

**TOWN OF HARVARD  
PLANNING BOARD AGENDA  
MONDAY MARCH 7, 2022 @ 7:00PM**

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Pursuant to Chapter 20 of the Acts of 2021, An Act Relative to Extending Certain COVID-19 Measures Adopted during the State of Emergency and signed into law on June 16, 2021, this meeting will be conducted via remote participation. Interested individuals can listen in and participate by phone and/or online by following the link and phone number below.

Hildreth Pro is inviting you to a scheduled Zoom meeting.

**Join Zoom Meeting**

<https://us02web.zoom.us/j/87078869187?pwd=Y0tjdjA1bFBBrZONHZmUrenNucDhrQT09>

**Meeting ID: 870 7886 9187**

**Passcode: 206799**

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**Public Comment**

**New Business:** a) Harvard Climate Initiative Committee (HCIC) Goals & Action Plans

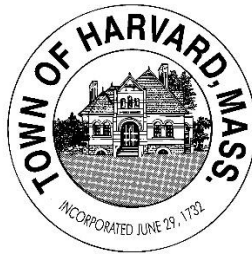
**Standard Business:** a) Board Member Reports

- Representatives & Liaisons Update
  - Community Matters
- b) Director's Report  
c) Approve Minutes

**Old Business:** a) Ayer Road Project Outreach Planning

- b) Discuss the State's Multi-Family District Requirements
- Review Schedule
  - Potential Districting & Strategy
- c) Chapter 125 Bylaw Amendment – 125-35 Open Space Residential Development (OSRD)
- Review 125-38D Development Density & 125-35F Dimensional & Design Requirements

**NEXT SCHEDULED MEETING:  
MARCH 21, 2022**



## Director of Community and Economic Development

# UPDATE

March 7, 2022

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### ■ Harvard Climate Action Initiative Committee (HCIC) Climate Action Plan

The newly constituted Harvard Climate Initiative Committee or HCIC is currently developing the Town's first climate action plan, this plan will include six (6) topical areas which are:

1. Buildings
2. Energy
3. Transportation
4. Natural Resources
5. Agriculture
6. Preparedness

Certainly, these categories are not mutually exclusive and they naturally overlap and interrelate, but it is up to the HCIC to make sure that those interconnections are addressed.

The Planning Board is being asked to provide ideas related to just the Natural Resources component, which includes topics such as land use, open space protection, recreation, agriculture and a range of other criteria. Within this component, HCIC is looking for guidance from the Planning Board related to land use.

Of course, the Planning Board is welcome to comment on other elements of the plan such as buildings, transportation, and the like, which are also connected to the Planning Board's charge. Currently, Associate Member Jefferson Burson is the Planning Board liaison to the HCIC and it is recommended that members coordinate through him related to the Climate Action Plan. For this meeting, it is anticipated that Jefferson will bring forward a set of goals and action items which have already been drafted for land use, to see if the HCIC is on the right path and to also get additional input and ideas for the Plan. Members are welcome to ask any questions about the plan, process, and timeline.

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### ■ Ayer Road Vision Plan Project – Outreach Discussion

One of the weaknesses of the prior effort to secure funding from CPIC for the Ayer Road Vision Plan project was a robust but strategically lacking outreach effort. For this prior

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effort, we had developed a detailed set of handouts, visited and sought support from the Finance Committee, School Committee, Council on Aging, Select Board, and a few other entities. We successfully received explicit support from the Select Board and Finance Committee. In the end, no committee spoke in favor of the request at Town Meeting. Due to COVID, we were not able to hold in-person meetings or to conduct the kind of face-to-face outreach that we would have preferred, but more still could have been done.

The challenge this time is to assess what was done right, what was done less well or not done at all, and what can be reasonably done this time to optimize successfully passing the funding article. Several things have changed since the last attempt and include:

1. We have received funding for Phase 1 and it is underway.
2. We will have the finding from Phase 1 in-hand.
3. We may have \$45,000 from Rantoul Trust already dedicated to Phases 2 and 3.
4. We have had some reasonably good press coverage recently.

Some ideas that have been presented recently about things we can do better include:

1. Seeking formal vote of project support from as many relevant boards, committees, and groups as possible. SusanMary Redinger notes that for some committees, there is a reluctance to take a public stand on such a sensitive issue. Her recommendation was to have a representative from each relevant board or committee attend the public workshop (see below) and share their support as an individual (but would have to emphasize that they are not speaking for the group).
2. Holding one or two public workshops (Zoom, hybrid, or in-person). At least one in April not during school vacation week.
3. Reviewing the handouts and online materials to see if anything else is needed or if edits are required.
4. Conducting other outreach events or platforms. This could include coffees at the HGS, podcasts, videos, blogging, Facebook, Instagram, Twitter, LinkedIn, etc.
5. Having members attend other events, going to the Transfer Station, school events, and the like.

Other ideas are welcome and time is of the essence. Once we agree on a set of outreach tools and strategies, we can develop a timeline and identify who will help with the effort. I acknowledge that the heaviest lifting will clearly come from me.

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## ■ MBTA Multifamily Zoning Draft Guidelines Update

Chris and Justin attended the Select Board meeting on Tuesday, March 1<sup>st</sup> to discuss the draft letter and agree on a timeline to follow up. Select Board input will be incorporated into the draft letter and discussed at this Planning Board meeting.

We hope to be able to finalize the draft letter from our perspective at this meeting and then the Select Board next meets on March 15<sup>th</sup> so any further Select Board comments can be added at that time. Finally, we expect SusanMary Redinger from the School Committee to attend the Planning Board’s March 21<sup>st</sup> meeting and share any comments or questions they want added to the letter and this will be then wrapped up prior to the March 31<sup>st</sup> deadline date. Chris will then get the letter signed, scanned, and submitted to the state through their portal.

At this point and to be discussed at this meeting, the Planning Board needs to discuss potential alternatives for approaching this task. Once alternatives are developed, the Board can assess whether a single strategy will be pursued or whether it makes sense to try to develop more than one as a contingency. Here are some suggestions:

- OPTION A:** Consider weaving the provisions into the Ayer Road Vision Plan. Here we would shoot for Annual Town Meeting 2023 with a Form-Based Code solution that would include the multifamily requirements. This is arguably the ideal solution as we were advocating for a mixed-use solution for Ayer Road anyway and this allows for the seamless integration of MBTA Guidelines into our postponed bylaw.

Positives	Negatives
<ol style="list-style-type: none"> <li>1. Best location</li> <li>2. Aligns with pre-existing goals and objectives</li> <li>3. Easiest to advocate for and sell</li> <li>4. Citizens have expressed an interest in this area</li> </ol>	<ol style="list-style-type: none"> <li>1. Will take the longest time frame</li> <li>2. No guarantee project will move forward</li> </ol>

- OPTION B:** Find a specific location in the vicinity of the Ayer Road Corridor (but not in the C District) to zone for a standalone district. We will need to use a map and brainstorm specific locations that have reasonable access to Ayer Road and also are good options for hooking up to Devens or Ayer water and sewer. Ideally these parcels should be either part of larger parcels already zoned commercial or that are adjacent to commercially zoned parcels. Utilize a new standalone replacement language for existing multifamily language in bylaw.

Positives	Negatives
<ol style="list-style-type: none"> <li>1. Next or alternative best location</li> <li>2. Near alignment with pre-existing goals and objectives</li> <li>3. Easiest to advocate for and sell</li> <li>4. Citizens have expressed an interest in this area</li> </ol>	<ol style="list-style-type: none"> <li>1. May cause opposition from neighbors</li> </ol>

- OPTION C:** Consider a temporary provision by amending the ARV-SP to meet the minimum requirements in order to buy time to develop something more appropriate and fitting. This would involve enhancing the ARV-SP to align with state guidelines and also remove it as a special permit (or say that if multifamily is built to requirements, it can be by-right but otherwise would need a special permit still).

Positives	Negatives
<ol style="list-style-type: none"> <li>1. Best Location</li> <li>2. Allows Town to buy time to thoughtfully consider a better permanent solution</li> </ol>	<ol style="list-style-type: none"> <li>1. Will be hard to build trust on a temporary solution</li> <li>2. May be unintended consequences</li> </ol>

4. **OPTION D:** Look for a specific location or locations throughout Harvard that meet the guidelines and use the existing multifamily language in the bylaw as a starting point. This would require an even bigger brainstorming effort by looking at the map for the entire community.

Positives	Negatives
1. May find a location that does not have as much overall impact on Harvard 2. More likely to maintain rural character by marginalizing the development 3. Potential to isolate in an area that has no visibility or connectivity	1. Likely to cause opposition from citizens and neighbors. 2. Location(s) may be controversial 3. May not meet state's criteria

5. **OPTION E:** Consider establishing an MGL 40R district and include MGL 40S. DHCD has indicated that they may come up with a specific program like 40R for the MBTA communities. This may be more challenging to establish because it is complex and has lengthy requirements, but it also has some key benefits to consider. Foremost in benefits is cash payments from the state to the Town for each unit built and each school kid anticipated as part of the development. These are *one-time* payments and not ongoing but pretty big. I guess you might argue, “If you have to build multifamily, why *wouldn't* you do this?”

Positives	Negatives
4. MGL 40R provides payments to Harvard for two provisions: zoning incentives and density bonus payments. 5. MGL 40S provides payments to communities that establish 40R districts to cover the cost of educating school-age children of up to \$600,000 and an additional \$3,000 per student. 6. Aligns with Ayer Road Vision Plan	1. Will take a long time to develop. 2. Will likely require a consultant to assist. 3. May not be timed to align with ARVP. 4. May not provide Harvard enough flexibility to control the design and layout.

Some of these may be blended or used together (e.g., 1, 3, and 5). The Board should also consider how it wants to engage the public. Would the Board want the public to give input on suggestion solutions or locations, or rather give the public a few options to respond to? Maybe the Board doesn't think public input is necessary or desirable? IMPO I would consider engaging early and often. There is a lot to further develop by the state before Harvard can go much further. For example, they may modify the guidelines based on community input. However, some of these issues should at least be preliminarily discussed.

### Potential Timelines

The following table is a rough estimate for how long each suggested option might take. Of course, they will vary based on how we integrate public outreach, funding requirements, technical assistance, and other factors.

Option	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
OPTION A										
OPTION B										
OPTION C										
OPTION D										
OPTION E										

Finally, please note that the Planning Board is NOT constrained by the typical two-year wait to bring failed bylaws back to Town Meeting. This is clearly stated in MGL 40A, Section 5 as follows:

No proposed zoning ordinance or by-law which has been unfavorably acted upon by a city council or town meeting shall be considered by the city council or town meeting within two years after the date of such unfavorable action unless the adoption of such proposed ordinance or by-law is recommended in the final report of the planning board.

All it requires to supersede this provision is to develop a Planning Board report recommending passage of the Bylaw. The passage above is a clickable link taking you to MGL Chapter 40A, Section 5.

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## ■ Chapter 125 Bylaw Amendment – 125-35 Open Space Residential Development (OSRD)

As discussed at the prior meeting, it is recommended that we next consider the density and dimensional requirements, these shall be provided in the text below for discussion purposes:

### D. Development Density

The method for determining the maximum number of residences is defined as the Formula Method:

- (1) The maximum number of residences is determined by dividing the total area of the tract of land by the minimum conventional lot size specified in the zoning district. This base density may be increased by density bonuses as noted in Section (2) below up to a maximum of an additional 50% permitted additional units.

- (1) Determine Parcel Size: --The gross acreage of the parcel or parcels under consideration for the project shall be the starting point in determining density. This number shall be designated as Gross Area (GA).

- (2) Minimum Open Space—The minimum acreage required to be set aside for open space is 50% of Gross Area.

Refer to Section C(2) above to determine the minimum requirements for open space.

- (3) Base Development Density (BD) – The maximum number of dwelling units per acre permitted in an OSRD shall not exceed one (1) unit per 1.5 acres and no more than 2.0 bedrooms per acre of the net density of the land area.

- (4) Permitted Yield (PY) – The Permitted Yield (PY) is the maximum number of residential units in an Open Space Residential Design and is calculated by multiplying the allowed (base) density or BD by the Gross Acreage (GA). Fractional units of less than 0.5 shall be rounded down and 0.5 or more shall be rounded up.

- (5) Total Open Space Set Aside (TOS) is the total amount of open space set aside for the project. This is calculated by taking the Minimum Open Space from (2) above and adding any additional open space set aside to achieve a density bonus for Bonus Open Space or BOS to the minimum 50%.

Table 1 - Unit Calculation for Hypothetical 40 Acre Development Scenario

<b>Total Acres</b>	<b>Open Space (Acres)</b>	<b>Base Density (Units/Acre)</b>	<b>Base Units</b>	<b>Maximum Units (+50%)</b>	<b>Final Gross Density (Units/Acre)</b>	<b>Final Net Density (Units/Acre)</b>
40	20	0.667	27	40.5	1.01	1.8

**Formulaic Calculation**

Total Parcel Size = 40 Acres  
 Minimum Open Space = 50% or 20 Acres  
 Base Density as Per Chapter 125 RE: AR Zoning = 1 Unit per 1.5 Acres or 0.667 Units/Acre  
 Maximum Density = 1.50 x Base Density

Base Density → 40 x 0.667 = 27 Units  
 Maximum Density → 27 x 1.5 = 40.5 Units

**F. Dimensional and Design Requirements**

(1) Development Types – There are three (3) primary OSRD development types as follows:

- (a) Condominium w/ Exclusive Use Areas
- (b) Condominium

(2) Dimensional Requirements – The following provisions shall apply:

(a) Project Scale Requirements

- [1] Project Size: Minimum (none), Maximum (none)
- [2] Setbacks:
  - [a] 50' to external side and rear lot lines
  - [b] For projects smaller than 3 acres, the Design Review Board shall establish setbacks.
- [3] Frontage: 50'
- [4] Maximum Build Out: Base Zoning Plus Density Bonus
- [5] Applicable Zoning District: Agricultural-Residential (AR)

(b) Dimensional Requirements Table:

The table below provides a set of dimensional requirements for the three land use types permitted in an OSRD development. Since projects will not involve separate building lots, dimensional criteria shall follow these conventions:

- [1] Land Use Area Size – Area dedicated to specific land uses will not be on the basis of lot size but rather will use an equivalent called an Exclusive Use Area or site pad.
- [2] Setbacks – shall be measured from the structure to the extents of the EUA or site pad.
- [3] Frontage – refers to the horizontal ground measurement of the front of a EUA or site pad facing an internal circulation roadway.
- [4] Building Size – Limits on the amount of floor area a specific use may have.

Table 2 - OSRD Land Use Dimensional Requirements

Land Use	Exclusive Use Area (EUA) or Pad Size	Setbacks (Minimum) From EUA Boundary or Site Pad <sup>1</sup>	Frontage	Building Size (Maximum)
<b>Open Space</b> Passive and active recreation, parks, squares, natural areas, plazas and courtyards (see definition)	Minimum 50% of Net Acreage (NA)	NA	NA	N/A
<b>Civic/Institutional Building</b> Community space, library, house of worship, museum, theater, or similar	Minimum: 5,000 s.f.	Front: 10' Side: 8' Rear: 30'	Minimum: 24' Maximum 75'	5,000 s.f.
<b>Residential</b> One and two-family detached dwellings	Minimum: 4,000 s.f. <del>No Maximum 30,000 s.f.</del>	Front: 10' Side: 8' Rear: 25'	Minimum: 36' <del>No Maximum 25'</del>	None

- (c) The Planning Board may waive the minimum requirements for frontage and/or exclusive use area requirements that would normally be applicable in order to achieve maximum open space area and to facilitate a creative or innovative design;

A buffer and/or screening may be required adjacent to sites outside of the OSRD if it is determined that such a buffer will provide relief from potential nuisances. Such buffers shall provide visual screening at all times of year, and preferred options include evergreen planted screening, except those that lose their lower branches as they grow (such as pines) or which are highly susceptible to deer damage (such as arborvitae).

- (d) Exclusive Use Areas (EUAs) or lots proposed for a width of 60' or less, townhomes, or duplexes shall use rear-facing garages on alleys or back lanes. EUAs wider than 60' are encouraged to have rear yard garages, side yard garages, or front facing garages offset behind the façade.

### **Commentary**

The proposed 50% net density bonus is still less than half to make Harvard eligible for MGL 40R Starter Home eligibility which is four (4) units per acre and less than Craftsman Village at 1 Baldwin Court. The Board may wish to allow a provision to incentivize 40R eligibility strictly for starter homes or even more flexible.



## The Problem: Greenhouse Gas Emissions

### Background:

Scientists know with virtual certainty that increasing greenhouse gas concentrations tend to warm the planet. In computer-based models, rising concentrations of greenhouse gases produce an increase in the average surface temperature of the earth over time. The imbalance between greenhouse gas emissions and the ability for natural processes to absorb those emissions has resulted in a continued increase in atmospheric concentrations of greenhouse gases. Rising temperatures may produce changes in precipitation patterns, storm severity, and sea level. Collectively, this is commonly referred to as *climate change*.

The Massachusetts 2050 Decarbonization Roadmap aims to reduce the state's production of greenhouse gases. As stated in their Roadmap: The climate crisis is a generational challenge that, without decisive action, leaves residents and communities across the state on the front lines. Recognizing the urgency of this crisis, the Baker-Polito Administration listened to the science, and set Massachusetts on an aggressive path to Net Zero greenhouse gas emissions by 2050. Reducing emissions to achieve Net Zero by 2050 is the Commonwealth's primary and most important line of defense in preventing the significant threats presented by a changing climate.

### Harvard's Role:

In 2020, a report of Harvard's greenhouse gas (GHG) emissions was conducted based on community wide activities of residents, businesses and municipal operations in the year 2018. The findings also highlighted GHGs from agricultural activities as well as an estimate of the carbon sequestration benefit provided by forests, wetlands and other tree cover in the community.

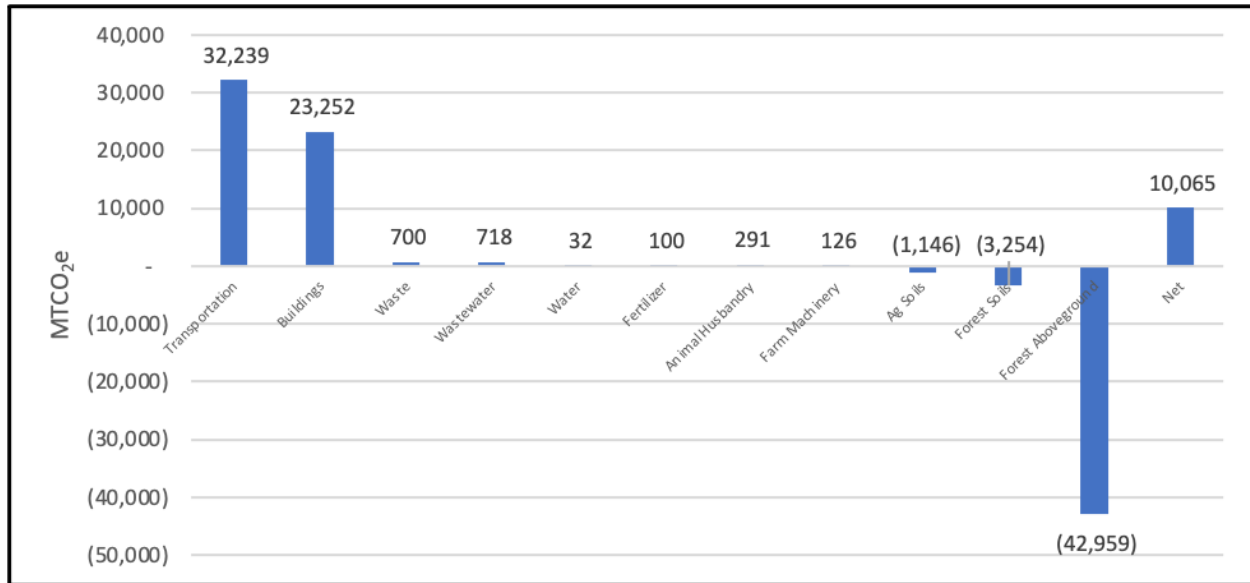
The inventory of GHG emissions for calendar year 2018 was the most recent year in which energy utility data was available. It considered three primary GHGs: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) and are presented in terms of CO<sub>2</sub>e or CO<sub>2</sub>.

Total greenhouse gas emissions for the Harvard community total 57,453 metric tons carbon dioxide equivalent (MTCO<sub>2</sub>e) in 2018, primarily from **on-road transportation and building energy use**. Approximately 3% of those emissions are attributable to municipal operations. Agricultural activities are relatively small (< 1%) contributors to the GHG footprint of the community and come from unique sources related to fertilizer use, animal husbandry, and farm machinery use.

With 1864 households, this is approximately 25-30 metric tons per household, given there are few commercial enterprises that account for much of the total. The average metric tons per

household in the United States from several sources puts it at 20 metric tons. The average worldwide is 4 metric tons.

The figure below identifies the sources of GHGs in Harvard as well as the offsets of carbon from our forested areas.



Harvard benefits greatly from its extensive forested areas and other tree cover. These forested areas along with wetlands capture carbon from the atmosphere and is upwards of 80% of the Town's annual emissions.

But as fortunate as Harvard is to be so well forested, maps over the years show that these areas are shrinking due to development. The significant positive impact provided by trees and undeveloped land represents significant potential for release of carbon should the land be developed. On a per acre basis, the release of GHGs from development would create a significant increase in emissions of 403 MTCO<sub>2</sub> that would need to be overcome but also would permanently reduce the rate at which tree cover in Harvard sequesters carbon by 4.26 MTCO<sub>2</sub> per year.

Harvard also needs to reflect on climate justice. It has the good fortune of its forests but it also has a responsibility to help the state, country, and world by doing its part to reduce its impact by protecting its forests and addressing the greenhouse gases produced by its homes and cars. Reducing GHGs from its sources will require action on the part of residents to improve the efficiency of their homes, electrify their heating systems, drive electric vehicles, care for the land and take other actions both big and small to reduce GHGs.

### Climate Impacts from GHG's

Climate impacts can be addressed in two major ways:

- ✓ Adaptation (also called resilience): how to adapt to or withstand the negative impact of climate change
- ✓ Mitigation (also called sustainability): how to prevent or reduce the adverse impact of climate change, usually by taking actions to reduce GHGs

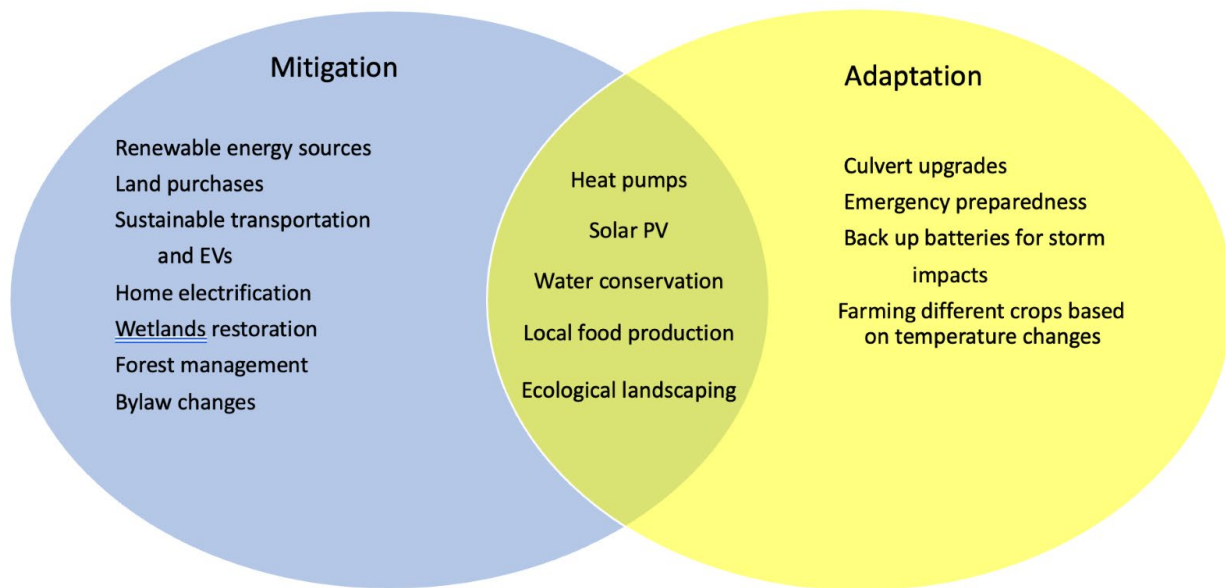
In order to address both adaptation and mitigation, the Town has sought input from residents, through workshops, surveys, and the establishment of several different committees who over time have been charged with developing plans to address climate change. These activities have led to the identification of what concerns residents: the problems brought on by climate change, now and foreseen, that need to be addressed.

# Climate Action Plan Overview

## Introduction

At the special town meeting in October 2021, the residents voted to adopt a resolution on climate change and part of that resolution is to create a climate action plan. The Harvard Climate Initiative Committee (HCIC) was formed with the charge to create the plan that would help guide the Town in meeting the Commonwealth of Massachusetts greenhouse gas emissions goals by 2050. The HCIC has framed this climate action plan around mitigation and adaptation.

This chart, is an example of mitigation and adaptation scenarios and the overlaps as to how the two elements of the plan come together.



With state funding, some of the work began in 2020. An agricultural climate action plan was released and the outline or framework of a comprehensive climate action plan was prepared. This work has led to the development of this plan: a goal setting and action plan that is attainable, that can reach the town’s goals as outlined in the town resolution, and that will require municipal and resident participation and commitment. We believe Harvard will thrive to commit and act on these actions. That it will be a collaborative process, that it will require commitments from all parts of our municipal government and that it is an iterative process that will be ever evolving.

Page Break

## Organization of the Plan

There is much the town and residents can do, but the goals and actions have to be realistic, implementable, timely and focused. For this reason, the plan targets six areas that reflect the Commonwealth's goals, the data on GHGs, the input the community provided to date and the desire to address both sustainability and resilience.

**The areas include:**



BUILDINGS



ENERGY



TRANSPORTATION



NATURAL  
RESOURCES



AGRICULTURE



PREPAREDNESS

These six areas have one goal for municipal operations and one goal for residents and typically two action items per goal. As actions are completed, new ones will be added, thus making this a living document. It reflects the ability of the plan to be realistic in what can be accomplished and timely as actions are completed and new ideas emerge.

The plan, though drafted by the HCIC is not the work of HCIC but the outcomes of discussions, interactions, input and feedback received from town committees, municipal operations, and residents. It is the ideas of many, those most knowledgeable of what can be accomplished and the commitments they can make to meet the goals.

Some of the work has already begun due to the commitment of a key group of stakeholders in town. These accomplishments are noted and celebrated. Much of this work relies on the many volunteers who are so devoted to this work and to giving back to the community.

The following pages contain the substance of the plan:

- Introduction of the climate consideration being addressed
- Municipal Goal, Actions to Date, and Priority Actions to undertake
- Residential Goal, Actions to Date and Priority Actions to undertake
- Measurements for success criteria

## Natural Resources

### Climate Consideration

Forests, native plants, meadows, soil, wetlands and waterways play a major role in reducing carbon in the atmosphere, by sequestering it. In 2020-2021, with a grant from the Commonwealth's Municipal Preparedness Program, and in conjunction with Bolton and Devens, The Apple Country project completed an assessment of the lands in all three towns with recommendations for lands to preserve, and how preserve them. To do so is to "ensure robust ecological climate resilience and continued ecosystem health." Preserving and restoring these lands and waterways helps slow climate change while also providing water retention, wildlife habitat and opportunities to continue to have agricultural lands to grow food . Despite the valuable natural resources, Harvard's location in the region of Massachusetts is experiencing some of the most significant development pressure which exacerbates the effects of climate change and highlights the urgency of protecting the natural resources that provide substantial climate related relief.

The key recommendations that emerged from The Apple Country Project are grouped into four Categories: 1. Protect, 2. Restore, 3. Manage Better, and, 4. Develop Better. Protect the natural environment that sequesters carbon. Restore areas that have the potential to be better carbon sinks. Manage well what is there. Manage development in areas that will not impact lands that benefit the ecosystem.

### Municipal:

**Goal: Increase the resilience of Harvard's ecosystems and community through the coordinated implementation of nature-based solutions.**

### Actions to date:

- MVP Prioritization Plans
- 2021 Apple Country Report
- 2017 Open Space and Recreation Plan
- 2016 Master Plan, Chapter 3
- The Conservation Commission, Harvard Conservation Trust, Sudbury Valley Trustees and other local partners have helped to protect over 1,900 acres of conservation land directly and an additional 523 acres under conservation restrictions and agricultures preservation programs. ( Add Apple Country report map from page 155?

### Priority Actions:

1. Seek grant funds to implement key recommendations related to nature-based solutions from the 2021 Apple Country Report, prioritizing:
  - Invasive species management
  - Wetland restoration and expansion
  - Stormwater management and culvert improvements
  - Tree and vegetation enhancements to built environments for shade, improved buffer, bio-swale, etc.
1. Develop forest management plan to enhance health and carbon sequestration opportunities for Harvard's forests.
2. Prioritize efforts to improve partnership with the state, region, and neighboring communities on topics of sustainability, environmental justice, invasive species, and biodiversity.
3. Pilot a green infrastructure project in town (what, specifically? Wait to identify with partner committee?)
4. Engage town committees and community to identify additional focus areas for improving the resilience of the town's natural resources not already covered in Apple Country Report

**Land Use Goal: The Town's policies and bylaws shall facilitate sustainable land use and development.**

Actions to date:

- Established an Open Space Residential Development Bylaw in response to 2002 Master Plan.
- Created a mixed-use overlay zoning district to facilitate smart growth.
- Land purchases by Conservation Commission, Harvard Conservation Trust and Sudbury Valley Trustees

Priority Actions:

1. Include more zoning districts and development types that are sustainable, smart growth models and remove or replace provisions that are not in line with this framework.
2. Educate and inform the public about sustainable land use patterns and why they have better environmental, social, and fiscal outcomes.
3. Ensure that all open space acquisitions and set asides align with goals for open space and nature resource protection through updated Open Space bylaws and ongoing decision-making by the Planning Board and Open Space Committee.
4. Enhance development and design review processes to enable low impact development and other nature-based solutions in land development and redevelopment.
5. Ensure land use and transportation planning are coordinated as their consequent impacts are interlinked.



## Residential:

**Goal: Reduce the climate impact of our homes and yards on the local environment.**

### Actions to date:

- HarvardEnergize information on native plantings
- Harvard Press Garden Column on environmentally friendly options

### Priority Actions:

1. Significantly reduce food waste amongst residents through composting, “buy local,” and changes to consumption practices.
2. Provide residents with information on sustainable practices for lawn care, landscaping, tree care, and invasive species management.

### Measuring Progress:

# Collaboration Document for CAP Focus Area: Natural Resources

NOTE: the Planning Board meetings will focus primarily on the Land Use Goal and Actions. If the PB has ideas or suggestions on the other 2 goals, they would also be welcome.

NOTE 2: the DRAFT goals and actions below are merely starting ideas to get the conversation going. They can be completely changed, replaced, added to – based on the discussions to be had. The goals and actions are meant to be co-developed not just reviewed and approved.

Starting Ideas for Goals and Priority Actions	Accept/Reject/Modify/Add?
Natural Resources	
<b>Municipal Goal: Increase the resilience of Harvard’s ecosystems and community through the coordinated implementation of nature-based solutions.</b>	
<ol style="list-style-type: none"> <li>1. Seek grant funds to implement key recommendations related to nature-based solutions from the 2021 Apple Country Report, prioritizing:               <ul style="list-style-type: none"> <li>• Invasive species management</li> <li>• Wetland restoration and expansion</li> <li>• Stormwater management and culvert improvements</li> <li>• Tree and vegetation enhancements to built environments for shade, improved buffer, bio-swale, etc.</li> </ul> </li> <li>2. Develop forest management plan to enhance health and carbon sequestration opportunities for Harvard’s forests.</li> <li>3. Prioritize efforts to improve partnership with the state, region, and neighboring communities on topics of sustainability, environmental justice, invasive species, and biodiversity.</li> <li>4. Pilot a green infrastructure project in town (what, specifically? Wait to identify with partner committee?)</li> <li>5. Engage town committees and community to identify additional focus areas for improving the resilience of the town’s natural resources not already covered in Apple Country Report</li> </ol>	

<b>Residential Goal: Reduce the climate impact of our homes and yards on the local environment.</b>	
<ul style="list-style-type: none"> <li>• Significantly reduce food waste amongst residents through composting, “buy local,” and changes to consumption practices.</li> <li>• Provide residents with information on sustainable practices for lawn care, landscaping, tree care, and invasive species management.</li> </ul>	
<b>Land Use Goal: The Town’s policies and bylaws shall facilitate sustainable land use and development.</b>	<b>Planning Board will work on this one</b>

<ol style="list-style-type: none"><li>1. Include more zoning districts and development types that are sustainable, smart growth models and remove or replace provisions that are not in line with this framework.</li><li>2. Educate and inform the public about sustainable land use patterns and why they have better environmental, social, and fiscal outcomes.</li><li>3. Ensure that all open space acquisitions and set asides align with goals for open space and nature resource protection through updated Open Space bylaws and ongoing decision-making by the Planning Board and Open Space Committee.</li><li>4. Enhance development and design review processes to enable low impact development and other nature-based solutions in land development and redevelopment.</li><li>5. Ensure land use and transportation planning are coordinated as their consequent impacts are interlinked.</li></ol>	

**HARVARD PLANNING BOARD  
MEETING MINUTES  
FEBRUARY 28, 2022**

Chair Justin Brown called the meeting to order at 7:04pm virtually, pursuant to Chapter 20 of the Acts of 2021, An Act Relative to Extending Certain COVID-19 measures adopted during the State of Emergency and signed into law on June 16, 2021, and under M.G.L. Chapter 40A and Code of the Town of Harvard Chapter 125

**Members Present:** Justin Brown, Stacia Donahue, Richard Cabelus, Brian Cook, Doug Thornton and Jefferson Burson (Associate Member)

**Others Present:** Christopher Ryan (Director of Community & Economic Development), Liz Allard (Land Use Administrator), Kevin Conover (Ross Associates, Inc.), Valerie Hurley (Harvard Press) and Kelen Blumstein

**Public Comment**

There were no comments from the public this evening

**Approval Not Require Endorsement – 37 Peninsula Road**

Donahue made a motion to endorse the perimeter plan entitled “Plan of Land in Harvard, Mass.”, prepared for Helen Tracey Wind, Job No. 28825, Plan No. L-14504, prepared by David E. Ross Associates, Inc., February 2022. Cook seconded the motion. The vote was unanimously in favor of the motion by roll call, Donahue, aye; Cabelus, aye; Cook, aye; Thornton, aye; and Brown; aye.

**Disband the Community Resiliency Working Group**

Donahue made a motion to disband the Planning Board Subcommittee known as the Community Resiliency Working Group. Cabelus seconded the motion. The vote was unanimously in favor of the motion by roll call, Donahue, aye; Cabelus, aye; Cook, aye; Thornton, aye; and Brown; aye.

**Annual Appointments – Brown and Burson**

Brown will not be seeking reappointment at this time. Burson has also has indicated that he will not be seeking reappointment as well. The Board can anticipate interviewing prospective candidates sometime in May in order to make recommendations to the Select Board.

**Ayer Road Market Study Update from Howard Kohn of the Chesapeake Group**

Kohn provided the data-driven results from the market survey. 88% of respondents were from Harvard. The survey results indicate a significant exportation of dollars by Harvard residents. The survey indicates poor market options in Harvard. Without an expanded tax base recreational activities are difficult to support in Harvard. Food, housing, and transportation are three things family’s general spend money on; with about \$10,000/annual at the grocery store; income levels in Harvard allows for more ability to dine-out. Harvard can capture these types of economical viable retail goods and services. The market share of the region is 2 million square feet of retail.

Regarding housing, most communities want to provide housing to allow residents to remain within the community. The survey results show certain age groups in Harvard are going to move out of Harvard in the next five years. Kohn recommends action should be taken to accommodate those age groups; most are looking for smaller homes, which do not really exist in Harvard currently. Sixty-five non-senior attached single-family units for corridor are likely filled by current residents, with 75 to 100 units for 65-plus, also only from local population, and market share opportunities from growth 1,770 homes in Harvard, with between 300 and 400 additional attached units in the corridor, with a total for the corridor of 445 new units.

53 Office market is going to see a decrease in economical viable space due to increase of work from home,  
54 shared spaces and smaller per employee footprint. Kohn sated other than medical services, he does not  
55 see an increases in office space in the near future. A large portion of the population would like to see  
56 commercial recreation within the corridor. Kohn stated there are growing opportunities for industrial  
57 vertical and non-vertical agriculture, however housing for these employees does not currently exist in  
58 Harvard.

59  
60 Defined opportunities thus far include:

- 61 • +/- 2 million square feet of retail goods and services space
- 62 • + 445 housing units
- 63 • +/- 50,000 sq ft office Commercial rec and others in progress

64  
65 Demand forecasting details the actual demand that is possible today and capable of supporting the  
66 corridor at this time, however Harvard does not have the space for this demand. Cook wanted to clarify  
67 the numbers in the progress report so those out there are not scared by them; the presentation is not  
68 suggesting Harvard could support 1.8 million square feet of market retail, but does indicate the region as  
69 a whole could support 1.8 million square feet of market retail. Brown further clarified the progress report  
70 is indicating what could go in the commercial district, not what will ultimately be there. What could or  
71 will ultimately be in the corridor will be based on what the Town wants. The progress report does  
72 indicate Harvard could capture 5% of the market retail if the area could support it. Ryan stated the  
73 numbers are artificially high, not that there is something wrong with the numbers, the goal is to  
74 determined what could reasonable be supported that would provide a balanced tax return. There are  
75 types of uses that may not be acceptable in Harvard, such as warehousing. Once assessed the Planning  
76 Board will know if it is feasible to move forward in this process. This is not at all a target number and  
77 should not be consider as such. Donahue requested potential tax revenue be included so that it is clear to  
78 the community how taxes could be reduced by growth in the corridor.

79  
80 On the housing aspect, this uber the age of 25 are planning to move, is there a breakdown of how many in  
81 each age bracket took the survey? Kohn stated that was an excellent point, but feels a portion of the  
82 survey results may have been bias, with a group pf people answering things in a way to prevent anything  
83 from changing in the corridor. Kohn noted younger respondents were the least number of respondents.

84  
85 Thornton felt office space for smaller services where work from home is not available would not be  
86 decreasing. Kohn stated that may be true, however the decrease in necessary office space is going to  
87 make available space more attractive rather than building new. Brown asked about housing demand.  
88 Kohn stated building permit patterns in the region show a lot of non-single-family detached homes being  
89 built, with very little growth in Harvard; small scale housing would do well in Harvard.

90  
91 • **Public Outreach**

92 Kohn would recommend a discussion with the Director and Chair about how to go about public  
93 outreach. With a significant percentage of the community not wanting to see thing happen in the  
94 district he would like to have an opportunity to discuss the strategies with both the Director and the  
95 Chair before discussing publicly.

96  
97 **Recommend Open Space Committee Representative**

98 Donahue made a motion to recommend Cook as the Planning Board representative to the Open Space  
99 Committee. Cabelus seconded the motion. The vote was unanimously in favor of the motion by roll call,  
100 Donahue, aye; Cabelus, aye; Cook, aye; Thornton, aye; and Brown; aye.

101  
102 **Discuss the State's Multi-Family District Requirements**

103 • **Review Schedule**

- 104 ○ Need to focus on the schedule for presenting the bylaw at the fall Town Meeting

- 105      ○ Comment letter due March 31, 2022  
106      • **Draft Comments**  
107      ○ No comments from members this evening  
108      ○ Awaiting comments from Board of Health  
109      ○ Meeting with Select Board tomorrow night  
110      ○ Brown to meet with School Committee Chair, SusanMary Reddinger

111  
112      **Board Member Reports**

- 113      • **Representatives & Liaisons Updates**  
114      ○ *Parks & Recreation Commission* – Excited about the trail connection allowing students to bike to  
115      Devens at the end of Old Mill Road (see Transportation Advisory Committee below). The  
116      Department of Public Works will not be maintaining the trail between Lancaster County Road and  
117      Depot Road, which was recently reclaimed with help from the Harvard Snowmobile Club and a local  
118      Eagle Scout who repaired an existing bridge. Bob O’Shea will not be seeking reappointment.  
119      ○ *Transportation Advisory Committee* – Outreach meeting on February 16<sup>th</sup> pertaining to the reopening  
120      of the trail at end of Old Mill Road to Devens through Red Tail Golf Course had a good turnout, with  
121      strong support. Those in attendance at that meeting were clear there was to be absolutely no  
122      parking, but realize a need for emergency vehicle access. There was also a concerned with the  
123      access being used by motorized vehicles.  
124  
125      • **Community Matters**  
126      ○ Lighting Bylaw on Nextdoor Harvard is pertaining to higher wattage and not the typical light trespass  
127      regulated in other communities; nothing formal has been request by any residents as of yet  
128      pertaining to revisions of the current bylaw.  
129

130      **Director’s Report**

131      This item was discussed under other items this evening.  
132

133      **Approve Minutes**

134      Donahue made a motion to approve the minutes of February 7, 2022 as amended. Cook seconded the  
135      motion. The vote was unanimously in favor of the motion by roll call, Donahue, aye; Cabelus, aye; Cook,  
136      aye; Thornton, aye; and Brown; aye.  
137

138      **Adjournment**

139      Cabelus made a motion to adjourn the meeting at 9:10pm. Thornton seconded the motion. The vote was  
140      unanimously in favor of the motion by roll call, Donahue, aye; Cabelus, aye; Cook, aye; Thornton, aye; and  
141      Brown; aye.  
142

143      Signed: \_\_\_\_\_ Liz Allard, Clerk  
144

145      **EXHIBITS & OTHER DOCUMENTS**

- 146      • Planning Board Agenda February 28, 2022  
147      • Director of Community and Economic Development UPDATE, February 28, 2022  
148      • Plan of Land in Harvard, Mass.” prepared for Helen Tracey Wind, Job No. 28825, Plan No. L-14504,  
149      prepared by David E. Ross Associates, Inc., February 2022  
150      • Harvard Market Analysis Progress Report, prepared by The Chesapeake Group, Inc., February 28,  
151      2022

- A. [Purpose and Intent](#)
  - B. [Applicability](#)
  - C. [Open Space](#)
  - D. [Development Density](#)
  - E. [Permitted Uses](#)
  - F. [Dimensional and Design Requirements](#)
  - G. [Project Site Design Process](#)
  - H. [Formal Process and Application](#)
- 

## A. Purpose and Intent

The purpose and intent of the Open Space Residential Development (OSRD) development option is to permit high-quality residential development in harmony with the natural features of the land that is consistent with historic land use patterns of village-like areas where residences are grouped, surrounded by areas of open space used for agriculture, forestry, recreation and similar purposes. It is also the purpose of the OSRD option to:

- (1) Preserve open space, scenic landscapes, water resources, wetlands, natural (particularly native) vegetation, habitat, prime agricultural land, key natural features, and cultural and historic resources with emphasis on goals and actions included in Harvard's 2016 Master Plan and 2016 Open Space and Recreation Plan.
- (2) Reduce site development and public and private maintenance costs.
- (3) Promote a diversity of housing opportunities within the Town, while respecting and enhancing neighborhoods, and promoting attractive standards of appearance and aesthetics consistent with town character.
- (4) Reduce the anticipated negative fiscal impact on the Town associated with conventional residential development by reducing street length and width, public utility extent, providing efficient stormwater runoff technology, and other public infrastructure.
- (5) Encourage the siting of homes in a manner that clusters units together in well-designed village settings, on buildable portions of the site, as a distinct alternative to the more arbitrary siting associated with lot-by-lot development typically reflected in plans submitted pursuant to Massachusetts General Laws Chapter 41, Sections 81K through 81GG, the Subdivision Control Law. At least 80 percent of dwellings shall be contiguous with some type of Open Space, and all OSRDs shall generally contain at least one neighborhood green or common, bounded by a street or streets in the traditional New England manner.
- (6) Prohibit a lot that has been approved for OSRD to apply for further subdivision of the lot for ten (10) years after the first approval.

## B. Applicability



OSRD is Special Permit option for residential development. The Planning Board may grant approval of an OSRD on an Agricultural-Residential (AR) zoned tract of land.

### C. Open Space

Open Space is the organizing principle for OSRD projects and as such, requires the bulk of the up-front project tasks. The following sections describe (1) how open space is calculated, (2) how open space may be classified, and (3) the logistics regarding ownership and maintenance.

- (1) Calculation of Open Space – A minimum of fifty (50%) percent of an OSRD must be open space made up of conservation areas and other open spaces such as commons or greens, parks, historic or cultural sites and features, and passive and active recreation areas. The specific allocation of this open space shall be as follows:
  - (a) Determine the acreage of Primary Resource Protection Areas (PRPAs), as defined in Section 125-2.
  - (b) Determine the acreage of Secondary Resource Protection Areas (SRPAs), as defined in Section 125-2.
  - (c) The combination of PRPA and SRPA area must equal at least 50% of the total site area.
  - (d) At least 50% of the SRPA must remain in its natural state, completely devoid of any structure, parking, loading and unloading space, or as private yards, patios, or gardens for the exclusive or principal use by residents of individual dwelling units, unless the conservation or preservation value is as an improved asset such as a farm field, stone wall, well, historic building or structure, or other modified landscape, protecting and maintaining those assets that were agreed upon by the Planning Board and Conservation Commission.
  - (e) The remaining 50% of SRPA may be improved into commons or greens, parks, and passive and active recreation areas, which may include unpaved walking paths and trails. All OSRDs shall generally contain at least one neighborhood green or common, bounded by a street in the traditional New England manner. The common open space described herein is in substitution of and supersedes any other reference to common open space that may be described elsewhere in the Bylaw.
  - (f) All Open Space, to the extent possible, shall be appropriate in size, shape, dimension, location, and character to assure its use as a conservation area, and where appropriate, a recreational area, and be a visual and natural amenity for the development and the Town. Preserved open space shall also be contiguous to the greatest extent practicable, except for neighborhood greens. Where noncontiguous pockets of open space are preferable to protect features of high conservation value, applicants shall attempt to connect these resource areas to the greatest extent practicable through the use of trails, vegetated corridors, or to adjacent external open space. Open Space will still be considered contiguous if it is separated by common elements such as a shared driveway, roadway, or an accessory amenity (such as a barn, paved pathway or trail, or shed for the storage of recreational equipment).
  - (g) The remaining land area, after all open space has been established, is available for the infrastructure, dwelling units, accessory buildings, and exclusive use areas (if a part of the design scenario).

(h) Site plan shall include a notation that states: “*Designated Open Space shall not be further subdivided or used for future building lots.*”

(2) Open Space Classification – For the purpose of this Section, open space, as defined generally in Section 125-2, shall include the two (2) primary types of open space within an OSRD parcel (See Section 125-2 for definitions):

- (a) Open Space, Primary Resource Protection Area
- (b)
- (c) Open Space, Common Use (Secondary Resource Protection Area)

(3) Open Space Logistics

Open space set aside in an OSRD or as a condition of any Special Permit or Site Plan approval shall be permanently preserved from development as required by this Section. The Planning Board may not require such open space land to be accessible to the public. Any development permitted in connection with the setting aside of open space land shall not compromise the conservation value of such open space land, based upon the conservation findings of the Planning Board, determined in consultation with the Conservation Commission as provided in Section 130. This section shall also provide for how Open Space may be owned and maintained.

[a] Permanent Preservation of Open Space Land – All land, except to be town-owned, required to be set aside as open space in connection with any OSRD shall be so noted on any approved plans and shall be protected by a 1) permanent conservation restriction, as defined in Article XIII, or 2) agricultural preservation restriction (APR), to be held by the Town of Harvard, the Commonwealth of Massachusetts, or a non-profit conservation organization qualified to hold conservation restrictions under G.L. Chapter 184, Section 31, and also qualified to hold tax-deductible conservation easements under Section 170(h) of the Internal Revenue Code. The restriction shall specify the permitted uses of the restricted land. The restriction may permit, but the Planning Board may not require public access or access by residents of the development to the protected open space land.

[b] Ownership of Open Space Land

At the Planning Board’s discretion, the Open Space may be owned by:

- (1) The Town or its Conservation Commission;
- (2) A nonprofit organization, the principal purpose of which is the conservation of open space and any of the purposes for such open space set forth above;
- (3) A corporation or trust owned jointly or in common by the owners of lots within the OSRD. If such corporation or trust is utilized, ownership thereof shall pass with conveyance of the lots in perpetuity. Maintenance of such open space and facilities shall be permanently guaranteed by such corporation or trust which shall provide for mandatory assessments for maintenance expenses to each lot. Each such trust or corporation shall be deemed to have assented to allow the Town to perform maintenance of such open space and facilities, if the trust or corporation fails to provide adequate maintenance, and shall grant the town an easement for this purpose. In such event, the town shall first provide fourteen (14) days written notice to the trust or corporation as to the inadequate maintenance, and, if the trust or corporation fails to complete such maintenance, the town may perform it. Each individual deed, and the deed or trust or

articles of incorporation, shall include provisions designed to effect these provisions. Documents creating such trust or corporation shall be submitted to the Planning Board for approval, and shall thereafter be recorded.

[c] Maintenance Standards for Open Space

- i. Ongoing maintenance standards shall be established in a formal Maintenance Plan as a condition of development approval to ensure that the open space land is not used for storage or dumping of refuse, junk, or other offensive or hazardous materials, and to ensure that it is maintained properly. Maintenance Plans shall therefore delineate all conservation lands within the OSRD into various land-types (such as woodlands, fields, meadows, pastures, neighborhood greens, active recreation areas, etc.) and shall describe in some detail the maintenance regime and schedule for each of those areas, to be implemented by the owners of those conservation lands. (For example, neighborhood greens and active recreation areas shall be mowed weekly during the growing season.). Standards and maintenance frequency and thresholds shall be specific enough so that violations are clear and unassailable.
- ii. Such standards shall be enforceable by the Town against any owner of open space land, including an HOA.
- iii. If the Select Board finds that the provisions of Subsection [a] above are being violated to the extent that the condition of the land constitutes a public nuisance, it may, upon 30 days written notice to the owner, enter the premises for necessary maintenance, and the cost of such maintenance by the Town shall be assessed ratably against the landowner or, in the case of an HOA, the owners of properties within the development, and shall, if unpaid, become a property tax lien on such property or properties.

**D. Development Density**

The method for determining the maximum number of residences is defined as the Formula Method:

- (1) The maximum number of residences is determined by dividing the total area of the tract of land by the minimum conventional lot size specified in the zoning district. This base density may be increased by density bonuses as noted in Section (2) below up to a maximum of an additional 33% permitted additional units.
  - (a) Determine Parcel Size - The gross acreage of the parcel or parcels under consideration for the project shall be the starting point in determining density. This number shall be designated as Gross Area (GA).
  - (b) Minimum Open Space—The minimum acreage required to be set aside for open space is 50% of Gross Area.

Refer to Section C(2) above to determine the minimum requirements for open space.

- (c) Base Development Density (BD) – The maximum number of dwelling units per acre permitted in an OSRD shall not exceed one (1) unit per 1.5 acres and no more than 2.0 bedrooms per acre of the net density of the land area.
- (d) Permitted Yield (PY) – The Permitted Yield (PY) is the maximum number of

residential units in an Open Space Residential Design and is calculated by multiplying the allowed (base) density or BD by the Gross Acreage (GA). Fractional units of less than 0.5 shall be rounded down and 0.5 or more shall be rounded up.

(e) Total Open Space Set Aside (TOS) is the total amount of open space set aside for the project. This is calculated by taking the Minimum Open Space from (2) above and adding any additional open space set aside to achieve a density bonus for Bonus Open Space or BOS to the minimum 50%.

In these calculations, density credit may be applied to certain other unconstrained parts of the site, such as land used for onsite sewage disposal, including nitrification fields and fields used for “spray irrigation” (sometimes called “land treatment”). Unless specified otherwise, these lands may also be counted toward meeting the minimum open space requirements for Open Space developments.

(f) Bonus Units – The unit count determined above (PY) may be increased by a density bonus at the discretion of the Planning Board based upon the eligible density bonuses listed in (2) below. The density bonuses allowed above may not increase the density by more than 50 percent of the base number of units and said density bonuses may only be used if the resulting development complies with Title 5 of the State Environmental Code as determined by the Board of Health. Fractional units of less than 0.5 shall be rounded down and 0.5 or more shall be rounded up.

(2) Residential Density Bonuses – Eligible residential density bonuses include the following as specific public benefits:

(a) Additional Open Space – For projects that provide SRPA open space in excess of the minimum fifty percent (50%), a by-right density bonus of one (1%) percent (minimum 1 unit) for each five (5%) percent of additional open space (minimum 7,500 s.f.) provided, up to a five (5%) percent bonus.

(b) Affordable Housing Component – The Planning Board may award a density bonus to increase the number of dwelling units/lots beyond the maximum number where affordable housing or affordable Over 55 Housing is provided. All affordable units shall meet the requirements of M.G.L. Chapter 40B and the developer shall demonstrate that said units will count towards the Town of Harvard’s 10% affordable quota as determined by the Massachusetts Department of Housing and Community Development. When affordable units exceed 15% and up to 25%, all of the affordable units on site must be Over 55 Housing. Computations shall be rounded to the highest number. The density bonus units may only be granted if they are restricted perpetually as SHI eligible affordable housing. The permanent restriction shall be approved as to form by legal counsel to the Planning Board, and a right of first refusal upon the transfer of such restricted units shall be granted to the Town of Harvard or its designee for a period of not less than 120 days after notice thereof. Designating 15% affordable units may be awarded a ten (10%) density bonus whereas any percentage in excess of 15% may be awarded one (1%) additional density for each percentage increase in affordability up to fifteen (15%) percent. Developers may pay a fee in lieu of unit designation to the Harvard Municipal Affordable Housing Trust to receive the density bonus. This fee is based on a formula established by the Harvard Housing Production Plan;

(c) Age Restricted or Age Targeted Housing – The Planning Board may award a density bonus of up to ten (10%) percent for a development that is certified as restricted age 62 and older active adult independent living units;

- (d) Starter Home Development – The Planning Board may award a density bonus of up to ten (10%) percent for a development containing at least ten (10%) percent of the units as “starter” homes each with less than 1,850 s.f. of floor area but no more than fifty (50%) percent. Each ten percent increment shall result in up to a 2% bonus. Should a MGL 40R Starter Home Zoning District be utilized, density, siting, and other requirements of the program shall be incorporated herein and density bonus will reflect such compliance.
- (e) Green Score Landscaping - If the applicant provides a minimum Green Score for the site of at least 0.35, a density bonus of 10%. See Section 133, Article XII for Green Score criteria and scoring.
- (f) Sustainable Development – There are two categories of sustainable development including:
  - [1] Green Buildings
  - [2] Green Roofs and Stormwater Management

Applicants may gain an additional five (5%) percent density bonus for each category met. See Section 133, Article XII for Sustainable Development criteria and scoring.

*Table 1 - Unit Calculation for Hypothetical 40 Acre Development Scenario*

<b>Total Acres</b>	<b>Open Space (Acres)</b>	<b>Base Density (Units/Acre)</b>	<b>Base Units</b>	<b>Maximum Units (+35%)</b>	<b>Final Gross Density (Units/Acre)</b>	<b>Final Net Density (Units/Acre)</b>
40	20	0.667	27	36	0.9	1.8

**E. Permitted Uses**

Permitted uses include the following:

- (1) Single-family and two-family detached dwellings;
- (2) Townhouse dwellings;
- (3) Agriculture and horticultural uses including but not limited to orchards, vineyards, forestry, farming for fruits and vegetables, and grazing animals including horses, donkeys, sheep, llamas, vicunas, and similar animals;
- (4) Open space, active and passive; trails; and bikeways.
- (5) Accessory residential/recreational uses (e.g., tennis court, pool, playground);
- (6) Clubhouse or community building;
- (7) Civic uses (e.g. library);

**F. Dimensional and Design Requirements**

- (1) Development Types – There are three (3) primary OSRD development types as follows:
  - (a) Condominium w/ Exclusive Use Areas

(b) Condominium

(2) Dimensional Requirements – The following provisions shall apply:

(a) Project Scale Requirements

- [1] Project Size: Minimum (none), Maximum (none)
- [2] Setbacks:
  - [a] 50’ to external side and rear lot lines
  - [b] For projects smaller than 3 acres, the Design Review Board shall establish setbacks.
- [3] Frontage: 50’
- [4] Maximum Build Out: Base Zoning Plus Density Bonus
- [5] Applicable Zoning District: Agricultural-Residential (AR)

(b) Dimensional Requirements Table:

The table below provides a set of dimensional requirements for the three land use types permitted in an OSRD development. Since projects will not involve separate building lots, dimensional criteria shall follow these conventions:

- [1] Land Use Area Size – Area dedicated to specific land uses will not be on the basis of lot size but rather will use an equivalent called an Exclusive Use Area or site pad.
- [2] Setbacks – shall be measured from the structure to the extents of the EUA or site pad.
- [3] Frontage – refers to the horizontal ground measurement of the front of a EUA or site pad facing an internal circulation roadway.
- [4] Building Size – Limits on the amount of floor area a specific use may have.

*Table 2 - OSRD Land Use Dimensional Requirements*

Land Use	Exclusive Use Area (EUA) or Pad Size	Setbacks (Minimum) From EUA Boundary or Site Pad <sup>1</sup>	Frontage	Building Size (Maximum)
<b>Open Space</b> Passive and active recreation, parks, squares, natural areas, plazas and courtyards (see definition)	Minimum 50% of Net Acreage (NA)	NA	NA	N/A
<b>Civic/Institutional Building</b> Community space, library, house of worship, museum, theater, or similar	Minimum: 5,000 s.f.	Front: 10’ Side: 8’ Rear: 30’	Minimum: 24’ Maximum 75’	5,000 s.f.
<b>Residential</b> One and two-family detached dwellings	Minimum: 4,000 s.f. No Maximum s.f.	Front: 10’ Side: 8’ Rear: 25’	Minimum: 36’ No Maximum	None

(c) The Planning Board may waive the minimum requirements for frontage and/or exclusive use area requirements that would normally be applicable in order to achieve maximum open space area and to facilitate a creative or innovative design;

A buffer and/or screening may be required adjacent to sites outside of the OSRD if it is determined that such a buffer will provide relief from potential nuisances. Such buffers shall

<sup>1</sup> Minimum rear setbacks will be waived if a rear facing garage and alley is proposed.

provide visual screening at all times of year, and preferred options include evergreen planted screening, except those that lose their lower branches as they grow (such as pines) or which are highly susceptible to deer damage (such as arborvitae).

- (d) Exclusive Use Areas (EUAs) or lots proposed for a width of 60' or less, townhomes, or duplexes shall use rear-facing garages on alleys or back lanes. EUAs wider than 60' are encouraged to have rear yard garages, side yard garages, or front facing garages offset behind the façade.

(3) Arrangement of Structures – Structures and other site features shall be located and arranged in a manner that protects:

- (a) Views from public roads and other publicly accessible points such as parks or land trust preserves;
- (b) Farmland, including fields and pastures;
- (c) Wildlife habitat;
- (d) Large intact forest areas, particularly ones older than 75 years, as seen on early aerial photographs;
- (e) Hilltops;
- (f) Ponds, creeks, and streams;
- (g) Steep slopes; and
- (h) Other sensitive environmental, historic, or cultural resources deemed important (including resources noted by the 2016 Master Plan and the 2016 Open Space and Recreation Plan).

Siting shall be designed to facilitate pedestrian circulation and connect to other development assets such as common areas and facilities. Pedestrian facility type may be a formal sidewalk in a village center type of project or a pedestrian or multi-purpose path in a rural hamlet type of project.

The Planning Board shall take into consideration the conservation analysis and findings in approving the arrangement of lots but, to the extent possible, each lot shall either front or rear on Open Space.

(4) Design Requirements –OSRD projects are also characterized by special attention to site and architectural design that directly reflects or highly complements the principles of town and architectural design that represents the character and history of the Town of Harvard. Specific design criteria are as follows:

(a) Project Site

[1] Developments shall be designed in the manner of a rural New England village, hamlet, or neighborhood with clusters of residences within a square or fronting on a town common or green.

[2] The development shall establish narrow, shaded streets conducive to pedestrians and

cyclists.

- [3] Buildings shall be established close to the street to facilitate a pedestrian scale.
  - [4] To the extent practicable and applicable, developments shall be integrated into the existing townscape by common edge treatments. This shall include frequent street connections and pathways to surrounding areas and a high degree of internal connectivity within the development.
  - [5] Projects are encouraged to possess a wide range of housing types and sizes—such as large and small townhouses, duplexes, single-family homes, small apartment buildings, or special needs housing.
- (b) Exclusive Use Areas and Buildings
- [1] All Exclusive Use Areas shall share a frontage line with a street, square, courtyard, neighborhood green, or park (public access).
  - [2] All buildings, except accessory structures, shall have their main entrance (include in definitions) opening onto a street, square, courtyard, neighborhood green, or park.
  - [3] Unenclosed porches may encroach into front setbacks as indicated in this bylaw.
  - [4] All residences shall be within 600 feet of trailheads or other pedestrian facilities.
  - [5] Garages entrances for Exclusive Use Areas 60' width or less shall be facing the rear of the EUA. Access to rear-facing garages should be from an alley or back lane, which may be a private common drive.
  - [6] Proposed two-family residences shall either be designed as a “Shaker Double” or a corner opposed front entrance double.

(a) Miscellaneous Design Standards

- [1] Porches. Unenclosed front or side Porches are encouraged for residential uses and may be built within the setback line or required front area.
- [2] Appearance/Architectural Design: Architectural design shall be compatible with the character and scale of buildings on the site, in the neighborhood, and in the Town through the use of appropriate building materials, screening, breaks in roof and wall lines and other architectural techniques. Variation in detail, form and siting shall be used to provide visual interest and avoid monotony. Proposed buildings shall relate harmoniously to each other with adequate light, air circulation, and separation between buildings where appropriate.
- [3] Design Review: OSRD projects shall be reviewed by the Design Review Board based on the criteria in this Section G. The design review process is outlined in Chapter 133, Article XII, of the Planning Board Rules and Regulations.

## **G. Project Site Design Process**

The site design process for OSRD is provided in Chapter 133, Planning Board Rules and Regulations,



Section 133-21(A). This process, in summary, mirrors the four (4) step design process as recommended by Randall Arendt, and is as follows:

- (1) Step One: Identifying All Potential Resource Protection Areas
- (2) Step Two: Locating the Building Sites
- (3) Step Three: Designing Street Alignments and Trails
- (4) Step Four: Drawing in Exclusive Use Areas or Site Pads

Site improvements including requirements for water and wastewater, stormwater and erosion control, road design, and pedestrian and bicycle facilities are found in Section 133-21(B).

## **H. Formal Process and Application**

The process for seeking approval of an OSRD project requires the following steps:

- (1) Pre-Application – Preliminary document development and discussion
- (2) Resource Protection Findings – Resulting in a conceptual plan for proposed development
- (3) Long-Range Development Plan (Optional) – Only for phased projects
- (4) Preliminary Project Approval
- (5) Formal Application Process – Design Review, Special Permit, and Site Plan Review processes

The full process for seeking approval of an OSRD project is provided in Chapter 133-21(C), Planning Board Rules and Regulations, which provides applicants with details of all of the required steps, plans, and documents that will be required.