



Sudbury  
Housing  
Trust

# 278 Maynard Road



278 Maynard Road  
Zoning Board Hearing  
Sudbury, MA  
Tuesday April 27, 2010



Meridian Associates, Inc.





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# Presentation Outline

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- General Update
- Support Letters
- Activities since we last met
  - Alternatives
- Financial review
- Guidelines
- Design Review
- Engineering Update
- Green Design Elements



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# Design Activities – Since we last met

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## **Project Design has been significantly enhanced**

Addressing comments from Zoning Board, Design Review Board, applicant, Trust and local community

- Three working meetings
  - Architects Only: Trust, DRB, The Narrow Gate
  - Working Groups: ZBA, DRB, Trust, Applicant, Community
- 2<sup>nd</sup> meeting with Fire Chief, obtained approval
- 2<sup>nd</sup> Design Review Board, obtained approval
- 2<sup>nd</sup> Community Meeting
- 3 meetings with direct abutter for shared driveway

## **Most commented that the revised design is vastly improved**

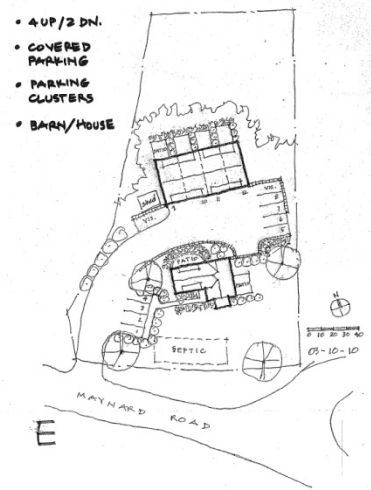
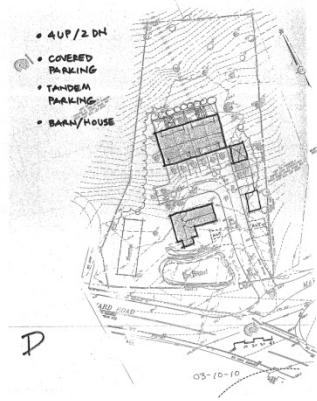
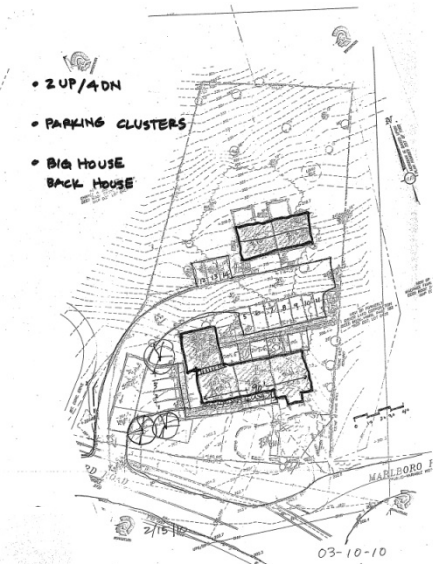
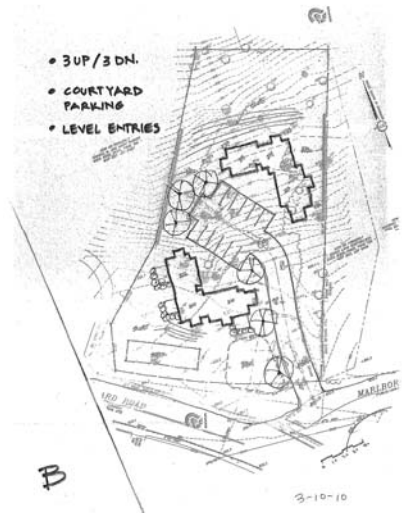
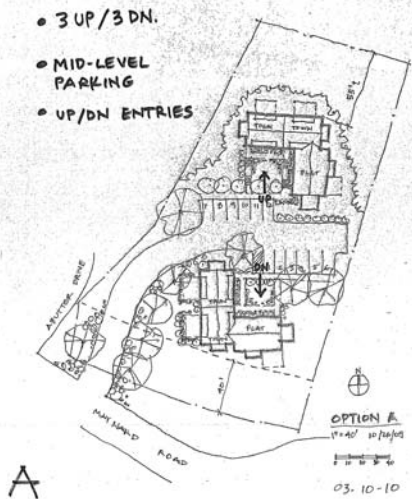
- Reduces the waivers required
- Reduces total building footprint by 465 feet
- Increases open space to 75%
- Addresses stated design issues





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# Design Activities – Multiple Designs Considered



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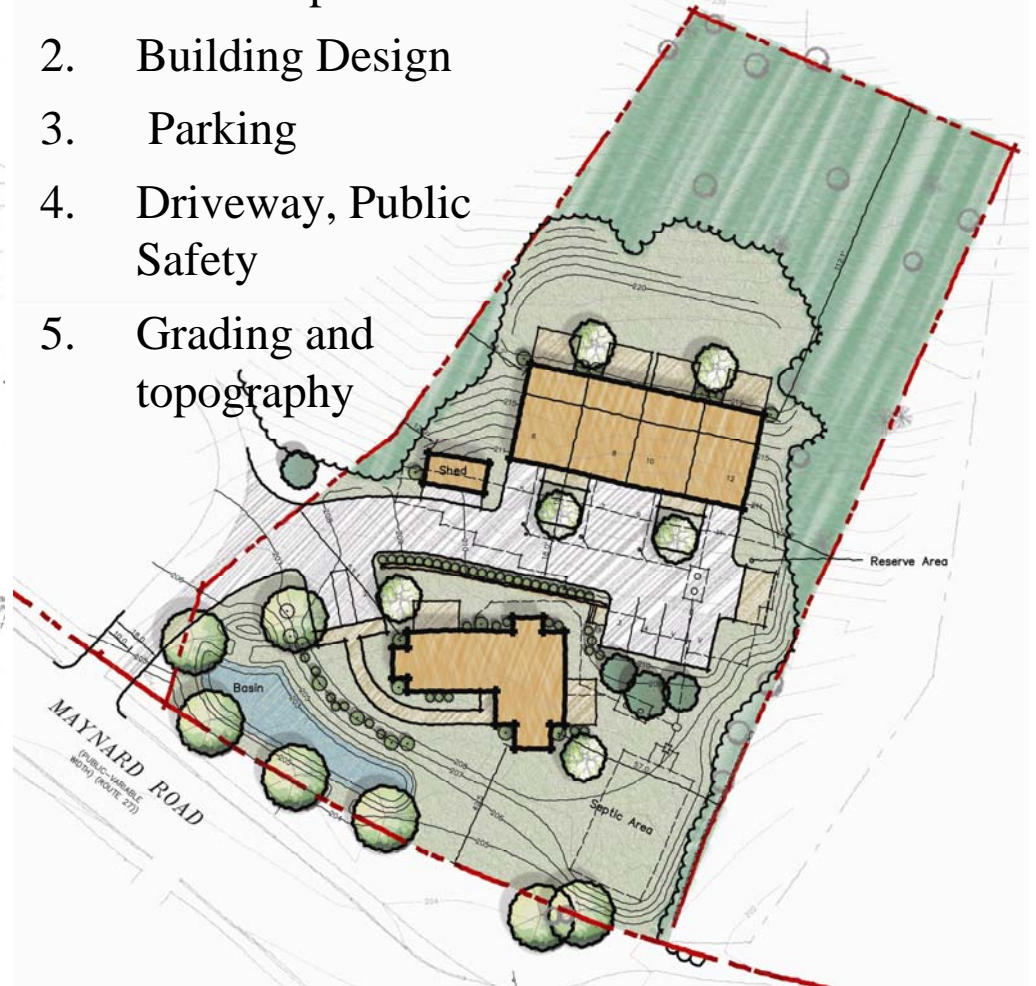




# Comparison of Old and New Plan

## Addresses five key areas:

1. Streetscape
2. Building Design
3. Parking
4. Driveway, Public Safety
5. Grading and topography





# Financial Introduction

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## *Building fewer units here eliminates future opportunities for eligible families*

- Reducing this proposal by 2 units eliminates support for 5 additional families due to higher subsidies needed (2 units here and 3 future units)
- ALL affordable housing is developed at a loss – especially if 100% deed restricted
  - Cost to build is \$350K but Affordable Sale price limited to \$175K
  - Private 40B projects offset with market sales
  - Public projects subsidize with grants
- The Sudbury Housing Trust uses a benchmark of ~\$150k per unit local subsidy, arrived at from experience:
  1. Home Preservation units: 4 units with an average \$180k subsidy
  2. 40B Buy-down units: 2 units with an average \$122k subsidy





# Unit Mix Financial Comparison

- 4 Unit Plan has larger unit sizes to maximize proceeds, 12 BR total
- Only 1200 sq ft of building differences between plans
- Soft and site costs constant in both plans
- Trust funding increases from \$913,610 to \$1,412,600
- All budgets and plans produced by NOAH with experienced and detailed construction estimates

	#Units	4	6
	<b>Unit Mix</b>	2 - 3BR 80% AMI, 2 - 3BR 100% AMI 4 Town houses	4 - 2BR 80% AMI, 2 - 2BR 100% AMI 5 Town houses, 1 Flat
	Gross Sq FT	6,000	7,234
Uses of Funds (cost)	Land Cost	\$310,000	\$310,000
	Soft Cost, Developer Overhead	\$655,580	\$640,440
	Construction/Septic Cost	\$1,269,672	\$1,364,770
	Total Development w/ land	\$2,235,252	\$2,315,210
	Per unit development cost w/ land	\$558,813	\$385,868
	Total Development w/o land	\$1,925,252	\$2,005,210
	Per unit development cost w/o land	\$481,313	\$334,202
Sources of Funds (income)	Total Sales Proceeds	\$822,640	\$1,011,600
	Trust Contribution	\$1,412,600	\$913,610
	State Funds AHTF	\$0	\$390,000
	Total Sources of funds	\$2,235,240	\$2,315,210
	Trust Per Unit Subsidy	<b>\$353,150</b>	<b>\$152,268</b>





# Compared to other 40B Projects in Sudbury

	Villages	Snowberry	Old County Rd	SHA	Maynard Rd	Maynard Rd
Budget	Proforma	Actual	Proforma	Proforma	Proforma	Proforma
Year of budget	2005	2007	2006	2010	2010	2010
Number of Units	66	8	37	11	6	4
Sq Ft per unit	2000	1900	2200	1200	1206	1500
Land Acquisition Cost	\$2,802,000	\$512,431	\$1,650,000	\$0	\$310,000	\$310,000
Hard Cost - Site	\$4,423,000	\$313,495	\$2,641,100	\$489,568	\$0	\$0
Hard Cost - Construction	\$15,029,300	\$1,831,940	\$7,524,000	\$2,090,243	\$1,364,770	\$1,269,672
Soft Cost	\$5,656,000	\$663,264	\$4,183,132	\$1,048,690	\$640,440	\$655,580
<b>Total Development Cost (w/land)</b>	<b>\$27,910,300</b>	<b>\$3,321,130</b>	<b>\$15,998,232</b>		<b>\$2,315,210</b>	<b>\$2,235,252</b>
<b>Per Unit Development Cost (w/land)</b>	<b>\$422,883</b>	<b>\$415,141</b>	<b>\$432,385</b>		<b>\$385,868</b>	<b>\$558,813</b>
<b>Total Development Cost (wo/land)</b>	<b>\$25,108,300</b>	<b>\$2,808,699</b>	<b>\$14,348,232</b>	<b>\$3,628,501</b>	<b>\$2,005,210</b>	<b>\$1,925,252</b>
<b>Per Unit Development Cost (wo/land)</b>	<b>\$380,429</b>	<b>\$351,087</b>	<b>\$387,790</b>	<b>\$329,864</b>	<b>\$334,202</b>	<b>\$481,313</b>
Construction Cost per Sq Ft	\$113.86	\$120.52	\$92.43	\$158.35	\$188.66	\$211.61
Total Cost per Sq Ft (w/Land)	\$211.44	\$218.50	\$196.54		\$320.05	\$372.54
Total Cost per Sq Ft (wo/Land)	\$190.21	\$184.78	\$176.27	\$274.89	\$277.19	\$320.88

Overall, project is higher cost per square foot, but lower cost per unit (for 6 unit plan). This is due to smaller units and larger fixed costs.







# Guidelines

The Comprehensive Permit Guidelines were adopted by the Board of Selectmen in 2007, with input from Planning, ZBA, Community Housing Committee, Sudbury Housing Authority

They were intended to provide administrative assistance to the Zoning Board to use in evaluating 40B applications, and are *not binding*

There was much discussion during the drafting of the guidelines on the units per acre

- Started at 5-7 units per acre, ZBA preferred fewer, State Smart Growth guidelines allow 8 units per acre

Units per Acres in other areas in town:

- Pine Lakes: 6 units per acre
- 5,000 to 10,000 sq ft lot sizes

Compared to other 40B project, this is in the middle

- SHA 40B on Landham Road is comparable
- Single Family neighborhood on busy street
- 100% affordable projects require more units

Units per Buildable Acre in Sudbury 40B Projects		
SHA (Ford/Greenwood):	2.9 (v 4)	Public
Sudbury Meadows:	3.1 (v 4)	Private
SHA (Great Rd):	4.3, 4.9 (v 4)	Public
H4H Dutton	4.6 (v4)	Public
Maynard Rd:	6.0 (v4)	Public
SHA (Landham):	6.7 (v4)	Public
Old County Road:	6.4 (v 5)	Private
Carriage Lane:	6.5 (v 4)	Private
Sudbury Village:	7.5 (v 5)	Private
Residences:	7.6 (v 4)	Private





# 278 Maynard Road – Comparison to Guidelines

	40B Guidelines 4/2007	Maynard RD	SHA Redevelop- ment, 4/2010	HFH Dutton Rd 7/2008	Carriage Lane 2004	Sudbury Meadows 3/2006	Old County Road 7/2006	Sudbury Village 7/2007	Residences 1/2008
# Units		6	10	2	16	8	37	73	21
Unit Size	25% 1BR 50% 2BR 25% 3BR	100% 2 BR	100% 2BR	50% 2BR 50% 3BR	100% 2BR	100% 2BR	67% 2BR 33% 3BR	03% 1BR 64% 2BR 33% 3BR	100% 2BR
Green Development Practices	Employ LIP, LEED, Energy Star practices	LEED Homes for Silver, Energy Star Homes, LID practices		Incorporates many LEED standards	None	None	Native species	LID practices	None
% Affordable units	> 25%	100% Affordable	100% Affordable	100% Affordable	25% Affordable	25% Affordable	27% Affordable	26% Affordable	28% Affordable
Parcel Size		0.97	Varied, 0.4 to 0.7	0.43	2.44	4.9, 2.55	6.02, 5.74	11.98, 9.5	2.77, 2.77
Density Units per buildable acre	< 5 acres: 4 5 – 10 acres: 5 > 10 acres: 6	6.0 (v 4)	Ford/Green wood = 2.9 Great Rd = 4.3 to 4.9 Landham Rd = 6.7	4.6 (v 4)	6.5 (v 4)	3.1	6.4 (v 5)	7.5 (v 5)	7.6 (v 4)
Zoning, Location	1-20: all zoning 21-40: Through st 40+: Major roadway	Route 27, zoned res A-1	Great, Landham, Ford, Greenwood – all A-1	Dutton Rd, zoned res A-1	Rt. 20, zoned res C-1	North Road, zoned res A-1	Old County Road, only 1 access, zoned res A-1, C-1	Rt. 20, only 1 access, zoned res A-1	Hudson Rd, zoned Limited Business
% Open Space	1-4 units: 0% 5-10: 15% 11-20: 20% 21+: 25%	76%	Varied	10%	0% (v 20%)	69%	56%	20%	
Height	< 5 acres: 28' 5 – 10 acres: 32' > 10 acres: 35'	30' (v 28')	35" (v 28')	28'	28.5' (v 28')	34' (v 28')	35' (v 32')	40' (v 35')	
Setbacks	Min: F 40, S 20, R 30 1-4: 40, 20, 30 5-10: 40, 30, 45 11-20: 40, 40, 60 21-40: 40, 50, 75 41-60: 40, 60, 90 60+: 120, 60, 90	F – 42' S – 23 (v 30') for building R – 112'	Varied	Complies with setbacks	F- 15' (v 40) S – 20' (v 40) R – 25' (v 60)	F – 30' (v 40) S – 13' (v 30) R – 20' (v 45)	F – 40' S – 95' R – 30' (v 75)	F – 30' (v 120) S – 10' (v 60) R – 78' (v 90)	F – 38' (v 40) S – 5' (v 40) R – 26' (v 60)



# Comparison of Old and New Plan

## Addresses five key areas:

1. Streetscape
2. Building Design
3. Parking
4. Driveway, Public Safety
5. Grading and topography





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# 1) Streetscape

- Appearance of typical single family home with barn
- Building faces street
- Deep front yard setback with added trees and lawn area for septic
- Able to save the large tree closest to the intersection of Maynard Road/Marlboro Road
- Parking is hidden by buildings and landscaping



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**NOAH**  
PROPERTIES

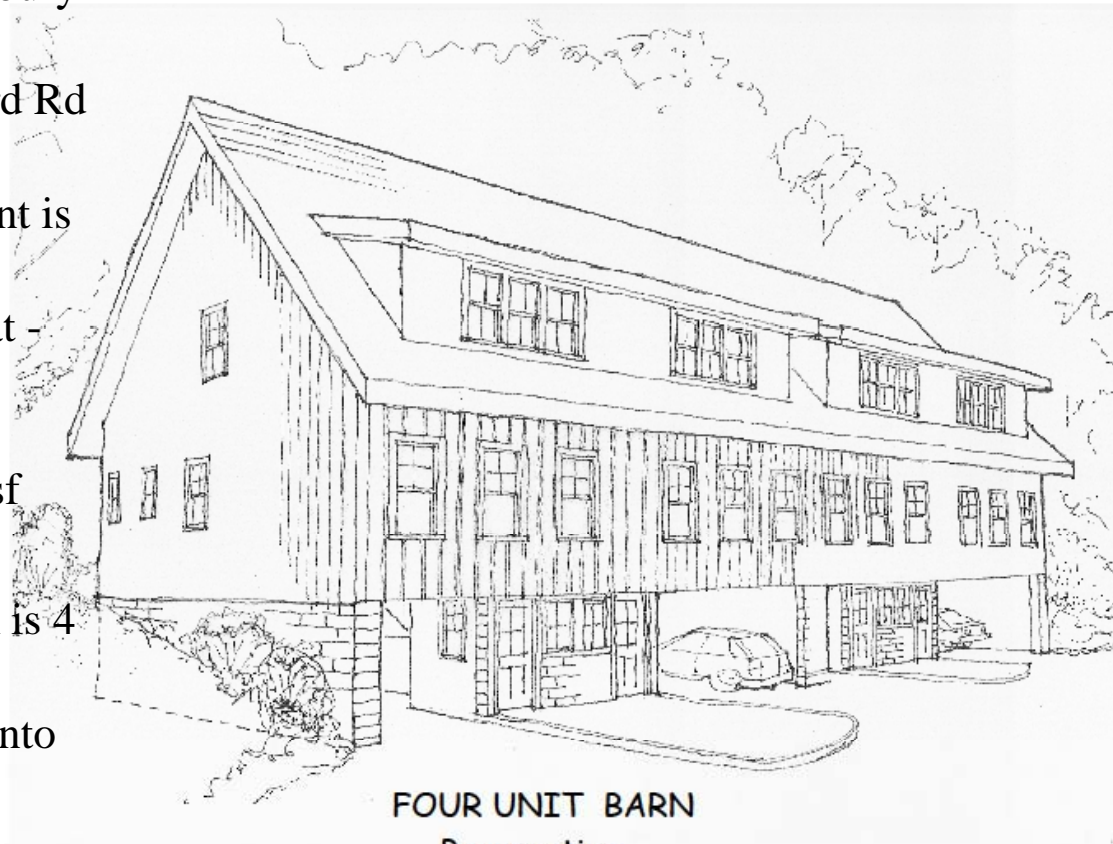
THE NARROW GATE  
architecture





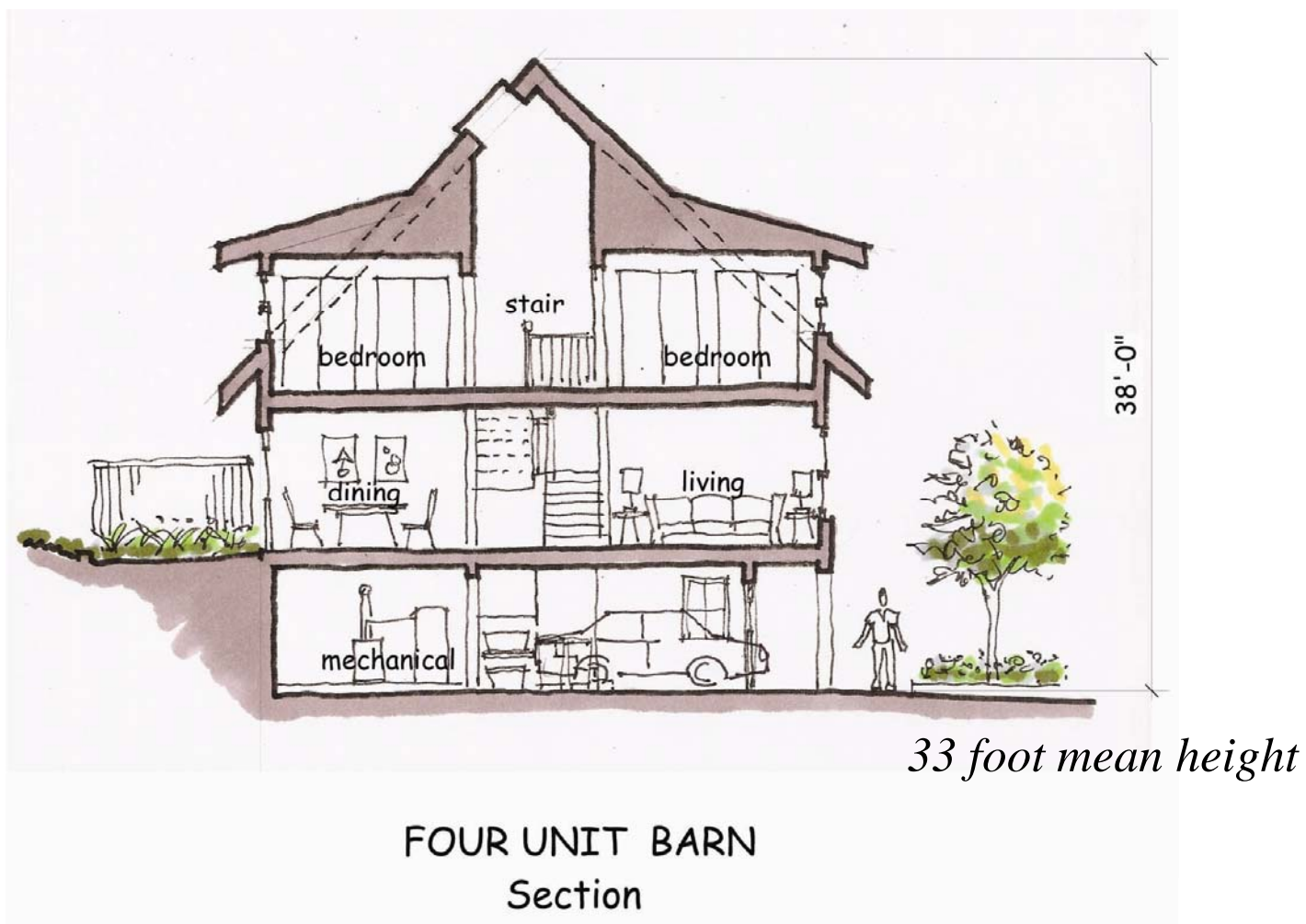
## 2) Building Design

- Structures that fit Sudbury vernacular
- Two barns on Maynard Rd used as an example
- House structure in front is 2 units
  - 1 townhouse, 1 flat - entry doors facing street
  - Footprint = 1673 sf
  - Net Sq Ft = 2170
- Barn structure in back is 4 unit
  - Townhouse built into the grade
  - Footprint = 2554
  - Net Sq Ft = 5024





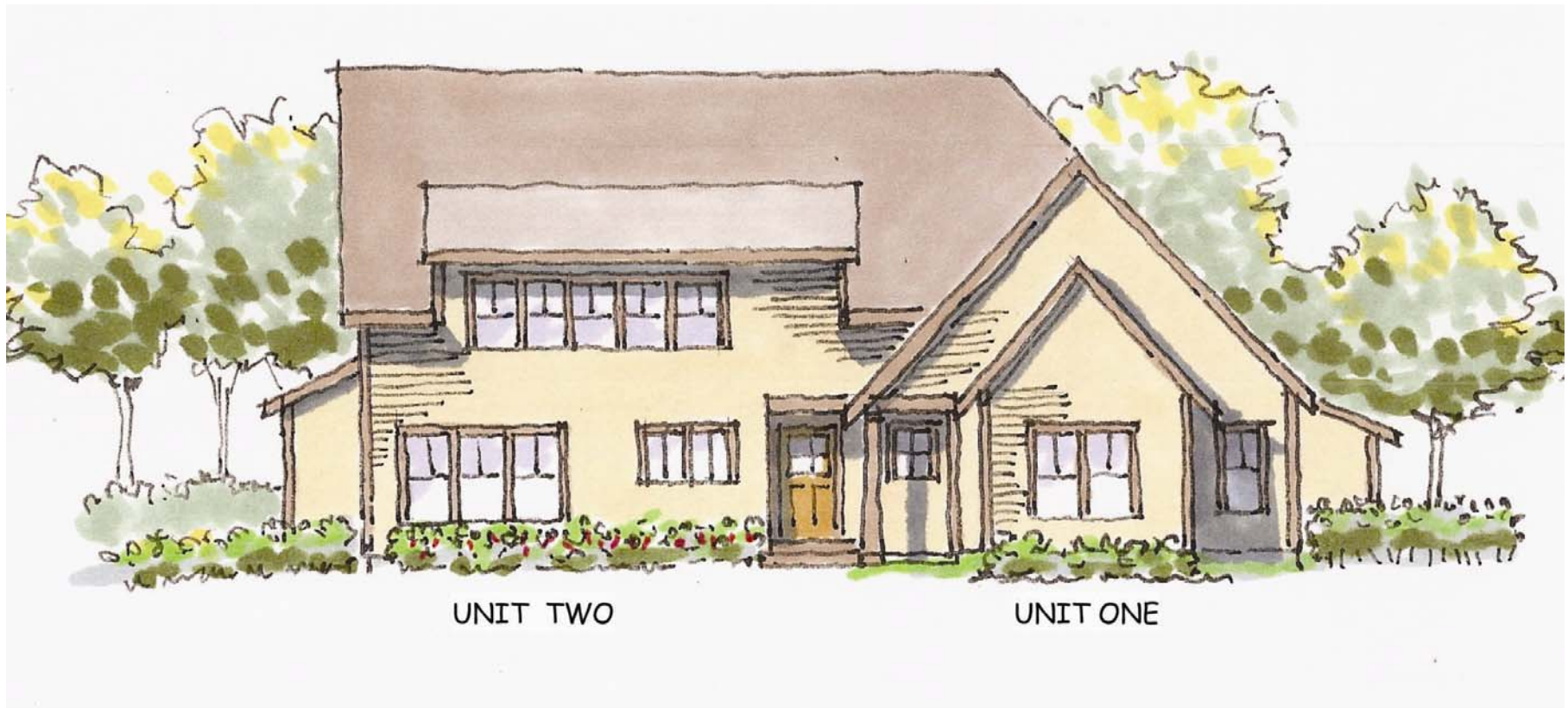
## 2) Building Design – Barn





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## 2) Building Design - House



TWO UNIT HOUSE  
Front Elevation



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# Animation

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**Show Animation**



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# 278 Maynard Road – Green Strategy

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## 1. Goal: LEED Silver

- Includes overall project, property, site
- Low Impact drainage system
- Building systems for heating, water, and insulation
- solar orientation of structures
- Conservation Services Group engaged as the LEED qualified providers who will do the LEED and Energy Star certifications and the HERS rating certification for the Stretch Code

## 2. Goal: Stretch Code compliance

- Addendum to Building Code
- Adopted by Sudbury Town Meeting April 2010
- Requires certified HERS rating of 70 or under (multi-family new construction)

## 3. Goal: ENERGY STAR® for New Homes program certified





# Additional Objectives to Redesign

## 3) Parking

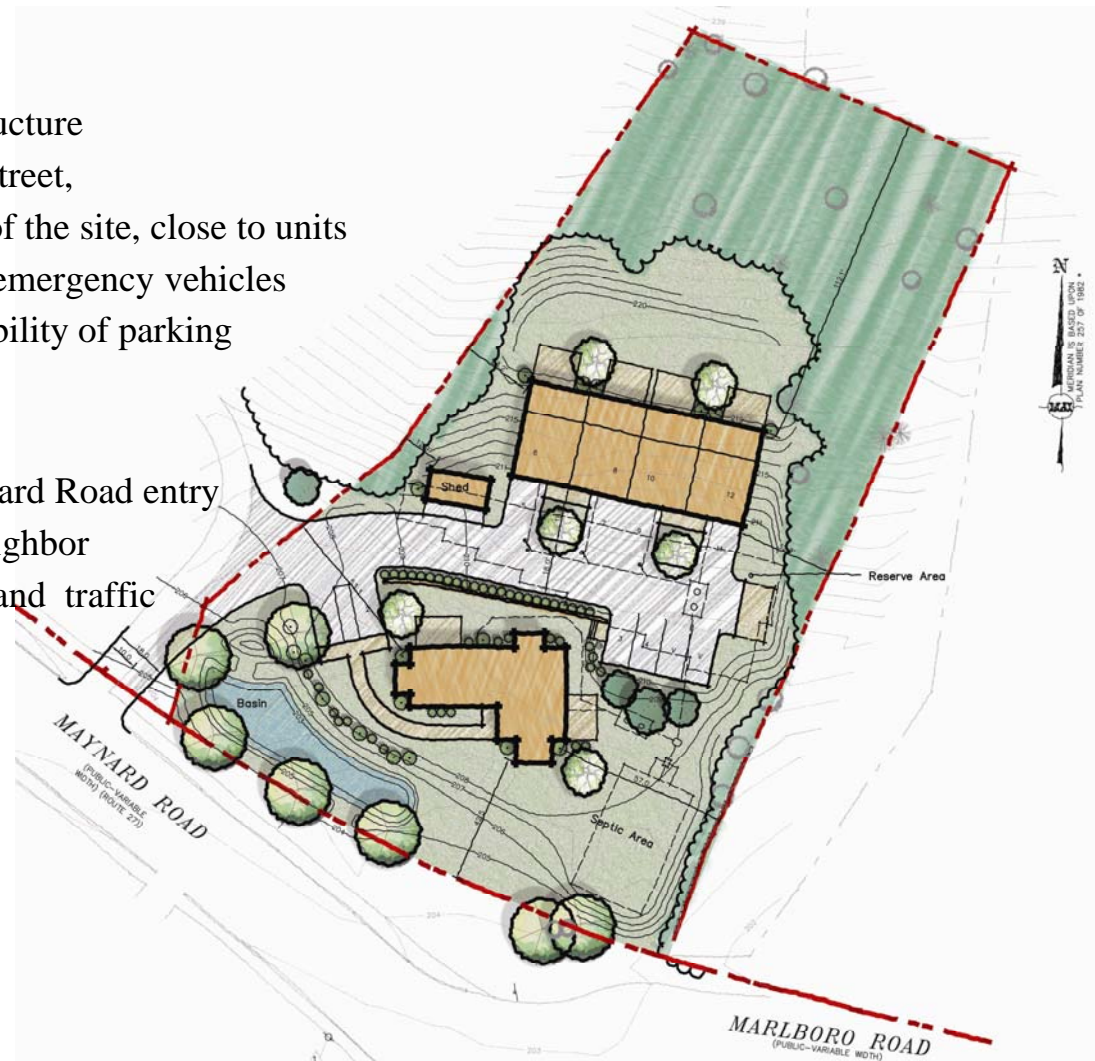
- 14 spaces total, separated on site
- Covered spaces for 4 units in new structure
- Only 2 spaces near and visible from street,
- Remaining spaces are in the interior of the site, close to units
- Provides for adequate movement for emergency vehicles
- Net effect reduces pavement and visibility of parking

## 4) Driveway

- Moved from Marlboro Road to Maynard Road entry
- Combined driveway curb cut with neighbor
- Reduces concerns over public safety and traffic
- Follows the grade more gracefully
- Approved by the Fire Department
- Facilitates snow removal and storage

## 5) Grading and topography

- Barn structure built into the grade
- Acts as a retaining wall
- Design works with the site contours





# New Design Plan – Zoning and Setback update

<b>Zoning Table</b>		
Zone Res A-1 (Single Family Residence "A")		
	Required	Provided
Minimum Lot Size	40,000 sf	41,174 sf
Allowable Use	Single Family	Six Unit Condominium
Minimum Frontage	180 ft	180 ft
Front Yard Setback	40 ft	42.5 ft
Side Yard Setback	20 ft	12.9 ft for shed All principal buildings comply
Rear Yard Setback	30 ft	112.1 ft
Maximum Building Coverage	40%	10.08%
Building Height	35 ft or 2.5 stories	32.8 ft - mean
Parking	2 spaces/dwelling	14

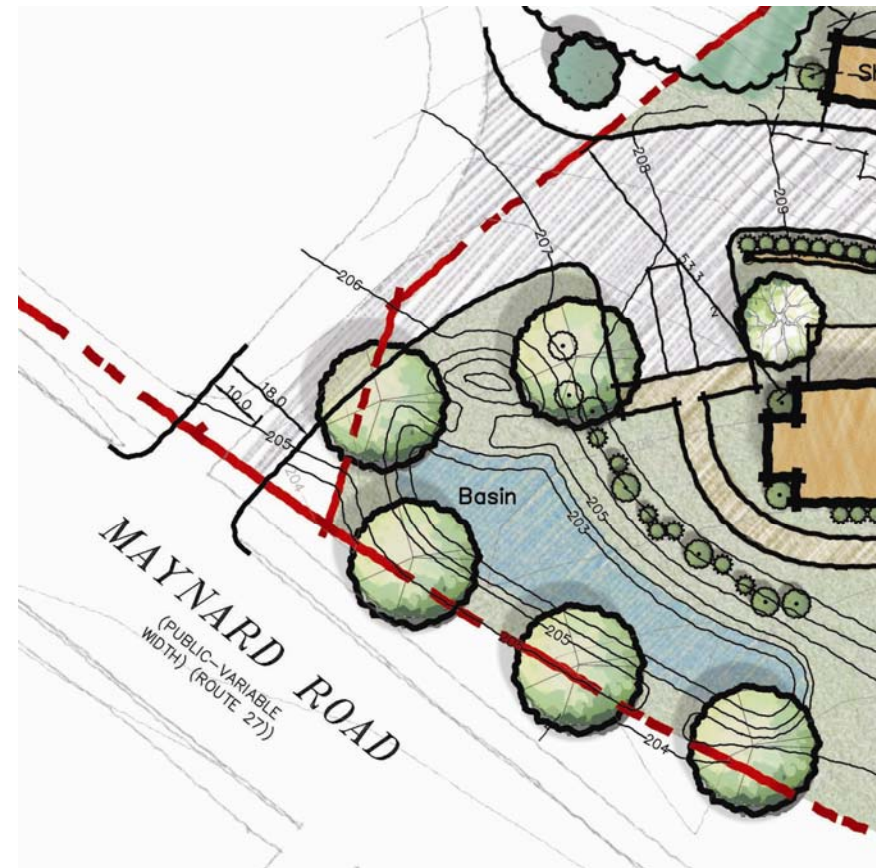




# Close-up of the Driveway

## Combined Curb cut with Neighbor

- Combined driveway curb cut via easement
- Include maintenance agreement
- Installation of some landscaping at curb
- Facilitates driveway redesign





# 278 Maynard Road – Septic System

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- Presby Enviro-Septic® Leaching System
  - Approved by Mass DEP for General Use in the Commonwealth of Massachusetts
  - Approved for systems with less than 10,000 gpd design flow
  - Approved in multiple properties in Sudbury from single family to multi-unit
- Sizing
  - Design Flow is 12 bedrooms @ 110 gpd/bedroom = 1,320 gpd
  - System sized based on soils, slope of site and design flow
  - 5' separation between bottom of system and ESHGW
  - All Title V setbacks for system components are met
  - Preliminary approval by Board of Health





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## Stormwater System

- Stormwater runoff reduced for all storm events (1 inch, 2 year, 10 year, 25 year and 100 year)
- System meets DEP requirements of Massachusetts Stormwater Handbook and Sudbury Stormwater Bylaw Regulations
- Mitigates peak rates of runoff on-site via bio-retention basin (rain garden)
- Water Quality treatment exceeds 80% minimum (94%)
- Groundwater recharge maintained at pre-development levels



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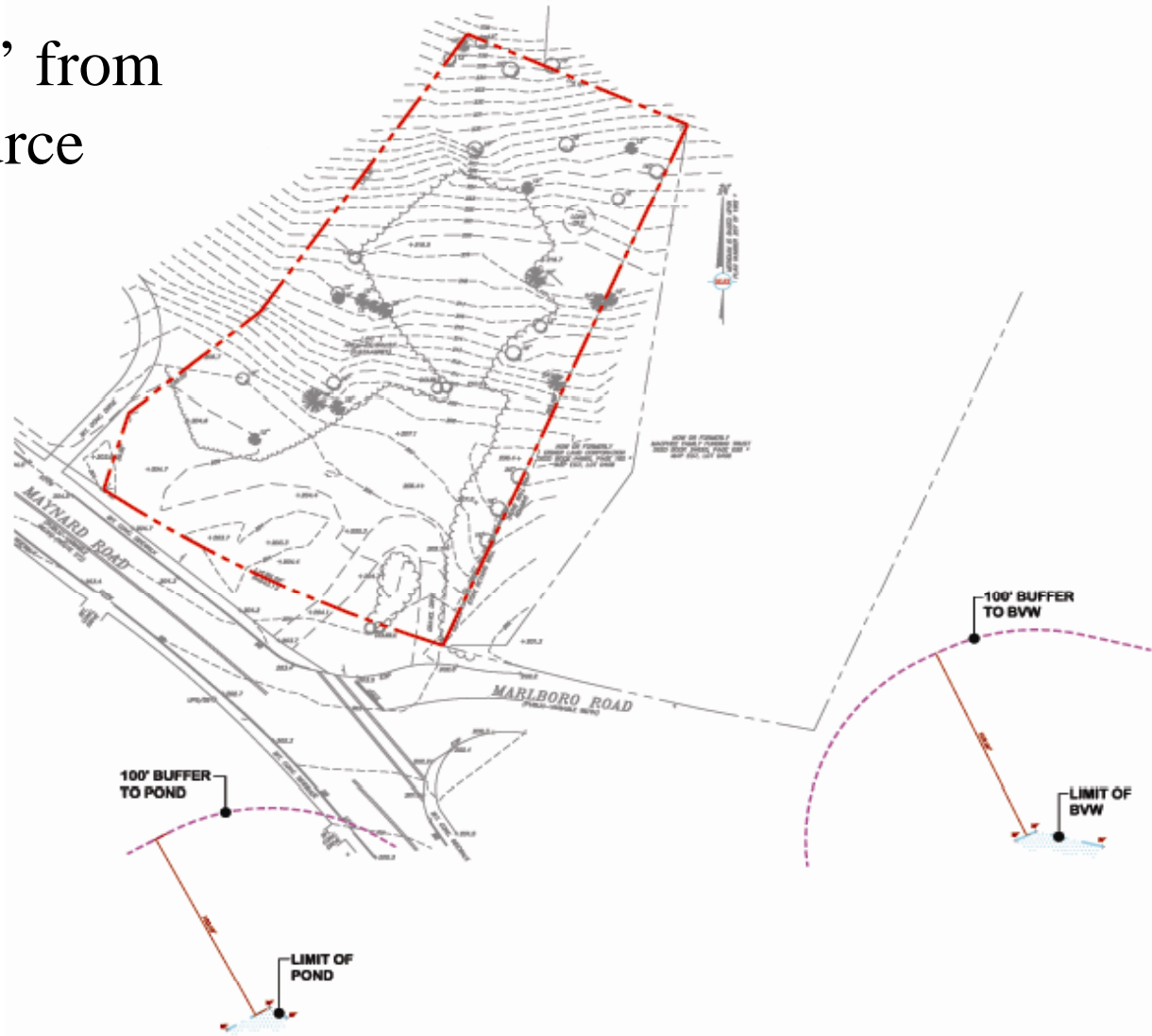




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# 278 Maynard Road - Conservation Jurisdiction

Over 100' from  
any resource



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## Town Involvement – Post Sale

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As with ALL affordable Homeownership units in Sudbury, the Town is the designated Monitoring Agent

- Monitoring in perpetuity Deed Restriction
- Compliance of initial purchaser eligibility
- Annual verification of affordability restrictions –  
Including approval for refinancing and capital improvements, ensuring property continues as primary residence, and providing general assistance

Additionally, the Trust proposes to retain a Trustee seat on the Condominium Board for 5-years

- Precedence with Frost Farm
- Ensures on-going support to property maintenance
- Ensures appropriate funding of condominium budget







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## Questions/Comments?



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