the current zoning by-law, 28 feet of the side of the house could be located 12.5 feet from the side lot line, the remainder would have to be sited at least 14.5 feet from the side line. "New construction" on lots which are non-conforming relative to frontage and/or area are governed by a 10 foot side yard setback requirement.

Policy Objectives

Five goals were articulated by the Working Group as relates building setback:

1. Front, side and rear yard setback in the Single Residence B and General Residence districts: Measurement of the required setback for the structure should be to the foundation wall/face of framing as opposed to the roof overhang for ease of zoning code enforcement. The required setback standard for the district should be adjusted to accommodate the newly revised measurement standard.

2. Encourage the placement of decorative elements along the front, side and rear elevations of the structure by exempting out from the required setback the desired element. Allow for the placement of safety items as required by the building code such as basement exits within the noted setbacks. Adjust the required setback to accommodate these new elements.

3. Front yard setback: increase the front yard setback and include measurement standards which respect the front yard setback of existing structures found along either side of the affected lot and if required adjust the rear yard setback accordingly.

4. Front yard setback: establish a story and setback limit for front loading garages so as to reduce the massing effect of the structure at the front lot line.

5. Side yard setback: Continue requirement of a staggered side yard setback requirement to break up massing of structure and avoid long unbroken walls along a property line. Expand requirement to include all facades in excess of 32 linear feet at the side lot line irrespective of their placement.

Recommended Regulatory Approach

To accomplish the above noted goals the following approaches are recommended.

1. Redefine how "Setback" is measured in the Single Residence B and General Residence districts so as to measure setback distance from the lot line to the foundation wall/face of framing and to exempt out the below noted elements.

   Setback – front, side, rear – the minimum horizontal distance from a street line or lot line, as the case may be, to any part of a building or structure excluding: (i) eaves (no gutters), cornices, belt courses, columns, chimneys, bay, box and bow windows projecting no more than 2 feet; (ii) in the side or rear, standard bulkheads up to 4 feet in height and 8 feet in length, emergency escape windows and window wells not exceeding 1 foot in height above grade and projecting no more than 4 feet from the face of the building; (iii) in the side or rear, air conditioning equipment, generators, propane tanks, or pool equipment shall meet a 5 foot set back from the lot line, distance from other structures is determined by manufacturers recommendations and the Building, Fire, Plumbing codes; and (iv) in the required front yard all of, or a portion of, a covered or uncovered landing or porch up to a maximum of 50 feet, with a maximum projection into the yard of 5 feet measured at the landing level, and in a required rear or side yard, a covered landing, above a stair or stairs, which has neither a total of 25 square feet nor projects more than 4 feet from the face of the building, where such landing is required by the State Building Code.

2. Revise the required setback requirements in the Single Residence B and General Residence districts to accommodate the revised definition of the term "Setback" as follows:

   For buildings created through "new construction" in the Single Residence and General Residence districts, the required front yard setback would be increased from 20 feet to 25 and a front yard setback alignment exception established to assure house placement in line with abutting structures along the frontage street through use of an average measurement (See section 3 below). The required rear yard setback would be decreased from 20 feet to 15 feet. On lots which are conforming relative to area and frontage the stepped side yard setback standard would be increased from 12.5 feet to14 feet. This 14 foot stepped sideline standard would work as follows: A maximum of 32 linear feet of structure, as measured parallel to the side lot line at the first-floor plane, may be constructed to the minimum side setback line. For the remaining length of the structure, as measured parallel to the side lot line at the first-floor plane, the minimum sideline setback would be increased by 2 feet. The maximum 32 linear foot requirement may start from the front or rear of the structure. "New construction" on lots which are non-conforming relative to frontage would have their side yard setback requirement increased from 10 foot to 12 feet. "New construction" on lots which are non-conforming relative to area would have their side yard setback requirement increased from 10 feet to

the 14 foot stepped setback standard noted above. The two foot stepped setback would be required in all instances along the sideline irrespective of house placement.

3. Establish a front yard setback alignment exception to assure house placement in line with abutting structures along the frontage street through use of an average measurement as follows:

   Exceptions for Existing Alignment of Interior Lots– In the Single Residence B and General Residence districts, if the alignment of two or more existing buildings on lots on either or both sides of a lot fronting on the same side of the street in the same block is farther from the street than the required front yard depth, the average of the existing alignment of all the buildings within one hundred and fifty (150') feet of said lot shall be the required front yard, except that no front yard requirement resulting from the application of this section shall exceed 35 feet from the front yard setback requirement. Reduction of this requirement shall require a Special Permit, but in no case shall the setback be less than the required minimum setback for that district of 25 feet.

   Exceptions for Existing Alignment of Corner Lots - In the case of a corner lot the averaging requirement as described above shall only be required along one of the frontage streets to be selected at the discretion of the applicant.

4. Define authorized projections at the front, side and rear yard to encourage greater architectural interest and a break-up of building mass.

   Projection of bay and box-out type windows into the required setback would be permitted provided the area does not exceed 25% of the elevation in which the projection occurs on the first floor only. In no case shall the projection exceed a total of 8 feet in width, and 2 feet from the face of the building or structure. Projections may not be continuous from the first floor to the top of the second floor wall elevation, unless they meet the required setback. Projections creating floor area would not be permitted to encroach into the required setback.

   As relates the front yard setback all of, or a portion of, a covered or uncovered landing or porch up to a maximum of 50 feet, with a maximum projection into the yard of 5 feet measured at the landing level would be permitted to break up the front façade and to add visual interest at the street.

5. Establish a story limit above a front loading garage so as to limit mass and height along the frontage street as follows:

   The story or portion of a story above a garage located *less than* 10 feet beyond the front setback are limited to a half-story. Dormers are allowed as described in the Half-story definition of the by-law. The story or portion of a story above a garage located 10 feet or more beyond the front setback would be subject to the underlying height and story requirements of the district. The maximum setback for a 2 story garage will be 35 feet.

Height

Present Requirements

Presently height is measured from average finished grade. Height is currently defined as "the vertical distance of the highest point of a structure or the roof of a building above the average grade adjoining the building or surrounding structure."

Recommended Regulatory Approach

A revision in terms of how height is measured is proposed under two alternative approaches to be selected at the applicant's discretion. The first approach recommended by the Working Group tracks the Wellesley zoning regulation which requires that height is measured from the lower of the new average grade or original grade. Original grade is defined as the grade of the lot before development occurs. It would be measured to the existing grade at the footprint of the new house. The height limit would remain the current 35 feet. The second approach tracks the Brookline zoning regulation which measures height from a portion of the average grade on the street front of the building. It would be measured from the crown of the roadway, and be the average elevation of the highest 1/3 of the street slope, to the highest point of the building or structure. In the case of corner lots the measurement on the roadway frontage of one street, the selected "front", shall be used to determine the building height. The height limit with this approach would be 32 feet. This approach is suggested because downward sloping lots can be excessively restricted by measuring from the existing grade. In both cases height limitations shall not apply to chimneys' spires, cupolas, or other structures exempt in the bylaw.

Exhibit 10

Overview of Regulatory Strategies under Consideration

The Board of Selectmen and the Planning Board prompted by inquiries and concerns expressed to them from residents regarding the issue of tear downs and reconstruction of houses, sought to investigate the Town's zoning by-laws regarding this issue, and the overall topic as it affects the Town. The Planning Board was assigned to form a committee with representatives of Town boards, Planning, Selectmen, Design Review as well as industry professionals including builders, architects, realtors, and town residents.

Process:
The Committee began the process of discussing the topic of replacing existing houses with new larger houses (tear downs). Taken into discussion were the expressed concerns and letters from residents, a study into our current by-laws, and examination of surrounding municipalities and how they have approached their zoning regarding this topic.

The Committee started to focus in on regulatory options they wanted to explore and how those would impact both Town residents and the building community. In an effort to understand how existing houses might fit into these regulatory options, the Planning Board staff and Building Department staff compiled a list of replacement houses in the last 2-3 years. The plans for these houses were analyzed and the data was compiled on square footage, lot coverage, and floor area ratio. This information was reviewed by a working group of the Committee and a list of study properties was created, along with questions for analysis of the properties. The houses included in the study covered both conforming lots and non-conforming lots. The houses varied as to compliance and non-compliance with the exploratory regulations.

The Committee members viewed the sites in person, and analyzed the houses according to the questionnaire and reported back to the Committee. The feedback of the members, and others who did the survey and tour, are the basis of the regulatory options proposed. The feedback from the tour was that interesting design features were more important than strict compliance with square footage and lot coverage limitations. It was observed that if by-laws could be amended that encouraged certain positive design elements, the result would help reduce the overall massing of larger construction, without significantly altering desired interior space composition. The spatial program assumed the standard house elements as a baseline. First Floor: 2 car garage, Living, Dining, Kitchen, Breakfast, Family Room, Mudroom, ½ Bath. Second Floor: Master BR with walk-in closets, Master Bath, 2nd Bath, Laundry, three additional Bedrooms.

Proposed:

- increase and encourage architectural variety by allowing various elements to be built within the front and side setbacks
    - Roof overhangs up to 18 inches (gutters not counted)
      Recommendation: Increase Roof overhangs from 18 inches to 24 inches.
    - First floor bay windows projecting 2 ft max. up to 8 ft wide each, maximum of 25% of first floor wall area where the bay(s) occur

- A portion of a covered landing or porch up to 50sf in front and 25 sf in side setbacks. Previously had to be uncovered, and if any portion was in the setback the total landing size was limited to 50sf.
- Fireplaces projecting 2 ft maximum, either masonry or enclosure for gas fireplace
- Bulkheads up to 40sf projecting a maximum of 7 ft.
  Recommendation: Add a maximum height of 3.5 feet for bulkheads.

- Change setbacks
  - Front setback: increase from 20 ft to 25ft or average of 150 ft each side of lot, whichever is greater, with a maximum of 35 feet. Corner lots only assess this on one street, the second street frontage (side) is a setback of 25 ft.
    Recommendation: Implement increase in front yard setback of 5 feet (20 feet to 25 feet). Eliminate the averaging provision.
  - Two car garages built within the first 35 ft are limited to one and one-half story designs. Full 2 1/2 story garage structure must occur beyond 35 ft from the front.
  - Recommendation: Reduce the two car garage setback from 35 to 30 feet so that two car garages built within the first 30 ft are limited to one and one-half story designs. Full 2 1/2 story garage structure must occur beyond 30 ft from the front. For corner lots require the above-noted garage setback along the elevation on which the house faces for the area above the garage irrespective of whether the garage doors face that particular elevation.
  - Side setback: measured to face of framing (see elements allowed in setback)
    - Conforming lot: increase from 12.5/14 ft to 14/16 ft. 32 ft of structure allowed at 14 ft setback line, the rest must offset 2 ft to 16 ft.
    - Non-conforming lot for frontage only: increase from 10 ft. to 12 ft. 32 ft of structure allowed at 12 ft setback line, the rest must offset 2 ft to 14 ft.
  - Rear setback: decrease to 15 ft.
    Recommendation: Retain the current rear yard setback of 20 feet.
  - Lot area coverage increased to 28%. Allowing a more relaxed lot coverage allows for additional design flexibility. This, in conjunction with allowing certain exemptions into the new adjusted setbacks encourages more architectural design features and helps reduce building massing. The FAR (see below) is now suggested to be the overall size control, while setback exemptions and relaxed lot cover will allow design flexibility and encourage a variety of design features.
  - Exclusions from lot coverage:
    - Covered porches and landings (unless habitable space is above)
    - Decks
    - Bulkheads
    - Fireplaces
    - Bay windows

- Add Floor Area Ratio calculation to the regulations. The key to FAR is always what counts as floor area and what does not. Many towns include complicated calculations of finished or unfinished basements, walk up attics, and garages, and count some portion or all of them as floor area to be regulated. This can lead to unnecessary changes to topography or roof pitch and design simply to avoid those areas being counted as floor area. Our approach concedes that every house has a foundation of some depth, and a roof of some appropriate design. Whether it is finished space, crawl space, or trussed attic, does not really impact the house structure and looks. Floor area counted will be defined as gross finished habitable area on the first and second floors. An additional 600 sf is allowed for garage space.

Lot Size (square feet)	**FAR**	**Maximum House size** (does not include basement or attic. 600 sf additional allowed for garage)
7,500 and under	.40	7,500 sf lot → 3,000 square feet
Recommendation	.38	7,500sf lot → 2,850 square feet
7,501 – 8,999	.38	8,500 sf lot → 3,230 square feet
9,000 – 9,999	.38	9,500 sf lot → 3,610 square feet
10,000 – 10,999	.38	10,500 sf lot → 3,990 square feet
11,000 – 11,999	.36	11,500 sf lot → 4,140 square feet
12,000 – 12,999	.35	12,500 sf lot → 4,375 square feet
13,000 – 13,999	.34	13,500 sf lot → 4,590 square feet
14,000 – 14,999	.33	14,500 sf lot → 4,785 square feet
15,000 and greater	.32	15,500 sf lot → 4,960 square feet

Lot Size	**Lot Count**	**Percentage Allocation**
Under 5,000	32	.4
5,000 thru 7,500	597	8.3
7,500 thru 10,000	1,121	15.6
10,000 thru 12,500	3,261	45.3
12,500 thru 15,000	1,053	14.6
Over 15,000	1,136	15.8
Total	7,200	

Building Height

Currently building height is measured from average grade at the face of the house walls. In general, the average height of replacement houses is much closer to the 35 foot height limit. There are numerous factors involved in this. One result has frequently been mounding of the grade along the perimeter of the house. This often results in altering the storm water runoff flow direction that had existed on the lot. Most original grading was part of a larger neighborhood watershed design. The mounding approach, when done on several lots, does not often work in concert with the larger neighborhood design.

Two options for measuring height are proposed, the choice is up to the applicant.

- Height is measured from average existing grade or average new grade, whichever is lower. Height limit is 35 feet. This approach works best on lots that are relatively level or slope up from the front.
- Height can alternatively be measured from a single point in the street centerline as the average of the highest 1/3 of the properties street frontage. The height limit is 32 feet when using this alternative. This approach works best on lots that slope down from the street front, which are at a disadvantage when measuring from average existing grade.

  Recommendation: Establish a maximum building height above grade at any point around the building of 42 feet. As height is measured using an average grade calculation this restriction would eliminate the potential for any side of a house to be excessively tall.

  Recommendation: Above the walkout basement wall prohibit the use of dormers in the half-story directly above the second floor. In this case the goal is to reduce the overall building mass over the walk-out basement where if the dormer option were exercised the elevation would present visually as a 4-story structure.

Alterations and Extensions of Existing Structures

Alterations to and extensions of existing structures would be governed by the same regulatory provisions afforded new construction as noted above with one exception. For those structures which are non-conforming relative to a side yard setback a special permit process would be established through the Board of Appeals. In the case of a conforming lot a reduction from 14/16 feet to no less than 10 feet would be permitted by special permit at the sideline. In the case of a nonconforming lot a reduction from 12/14 feet to no less than10 feet would be permitted by special permit at the sideline. In all cases the reduction could not exceed the existing house setback.

Exhibit 11

Overview of Regulatory Strategies under Consideration

The Board of Selectmen and the Planning Board prompted by inquiries and concerns expressed to them from residents regarding the issue of tear downs and reconstruction of houses, sought to investigate the Town's zoning by-laws regarding this issue, and the overall topic as it affects the Town. The Planning Board was assigned to form a committee with representatives of Town boards, Planning, Selectmen, Design Review as well as industry professionals including builders, architects, realtors, and town residents.

Process:
The Committee began the process of discussing the topic of replacing existing houses with new larger houses (tear downs). Taken into discussion were the expressed concerns and letters from residents, a study into our current by-laws, and examination of surrounding municipalities and how they have approached their zoning regarding this topic.

The Committee started to focus in on regulatory options they wanted to explore and how those would impact both Town residents and the building community. In an effort to understand how existing houses might fit into these regulatory options, the Planning Board staff and Building Department staff compiled a list of replacement houses in the last 2-3 years. The plans for these houses were analyzed and the data was compiled on square footage, lot coverage, and floor area ratio. This information was reviewed by a working group of the Committee and a list of study properties was created, along with questions for analysis of the properties. The houses included in the study covered both conforming lots and non-conforming lots. The houses varied as to compliance and non-compliance with the exploratory regulations.

The Committee members viewed the sites in person, and analyzed the houses according to the questionnaire and reported back to the Committee. The feedback of the members, and others who did the survey and tour, are the basis of the regulatory options proposed. The feedback from the tour was that interesting design features were more important than strict compliance with square footage and lot coverage limitations. It was observed that if by-laws could be amended that encouraged certain positive design elements, the result would help reduce the overall massing of larger construction, without significantly altering desired interior space composition. The spatial program assumed the standard house elements as a baseline. First Floor: 2 car garage, Living, Dining, Kitchen, Breakfast, Family Room, Mudroom, ½ Bath. Second Floor: Master BR with walk-in closets, Master Bath, 2nd Bath, Laundry, three additional Bedrooms. Additionally a study was included on the first floor in the case of a conforming lot.

Proposed:

- increase and encourage architectural variety by allowing various elements to be built within the front, rear and side setbacks
    - Roof overhangs up to 18 inches (gutters not counted)
      Recommendation: Increase Roof overhangs from 18 inches to 24 inches.
    - First floor bay windows projecting 2 ft max. up to 8 ft wide each, maximum of 25% of first floor wall area where the bay(s) occur

- A portion of a covered landing or porch up to 50sf in front and 25 sf in side setbacks. Previously had to be uncovered, and if any portion was in the setback the total landing size was limited to 50sf.
- Fireplaces projecting 2 ft maximum, either masonry or enclosure for gas fireplace
- Bulkheads up to 40sf projecting a maximum of 7 ft.
  Recommendation: Add a maximum height of 3.5 feet for bulkheads.

- Change setbacks
  - Front setback: increase from 20 ft to 25ft or average of 150 ft each side of lot, whichever is greater, with a maximum of 35 feet. Corner lots only assess this on one street, the second street frontage (side) is a setback of 25 ft.
    Recommendation: Implement increase in front yard setback of 5 feet (20 feet to 25 feet). Eliminate the averaging provision.
  - Two car garages built within the first 35 ft are limited to one and one-half story designs. Full 2 1/2 story garage structure must occur beyond 35 ft from the front.
  - Recommendation: Reduce the two car garage setback from 35 to 30 feet so that two car garages built within the first 30 ft are limited to one and one-half story designs. Full 2 1/2 story garage structure must occur beyond 30 ft from the front. For corner lots require the above-noted garage setback along the elevation on which the house faces for the area above the garage irrespective of whether the garage doors face that particular elevation.
  - Side setback: measured to face of framing (see elements allowed in setback)
    - Conforming lot: increase from 12.5/14 ft to 14/16 ft. 32 ft of structure allowed at 14 ft setback line, the rest must offset 2 ft to 16 ft.
    - Non-conforming lot for frontage only: increase from 10 ft. to 12 ft. 32 ft of structure allowed at 12 ft setback line, the rest must offset 2 ft to 14 ft.
  - Rear setback: decrease to 15 ft.
    Recommendation: Retain the current rear yard setback of 20 feet.
  - Lot area coverage increased to 28% if coupled with the Floor Area Ratio requirement detailed below. Allowing a more relaxed lot coverage allows for additional design flexibility. This, in conjunction with allowing certain exemptions into the new adjusted setbacks encourages more architectural design features and helps reduce building massing. The FAR (see below) is now suggested to be the overall size control, while setback exemptions and relaxed lot cover will allow design flexibility and encourage a variety of design features.
  - Exclusions from lot coverage:
    - Covered porches and landings (unless habitable space is above)
    - Decks
    - Bulkheads
    - Fireplaces
    - Bay windows

    - 6 inch siding and trim
- Add Floor Area Ratio calculation to the regulations. The key to FAR is always what counts as floor area and what does not. Many towns include complicated calculations of finished or unfinished basements, walk up attics, and garages, and count some portion or all of them as floor area to be regulated. This can lead to unnecessary changes to topography or roof pitch and design simply to avoid those areas being counted as floor area. Our approach concedes that every house has a foundation of some depth, and a roof of some appropriate design. Whether it is finished space, crawl space, or trussed attic, does not really impact the house structure and looks. Floor area counted will be defined as gross finished habitable area on the first and second floors. An additional 600 sf is allowed for garage space.

Lot Size (square feet)	**FAR**	**Maximum House size** (does not include basement or attic. 600 sf additional allowed for garage)
7,500 and under	.38	7,500sf lot → 2,850 square feet
7,501 – 8,999	.38	8,500 sf lot → 3,230 square feet
9,000 – 9,999	.38	9,500 sf lot → 3,610 square feet
10,000 – 10,999	.38	10,500 sf lot → 3,990 square feet
11,000 – 11,999	.38	11,500 sf lot → 4,350 square feet
12,000 and greater	.36	12,500 sf lot → 4,500 square feet

Lot Size	**Lot Count**	**Percentage Allocation**
Under 5,000	32	.4
5,000 thru 7,500	597	8.3
7,500 thru 10,000	1,121	15.6
10,000 thru 12,500	3,261	45.3
12,500 thru 15,000	1,053	14.6
Over 15,000	1,136	15.8
Total	7,200	

Building Height

Currently building height is measured from average grade at the face of the house walls. In general, the average height of replacement houses is much closer to the 35 foot height limit. There are numerous factors involved in this. One result has frequently been mounding of the grade along the perimeter of the house. This often results in altering the storm water runoff flow direction that had existed on the lot. Most original grading was part of a larger neighborhood watershed design. The mounding approach, when done on several lots, does not often work in concert with the larger neighborhood design.

Two options for measuring height are proposed, the choice is up to the applicant.

- Height is measured from average existing grade or average new grade, whichever is lower. Height limit is 35 feet. This approach works best on lots that are relatively level or slope up from the front.
- Height can alternatively be measured from a single point in the street centerline as the average of the highest 1/3 of the properties street frontage. The height limit is 32 feet when using this alternative. This approach works best on lots that slope down from the street front, which are at a disadvantage when measuring from average existing grade.
  Recommendation: Establish a maximum building height above grade at any point around the building of 41 feet. As height is measured using an average grade calculation this restriction would eliminate the potential for any side of a house to be excessively tall.
  Recommendation: Above the walkout basement wall prohibit the use of dormers in the half-story directly above the second floor. In this case the goal is to reduce the overall building mass over the walk-out basement where if the dormer option were exercised the elevation would present visually as a 4-story structure.

<u>Alterations and Extensions of Existing Structures</u>

Alterations to and extensions of existing structures would be governed by the same regulatory provisions afforded new construction as noted above with the following exceptions.

Additions to existing single or two-family structures that are non-conforming relative to the front yard setback and that were constructed prior to May 1, 2017, would be permitted to be extended within a front yard setback of 20 feet, provided any demolition of the existing structure does not exceed 50% of the building shell exclusive of demolition of a single story attached garage and further provided that the front yard setback does not exceed the farthest extent of the setback of the existing structure. For additions to existing single or two-family structures that are non-conforming relative to front setback where demolition <u>exceeds</u> 50%, the structure may be extended within a front yard setback of 20 feet through a special permit process through the Board of Appeals.

For those structures which are non-conforming relative to a side yard setback, there is a tiered provision for additions to existing single family or two-family structures non-conforming relative to side yard setback and constructed prior to May 1, 2017. These structures may be extended to the following setbacks, provided any demolition of the

existing structure does not exceed 50% exclusive of demolition of a single story attached garage and further provided that the side yard setback does not exceed the farthest extent of the setback of the existing structure: (1) Structures built prior to July 1, 1999 may be extended within a side yard setback of 10 feet. (2) Structures built between July 1, 1999 and May 1, 2017 may be extended within a side yard setback of 12.5 feet. For existing structures non-conforming relative to front setback where demolition exceeds 50% of the building shell, the structure may be extended within a side yard setback of 10 feet or 12.5 feet, depending on original construction date, as previously noted, upon receipt of a special permit through the Board of Appeals.

In all of the above-noted cases, the reduction would not be permitted (by right or special permit) to exceed the existing house setback.

Exhibit 12

MEMORANDUM

TO: Members of the Large House Review Study Committee
FROM: Jeanne S. McKnight
DATE: February 8, 2016
RE: Reconstruction of Non-Conforming Single-Family Houses in Needham

At our January 7, 2016 meeting, I said I would forward recent Massachusetts appellate court cases on the issue of reconstruction of prior nonconforming residential structures. Two cases are attached: Gale v. Zoning Board of Appeals of Gloucester, 80 Mass. App. Ct. 331 (2011) and Deadrick v. Zoning Board of Appeals of Chatham, 85 Mass. App. Ct. 539 (2014).

In Gale the Court determined that reconstruction of a pre-existing nonconforming single-family residence by Foote (the private co-defendant with the Gloucester ZBA) required only that the ZBA issue a special permit, finding that the new residence was not more detrimental to the neighborhood than the existing residence, even though the new residence would increase or intensify a pre-existing nonconformity; a variance was not required. Foote's proposed new structure had a larger footprint than the previous structure, going from a 1,000 sq. ft. cottage to a 2,700 square foot 2-bedroom house that would exceed the bounds of the existing footprint, and would increase the pre-existing setback nonconformities. Gale, the abutting property owner, argued that a variance was required to increase the existing setback nonconformities and that Foote did not meet the standards required for the issuance of a variance. The Appeals Court upheld the entry of summary judgment by a Land Court judge in favor of Foote and the ZBA, concluding that the ZBA's grant of a special permit, based on its finding of no substantial detriment to the neighborhood, was all that was required.

When the Gale decision was issued in 2011, it created a concern as to whether this case meant that *new* non-conformities could be permitted by means of a mere finding, without a variance. The Appeals Court in Deadrick in 2014 clarified that Gale applied only to intensification of an existing non-conformity, not to the creation of a new non-conformity, which would still require a variance. The Chandlers (co-defendants with the ZBA) proposed to replace a 2,161 square foot house built in 1929 with a new house having an additional 529 square feet of living space, on substantially the same footprint as the prior house. The replacement house, however, would have exceeded the Zoning Bylaw's 20-foot height limit in Chatham's coastal conservancy district (thus creating a new non-conformity as to height). The Court remanded the matter to the Chatham ZBA to determine whether the proposed new structure was eligible for a certain height exemption under the Zoning Bylaw for houses built prior to January 16, 1992 and required to be elevated in accordance with FEMA regulations "provided there is no expansion." The remand was so that the ZBA could expressly determine whether this reconstruction constituted an "expansion" or not under the Zoning Bylaw so as to trigger or not trigger the height limit exception.

It is the clarifying language in Deadrick that is important on the issue of whether the addition of new nonconformities to a pre-existing nonconforming residential structure requires a variance (see p. 5 of Deadrick). The Court noted that the new structure would keep many of the

preexisting nonconformities of the old structure (lot size, building coverage, frontage, front and side yard setbacks) but (if not exempt as explained above) would create an *additional* nonconformity with respect to height, noting that the Land Court judge below had determined that the addition of a new nonconformity required a variance rather than a special permit/finding. The Chandlers challenged this interpretation, arguing that both new and existing nonconformities could be permitted by special permit/finding. The Land Court judge had noted that it appeared the statement in Gale that *a permit granting authority, after identifying the particular respect(s) in which the existing structure does not conform to the present bylaw, must then determine whether the proposed reconstruction would intensify the existing nonconformities or result in additional ones and, if yes, a finding of no substantial detriment is required*, does not distinguish between reconstruction that results in increased existing nonconformities, versus creating new, additional nonconformities. The Land Court judge concluded that while intensifying existing nonconformities could be done with only a special permit/finding, the creation of new nonconformities requires a variance. The Appeals Court in Deadrick agreed with this interpretation, citing and distinguishing Rockwood c. Snow Inn Corp., 409 Mass. 364 (1991), which pertained to reconstruction or expansion of a non-residential nonconforming structure (see p. 7 of Deadrick). The Court said, applied strictly to residential structures, the holding in Rockwood would require a variance even for extensions of existing nonconformities; however, a long line of cases have held that an alteration which intensifies an existing nonconformity in a residential structure may be authorized upon a finding of no standing detriment, citing Gale. Thus, the Appeals Court in Deadrick concluded by saying that it construed the provisions of the first and second sentences of §6 (fully cited below) together to allow extension of existing nonconformities, but to require a variance for the creation of any new nonconformity.

In applying these two cases to Needham's Zoning Bylaw, I shall confine my comments to reconstruction of single-family residences in Needham zoning districts where single-family residences are allowed by right, since two-family houses in Needham present both use and structural non-conformities.

Gale and Deadrick explain Mass law, G.L. c.40A (the Zoning Act) §6, ¶1, which provides in relevant part: "Except as hereinafter provided, a zoning … bylaw shall not apply to structures or uses lawfully in existence or lawfully begun…, but shall apply to any change or substantial extension of such use …, [and] to any reconstruction, extension or structural change of such structure … except where alteration, reconstruction, extension or structural change to a single or two-family residential structure does not increase the nonconforming nature of said structure. Pre-existing nonconforming structures or uses may be extended or altered, provided, that no such extension or alteration shall be permitted unless there is a finding by the permit granting authority or by the special permit granting authority designated by … by-law that such change, extension or alteration shall not be substantially more detrimental than the existing nonconforming [structure or] use to the neighborhood."

Needham's Zoning Bylaw provides for reconstruction [defined in Section 1.4.7.1 as the voluntary razing and rebuilding of a building] of single-family dwellings in Section 1.4.7.3 as follows: "A lawful pre-existing non-conforming single-family … dwelling which is non-conforming because of front, side and rear setback, build factor, area and/or frontage requirements of this By-Law may be reconstructed as a matter of right and without a special

permit or finding by the Board as required in the preceding section [1.4.6] provided that the new building is built in compliance with all front, side and rear setback, lot coverage, building height and building story requirements of the current By-Law including but not limited to the provisions of Section 4.2.1 (g) [side and rear setback for new construction on lots created before 1/9/1986 in Single Residence A, Single Residence B and General Residence District], (i) [side setback for new construction on lots created after 1/9/1986 in Single Residence B or General Residence District], (j) [rear setback for new construction on any lot in Single Residence B and General Residence Districts], and (k) [lot coverage for new construction in the Single Residence B District and General Residence District] and provided that the building as reconstructed has a footprint no greater in area than that of the original non-conforming building." If the proposed reconstruction does not meet these standards, then it would require a special permit under Section 1.4.6.

Section1.4.6 provides in relevant part as follows: "… a lawful pre-existing … non-conforming building may be structurally altered, enlarged or reconstructed only pursuant to a special permit issued by the Board of Appeals pursuant to Section 7.5.2. No such permit shall be issued except in accordance with the requirements of Section 7.5.2 nor unless the Board shall determine that such change, extension, alteration, enlargement or reconstruction would not be substantially more detrimental to the neighborhood than using the existing non-conforming use of structure. The issuance of a special permit hereunder shall not authorize the violation of any dimensional, parking or intensity regulation with which the structure or use was theretofore in conformity."

I mentioned these cases at our meeting of January 7th in the context of discussion of suggested increases in front and side setback requirements for residential construction. Objections were raised to the suggested increases. I commented that those objecting are ignoring that an existing house on some of the lots that were under discussion [undersized lots or corner lots] may already be closer than the existing lot line setback requirement. I noted that in such a case, there could be a finding made by the Zoning Board of Appeals that a new house at that setback would not be more detrimental to the neighborhood than the existing non-conforming house. Ms. Newman said, however, that if the house is merely altered, such a finding could be made, but if the house is demolished, the new house would need to comply in every respect with the current zoning requirements. I responded that recent case law says otherwise [that a non-conforming house may be reconstructed with such a finding even if the non-conformity is intensified]; however creating a new non-conformity is a different story [creating a new non-conformity can only be done with a variance – and a variance may be issued only if certain strict standards are met, which is rarely the case]. I believe the Gale and Deadrick cases stand for these principles. I recommend that Town Counsel be consulted for an opinion if the applicability of this case law to the provisions of the Needham Zoning Bylaw is not clear.

Exhibit 13

Large House Review Study Committee

Community Meeting, June 1, 2016

Issues

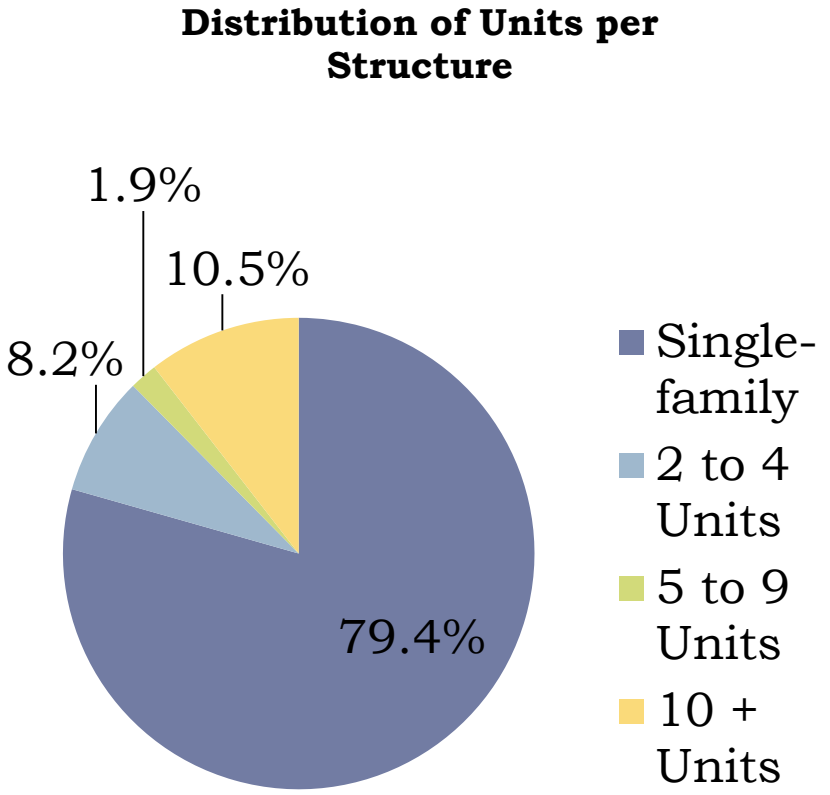
- New residential construction is often built close to the maximum size allowed determined by setback, height, and lot coverage requirements.
- Abutters are impacted by these large-scale houses when views are blocked, trees removed, shadows cast, and drainage problems arise.
- Neighborhoods lose their distinct fabric with odd scales, loss of trees, and the addition of walls or fences.
- New construction replaces more moderately-sized housing stock which erodes community diversity.
- Many residents perceive that replacement homes are “just too big”.

Study Committee Goals

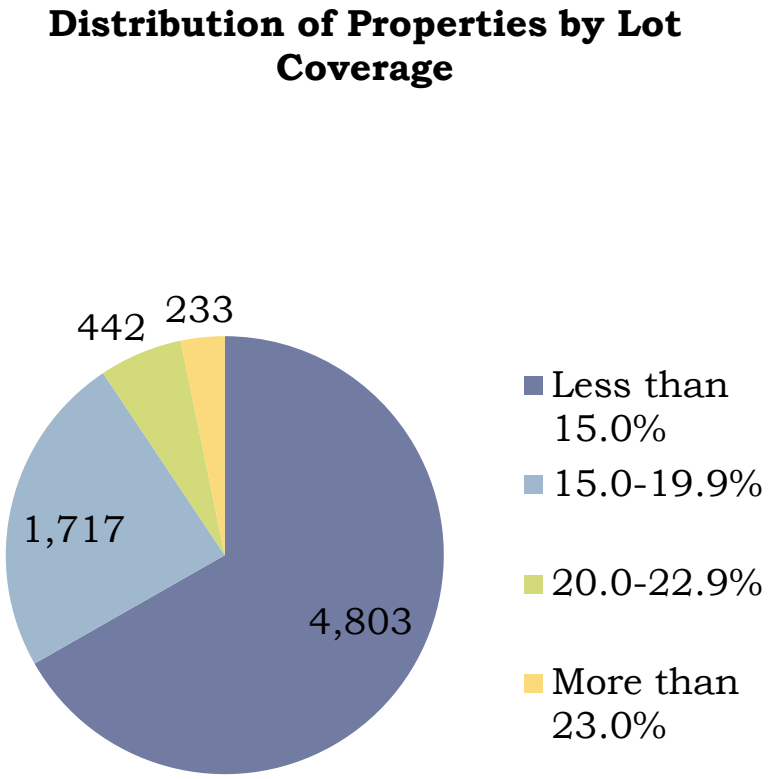
- Respond to resident concerns about the issue of teardowns and replacement housing.
- Explore the specific effects of zoning on regulating this issue.
- Investigate other communities' responses.
- Make recommendations for zoning changes to balance the rights of property owners with the preservation of collective neighborhood character.
- Reduce the negative impacts on abutters (shadows, loss of views, decrease in privacy, large massing, etc.).
- Limit house size in relation to lot size, complementing the Town's other zoning dimensional controls.
- Make zoning changes fair and easy to understand.

Needham's Housing Inventory – Types of Properties

- About 11,000 total units.
- 76% single-family detached, 3.6% attached.
- 82.5% owner-occupied.
- About 25% are nonconforming for either lot size or frontage.
- Approximately17% are nonconforming for both lot size and frontage.



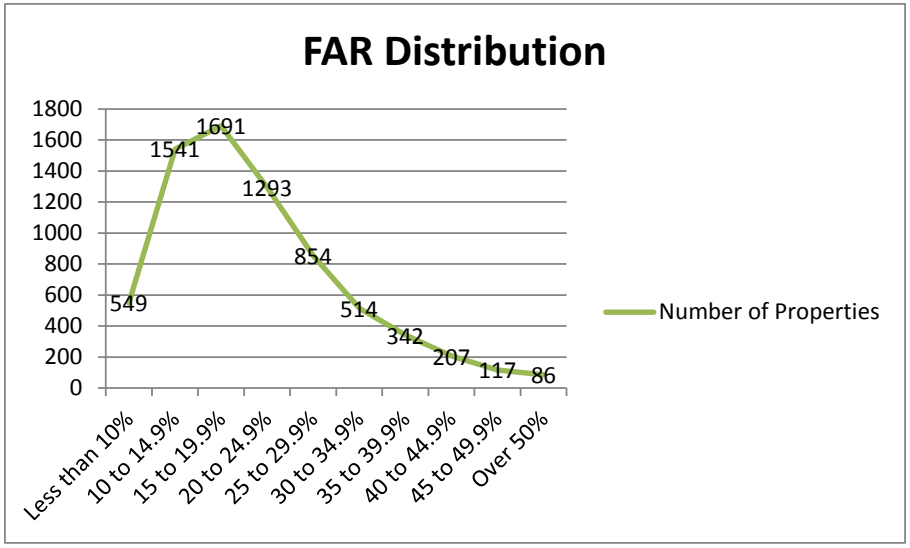
Needham's Housing Inventory – Lot Area Coverage



- (Footprint of house as a % of lot area.)
- 2/3 of properties had lot coverage percentages of less than 15%.
- Median lot coverage of 13% compared to 23% for studied replacement units.
- Only 80 properties had lot coverage of more than 25%.

Needham's Housing Inventory – Floor Area Ratio (FAR)

- (Floor area divided by the lot area.)
- Median FAR of about 20%.
- 30% of properties had an FAR above 25%.
- Only 5.6% had an FAR above 40%.



Needham's Housing Inventory – Housing Costs

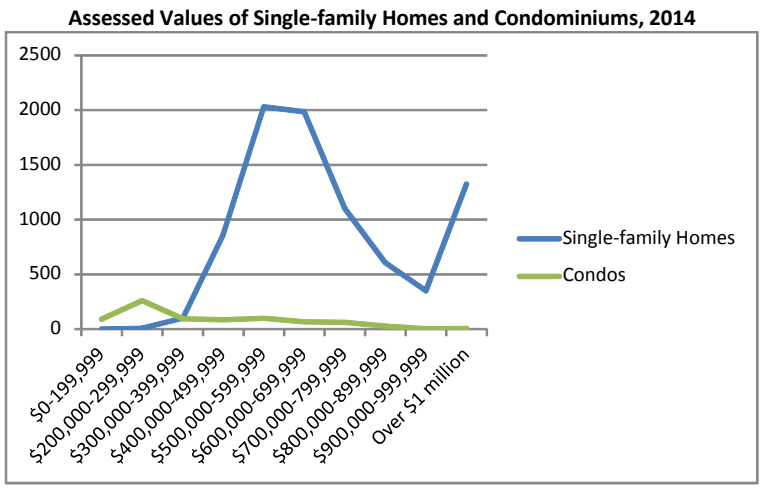
Median single-family home prices have increased by 243% since 1990.

- 1990 = $245,000
- 2000 = $436,250
- 2010 = $632,500
- 2015 = $840,000

Median rent of $1,432 based on 2014 census estimates.

Market rents for new 2-bedroom apts. above $5,000.

More than 12% of households pay more than half their income on housing costs.



Teardown Activity

Period	# New Residential Single-family Units	# Residential Units Demolished	Net New Units
2010 through 2012	203	186 92% of new units	17
2013	104	96 92% of all new units	8
2014 through 5-12-14	42	30 71% of all new units	12
5-13-14 through 3-30-15	81	55 68% of all new units	26
Total	430	367 85% of all new units	63

Teardown Activity

- Smaller homes with median size of 1,536 square feet and median value of $600,000.*
- Replacement homes had a median size of 4,830 square feet and prices well above $1 million.*
- Loss of rental units as smaller multi-family properties are being torn down and converted to high-end condos.
- Teardown properties had a median FAR of 15% compared to 45% for replacement homes.*
- * Analysis includes all finished space minus the garage for 30 teardowns and replacement properties built during about the first 5 months of 2014.

Proposed Changes to Zoning

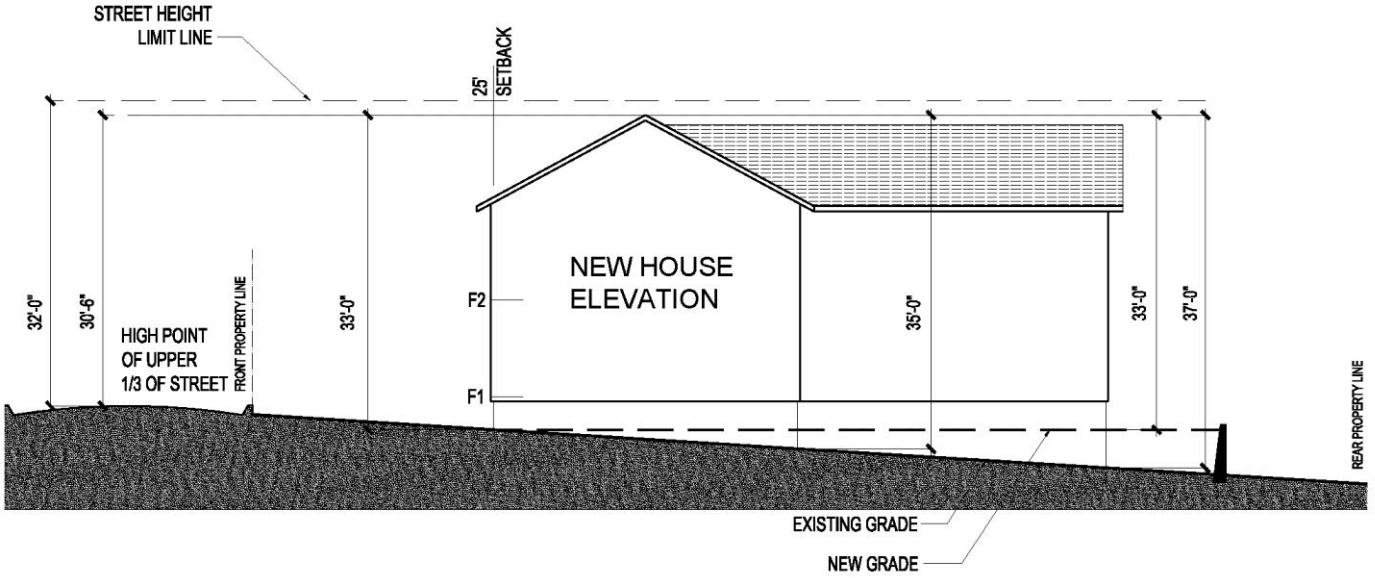
- Change building height measurement method
- Allow more building elements in setbacks
- Revise setbacks
- Increase Lot Area Coverage
- Cap house square footage by applying a Floor Area Ratio (FAR) calculation

Change Height Measurement Method

- Two options are offered
  - Measure from average existing grade or average new grade, whichever is lower. Height limit is 35 feet.
  - Measure from a single point in the street centerline as the average of the highest 1/3 of the properties' street frontage. Height limit is 32 feet.

Building Height – Downhill Lot Example

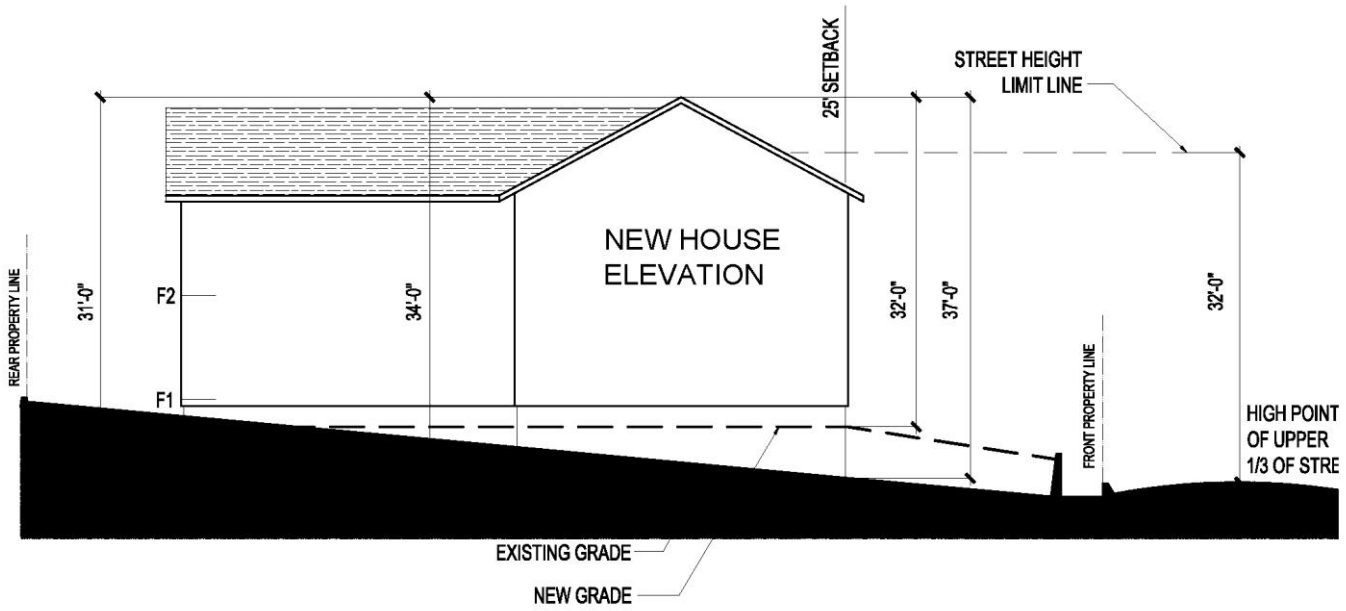
AVERAGE HEIGHT TO EXISTING GRADE: 35.5'
AVERAGE HEIGHT TO NEW GRADE: 33'
HEIGHT FROM HIGHEST 1/3 OF STREET: 31'



HEIGHT MEASUREMENT
EXAMPLE B: DOWNHILL LOT
FIRST FLOOR 1' ABOVE STREET

Building Height – Uphill Lot Example

AVERAGE HEIGHT TO EXISTING GRADE: 34'
AVERAGE HEIGHT TO NEW GRADE: 32.3'
HEIGHT FROM HIGHEST 1/3 OF STREET: 37'



HEIGHT MEASUREMENT

EXAMPLE A: UPHILL LOT

FIRST FLOOR 8' ABOVE STREET

Allow Elements in Setbacks

- Increase and encourage architectural variety by allowing various elements to be built within the front and side setbacks.

- Roof overhangs up to 18 inches.

Allow Elements in Setbacks

- Bay windows up to 8 feet long – maximum overall at 25% of that side of house.

Allow Elements in Setbacks

- Covered porches can project into setback to maximum of 50 square feet.

Change Setbacks

- Front
  - Increase from 20 to 25 feet or average of 150 feet each side of lot, whichever is greater, with maximum of 35 feet.
  - Limit 2-car garages within 35 feet to 1½ stories.
- Rear
  - Decrease to 15 feet.

- Compliant garage with proposed regulations

Change Setbacks

- Compliant garages with proposed regulations

Change Setbacks

- Non-compliant garages with proposed regulations

Change Setbacks

- Side
  - Measure to face of framing.
  - Conforming lot increase from 12.5/14 feet to 14/16 feet.
  - 32 feet of structure allowed at 14 foot setback line, the rest offset 2 feet to 16 feet.
  - Non-conforming lot (for frontage only) increase from 10 feet to 12 feet.
  - 32 feet of structure allowed at 12 foot setback line, the rest offset 2 feet to 14 feet.

Increase Lot Area Coverage

- Lot Area Coverage – Increase to 28% to allow for additional design flexibility.
- This is only in conjunction with Floor Area Ratio (FAR) calculation.

Add Floor Area Ratio (FAR)

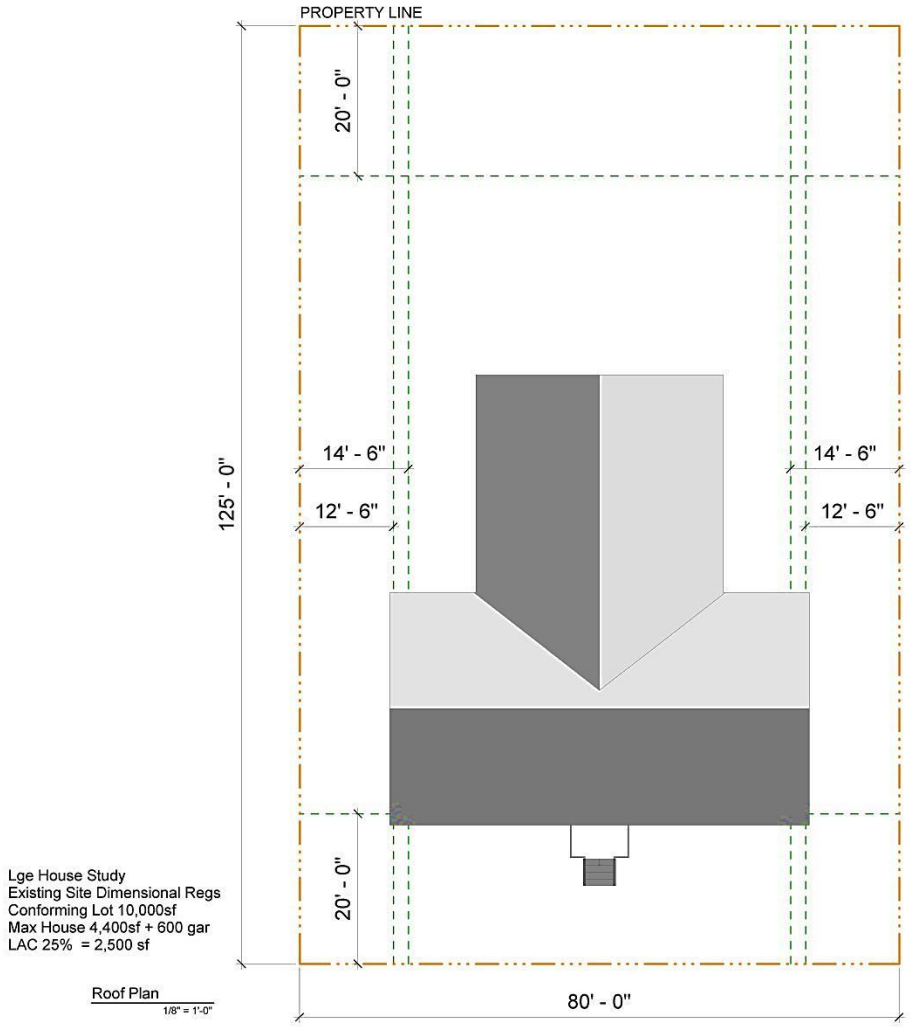
Basic Assumptions: First floor includes 2-car Garage, LR, DR, Kitchen, Family Room, Mudroom and Study. Second floor includes 4 BRs, 2-3 Baths, Laundry.

Lot Size (square feet)	FAR	Maximum House size (Does not include basement or attic. Includes a maximum 600 sf additional allowance for the garage.)
7,500 and under	.40	7,500 sf lot → 3,000 square feet
7,501 – 8,999	.38	8,500 sf lot → 3,230 square feet
9,000 – 9,999	.38	9,500 sf lot → 3,610 square feet
10,000 – 10,999	.38	10,500 sf lot → 3,990 square feet
11,000 – 11,999	.36	11,500 sf lot → 4,140 square feet
12,000 – 12,999	.35	12,500 sf lot → 4,375 square feet
13,000 – 13,999	.34	13,500 sf lot → 4,590 square feet
14,000 – 14,999	.33	14,500 sf lot → 4,785 square feet
15,000 and greater	.32	15,500 sf lot → 4,960 square feet

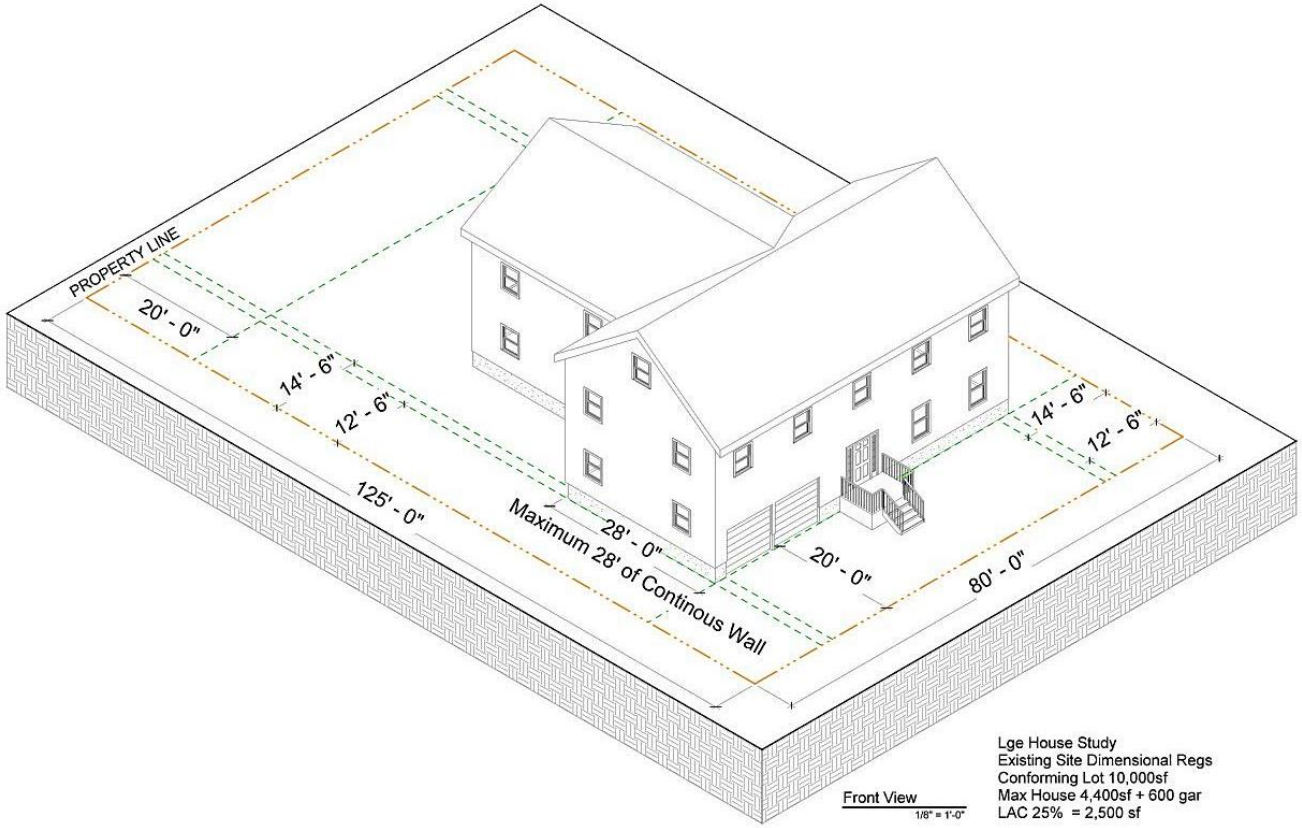
Comparative Examples

- Lot is 10,000 square feet
  - *Needham = 3,800 (First and second floor area plus allowance of 600 square feet for garage. Basement and attic are not counted.)*
  - Concord = 3,600 (Without basement)
  - Lexington = 5,950 (Includes basement, attic, garage and porch)
  - Newton = 3,800 (Includes attic, garages, and a portion of the basement)
  - Wellesley = 3,600 (Total living area plus garage; may include basement and attic.)

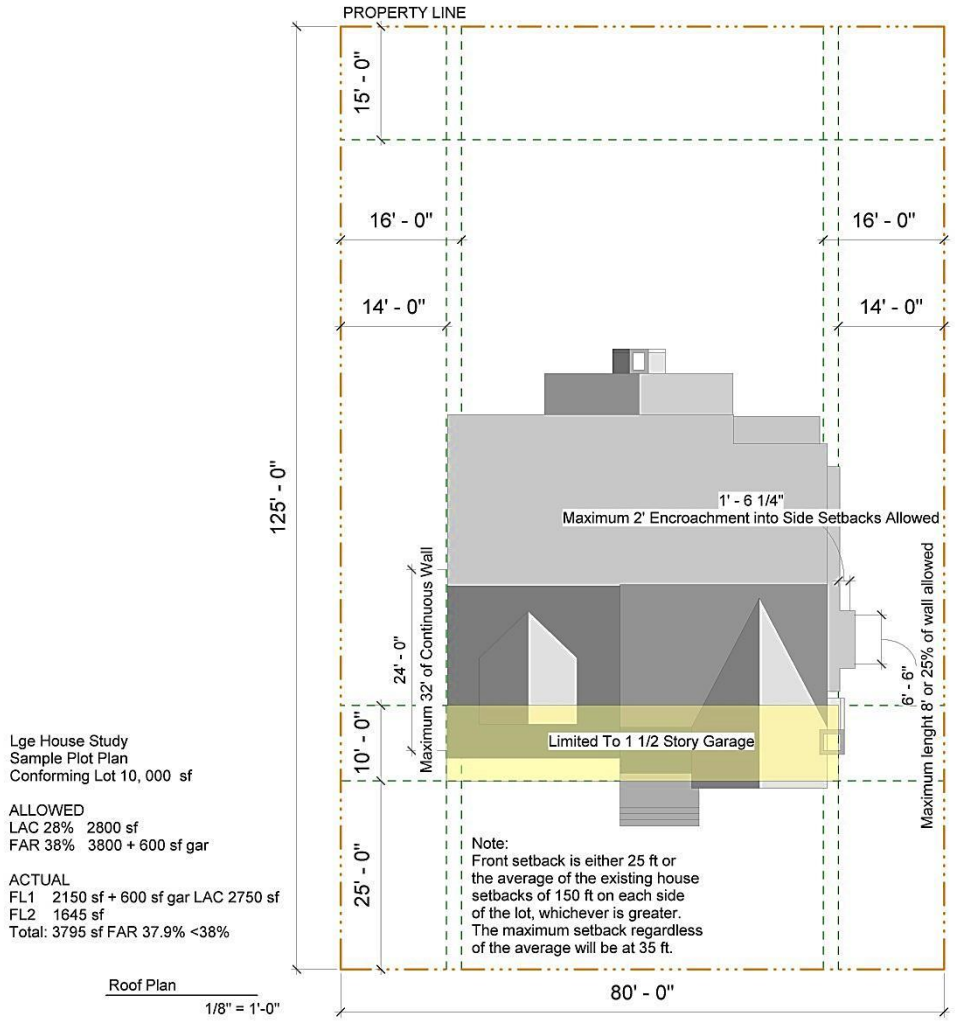
Existing Regulations: Conforming Lot



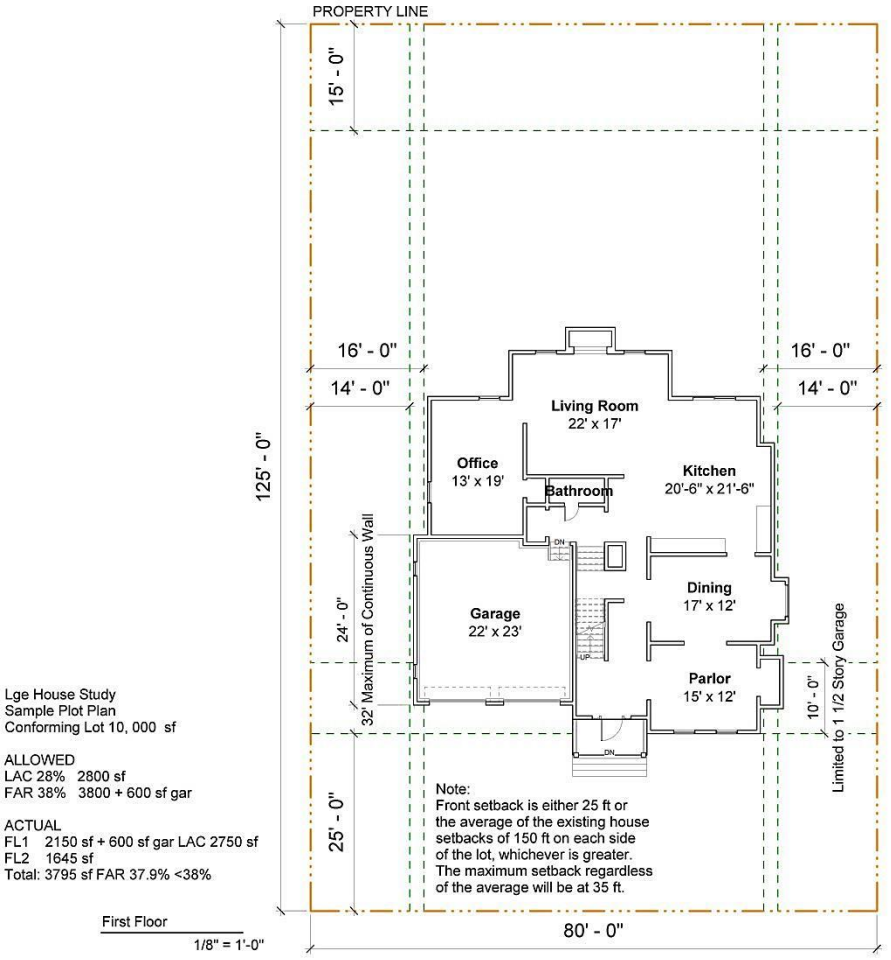
Existing Regulations: Conforming Lot



Proposed Regulations: Conforming Lot



Proposed Regulations: Conforming Lot

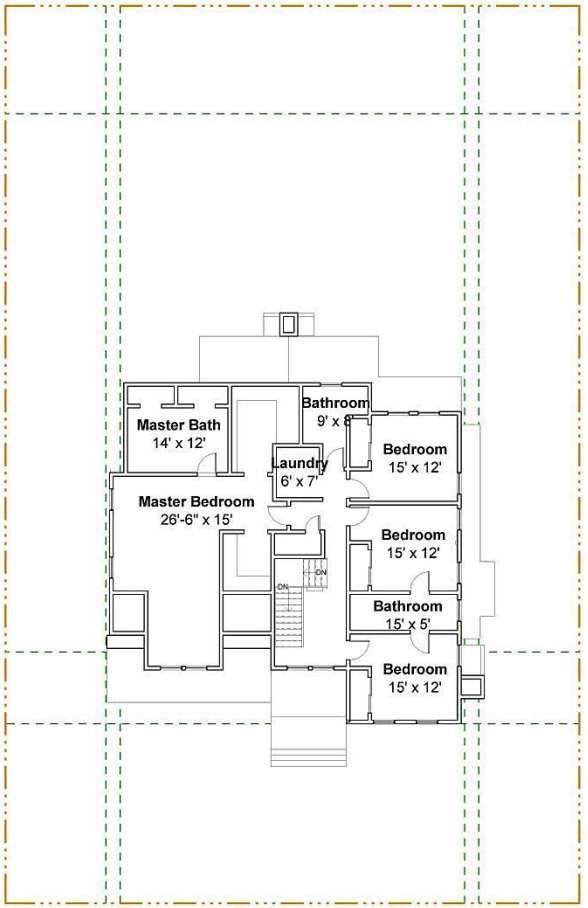


Lge House Study
Sample Plot Plan
Conforming Lot 10, 000 sf

ALLOWED
LAC 28% 2800 sf
FAR 38% 3800 + 600 sf gar

ACTUAL
FL1 2150 sf + 600 sf gar LAC 2750 sf
FL2 1645 sf
Total: 3795 sf FAR 37.9% <38%

First Floor
1/8" = 1'-0"



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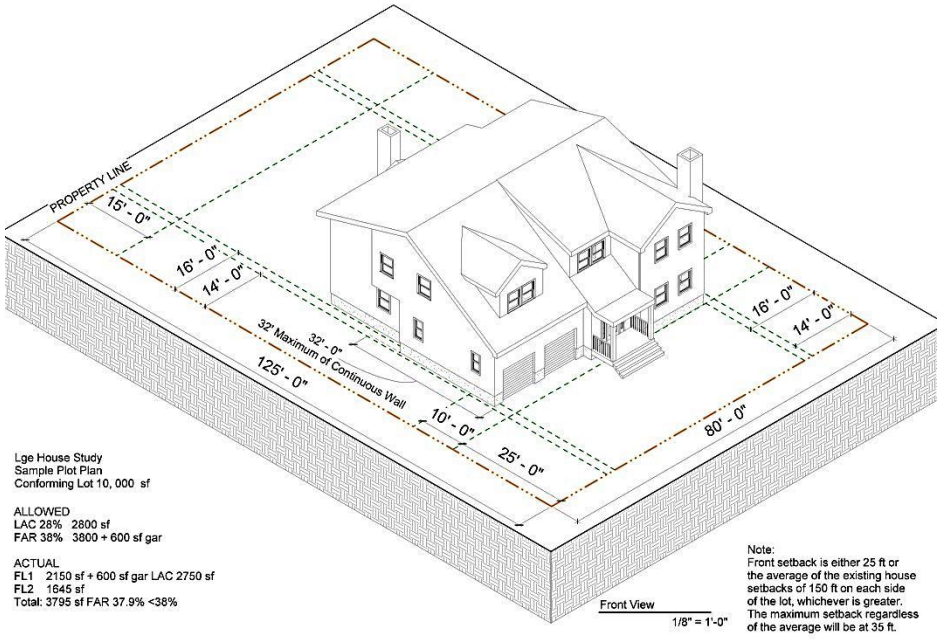
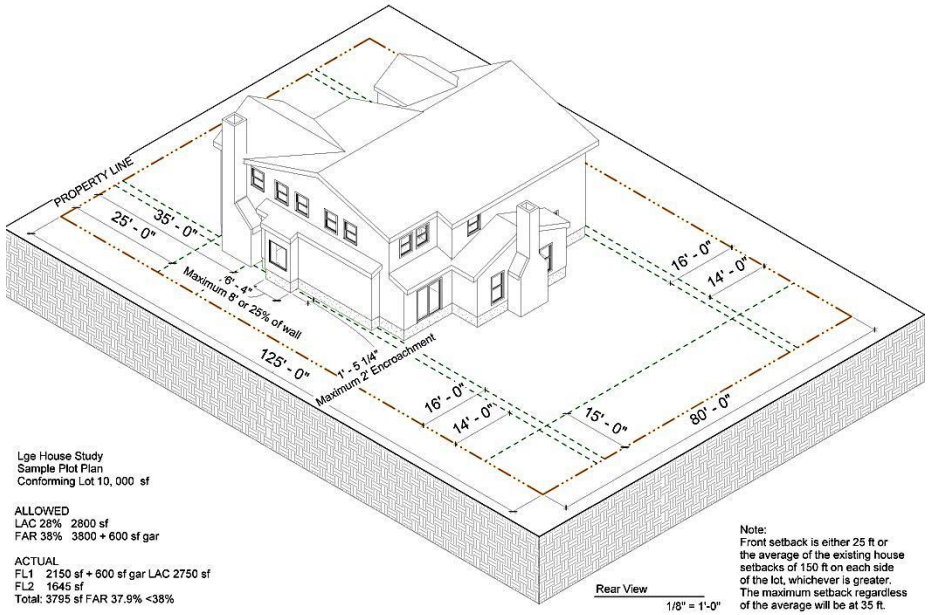
FL2 1645 sf
Total: 3795 sf FAR 37.9% <38%

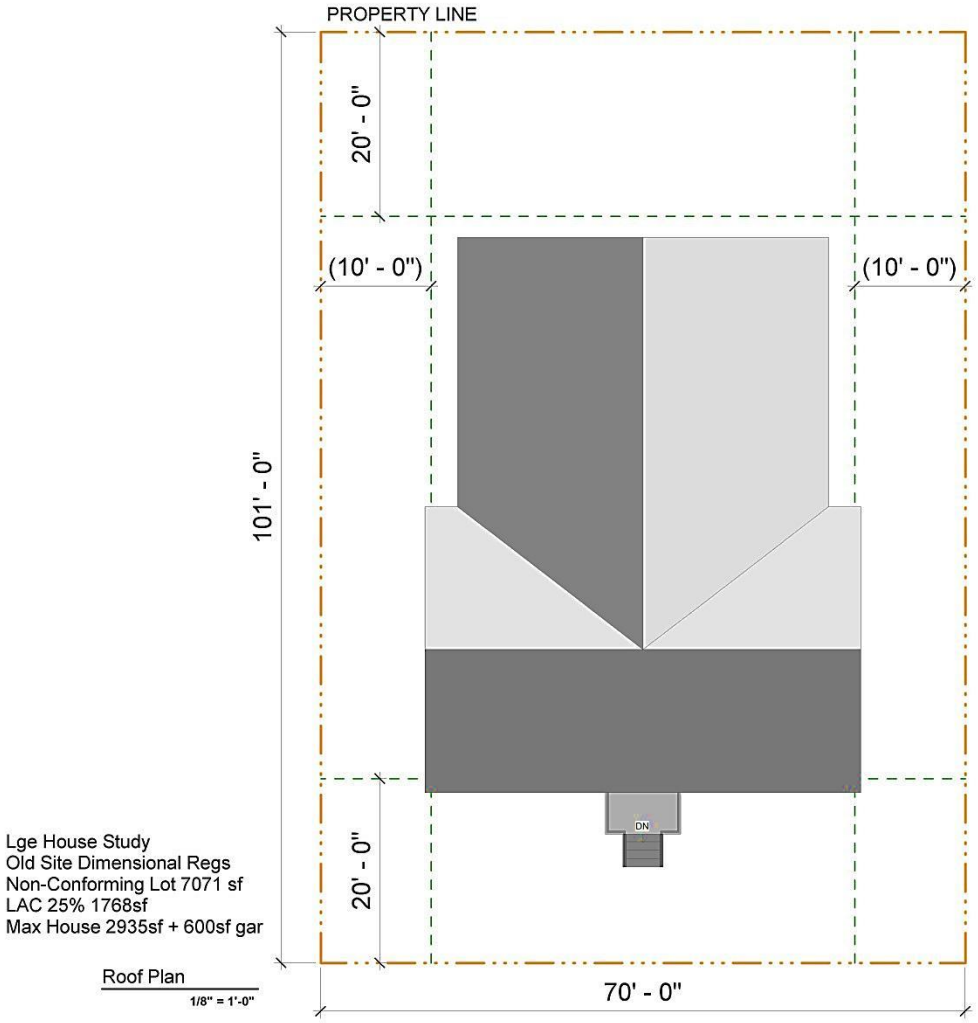
Second Floor
1/8" = 1'-0"

Proposed Regulations: Conforming Lot





Existing Regulations: Non-conforming Lot



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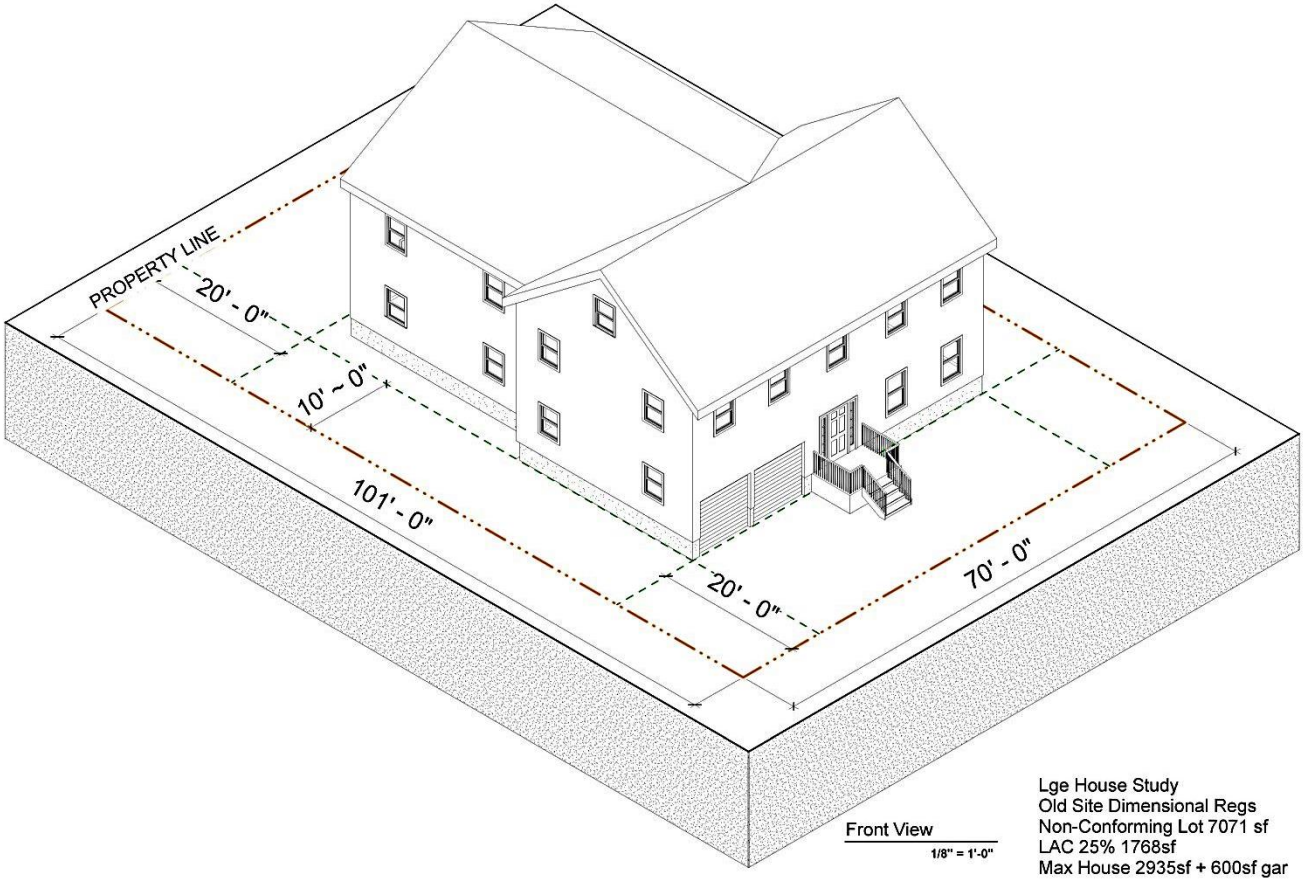

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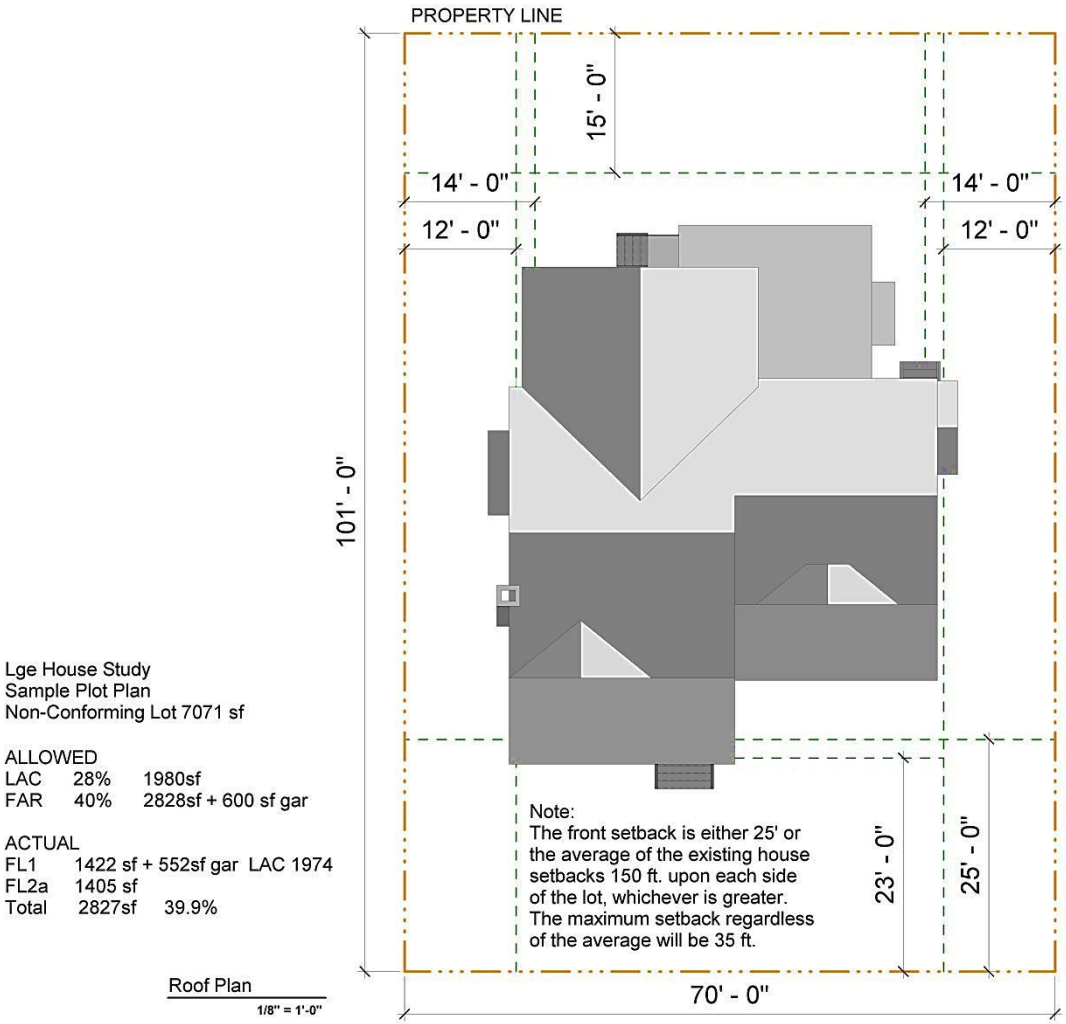
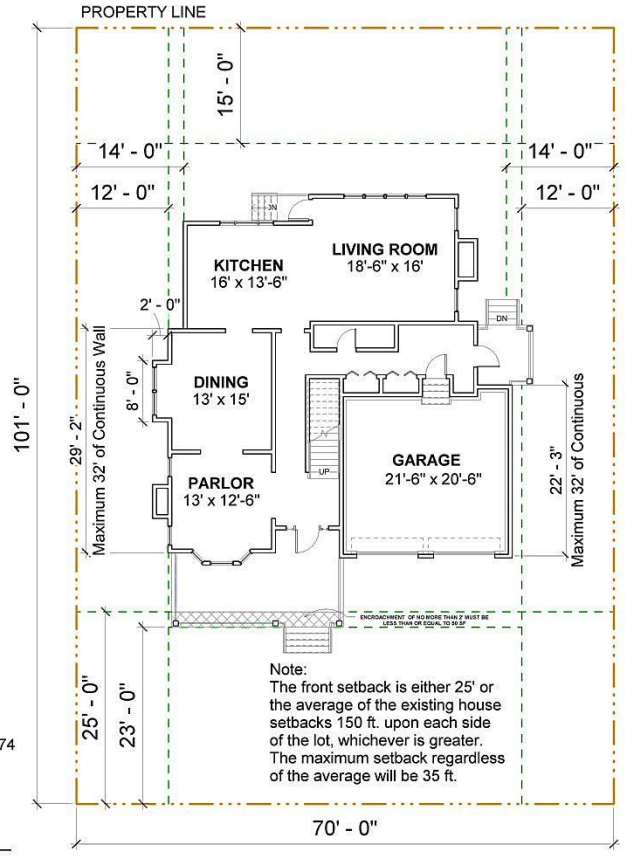


Proposed Regulations: Non-conforming Lot

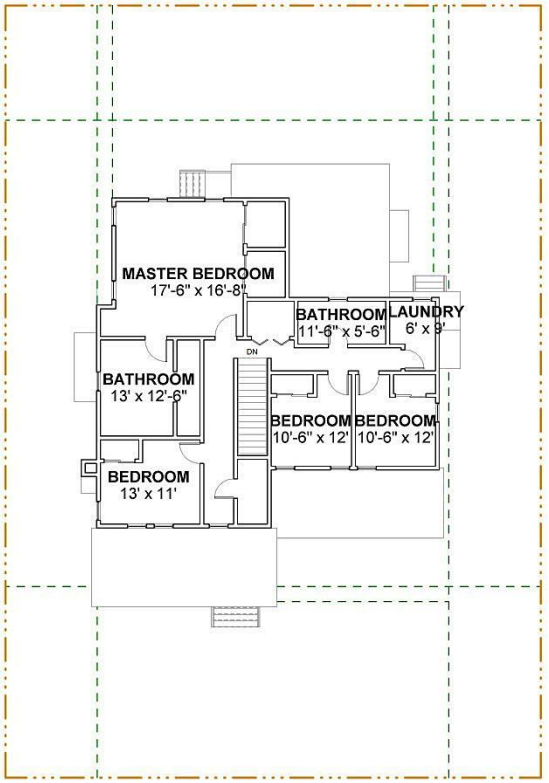


Lge House Study
Sample Plot Plan
Non-Conforming Lot 7071 sf

ALLOWED
LAC 28% 1980sf
FAR 40% 2828sf + 600 sf gar

ACTUAL
FL1 1422 sf + 552sf gar LAC 1974
FL2a 1405 sf
Total 2827sf 39.9%

First Floor
1/8" = 1'-0"



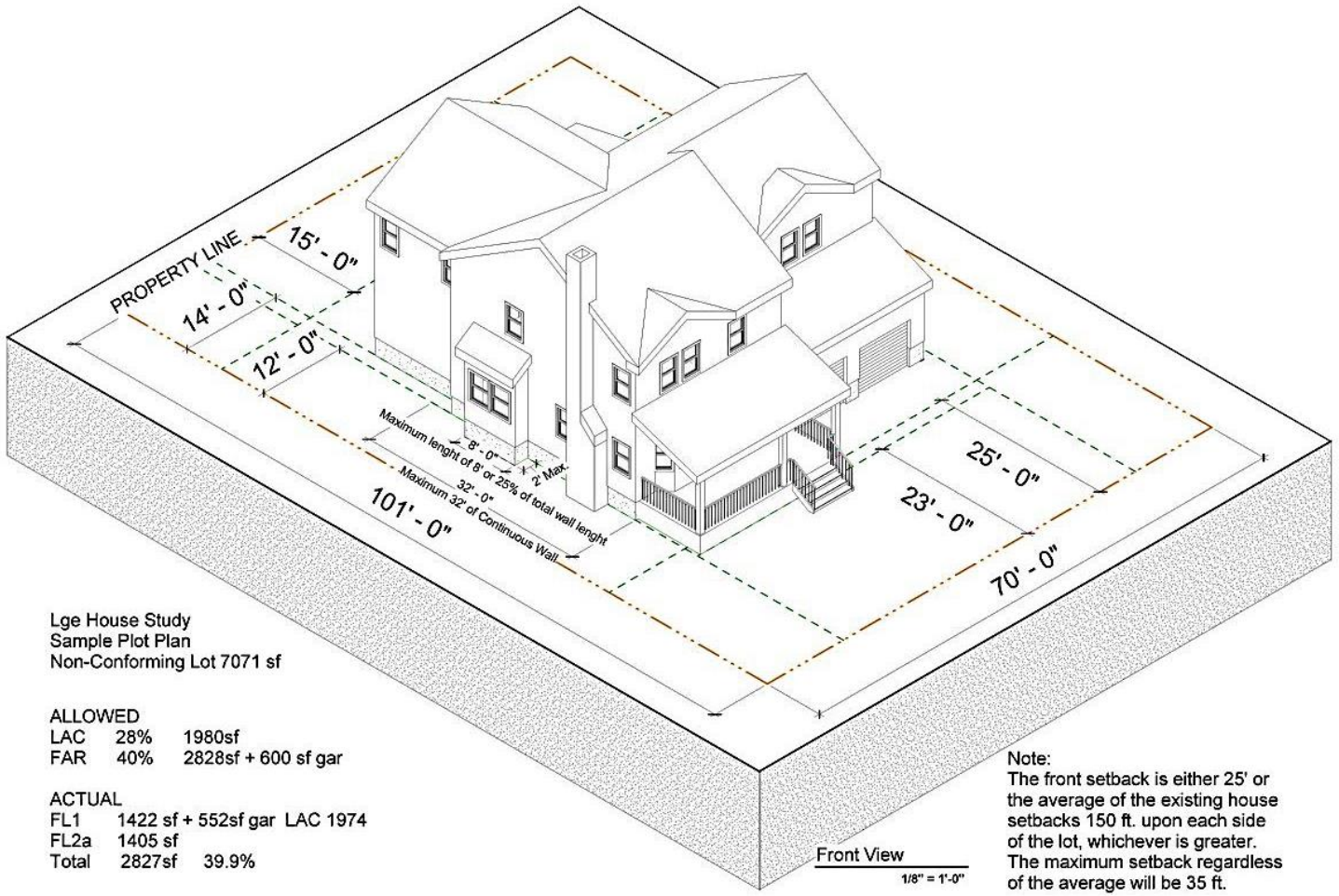
Lge House Study
Sample Plot Plan
Non-Conforming Lot 7071 sf

ALLOWED
LAC 28% 1980sf
FAR 40% 2828sf + 600 sf gar

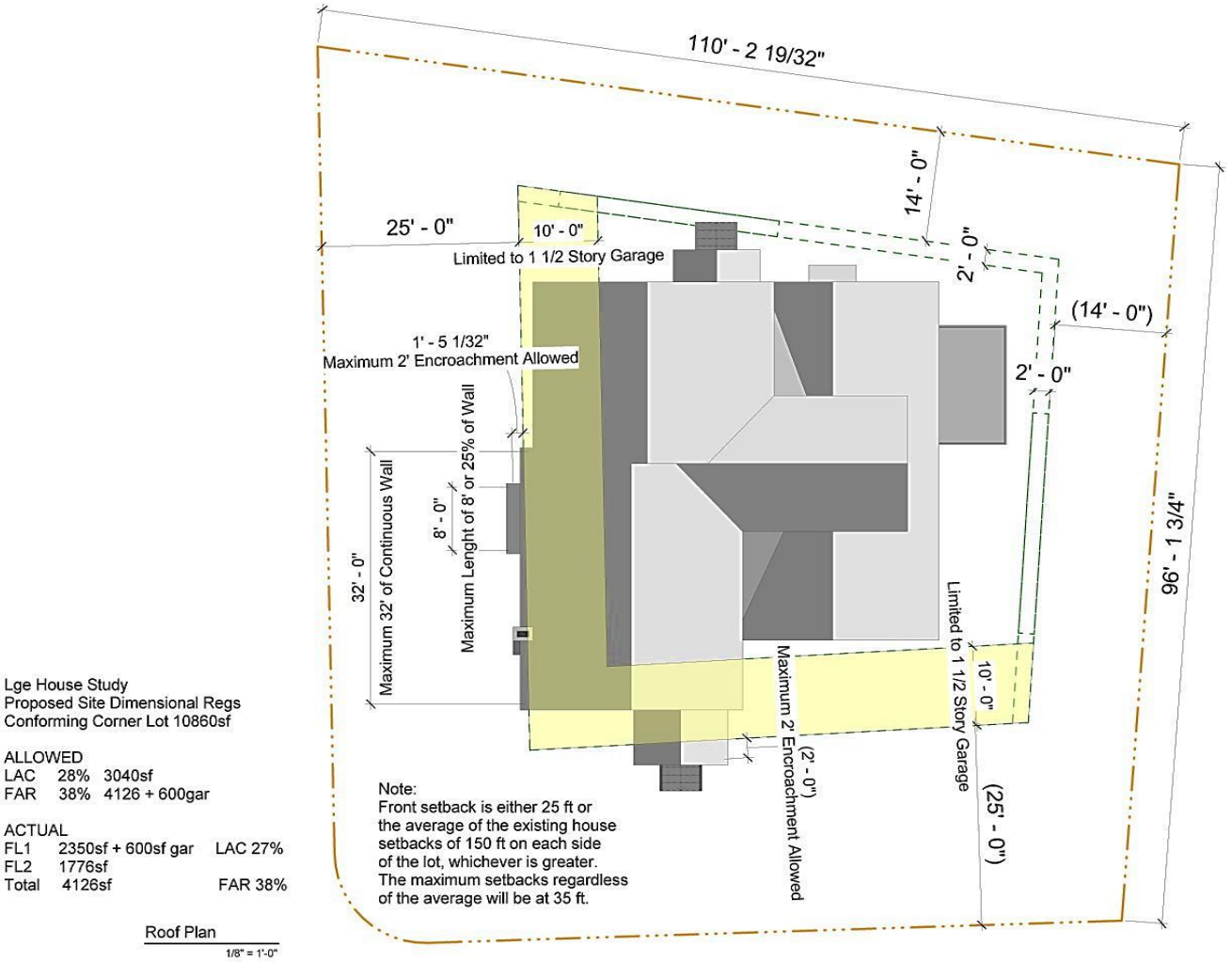
ACTUAL
FL1 1422 sf + 552sf gar LAC 1974
FL2a 1405 sf
Total 2827sf 39.9%

Second Floor
1/8" = 1'-0"

Proposed Regulations: Non-conforming Lot



Proposed Regulations: Corner Lot



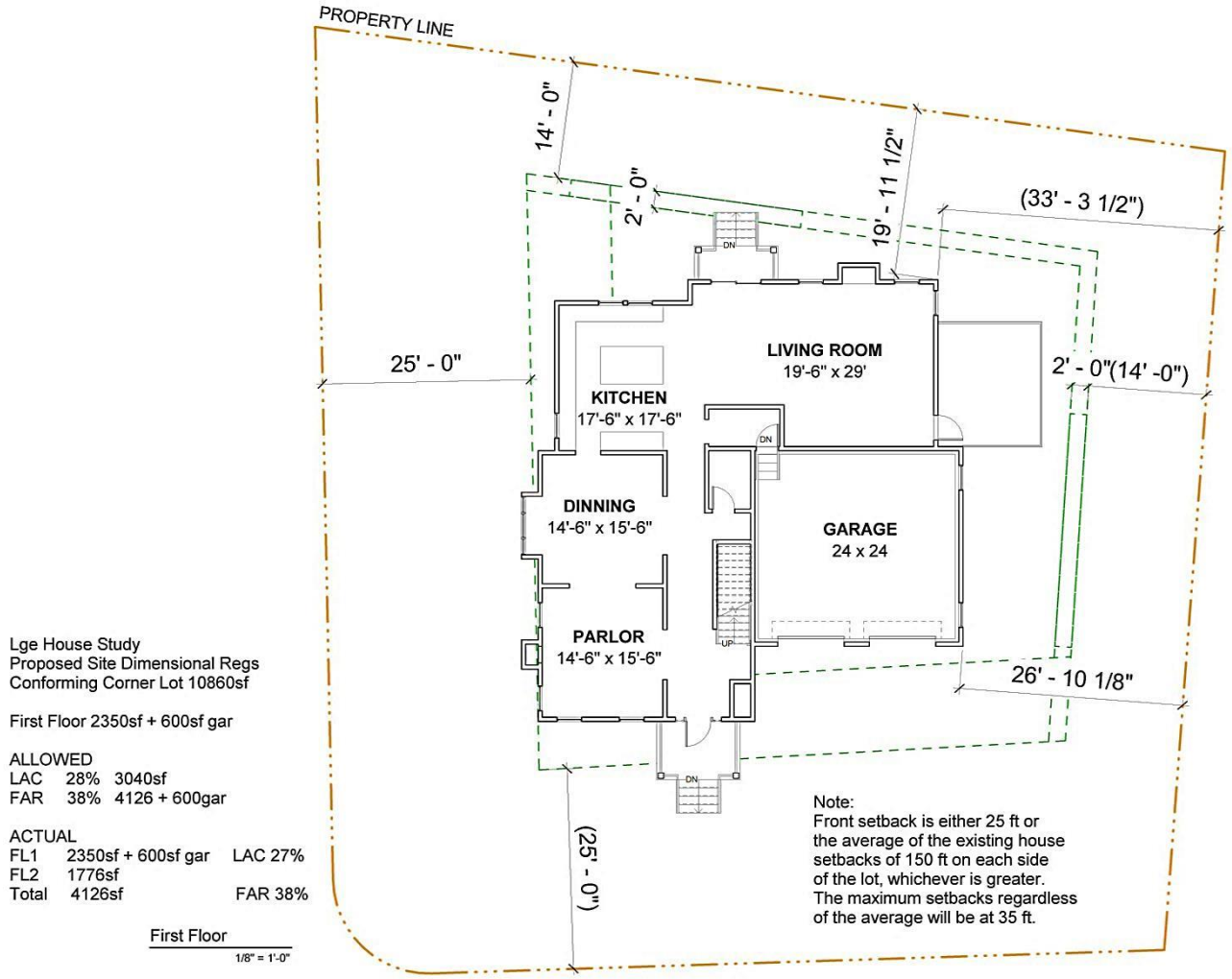
Lge House Study
Proposed Site Dimensional Regs
Conforming Corner Lot 10860sf

ALLOWED
LAC 28% 3040sf
FAR 38% 4126 + 600gar

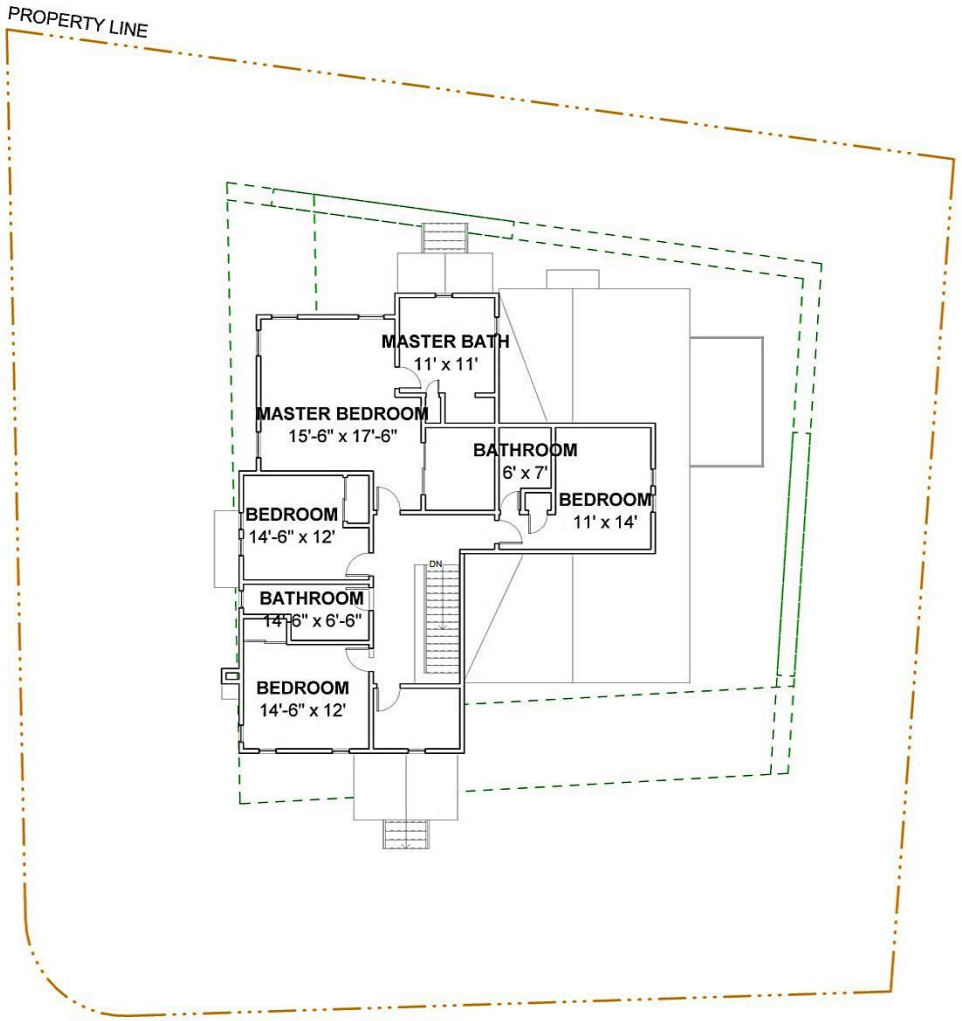
ACTUAL
FL1 2350sf + 600sf gar LAC 27%
FL2 1776sf
Total 4126sf FAR 38%

Roof Plan
1/8" = 1'-0"

Proposed Regulations: Corner Lot



Proposed Regulations: Corner Lot



Lge House Study
Proposed Site Dimensional Regs
Conforming Corner Lot 10860sf

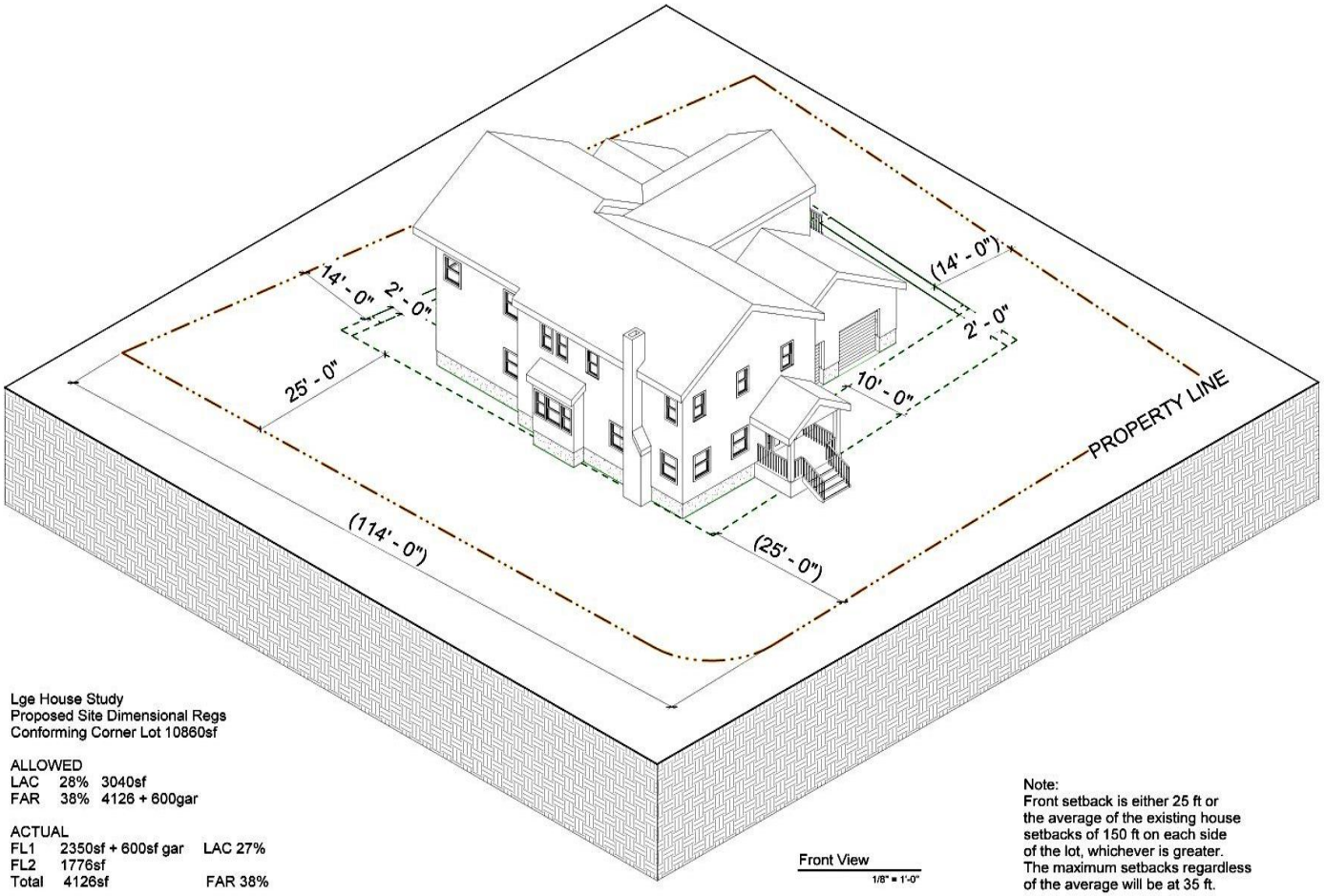
Second Floor 1770sf

ALLOWED
LAC 28% 3040sf
FAR 38% 4126 + 600gar

ACTUAL
FL1 2350sf + 600sf gar LAC 27%
FL2 1776sf
Total 4126sf FAR 38%

Second Floor
1/8" = 1'-0"

Proposed Regulations: Corner Lot



Lge House Study
Proposed Site Dimensional Regs
Conforming Corner Lot 10860sf

ALLOWED
LAC 28% 3040sf
FAR 38% 4126 + 600gar

ACTUAL
FL1 2350sf + 600sf gar LAC 27%
FL2 1776sf
Total 4126sf FAR 38%

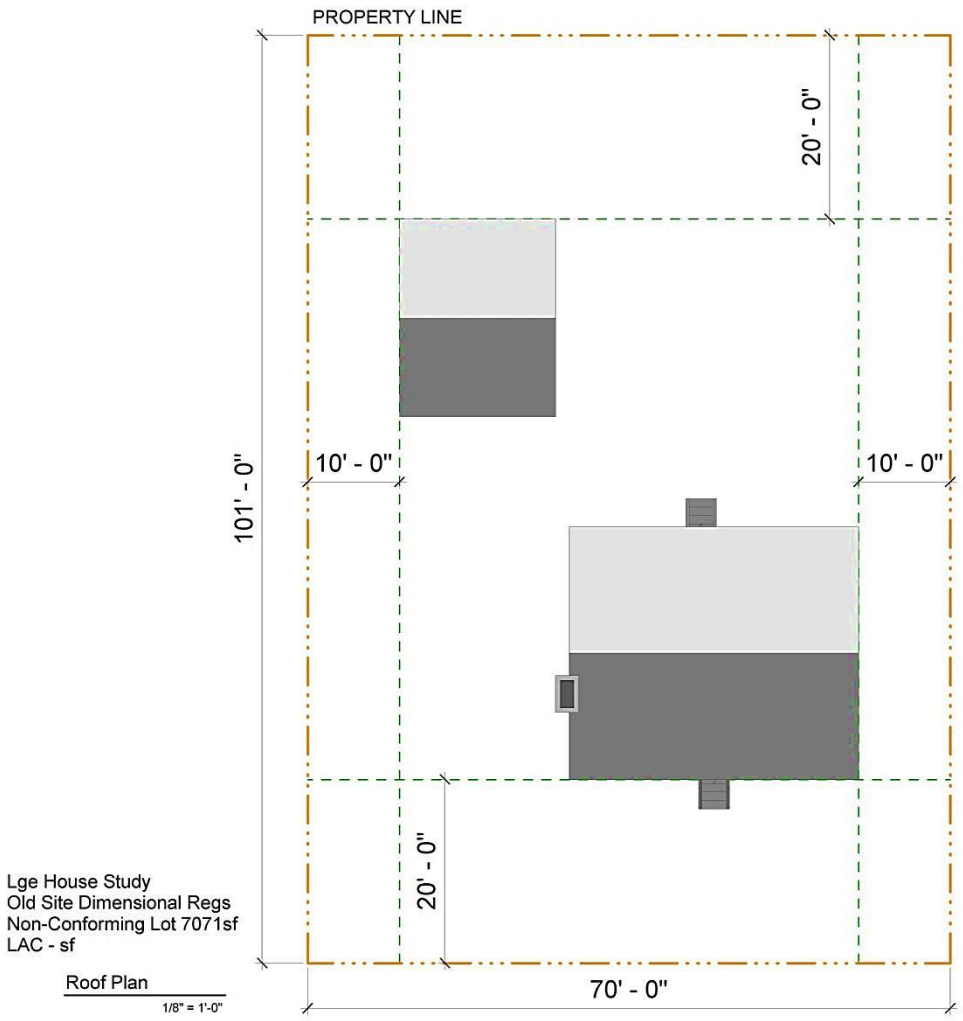
Front View
1/8" = 1'-0"

Note:
Front setback is either 25 ft or the average of the existing house setbacks of 150 ft on each side of the lot, whichever is greater. The maximum setbacks regardless of the average will be at 35 ft.

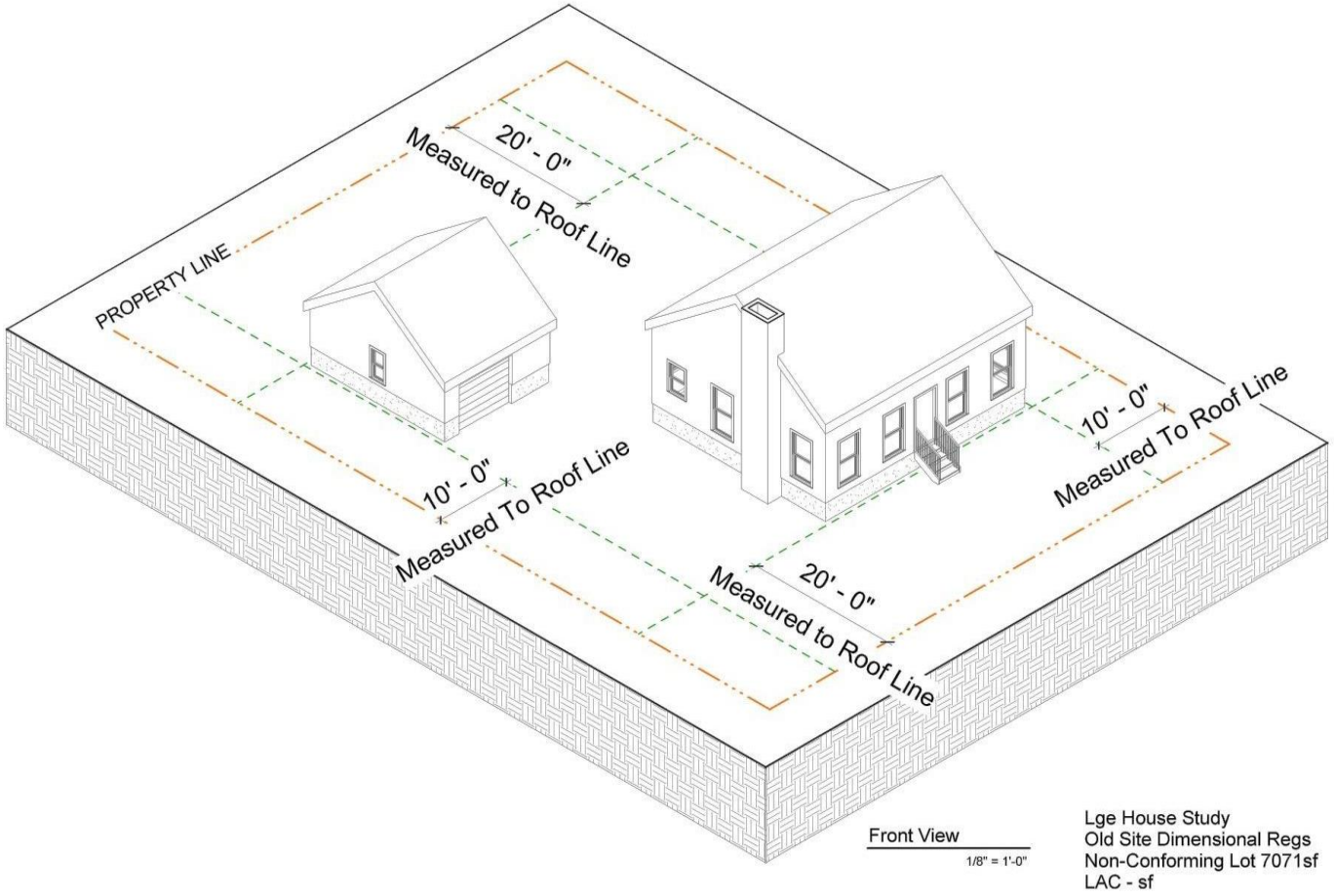
Summary of Changes

- Change building height measurement method
- Allow more building elements in setbacks
- Revise setbacks
- Increase Lot Area Coverage
- Cap house square footage by applying a Floor Area Ratio (FAR) calculation

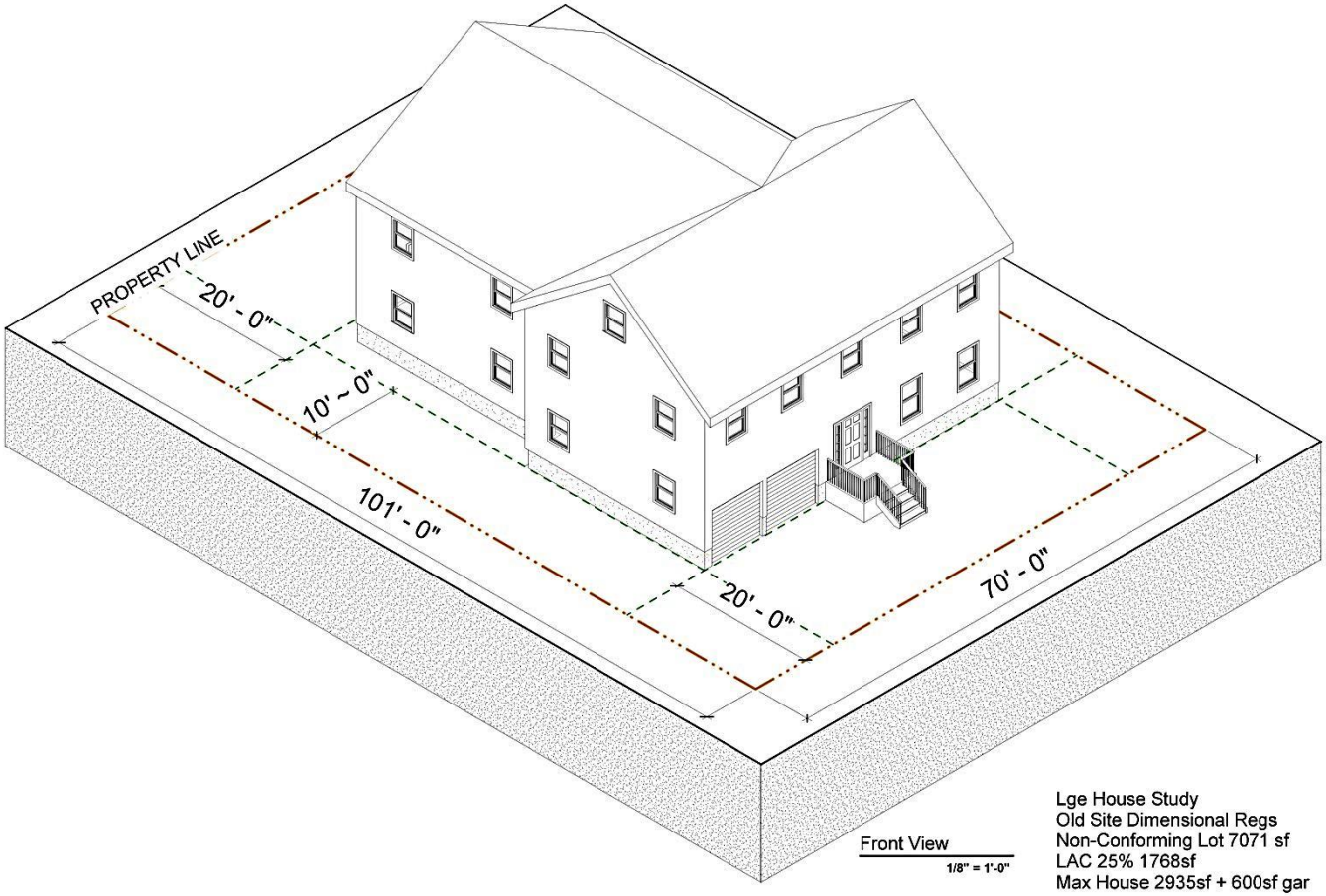
Typical Existing Non-conforming Lot



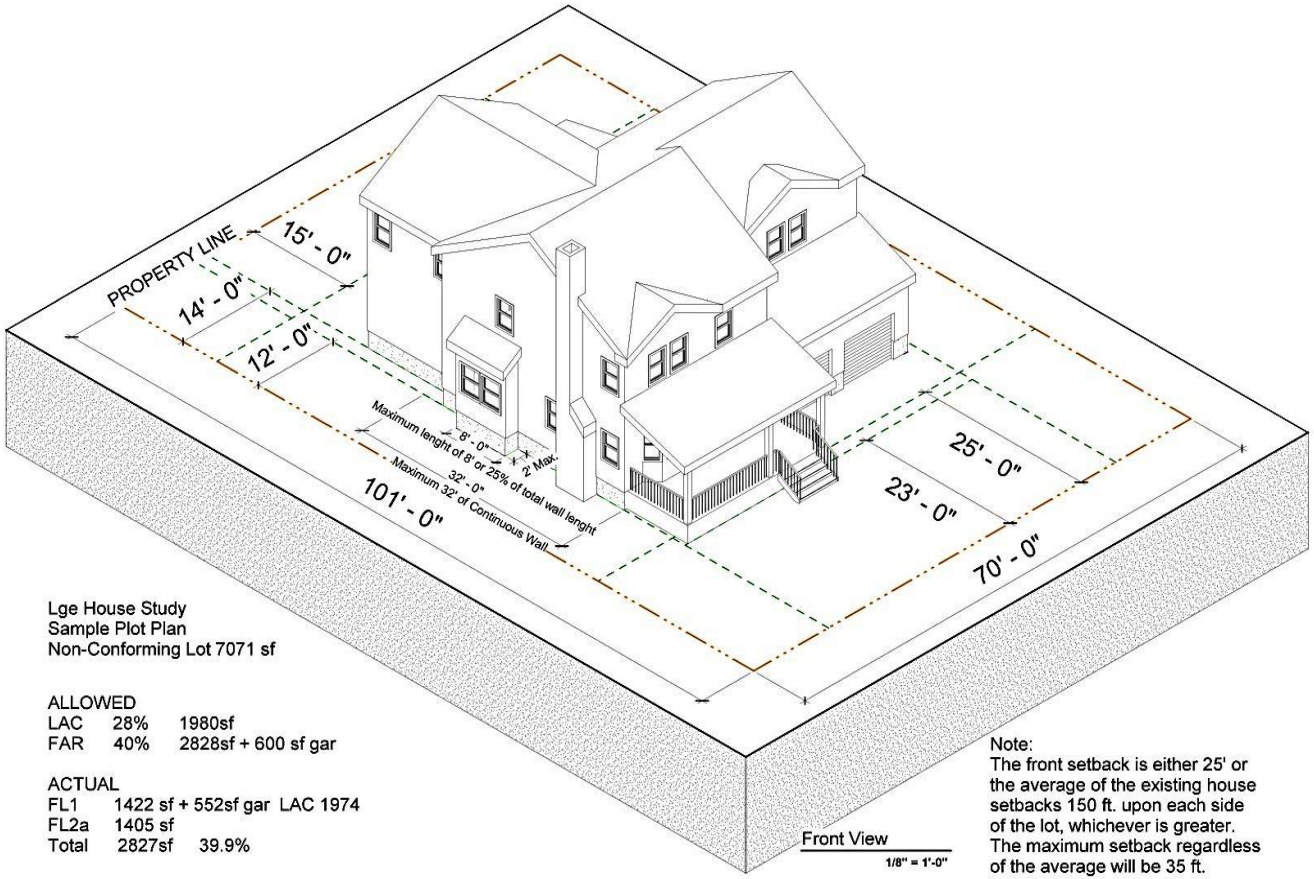
Typical Existing Non-conforming Lot



Maximum Replacement House for Non-conforming Lot under Existing Regs



Maximum Replacement House under Proposed Regs for Non-conforming Lot



Summary of Changes – Non-conforming Lot

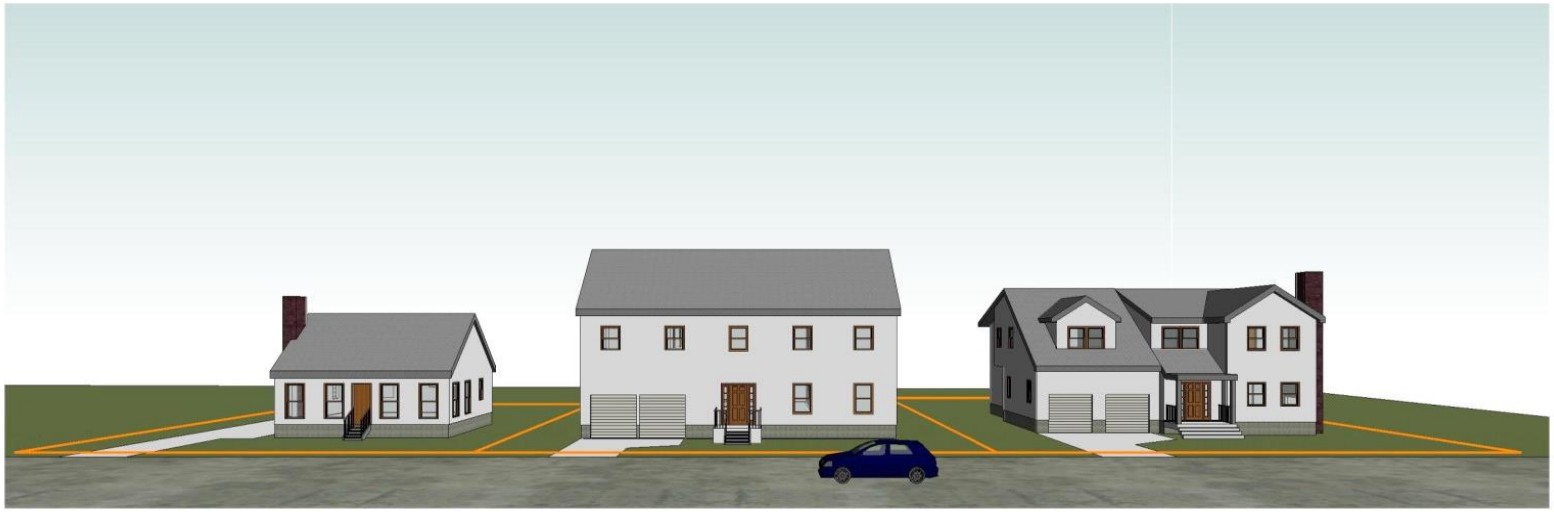
TYPICAL
EXISTING LOT
NON-COMFORMING

MAXIMUM REPLACEMENT
7170 sf Lot
LAC 25% 1768 sf
2935 + 600 sf gar

MAX REPLACEMENT
HOUSE
7170 sf Lot

LAC 28% FAR 40%
2827 sf + 600 sf gar

Summary of Changes – Conforming Lot



TYPICAL EXISTING
CONFORMING LOT

MAXIMUM REPLACEMENT
HOUSE UNDER CURRENT
REGULATIONS

10,000 sf Lot
LAC 25% 2500 sf
4,400 sf + 600 sf gar

MAX REPLACEMENT HOUSE
UNDER PROPOSED REGS

10,000 sf Lot
LAC 28% FAR 38%
3795 sf + 600 sf gar

Exhibit 14

ARTICLE 1: AMEND ZONING BY-LAW – DIMENSIONAL REGULATIONS

To see if the Town will vote to amend the Needham Zoning By-Law as follows:

(a) In Section 1.4, Non-Conformance, Subsection 1.4.7, Single-Family and Two-Family Dwellings, Subparagraph 1.4.7.2, Alteration of Single-Family and Two-Family Dwellings, by revising the first and third sentences of the paragraph so that the entire subsection shall now read as follows (new language underlined):

"A lawful pre-existing non-conforming single-family or two-family dwelling which is non-conforming because of front, side and rear setback, build factor, area and/or frontage requirements of this By-Law may be altered, extended or structurally changed (but not reconstructed) as of right and without a special permit or finding by the Board as required in the preceding section provided that such alteration, extension or structural change complies with all front, side and rear setback, lot coverage, floor area ratio, building height, and building story requirements of the current By-Law including but not limited to the provisions of Section 4.2.1 (a)(b)(c)(d)(e)(f)(g)(h)(i)(j) of this By-Law. Such alteration, extension or structural change shall not be considered an increase in the non-conforming nature of the dwelling. For purposes of this section, the extension of an exterior wall within a required setback area shall be deemed to create a new non-conformity and shall require the grant of a variance by the Board of Appeals except as otherwise provided under Section 4.2.1 footnote b and footnote e of this By-Law."

(b) In Section 1.4, Non-Conformance, Subsection 1.4.7, Single-Family and Two-Family Dwellings, Subparagraph 1.4.7.4, Reconstruction of Two-Family Dwellings in a Single Residence A, Single Residence B or Rural-Residence Conservation District Where the Use is Prohibited, Subparagraph (d) by revising the paragraph, so that the entire subsection shall now read as follows (new language underlined):

"(d) Reconstruction of a non-conforming two-family dwelling on a lot where the building as reconstructed would not comply with all front, side, and rear setbacks, lot coverage, floor area ratio, building height, and building story requirements of the current By-Law including but not limited to the provisions of Section 4.2.1(a)(b)(c)(d)(e)(f)(g)(h)(i)(j) of this By-Law; and"

(c) In Section 4.2, Dimensional Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, General Residence, and Institutional Districts, by replacing Section 4.2.1, Table of Regulations with new sections 4.2.1, 4.2.2, 4.2.3 and 4.2.4, so that the entire section shall now read as follows:

"4.2.1 Table of Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, and General Residence Districts

Except as otherwise provided in Section 4.2.2 for public, semi-public and institutional uses, no building or structure shall be constructed, altered, or relocated on any lot except in conformance with these regulations:

District	Min. Lot Area (sf)	Min. Frontage (ft)	Front Setback (ft)	Side Setback (ft)	Rear Setback (ft)	Max. Floor Area Ration (F.A.R.)	Max. % Lot Coverage	Max. Stories	Max. Height (ft)
Rural Residence Conser-vation	43,560	150	50	25	25	NR	15%	2-1/2 *(h)*	35
Single Residence A	43,560	150	30	25 *(c)*	15 *(c)*	NR	NR	2-1/2 *(h)*	35
Single Residence B	10,000	80	25 *(a)(b)*	14 (d)(e)	20	.36-.38 *(f)*	28%	2-1/2 *(h)*	35 *(i)(j)*
General Residence	10,000	80	25 *(a)(b)*	14 *(d)(e)*	20	*NR*	*30%-35% (g)*	2-1/2 *(h)*	35 *(i)(j)*

The terms used in the Table of Regulations above are as defined in Section 1.3 of the By-Law except as otherwise noted below.

Front Yard Setback - the minimum horizontal distance from a front lot line of a lot to the nearest portion of a building or structure. The following elements are permitted in the front yard setback: (i) uncovered steps; (ii) roof overhangs projecting not more than 2 feet from the wall of a building; (iii) siding and trim projecting not more than 6 inches from the wall of a building; (iv) first floor bay windows that do not have a foundation nor create any floor area nor project more than 2 feet from the wall of a building, provided that the width of a single bay window is limited to 8 feet, total overall area of a bay or bays is limited to 25% of the first floor wall area where the bay or bays are installed, and roofs on bay windows may project an additional 6 inches into the setback; and (v) unenclosed, covered or uncovered landings or entrance porches located on the first floor and having no habitable space directly above, provided that no more than a maximum of 50 square feet of said landing or porch is allowed in the front setback and the maximum porch or landing projection into the front setback is limited to 5 feet.

Side Yard Setback - the minimum horizontal distance from a side line of a lot to the nearest portion of a building or structure. The following elements are permitted in the side yard setback: (i) uncovered steps; (ii) roof overhangs projecting not more than 2 feet from the wall of a building; (iii) siding and trim projecting not more than 6 inches from the wall of a building; (iv) unenclosed, covered or uncovered landings which neither exceed a total area of 25 square feet nor project more than 4 feet from the face of a building; (v) first floor bay windows that do not have a foundation nor create any floor area nor project more than 2 feet from the wall of a building, provided that the width of a single bay window is limited to 8 feet, total overall area of a bay or bays is limited to 25% of the first floor wall area where the bay or bays are installed, and roofs on bay windows may project an additional 6 inches into the setback; (vi) attached chimneys and fireplace enclosures projecting not more than 2 feet from the wall of a building; and (vii) covered basement entrances (bulkheads) which neither exceed a total area of 40 square feet nor a maximum height of 3.5 feet nor project more than 7.5 feet from the wall of a building.

Rear Yard Setback - the minimum horizontal distance from the rear line of a lot to the nearest portion of a building or structure. The following elements are permitted in the rear yard setback: (i) uncovered steps; (ii) roof overhangs projecting not more than 2 feet from the wall of a building; (iii) siding and trim projecting not more than 6 inches from the wall of a building; (iv) unenclosed, covered and uncovered landings which neither exceed a total area of 25 square feet nor project more than 4 feet from the face of a building; (v) first floor bay windows that do not have a foundation nor create any floor area nor project more than 2 feet from the wall of a building, provided that the width of a single bay window is limited to 8 feet, total overall area of a bay or bays is limited to 25% of the first floor wall area where the bay or bays are installed, and roofs on bay windows may project an additional 6 inches into the setback; (vi) attached chimneys and fireplace enclosures projecting not more than 2 feet from the wall of a building; and (vii) covered basement entrances (bulkheads) which neither exceed a total area of 40 square feet nor a maximum height of 3.5 feet nor project more than 7.5 feet from the wall of a building.

Lot Coverage - that portion of a lot that is covered or occupied by any building or structure, but excluding unenclosed, covered or uncovered landings or porches (unless such covered landings or porches have habitable space directly above), steps, roof overhangs, bay windows, chimneys and bulkheads as permitted in required setbacks as provided above, as well as outdoor fireplaces, decks, patios and pools.

Floor Area Ratio: The floor area divided by the lot area. Floor area shall be the sum of the horizontal areas of the several floors of each building on a lot, as measured from the exterior faces of the exterior walls, but excluding basements, attics, half-stories located directly above the second floor, unenclosed porches and up to 600 square feet of floor space in accessory buildings or structures or in main buildings or structures intended and designed for the parking of automobiles.

Height- Height shall be measured using one of the following two alternative methods: (1) the vertical distance from average original grade or finished grade, whichever is lower, of the land surrounding the footprint of the structure to the highest point of a structure or roof of a building. The average height shall be measured starting at one corner of the structure measuring the height of the structure to the highest point above grade every 10 lineal feet. The height limit under this method is 35 feet. For purposes of this alternative, original grade shall be defined as the grade of the lot before any regrading, demolition or development begins. If an existing structure is to be demolished, the original grade shall be the grade determined prior to demolition of the structure. If there is no existing structure on the property, the natural grade of the property, prior to any modification, shall be considered the original grade; except in new subdivisions where the original grade shall mean the approved and recorded grade; (2) the height of the structure measured from a single point in the street centerline which is the average of the highest 1/3 of the property's street frontage. The height limit under this method is 32 feet.

The symbol "NR" means no requirements.

(a) A first story or basement story attached 2 car garage with a front setback between 25 and 30 feet is limited to a height of 1 ½ stories. A full second story above such a garage must have a front setback of a minimum of 30 feet. For corner lots the increased setback is required only on the elevation on which the garage doors face.

(b) In a Single Residence B or a General Residence District, additions to existing single or two-family structures nonconforming for front yard setback and constructed prior to May 1, 2017, may be extended to a front yard setback of 20 feet, provided any demolition of the existing

structure does not exceed 50% of the building shell exclusive of demolition of a single story attached garage and further provided that the front yard setback does not exceed the farthest extent of the setback of the existing structure. For existing single or two-family structures non-conforming for front setback where demolition exceeds 50% of the building shell, the structure may be extended to a front yard setback of 20 feet upon receipt of a special permit from the Board of Appeals under Section 7.5.2 of the Zoning By-Law, provided: (1) the new construction meets all other requirements of the Zoning By-Law; (2) the front yard setback as permitted by special permit does not exceed the farthest extent of the setback of the existing structure; (3) the Board determines that such change, extension or alteration shall not be substantially more detrimental to the neighborhood than the existing nonconforming structure.

(c) Buildings or structures on lots created by deed or plan, endorsed or recorded before January 9, 1986, shall have a minimum side or rear yard setback of 15 feet in the Single Residence A District. Notwithstanding the foregoing, in the Single Residence A District, a change in the area, frontage or configuration of an existing improved lot created by deed or plan, endorsed or recorded before January 9, 1986, which includes a conforming structure or building shall not change the minimum side or rear line setback requirement of 15 feet provided that (i) no other dimensional violations of the By-Law are created as a result of such change in the area, frontage or configuration of such existing improved lot, (ii) such lot otherwise continues to be a conforming lot in terms of minimum lot area, frontage and build factor following such change in the area, frontage or configuration of such existing improved lot, and (iii) such change in the area, frontage or configuration of such existing improved lot does not result in the creation of any additional building lot. The deed conveying land by reference to a plan showing such change in the area, frontage or configuration of such existing improved lot shall contain a restriction affecting the land of both the grantor and the grantee prohibiting the creation of an additional building lot as a result of such conveyance.

(d) In the Single Residence B and General Residence districts the minimum side yard setback is 14 feet, and a maximum of 32 linear feet of structure may be built at the minimum setback line, as measured parallel to the side lot line, provided that the remaining length of structure along the side yard setback must be offset an additional 2 feet. Notwithstanding the above, the minimum side yard setback requirement for all buildings and structures on any lot in a Single Residence B District or General Residence District which contains less than 80 feet of frontage shall be 12 feet, and a maximum of 32 linear feet of structure may be built at the minimum setback distance, as measured parallel to the side lot line, at the first floor plane, provided that the remaining length of structure along the side yard setback must be offset an additional 2 feet.

(e) In a Single Residence B or a General Residence District, additions to existing single family or two-family structures non-conforming for side yard setback and constructed prior to May 1, 2017, may be extended to the following setbacks provided any demolition of the existing structure does not exceed 50% of the building shell exclusive of demolition of a single story attached garage and further provided that the side yard setback does not exceed the farthest extent of the setback of the existing structure. Structures built prior to July 1, 1999 may be extended to a side yard setback of 10 feet. Structures built between July 1, 1999 and May 1, 2017 may be extended to a side yard setback of 12.5 feet. For existing structures non-conforming for side setback where demolition exceeds 50% of the building shell, the structure may be extended to a side yard setback of 10 feet or 12.5 feet, depending on original construction date, upon receipt of a special permit from the Board of Appeals under Section 7.5.2 of the Zoning By-Law, provided: (1) the new construction meets all other requirements of the Zoning By-Law; (2) the side yard setback as permitted by the special permit does not exceed the farthest extent of the setback of the existing structure; (3) the Board determines that such change, extension or

alteration shall not be substantially more detrimental to the neighborhood than the existing nonconforming structure.

(f) *In a Single Residence B or General Residence District, the maximum floor area ratio shall be as follows: For lots containing less than 12,000 square feet – .38; and For lots containing at least 12,000 square feet and greater – .36.*

Lot Size in Square Feet	**FAR**
Lot size < 12,000	.38
Lot size ≥ 12,000	.36

(g) In the General Residence District, buildings and structures shall not result in lot coverage exceeding the following specified maximum percentages of the area of such lot: For lots containing less than 7,000 square feet – 35%; For lots containing at least 7,000 square feet but less than 7,500 square feet – 34%; For lots containing at least 7,500 square feet but less than 8,000 square feet – 33%; For lots containing at least 8,000 square feet but less than 8,500 square feet – 32%; For lots containing at least 8,500 square feet but less than 9,000 square feet – 31%; For lots containing at least 9,000 square feet – 30%.

Lot Size in Square Feet	**Lot Coverage**
Lot size < 7,000	35%
7,000 ≤ Lot size < 7,500	34%
7,500 ≤ Lot size < 8,000	33%
8,000 ≤ Lot size < 8,500	32%
8,500 ≤ Lot size < 9,000	31%
Lot size ≥ 9,000	30%

(h) See the definition of Half-story, under Story in the Definitions section.

(i) In a Single Residence B or General Residence District the maximum height at any point of any building or structure shall not exceed 41 feet above the lower of original or finished grade.

(j) In a Single Residence B or General Residence District if all or a portion of a basement wall is exposed for the full height of the wall, dormers in the one-half story shall not be permitted.

4.2.2 Table of Regulations for Public, Semi-Public and Institutional Uses in the Rural Residence Conservation, Single Residence A, Single Residence B and General Residence Districts and for the Institutional District

No building or structure for public, semi-public or institutional us, as listed in Section 3.2 Schedule of Use Regulations, shall be constructed, altered, or relocated on any lot except in conformance with these regulations:

District	Min. Lot Area (sf)	Min. Frontage (ft)	Front Setback (ft)	Side Setback (ft)	Rear Setback (ft)	Max. Floor Area Ration (F.A.R.)	Max. % Lot Coverage	Max. Stories	Max. Height (ft)
Rural Residence Conser-vation	43,560	150	50	25	25	.30	15%	2-1/2 (g)	35
Single Residence A	43,560	150	35 (a)	25	25 (d)	.30	15%	2-1/2 (g)	35
Single Residence B	10,000	80	25 (b)	25 (c)	25 (d)	.30	15%	2-1/2 (g)	35
General Residence	10,000	80	25 (b)	25 (c)	25 (d)	.30	15%	2-1/2 (g)	35
Institutional	43,560	150	30	25 (e)	15	NR	15%	2-1/2 (f)	35 (f)

The terms used in the Table of Regulations above are as defined in Section 1.3 of the By-Laws.

(a) Buildings and structures on any lot in a Single Residence A District devoted to a public, semi-public or institutional use shall have a minimum front yard setback of thirty-five (35) feet. The setback area shall be kept open and landscaped with grass or other plant materials; such area shall be unpaved except for walks and driveways. The Board of Appeals may grant a special permit reducing the minimum front yard setback required by this footnote to no less than thirty (30) feet. (See Section 4.2.7)

(b) Buildings and structures on any lot in a Single Residence B or General Residence District devoted to a public, semi-public or institutional use shall have a minimum front yard setback of twenty-five (25) feet. The setback area shall be kept open and landscaped with grass or other plant materials; such area shall be unpaved except for walks and driveways. The Board of Appeals may grant a special permit reducing the minimum front yard setback required by this footnote to no less than twenty (20) feet. (See Section 4.2.7)

(c) Buildings and structures on any lot in a Single Residence B or General Residence District devoted to a public, semi-public or institutional use shall have a minimum side yard setback of twenty-five (25) feet. The Board of Appeals may grant a special permit reducing the minimum side yard setback required by this footnote to no less than twenty (20) feet. (See Section 4.2.7)

(d) Buildings and structures on any lot in a Single Residence A, Single Residence B or General Residence District devoted to a public, semi-public or institutional use shall have a minimum rear yard setback of twenty-five (25) feet. The Board of Appeals may grant a special permit reducing the minimum rear yard setback required by this footnote in a Single Residence A

District to no less than fifteen (15) feet and the minimum rear yard setback required by this footnote in Single Residence B and General Residence Districts to no less than fifteen (15) feet. (See Section 4.2.7)

(e) Buildings or structures on lots created by deed or plan, endorsed or recorded before January 9, 1986, shall have a minimum side line setback of 15 feet in the Institutional Districts.

(f) Buildings and structures located in an Institutional District devoted to educational uses and uses accessory thereto and located at least 800 feet from any public way in the Town of Needham in existence as of September 1, 1998, shall have a maximum height in accordance with the following limitation:

Roof Type	*Average Height (feet)*	*Maximum Height at any single point (feet)*
Flat Roof	*63**	*68**
Sloping Roof Top of Roof	*85*	*90*
Wall, cornice or eave line	*63**	*68**
Gabled endwalls	*63**	*68**

There shall be no limit on the number of stories of such buildings. The foregoing limitations are not intended to supercede any of the requirements of the Massachusetts State Building Code.

**The Board of Appeals may grant a Special Permit to allow the average height of a structure to increase as much as an additional seven (7) feet above the average height listed.*

(g) *See the definition of Half-story, under Story in the Definitions section.*

4.2.3 Build Factor Formula

In order to limit the degree to which a lot may have an irregular shape, the following **build factor formula** shall be used:

Lot Perimeter Squared — Actual Lot Area

---------- Divided By ----------

Actual Lot Area — Required Lot Area

Lots recorded or endorsed after August 22, 1985 shall be subject to a maximum Build Factor of 20 in Single Residence B and General Residence Districts and 30 in Single Residence A and Institutional Districts. Lots recorded or endorsed prior to August 22, 1985 may not be modified such that the Build Factor of the modified lot exceeds 20 in SRB and General Residence Districts or 30 in SRA and Institutional Districts. Lots recorded or endorsed after February 16, 1995 shall be subject to a maximum Build Factor of 30 in a Rural Residence Conservation District. Lots recorded or

endorsed prior to February 16, 1995 may not be modified such that the Build Factor of the modified lot exceeds 30 in a Rural Residence Conservation District.

No portion of a lot which is covered by a water body shall be counted in calculating the area of a lot for purposes of determining the respective minimum lot areas as listed in the table above. Not more than a combined total of thirty (30) percent of: (a) land located in a Flood Plain District; (b) land area subject to the Wetlands Protection Act and the Inlands Wetlands Act, M.G.L., Ch. 131, S. 40 and 40A (but not including any area defined as a buffer area under said statutes); and (c) land subject to federal flood storage restrictions included within the Charles River Valley Storage Project shall be counted in calculating the area of a lot for purposes of determining the respective minimum lot areas in Single Residence A, Single Residence B, General Residence and Institutional Districts. The provisions of the second sentence of this paragraph (a) shall apply in Single Residence A, Single Residence B and General Residence Districts to any lot created after May 8, 1989.

Not more than a combined total of ten (10) percent of: (a) land located in a Flood Plain District; (b) land areas subject to the Wetlands Protection Act and the Inland Wetlands Act, M.G.L., Ch. 131, S. 40 and 40A (but not including any area defined as a buffer area under said statutes); and (c) land subject to federal flood storage restrictions included within the Charles River Valley Storage Project shall be counted in calculating the area of a lot for purposes of determining the minimum lot area as listed in the table above in a Rural Residence-Conservation District.

4.2.4 Special Regulations for Rural Residence – Conservation District

(a) Lot Coverage No building or structure, or addition to any building or structure, but not including accessory buildings or structures, shall be erected or placed on a lot which will result in the covering by buildings or structures of more than fifteen percent (15%) of the lot area in a Rural Residence-Conservation District.

(b) Vegetative Buffer In a Rural Residence-Conservation District, the first thirty-five (35) feet of the required minimum front setback of fifty (50) feet, as measured from Chestnut Street and from the designated Scenic Roads of South Street and Charles River Street, shall remain as a natural vegetative buffer not to be cut or cleared except for normal maintenance and vehicular access, including private driveways and subdivision roadways."

(d) In Section 4.2, Dimensional Regulations for Rural Residence-Conservation, Single Residence A, Single Residence B, General Residence, and Institutional Districts, by renumbering Section 4.2.2 as 4.2.5, Section 4.2.3 as 4.2.6, Section 4.2.4 as 4.2.7, Section 4.2.5 as 4.2.8, Section 4.2.6 as 4.2.9, Section 4.2.7 as 4.2.10, and 4.2.8 as 4.2.11.

Or take any other action relative thereto.