

## Bennington College Adaptive Framework Plan

Atelier 10

Dill 12

Spring 2023



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#### **Opening Statement**

The goal of this Adaptive Framework Plan is In 2022, under the guidance of President Laura Walker, Bennington College initiated creation to provide Bennington College with a menu of a comprehensive Strategic Plan that will of options to guide the use of its buildings, articulate the vision for the college as it looks landscape, and other resources over time, in towards its 100th anniversary, 9 years from now. such a way that solutions can be tailored to the Alongside the strategic plan, this effort is the changing needs of the institution. Rather than development of a campus plan for Bennington, a fixed and static plan, the Adaptive Framework framing as an Adaptive Framework Plan. While Plan is intended to serve as a living and dynamic providing clear guidance and direction regarding tool, designed and organized to facilitate and the present needs and future development of respond to future needs and shifting resources. the campus, the Adaptive Framework does "It is the policy of the Trustees that Bennington not "lock in" on a singular path, but rather provides for long-term flexible planning through shall erect no monumental buildings, but will a comprehensive collection of concepts and adhere to a principle of alertness and readiness to meet changing conditions." actions. – Bennington College: A Prospectus, 1929

This report is a summary of the process and strategies which have emerged over the past Adaptability is one of the founding values of Bennington. When the Great Depression year of study in robust dialogue with Students, Faculty, Staff, Alumni, Trustees, and the forced Bennington to find a new campus site surrounding community. This looks to establish in 1930, the founders molded and reworked a clear vision and means of implementation existing building plans to fit a new site. for adapting the physical campus to serve the Grand brick dormitories became modest needs of the College into its second century. wood-framed houses, the central academic The simultaneous development of the Strategic building was scaled down, and existing barns Plan and the Adaptive Framework Plans plans and miscellaneous agricultural structures has allowed for feedback and exchange between were renovated to become academic and larger strategic directions and the possibilities administrative buildings. These creative and constraints connected to the College's land solutions in the face of challenging constraints and buildings. came to define the character of the campus and the institutional spirit as a whole.

Andrew Schlatter Facilities Management & Planning



# Framing the Plan

1.

This introductory section outlines the general approach and larger campus frameworks that serve as a foundation for the Adaptive Framework Plan. Over the past year, we have completed a deep level of investigation, broad engagement, and synthesis to create these recommendations and an extensive project matrix.

The Framework is meant to be a planning tool, part of supporting the translation of need to an appropriate solution, tuned through evaluation and refinement. This report is only a guide to the realm of possibilities. By maintaining design principles the College has an opportunity to strengthen its mission and support greater cross-disciplinary living and learning.

#### Bennington's Mission

Bennington liberates and nurtures the individuality and rigorous creativity of its students, supporting them as they forge their own paths and work toward a world more beautiful, sustainable, democratic, and just.





#### A Unique College Experience Poised for its Next Chapter

Bennington College is at a turning point in its history. Following an enrollment decline during the COVID-19 pandemic, the College welcomed over 250 first-year students and 18 transfer students in 2022, the largest in the College's history. Student housing is at capacity and the college needs strategies to accommodate costeffective growth.

Earlier this year, the College was designated for inclusion in the National Register, recognizing the College's architectural and historic significance. This strong foundation of place is critical to carefully adapt for new academic needs and future sustainability goals.

There is also a need to keep expanding the local, regional and global reach of the College. This starts with the sense of the campus itself and how the College connects physically and programmatically.

Top: Outdoor class session, using the unique landscape assets of the College

Bottom: VAPA painting studio space, with open and light-filled character

#### Takeaways

Student Housing at Capacity

Aging Campus with Ambitious Sustainability Goals

Global Institution in a Rural Setting

Strong Architectural Stock with Capacity to Adapt

Need for a Stronger Sense of Arrival

Transitioning to a Year-Round Campus





#### Building on Bennington's Past Towards a Compelling Future

From initial analysis through scenario development, the team refined a set of six goals in relation to current issues and opportunities. These relate to the specific space constraints and opportunities of the existing buildings and landscape to support larger strategic goals of the college. They were developed in dialogue with the Strategic Plan work and note opportunities both on and off campus.

The student experience and academic growth is at the heart, providing the infrastructure for continued learning and innovation. There is a need for growth in the student body and with that the opportunity for developing new programs and fields of study.

Bennington College has been a leader in sustainability and these accomplishments have been widely recognized. The potential is to deepen this leadership with the existing ecosystems and become a model for how to adapt with climate change.

The set of goals to the right relate to the physical campus, reinforcing connections within the campus and new bridges to adjacent towns and the region. This may be through mobility improvements but also how campus buildings are utilized and open to multi-disciplinary work and community programs. A key part is the sense of arrival and orientation.

Top: North elevation of the renovated Commons, a mixed-use hub of campus

Bottom: Winter view of Crossett Library from the East

Bennington College Adaptive Framework Plan

Goals

Provide for Student Body Growth & New Programmatic Directions

**Expand Sustainability** Leadership & Adapt Ecosystems with Climate Change

Connect the Campus to the Greater Community, Region & Globally

Preserving, Upgrading & **Re-Programming Campus** Buildings to meet Future Needs

Improve Walkability & Navigability Towards a More Legible Campus

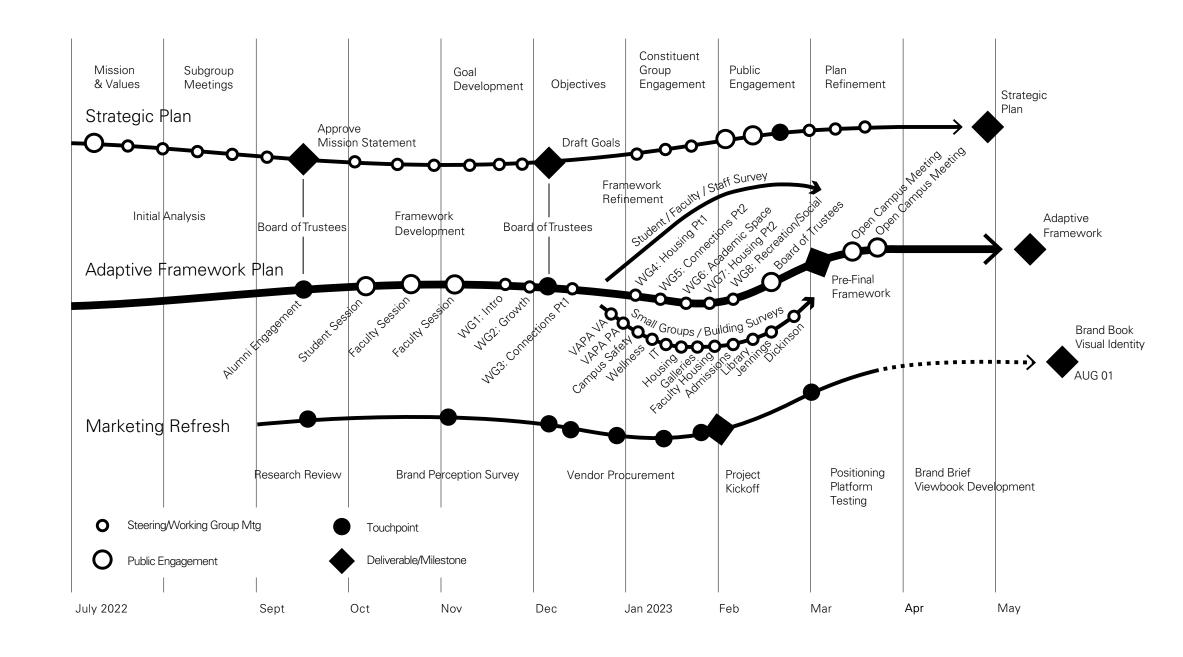
Support Partnerships On & Off Campus to Enrich Student Life Year-Round

#### Project Team & Process

The Adaptive Framework Plan has been one component of several parallel studies underway to look at the strategic direction of Bennington College over the next several years. The process overlapped with the Strategic Plan at multiple points over the past year, in particular at three Board of Trustees meetings and concurrent development of goals. The Marketing Refresh, an effort focused on the communications, identity, and marketing work of the college, kicked off this February. Together, these parallel projects represent a comprehensive effort to assess Bennington's current needs and plan for the future through broad, multidisciplinary, and community-engaged processes.

Following an Initial Analysis phase over Summer 2022, the project team kicked off the engagement process over Alumni Weekend with a set of meetings with Alumni (September 2022) to introduce the process. We followed with a set of Student and Faculty Sessions in October, which highlighted the need for a larger, cross-constituent body (Students, Faculty, Staff) that could commit to the project over a span of time, allowing for a deep dive on specific topics. Shortly thereafter, the Working Group was formed and started meeting weekly in November 2022, continuing through Field Work Term in January-February 2023. Weekly meetings were organized around specific topic areas, and consisted of brief presentations from the project team followed by an open discussion and feedback period.

Concurrent with the Working Group, the project team met with a number of small groups of "subject matter experts" from across campus to focus on specific needs and potentials within individual buildings, administrative departments, programs, and academic discipline areas. Groups were also provided with individual Building Surveys to capture detailed room-by-room and detailed program information to feed into this plan.



#### **Working Group**

Faculty Michael Dumanis (Literature) Michael Giannitti (Dance/Drama) Joe Alpar (Music) Donald Sherefkin\*\* (VA) Mariam Ghani\* (VA) Eileen Scully\*\* (SCT) Blake Jones (Sciences) Ginger Lin (Languages)

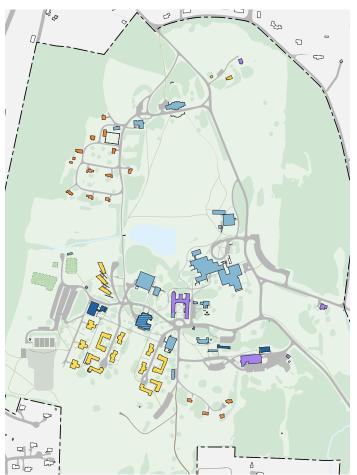
#### Students

Lorena Fernandez Camba Muhammad Tanvir Anjum Charlotte Poehlmann Nicholas Pertz Kelley Sawyer London\* Staff Sarah Harris Erin McKenny Carly Rudzinsky Fran Salcedo-Edwards

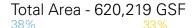
Campus Planning Committee, Board of Trustees Susan Borden, co-chair Matthew Clarke, co-chair Priscilla Alexander Dan Rowland Tracy Katsky Boomer Charlene Schwartz Christine Congelosi-Lulla, staff representative Donald Sherefkin, faculty representative Mohammad Tanvir Anjum, student representative

\* Denotes member of Strategic Planning Steering Committee \*\* Denotes member of Faculty Executive Committee

#### The Need for Growth



## Bennington's Unique Program Mix



Existing area by Facilities Inventory and Classification Manual (FICM)

13% 11% 5%

#### Academic - 234,896 GSF FICM Code: 100 Classroom, 200 Labs, 400 Study

Student Residence - 201,602 GSF FICM Code: 900 Res. (Student) + Paran Creek Apts Included

Faculty + Admin Offices and Support Structures - 78,711 GSF FICM Code: 300 Office, 700 Support Facilities

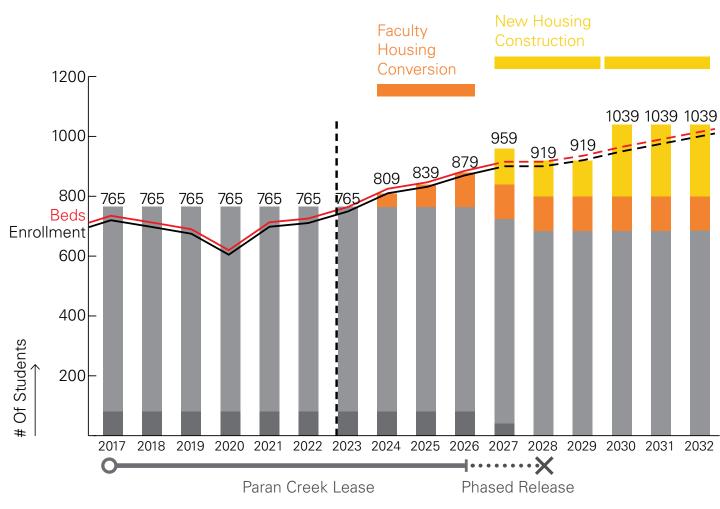
Social and Recreational - 72,525 GSF FICM Code: 500 Special Use, 600 General, 800 Health Centers

Faculty Residence - 32,485 GSF FICM Code: 900 Res. (Faculty)

Comparing Bennington's program areas and existing facilities with peer institutions, we found that the existing square footage per student is higher in all categories than comparable peer institutions (rural, small, liberal arts colleges), most significantly in academic program area. This represents not so much an "excess" of space, but rather the provision for a collection of unique program spaces- from studios to performance spaces- to provide rich resources for exploratory student and faculty work. At the same time, it is also possible to infer that there is room for increased utilization with growth, making the best use of the assets the College has today.

Social and Recreational space is on par with comparable institutions and with increased growth will need to find ways to increase and adapt to student needs, in line with the character of the College. This may not be in large facilities but more sensitive and incremental support of student health and wellness.

Residential space per student is also higher than benchmark partially due to the lower enrollment numbers and also the unique type of housing of small clusters that Bennington employs, overall is less efficient than the standard but part of the identity of the College.

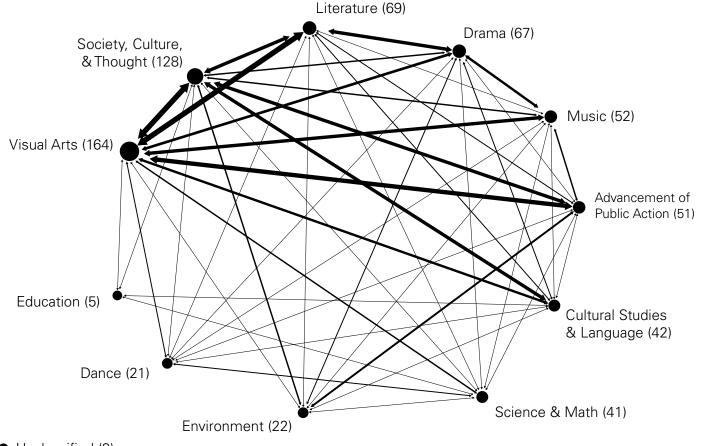


#### Housing Growth Needed to Keep Pace with Enrollment

The graph above shows the historical and projected enrollment growth over the next ten years. The decline in enrollment in 2020 corresponds with the onset of the COVID-19 pandemic and from this point has rebounded and grown. The College welcomed a robust and diverse class of over 250 first-year students and 18 transfer students in 2022, with the largest enrollment in College history. The College is fielding a record number of student applications from around the world and expects an similar enrollment increase for the next year.

Key to supporting this growth is supporting growth of faculty and staff as well as students. This means expanding support for faculty and staff, including expansion of housing options for recruitment and retention. This report also maps out potential near-term strategies that support long-term, sustainable growth, looking to leverage existing resources while building momentum towards future "big" investments. We also look to create more touchpoints between Bennington and the surrounding community. Through strategic plan initiatives as well as physical planning, identify ways to connect the college more closely to Bennington, North Bennington, and the region.

#### **Cross-Disciplinary** Living & Learning



Unclassified (9)

Diagram based on student specialization data of graduates from Dec 2019-June 2022



One of the key defining features of Bennington is the individual shaping of The Plan, an individual course of study and practice that goes beyond the bounds of a traditional major. This takes shape through one-on-one academic planning and graduate-style advising.

Visualizing the field of studies of recent Bennington graduates reveal dynamic crossdisciplinary learning. To the right is a diagram of student specialization data from the past three years showing the many ways in which territories for study are broken down and recombined.

How can the campus reflect and support the multifaceted ways students live and learn?

Many of the academic spaces need to support certain concentrations of study and have specific space and technical needs. Other spaces need to be more flexible, to support cross-disciplinary encounters in support of advancing each student's Plan.

Housing also is integral to this cross-disciplinary collaboration and a tradition of mixing both class years and fields of study fosters learning from one another. With additional enrollment growth and housing clusters it is critical to continue fostering a closely connected community.

## **Design Principles**

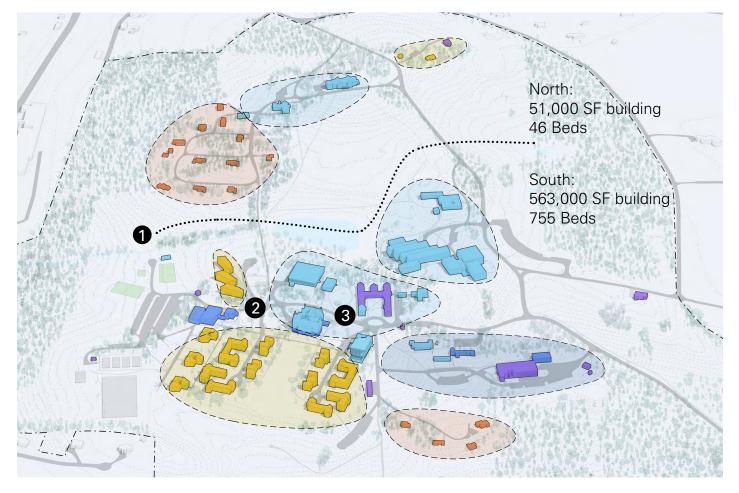
Make the most of what we have—adapt and enhance what is existing before expanding

Identify, preserve, and strengthen the qualities that contribute to Bennington's sense of place

Foster environments where everyone can feel a sense of belonging—promoting community through space, removing barriers to access

Create a living planning tool that can evolve and continually refine all parts of campus

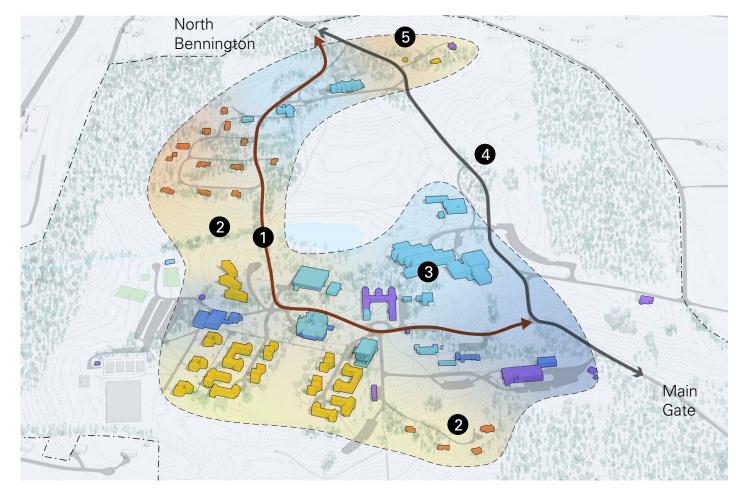
#### Framework 1: Increasing Mix of Uses & Strengthening Connection to the North



#### Today

The first campus-wide framework that emerged from this study related to the balance between the north and south campus, breaking down distinct program clusters which have developed over time. Through creation of a more accessible and activated circulation connection- or "spine"-at the western portion of campus, growth can support and break down these divides physically and programmatically. Increased mixed-use programming within and across buildings and spaces is key to supporting cross-disciplinary learning and the overall Bennington mission.

- 1. Imbalance between south and north campus
- 2. Separate housing clusters and student life hubs
- 3. Recent mixed-use hubs of Commons and the Barn



#### Tomorrow

- 1. Create west spine with a mix of uses linking south and north
- 2. Connect conversions and additions through student life and academic components
- 3. Increase utilization of academic buildings with social spaces and classroom upgrades
- 4. Enhance east spine for bicycle and shuttle local and regional connections
- 5. Potential development on North Bennington edge, faculty housing and hybrid spaces

- - Living (Student)
  - Living (Faculty)
  - Learning
  - Shared Spaces
  - Systems & Support

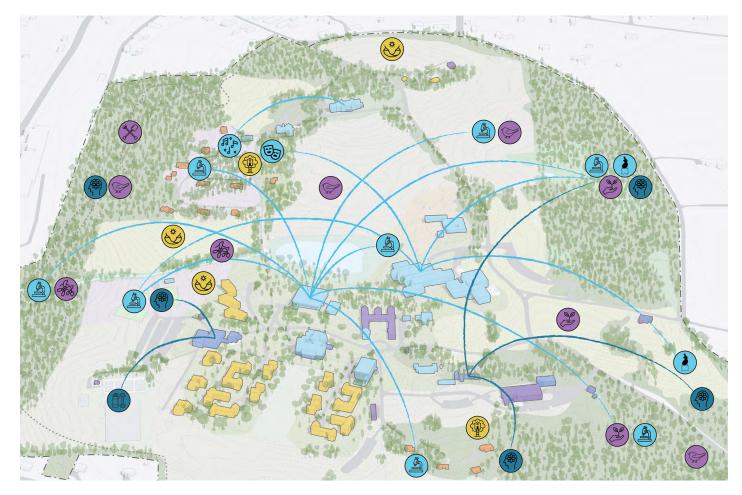
#### Framework 2: Connecting the Campus Landscape to Support the College's Mission



## Today

From a larger landscape lens, the north and south "imbalance" of the present-day campus also represents an experience of the landscape with distinct precincts. There is a high utilization of the campus core at the south, but minimal usage of trails and other campus landscape. Thinking of the entire landholding as the campus landscape, programs from housing to academic to wellness uses can link to the environment and support the varied ecosystems on campus.

- The landscape is one of the College's most important assets
- Distinct north/south precincts
- High utilization of campus core, low utilization of peripheral landscape
- Ecologically sensitive landscape (woodland and wetlands) in declining health



#### Tomorrow

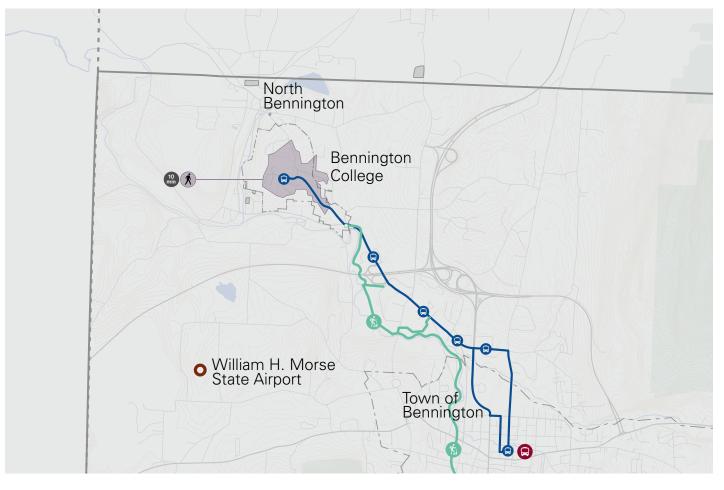
- Entire landholding should be thought of as campus landscape
- The landscape can more directly support College's Mission, its community, and the environment



Living (Student) Living (Faculty) Learning Shared Spaces

Systems & Support

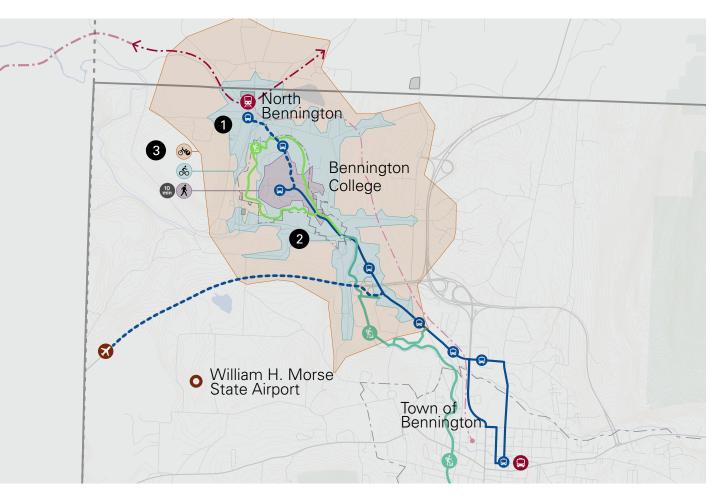
# Framework 3: Extending Infrastructure to Engage Locally, Regionally, and Globally



#### Today

Looking beyond the bounds of the campus, the team heard robust feedback about ways to link the College to resources around and mutually support adjacent communities. North Bennington seems physically distinct today but easily accessible with greater walking, biking, and potential direct shuttle connections through the north gate. Providing electric bicycle access on campus could also shorten the perceived distance from grocery and shopping venues recently linked through an extensive local bicycle network.

 Limited connections to North Bennington, Town of Bennington, and further destinations, primarily by car and shuttle.



#### Tomorrow

- 1. Improve accessibility and multiple mobili options to North Bennington
- 2. Enhancements with main entrance roundabout construction
- 3. Clarifying shuttle and bicycle connections longer-term support of regional train and airport opportunities

ty		10 min Walkshed
		10 min Bikeshed
		10 min E-Bikeshed
S,		Green Mountain Express Bus Route
		Bus Stop + 5 Min Walk Radius (Estimated)
	Ś	Ninja Path
		Existing Amtrak Railway
	•	Unused Rail Tracks
		- Freeway
		- Road



#### *ii*. Key Elements

This section outlines six key elements of the College's physical plan from larger circulation and ecosystems to how buildings interact and operate. Our working group topics revolved around these elements and feedback from both small group discussions and the campus-wide survey directly shaped both the values and recommendations for each.

With each of the elements we start by distilling key engagement themes and the values that emerged. A summarized version of our initial analysis follows framing issues and opportunities. A spread with recommendations closes the section on each element, strategies which combine to form projects and initiatives in the next section.

LIVING

51



## LANDSCAPE



## LEARNING



Bennington College Adaptive Framework Plan

## 31 SUSTAINABILITY 39







61 RECREATION

73





## Engagement Feedback

Movement to and through campus has been described by College community members as discontinuous for pedestrians, disconnected from the local community, and—particularly in winter or at night—dangerous. A well-connected Bennington College will prioritize pedestrians over vehicles, complete path networks to expand accessibility, and create welcoming thresholds that engage visitors and residents alike.



## Values & Principles

Connect the Campus to the greater community, region and globally

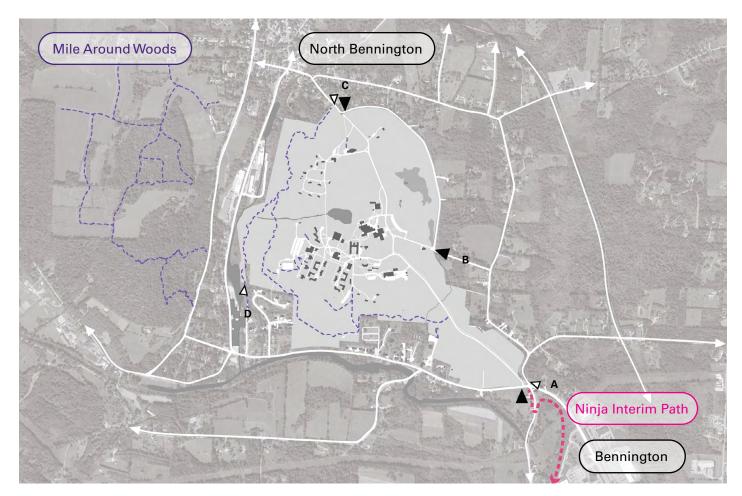
Create overall sense of arrival and distinct thresholds at campus edges, and in campus interior, that celebrate the College character

Clarify campus circulation, making wayfinding legible for residents and visitors

Make campus safer and more accessible for pedestrians and those with varying mobility, throughout the day and across all seasons

Improve walkability and navigability towards a more legible campus

## Analysis



Need to Improve Connections to the North & South

The towns of Bennington and North Bennington continue to grow and expand their network of bike infrastructure, and the campus must provide opportunities to connect to this network and provide safe ways for students, faculty, staff, and visitors to access the campus on bike and foot.

The existing thresholds of Bennington College are quiet and unassuming, with the rural drive defining the character for vehicular travel. These thresholds are the first point of contact for prospective students and visiting neighbors, and important passages for students and faculty to access resources and experiences off-campus.



Entrance (Vehicular)

- Pedestrian Trails
- Ninja Interim Path



A1) Main Entrance



A4) Campus Safety



B) East Entrance

## C) North Entrance **Unclear Arrival Sequence** & Barriers to Entry

Studies have shown that the average prospective student makes their decision with the first few minutes of arriving on a campu The existing arrival sequence for a new visito remains unclear, with decision points not clearly marked, a campus safety booth that unintentionally functions as a welcome center and parking scattered in the core of campus. This sequence of experiences, as one working group member described, "leaves the major of visitors without an ah-ha moment."

Bennington College Adaptive Framework Plan





A2) College Drive



A3) Decision Point



C) Prospect Street Trail

	Some key questions addressed through
thin	engagement:
s.	— In the arrival experience, what is working and
or	what is not working?
	<ul> <li>What is the arrival experience we want</li> </ul>
	visitors to have?
er,	— Does more consideration need to be given to
	the east or north entrances?
ng	<ul> <li>How are the footpaths working today? How</li> </ul>
ity	do most people get around, or want to
-	

get around?

## Analysis



#### Car & Pedestrian Conflicts

MOVEMENT

The existing campus circulation is largely defined by the interaction between cars and pedestrians. While pedestrians are limited in their access to paths and between buildings, vehicles are allowed in the majority of campus although they're mostly going to parking.

Can we create a more pedestrian-oriented campus, which accommodates vehicles, and not the other way around? Can we consolidate parking to the edges? Can we envision a loop road that eliminates vehicles from the campus core?



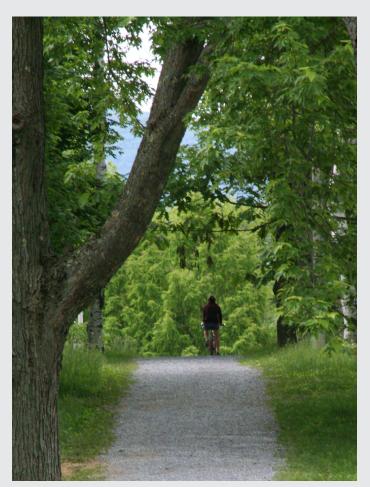


#### Lacking Pathway Accessibility & Hierarchy

As a result of the many eras of construction and the considerable expanse of the campus, there are many instances of conflicting circulation whether the conflict is a vehicular road with no clear pedestrian accommodation (such as the drives leading from south campus to north campus), a paving material that is considered inaccessible by ADA definition (such as gravel or mown paths), or a pathway that doesn't fully connect to to a wider network (such as the Woo Houses or forest trails).



## Recommendations



# Support Pedestrian, Bicycle & Shuttle Infrastructure

The College has an opportunity to prioritize pedestrian infrastructure, increase access to bicycles, and support low-carbon movement.

- Separate modes of travel, clearly define lanes for cars on larger roads, provide a generous buffer between roads and campus paths, mark designated crossings
- Expand bikeshare with electric bikes, repair stations, bike parking, and learn-to-bike programs
- Ensure that in-campus bike routes connect to the larger network of bike lanes
- Provide shuttles for College community access between campus and important destinations and towns.



## Improve Gateways & Arrival Experience

Rearranging certain elements of the current arrival experience—such as relocating parking and decoupling Campus Safety from a welcome site—and ultimately creating an intentional first experience of Bennington College, will improve the legibility of the College for all visitors.

- Introduce designated Welcome Site, relocate safety booth
- Create dedicated pedestrian paths from parking to arrival area
- Create new views ("aha moment")
- Introduce protected outdoor gathering spaces as part of admissions and tour experience

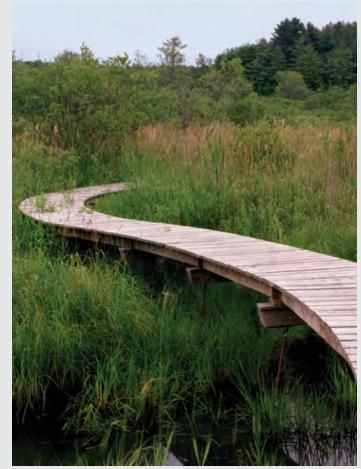


## Better Connect West & North of Campus

The north and south precincts of today's campus are distinct from one another. Through academic programming, landscape maintenance, and residential support, it is possible to create a unified, whole, campus. The patterns of circulation that exist today are a result of several factors, including the prioritization of the vehicle and the assumption that cars should be able to access the entirety of campus.

- Enhance primary western pedestrian pat with lighting, accessible paving/ seating, careful drainage, and landscape nodes
- Manage invasives for views north and so
- Bolster the landscape character and heal
- Study the strategic opening of the north
- Complete trail network along campus perimeter
- Site future buildings with an ecological a cultural sensitivity





## Create a More Walkable & Navigable Campus

:h,	<ul> <li>Create a coherent and cohesive loop road</li> <li>Relocate parking out of campus core</li> </ul>
	<ul> <li>Design paths primarily for pedestrians which</li> </ul>
outh.	also accommodate emergency and service
th	vehicles
gate	<ul> <li>Expand pedestrian network beyond core</li> </ul>
	<ul> <li>Enhance accessibility through materials,</li> </ul>
	consideration of slopes, adequate lighting,
nd	seating, and emergency call boxes

## Engagement Feedback

The Bennington College Community has affirmed that the ability to immerse oneself in a landscape of this size and character, to be in "nature", as one of the most valued aspects of the campus. The Framework Plan recognizes management of the campus' ecological resources is not only essential to the longevity and resilience of the campus itself, but will allow the College to provide benefits felt far beyond its bounds.

I think that an outdoor amphitheater with great acoustics would be well utilized for classes and recreation.

Outdoor classrooms - some faculty use the garden outside Crossett as a meeting space when it's nicer out; it would be great to have more "formal" outside spaces that can be reserved. We need more intimate spaces, clearings, small places to gather or to be alone, to get to parts of campus that are currently inaccessible It is important to keep large untouched areas, areas with minimal intrusion, large fields, the pond... We should be cognizant of wildlife that exist on campus, and not 'defeat the purpose' as we develop

More communication as to what is already happening... Support for purple carrot farm long term. Promote + build culture of community service Outdoor social spaces such as pavilions, benches, expanded outdoor seating and tables for the dining hall and such would be much appreciated especially in the spring and fall terms when it's beautiful outside

Less mowing, more landscaping for pollinator habitats, farming, fruit trees. I think we should have bees! The landscape is a huge part of why I chose Bennington and part of why I love it here so much. The mountains and the pond especially, those are so important to me and constantly inspire me both creatively and academically.

Being able to walk the grounds of campus is one of the things I most love about bennington.

#### Values & Principles

Utilize entire land holding in service of College Mission and campus life

Manage campus landscapes with an eye towards climate change resiliency, sustainability, and conservation of resources

Make campus safer and more accessible for pedestrians and those with varying mobility, throughout the day and across all seasons

Clarify campus circulation, making wayfinding legible for residents and visitors

Create overall sense of arrival and distinct thresholds at campus edges, and in campus interior, that celebrate the College character

## Analysis



Campus Pond





Campus Wetlands

## **Existing Sensitive Ecologies**

The abundance of deer and invasive species is limiting natural tree regeneration and over the long-term will limit structural and age class diversity, climate resiliency, and wildlife habit Invasive species outcompete and reduce native tree regeneration and the abundance and richness of other native flora, and are generally of lower palatability, hence are often avoided by browsing deer. This selective browsing is encouraging invasive plants while reducing and, in some areas, eliminating young tree regeneration, native shrubs, and herbs throughout campus.

The College's fields have the potential to provide good pollinator habitatr. High quality

## **Diverse Campus Ecologies & Needs**

We are at a pivotal moment in the ecological life of the campus. In many ways, Bennington College has been at the forefront of sustainable maintenance practices, eschewing traditional landscape management practices in favor of adapting the campus to its context (examples include forgoing irrigation, regenerating meadows, and performing manual invasive removal instead of chemical). However, its management and maintenance must continue to improve and adapt or it will not survive as we have known it for the last hundred years.

Issues of aging woodlands, decreasing plant diversity, increasing invasives and deer browsing, and the pressures of a warming

climate threaten this resource. Important ecologies are aging without a reliable way to renew. With 9 distinct ecological typologies and numerous distinct "character zones" within, the campus is a precious habitat for plants and animals. With 440 acres overall, of which 128 are forested and 105 are fields, it is also critical infrastructure for climate change readiness, with the power to contribute to both flood management and water quality benefits, and to capture carbon and mitigate warming.







Fringed Gentian



Little Brown Bats

ta	t.
ve	

pollinator habitat has herbaceous vegetation in various stages of regrowth, including recently mowed areas with young, succulent herbs and grasses; less frequently mowed areas with a mix of older grasses and herbs; and even less frequently mowed areas with a mix of old field grasses, herbs, and young shrubs. One key plant which was observed is the fringed gentian (Gentianopsis crinite). This is an uncommon plant in Vermont, and was last observed by or reported to the state's botanist in 2012.

Paran Creek has recently been elevated to high priority habitat, and the campus has an opportunity to protect and invigorate this watercourse from its upstream location.

## Analysis



#### Water Management Needs

The aquatic and associated riparian, wetland, and floodplain habitats along Paran Creek are modeled as a highest priority surface water and riparian habitat in the Vermont Conservation Design (Sorenson and Zaino., 2018). As it flows through campus, Paran Creek and its riparian areas are likely to be used by upland species, provide essential habitat for aquatic and wetland species, wildlife movement, plant dispersal, and ecosystem services. These functions are best maintained when waterways and wetlands are lined by diverse, forested riparian areas and

when waterways are unconstrained by roads, houses, and other forms of development. Compared to the surrounding landscape, Bennington College's riparian areas are well forested, unconstrained, and diverse.



#### Varied Maintenance Practices

Bennington College has historically done a g job of maintaining campus using low-energy low-impact means and methods (for example forgoing traditional irrigation). The College ha also demonstrated dedication to supporting character and ecology of the campus, adjust maintenance regimes to benefit the flora and fauna that make up the campus (such as adjusting the mowing schedule of the fields to accommodate bird nesting seasons).

good y and le, as	<ul> <li>Trail system: Best management appeared to be limited or lacking on some stream crossings, wetland/wet area crossings, and sloped trail sections.</li> </ul>
as	sloped trail sections.
the	<ul> <li>Composting: The College does not yet have</li> </ul>
ting	composting systems for food waste and
5	large scale maintenance waste (such as plant
IS	clippings)

## Recommendations



# Regenerate & Diversify Woodlands

Approximately 128 of Bennington College's 440 acres are forest. Tuning maintenance practices will help support growing these ecosystems.

- Increase forest structure, age-class diversity
- Encourage a diversity of tree species that are suited to the site's current and future growing conditions
- Encourage and protect existing tree regeneration, including seedlings and saplings, smaller pole-sized midstory trees
- Establish and protect new tree regeneration.
- Minimize the impacts of invasives and deer on forest regeneration
- Consider increasing connectivity between largest forest patches at north end of campus



## Protect Ecologically Sensitive Areas

Climate change is altering the synchrony of plant flowering and pollinator emergence. Having a diversity of pollinators on site maximizes the chance that plants have a suitable pollinator even if the plant flowering or insect emergence changes.

- Rethink lawns
- Increase diversity
- Plant for climate resiliency
- Use a varied, delayed, and rotational mowing regime to maintain diversity of field habitats
- Resurvey and manage for fringed gentian.



## Collect, Clean & Infiltrate Water

Bennington College has a unique opportunity to utilize its campus landscape to assist in the implementation of integrated stormwate management strategies.

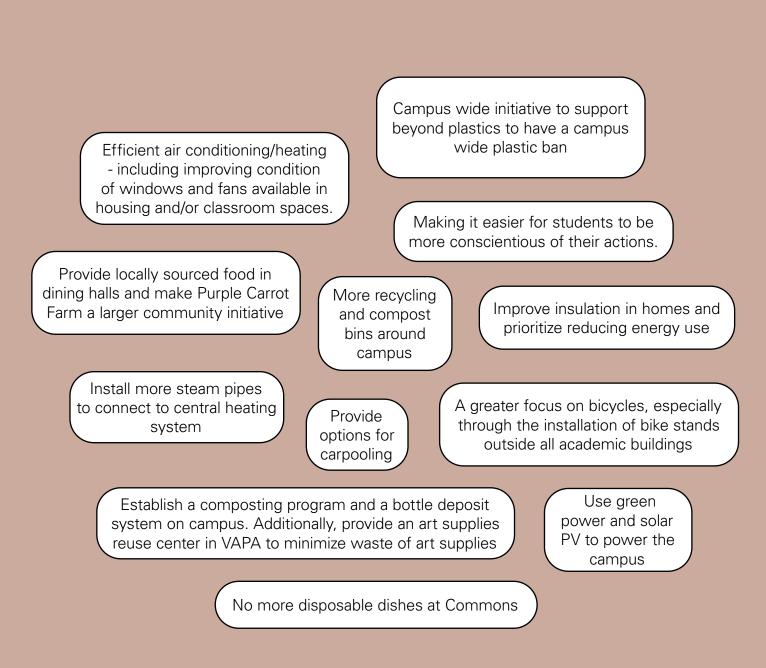
- Pursue and implement strategies from sustainable design/wellness benchmarkir systems
- Use methods of diversion, direction, and dispersal, to manage and clean stormwat runoff from buildings and paved areas.
- Consult the Bennington College Stormwa Infrastructure Mapping Project (Oct 2017)
- Consider the Three-Acre Rule for stormw that will impact landowners with more th three acres of land

#### Advance Campus Maintenance

y er	Campus landscape maintenance has been in many ways ahead of its time, and can continue to be on the cutting edge through the fine tuning of existing regimes and the introduction of new regimes:
ng	— Renew: Commit to growing nursery stock (trees and shrubs) on campus to support forests and meadows
ter	— Reduce: Phase out gas-powered machinery where possible
ater ) ater ian	— Re-use: Compost maintenance trimmings, and use felled trees for their wood or habitat construction where possible

## SUSTAINABILITY

## Engagement Feedback



Bennington College has been a leader in sustainability, rooted in both the classroom and daily life. Comments were across the spectrum of scales from waste systems to power systems to achieve the commitment to carbon neutrality by 2030. These values and recommendations look to engage the community in active questioning and investigation and continue to push boundaries and link together disciplines and perspectives that are otherwise separated.

Values & Principles

Improve the energy efficiency of the campus through on and off site renewable energy

Upgrade electric and water infrastructure to serve more buildings more efficiently

Improve envelopes on existing housing

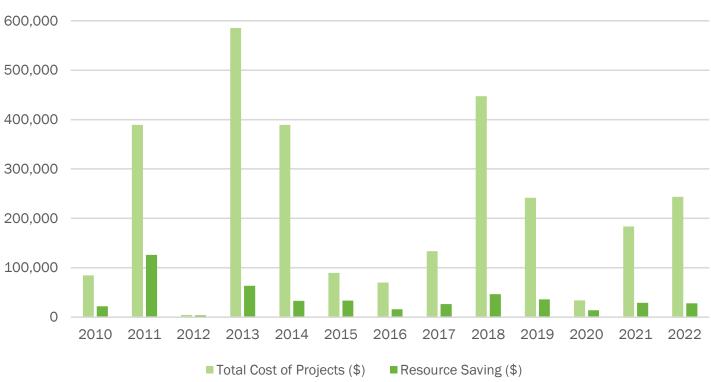
Provide additional recycling, reuse, and compost infrastructure on campus

Provide and incentivize alternate modes of transportation on campus

#### SUSTAINABILITY Analysis

	Key Goals	Key Accomplishments	Key Challenges
Energy & Carbon	<ul> <li>Develop a greenhouse gas emissions inventory</li> <li>Reduce emissions from Bennington College fleet and faculty/staff commuting</li> <li>Install ground source heat pumps or connect biomass plant steam lines to 100% of campus</li> <li>Improve building envelopes for older, inefficient buildings</li> </ul>	<ul> <li>Greenhouse gas inventories were completed from 2004 through 2011</li> <li>Signing the American College &amp; University Presidents Climate Commitment (ACUPCC)</li> <li>Installation of daylight and occupancy sensors in renovated buildings throughout campus</li> <li>Engaging in a power purchase agreement for 1.5MW of PV solar</li> <li>Biomass plant producing 85% of the heat on campus</li> </ul>	<ul> <li>LEED feasibility was assessed but determined that it is likely too expensive to pursue on a campus- wide level</li> <li>Due to old buildings on campus lacking significant energy efficiency measures, major renovations may be required to meet carbon reduction goals</li> </ul>
Water and Stormwater	<ul> <li>Reduction in total potable water consumption</li> <li>Installation of low-flow plumbing fixtures during renovation and new construction projects</li> <li>Implementation of stormwater management and reuse strategies to reduce potable water use for other uses</li> </ul>	<ul> <li>Replacement of old fixtures in renovated buildings with low-flow fixtures with sensors</li> <li>Installation of pervious pavers for new construction</li> <li>Topography at the End of the World allows for rainwater to be diverted downhill to prevent flooding on campus</li> </ul>	<ul> <li>Stormwater reuse infrastructure updates have not been explored in depth</li> <li>A majority of student housing and older buildings currently have old and inefficient plumbing fixtures</li> <li>Currently there aren't any percent water use reduction requirements or targets that have been specified by the college</li> </ul>
Habitat and Natural Space	<ul> <li>Reduction in water use for irrigation</li> <li>Removal of parking lot in front of Cricket Hill</li> <li>Minimize heat island effect with high albedo paving and roofing</li> <li>Improve biodiversity on campus</li> <li>Re-grade The End of the World to block view of off-campus construction</li> </ul>	<ul> <li>There are lots of green spaces and largely permeable areas throughout the campus</li> <li>The campus provides a significant open space areas for students and faculty to use</li> </ul>	<ul> <li>Logistical difficulties of relocating parking lot and re-grading the End of the World area</li> <li>Replacement of paving and roofing materials may require significant renovation</li> </ul>
Waste	<ul> <li>Target waste diversion in construction and through implementation of additional recycling infrastructure</li> <li>Composting integration</li> </ul>	Recycling infrastructure present throughout campus	<ul> <li>Integrating composting program and waste diversion/reduction infrastructure into existing buildings</li> </ul>

#### **EFFICIENCY PROJECTS 2010-2022**



## Strong Sustainability Goals

At the start of the Framework project, the team conducted a site visit to assess the current state of buildings on campus and coordinate with team members on the sustainability priorities of Bennington College. Using input from the design team and overarching goals outlined in sustainability documents such as the Bennington Climate Action Plan, the team established a preliminary list of long-term Framework goals.

Long-Term Sustainability Goals

- Establish a carbon neutral campus by 2030
- Establish a long-term strategic plan for the sustainability components of projects
- Further implementation of flexible load management to look at Bennington College separate from the grid
- Improve the energy efficiency of buildings on campus
- Implement strategies to enhance the health and wellness of campus users
- Development of a template to inform sustainability strategies on future developments and renovation

Atelier Ten also analyzed the typical structure improvement projects at Bennington College to determine what types of sustainability project recommendations and improvements are feasible and most effective for meeting the college's goals. The scopes of previous efficiency-related projects since 2010 were reviewed and the team coordinated with Bennington College to develop a general set of priorities for future project types. The over cost of each project was then compared to the estimated resource savings to determine Bennington College's typical annual investme and anticipated returns for efficiency projects

e for e	Priorities for Sustainability Projects — Projects that provide funding and incentives through outside organizations such as
ts	Efficiency Vermont
	<ul> <li>Maintenance projects and building code</li> </ul>
	updates that can be bundled with renovation projects (e.g. The Barn)
	— Opportunistically incorporating sustainability-
t	related upgrades in projects as they are
erall	being worked whenever possible (e.g.
	implementing sustainability strategies when
ne	upgrading life safety measures in Dickinson)
nent	— Envelope improvements on existing buildings
ts.	<ul> <li>System updates that are not invasive, generally out of sight, and have minimal impact on operations (e.g. upgrades to</li> </ul>

#### SUSTAINABILITY Analysis

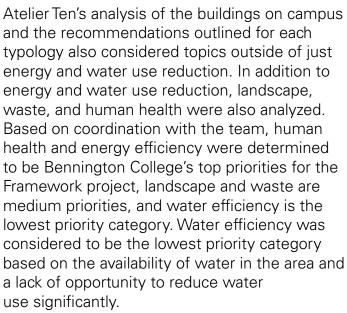


## Aging Building Stock

Existing buildings on campus were categorized into different typologies that represent their use type. Different building typologies use energy, water, etc. differently depending on the equipment and general functions of the space and will therefore have different priorities for sustainability improvement projects. The buildings analyzed in the Framework project are separated into the following building typologies:

- Lab & Research
- Offices
- Academic
- Housing

Within each typology that was established, buildings are further separated into categories based on when they were constructed or received major renovations. The age of buildings typically impacts what sustainability improvements are most critical considering factors like older buildings will usually have low-efficiency insulation and windows. While sustainability improvement recommendations are also provided for each individual building in the appendix, separating the buildings on campus into these categories provides a general template for the upgrades and renovations that should be prioritized based on the type and age of certain buildings.



**Prevent Harm** 

WATER

Quality

MATERIALS

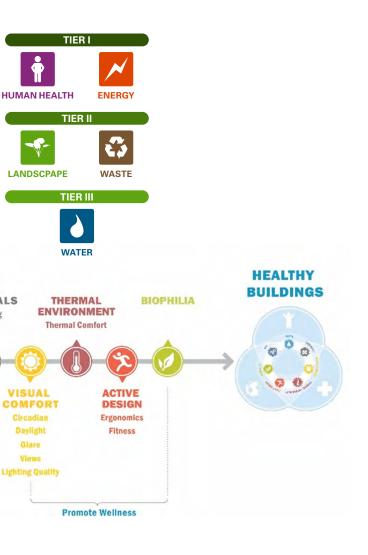
Sourcing

Toxicity

AIR

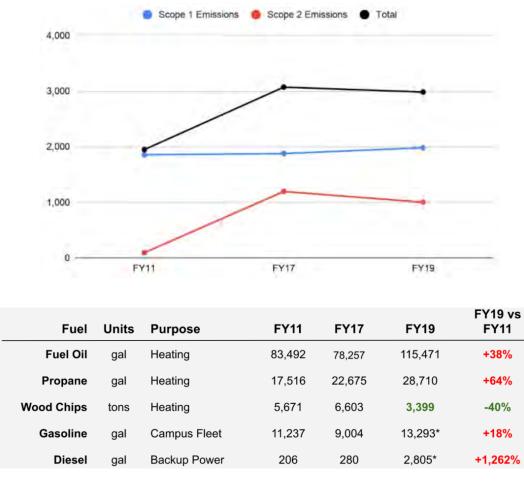
Outdoor Air

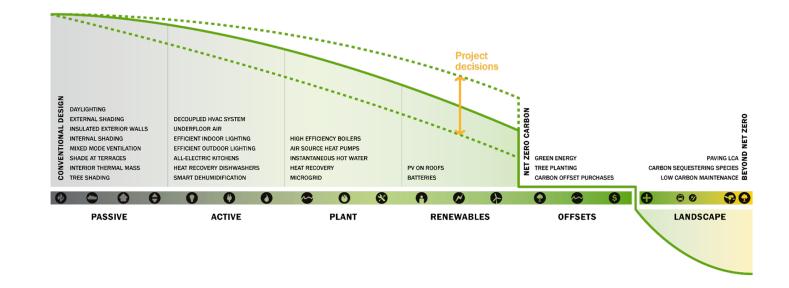
Ventilation



npus ust to ed. an ed the re	Using these categories, campus-wide and individual building strategies were developed based on both the current and anticipated future needs of the campus. A list of key strategies is provided in the Recommendations section of this chapter and outlined further in Projects and Initiatives.
ne	
as	

## SUSTAINABILITY Analysis





#### Progress to Carbon Neutrality

Carbon emissions were analyzed for the campus during the initial analysis phase based on Bennington College's goal of establishing a carbon neutral campus by 2030. The most recent carbon emissions data available from 2019 indicates the following main points.

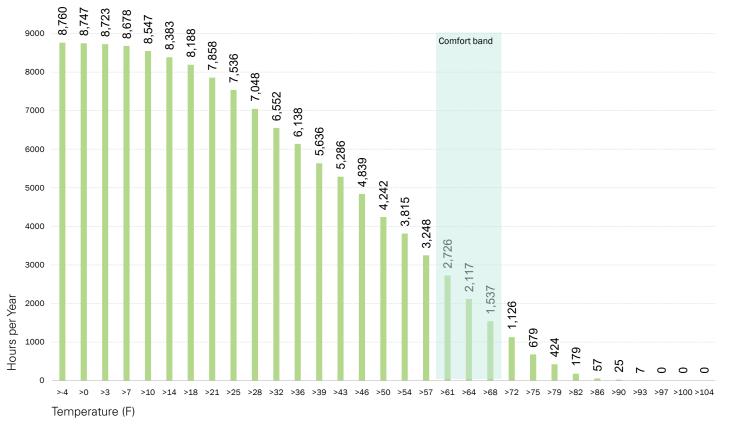
- Scope 1 and 2 emissions made up ~70% of the College's total emissions for FY17
- Scope 2 electricity consumption has increased by 30% since FY11
- Scope 2 emissions increased until FY17 due to GMP Fuel Mix, then decreased in 2019 due to significant investment in renewable energy (Solar Sense) in FY17 and FY18

Using this information, sustainability recommendations included in this chapter largely revolve around reducing carbon emissions and providing mitigation strategies on both an individual building and campuswide scale. Achieving carbon neutrality is a primary goal for Bennington College, so proposed building upgrades, renovations, and new construction projects must contribute towards reducing carbon emissions. However, implementation of these strategies alone will likely not achieve carbon neutrality by 2030. Bennington College will need to use carbon offsets or additional renewable energy purchases to meet the 2030 goal. When considering the reduction of carbon emissions, building design and construction is critical to consider in detail for a campus framework project that encompasses dozen of buildings. There are many strategies to combat and reduce carbon emissions that should be considered while coordinating building renovation and construction projects Recommendations for maximizing the sustainability of individual existing buildings on Bennington College's campus is included in the Appendix of this document, however, general strategies that will contribute to the carbon neutral by 2030 goal are outlined in t graphic below. While implementation of the strategies will help guide the campus towar

	carbon neutrality, purchase of carbon offsets and renewable energy will likely be required to completely fulfill the 2030 goal.
IS	
	Passive carbon emissions reduction strategies include designing and orienting buildings to maximize useful daylight for occupants and
S.	using tree shading to the project's advantage; while active strategies focus on things like selection of efficient HVAC systems and light
1	fixtures. From there, more impactful emission reduction strategies include implementing heat recovery systems, air source heat pumps,
he se ds	installation of solar PV, and designing landscapes to support sequestration and minimize the need for carbon intensive maintenance.

#### SUSTAINABILITY Analysis

Annual Number of Hours Above Temperature (IP)





As part of the initial analysis phase, a climate analysis was conducted to gain information about the precipitation, humidity, wind, air temperature, and incident radiation at Bennington College. The information gained from the climate study was then used to provide general building upgrade recommendations for the region to maximize wise use of our limited natural resources and ensure a comfortable environment for students, faculty, and staff.

The climate study found that for approximately 68% of the year, Bennington College is below the thermal comfort band, indicating that it is a heating dominant climate. As a result, applicable building design strategies include using passive solar heat gain and ensuring that building envelopes are air-tight and well insulated to reduce heating loads.

The climate was then further analyzed to ass occupant comfort based on the temperature and humidity data for the site throughout the year. Comfortable temperature and humidity ranges were determined by using standards outlined by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). Based on the comfort zone outlin in blue in the graph below, only 6.5% of the year (570 hours) is within the comfort zone where no cooling or heating is needed.

DESIGN STRATEGIES: JANUARY through DECEMBER

4.8% 4 High Thermal Mass Night Flushed(418 hrs)

3.8% 6 Two-Stage Evaporative Cooling(337 hrs)

8.2% 8 Fan-Forced Ventilation Cooling(715 hrs)

9.3% 10 Passive Solar Direct Gain Low Mass(817 hrs) 6.3% 11 Passive Solar Direct Gain High Mass(549 hrs)

4.3% 12 Wind Protection of Outdoor Spaces(375 hrs)

dification Only(321 hrs

fication OnM(0 hrs)

100.0% Comfortable Hours using Selected Strategies

10.0% 2 Sun Shading of Windows(872 hrs)

3.1% 5 Direct Evaporative Cooling(269 hrs)

8.6% 7 Natural Ventilation Cooling(755 hrs)

4.5% 3 High Thermal Mass(397 hrs)

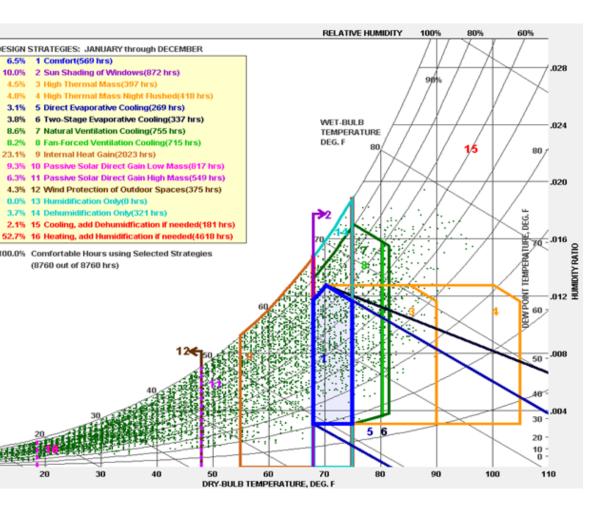
23.1% 9 Internal Heat Gain(2023 hrs)

(8760 out of 8760 hrs)

6.5% 1 Comfort(569 hrs)

0.0% 13 Hu

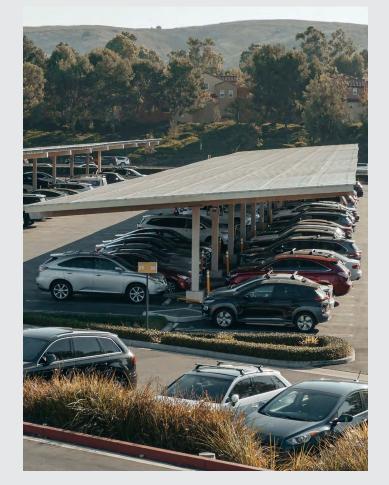
3.7% 14 Det



sess	Using this data, various building design
Э	strategies were identified to increase the
е	annual comfort hours. Implementation of all of
/	the following strategies result in improving the
6	annual comfort hours from 6.5% to $\sim$ 50% of
],	the year.
S	
ned	— Maximizing internal heat gain (~2,000 hours)

- Natural ventilation cooling (~750 hours) — Passive solar direct gain low mass (~800 hours)
- Sun shading of the windows (~900 hours)

## SUSTAINABILITY Recommendations



#### Expand Renewable Energy Infrastructure

Campus energy is largely generated from locally sourced woodchips in the awardwinning biomass steam plant, which has led to significant savings both in energy cost and in the campus' carbon footprint. However, most buildings that are not connected to the steam plant are heated by individual oil boilers, replacement of which should be a target for future energy and resource savings. Additional renewable energy is possible through onsite solar generation such as over parking lots or a percentage commitment for off-site renewable energy. Additionally, access to EV charging stations, electrifying the campus fleet, and support of bicycle infrastructure can substantially reduce vehicle emissions.



## Improve Building Performance

With the aging building stock, existing buildi on campus lack significant energy efficiency measures and major renovations may be required to meet carbon reduction goals. Recommendations are detailed per building the appendix and include:

- Provide envelope upgrades to buildings tare lacking insulation and have inefficient single-pane windows
- Eliminate CFC refrigerants
- Install ground source or cold weather he pumps
- All electric buildings for new construction and renovations, explore appropriate renewable technologies



## Create Healthier Environments

buildings	In support of human health and wellness on
iency	campus, the interior environment is key along
be	with promoting active movement through the
S.	buildings and campus.
lding in	
	— Specify materials with recycled content and
	EPDs indicating global warming potential
ngs that	- Specify materials with low VOC contents and
icient	emissions testing
	<ul> <li>Reduce indoor and outdoor water</li> </ul>
	consumption by limiting irrigation and
er heat	installing efficient plumbing fixtures.
	<ul> <li>— Specify all LED lighting and ENERGY STAR</li> </ul>
uction	equipment, especially in high traffic areas.
Э	Continue to install occupancy and daylight
	sensors in academic buildings.

50

## Engagement Feedback

One of the most important aspects of the Bennington experience is the system of houses, clusters that define a sense of community and break down the boundaries of year or field of study. Feedback strongly represented maintaining this ethos from scale to common spaces while providing for more flexibility in accommodation from room types to food and lifestyles.

It would be nice to have more options where students can share housing as well as food, lifestyles, and housing needs

For faculty, it is immensely helpful to have housing that one can settle in during the first three years or so. The rental market in the Bennington area is very difficult. When I was on the job market, having the ability to rent an oncampus house was a substantial draw for me towards this job.

I think there should be designated, established themes like quiet houses, substance free houses, community oriented houses, outdoor adventure house. Can we welcome the faculty row houses back into the campus?

Not enough room for the people we love the most - our housekeepers!

How do we design flexibility to meet changing needs? Can we design a building that can be reconfigured to suit families or multiple faculty?

Whoever designed the Colonial Houses probably wanted to live there, and put a lot of thought into those who do - for them to be able to do everything you could want to in a living space, other than eat, sleep, and study.

There is something to be said for steps within housing - living with a roommate, living in a suite with a common area, living in an apartment, etc. so that students can mature through different types of housing arrangements.

The residences are all rather inaccessible, the heating is finicky, the houses get too hot in the summertime

The houses form a nice community rather than regular dorm style. I like the size, that it's small enough to know everyone you live with and that there is a diverse number of different housing styles.

> The founding idea of Bennington was for the campus to be a community...many people would live where they worked, and that would help build solidarity, buyin, and a shared vision.

Values & Principles

Maintain ideal clusters of 30-40 students, woven on-campus

Implement dispersed methods of supporting all students and lifestyles

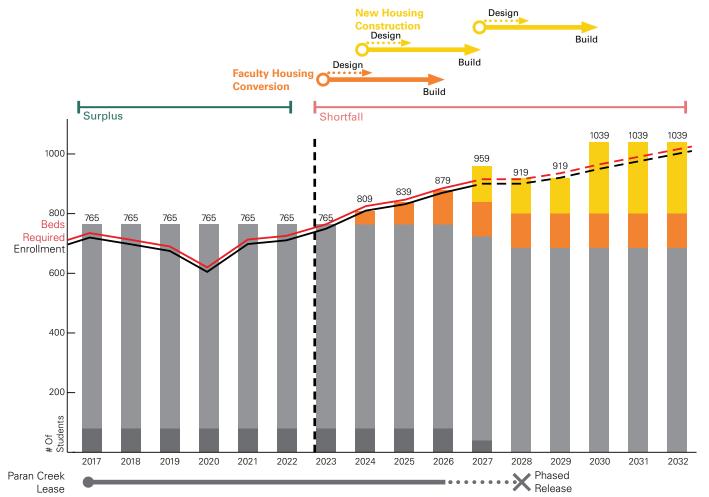
Offer a variety of nearby spaces to support learning outside the classroom

Increase range of accommodations to meet changing student needs

Quality of space and integrated components toward zero carbon goals

Foster a sense of belonging and engagement for all students

## Analysis

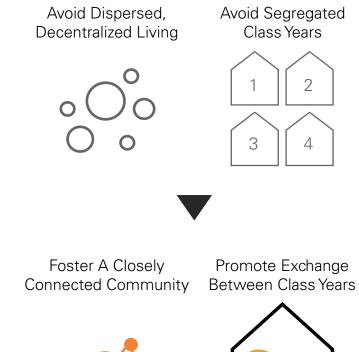


## Additional Housing Needed to Support Growing Student Body

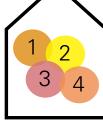
Today, Bennington has the largest enrollment in the college's history, and is on the threshold of its housing capacity. With a moderate enrollment scenario projecting a shortage of 120 beds in the next 3 years, there is an urgent need to identify cost-effective near-term solutions to accommodate growing enrollment. It is expected by Fall of 2024 that some form of new housing will be necessary. A flexible near-term approach is a necessary "runway" for long-term solutions:

Phase 1: Re-purpose select faculty residences to student housing as a "Bridging Strategy" for incremental growth, while aiding faculty in finding alternative housing close to campus. Conversions allow for minimum financial risk while momentum is built in enrollment approach and fundraising to support a long-term solution in Phase 2.

Phase 2: Expand on-campus housing capacity through new facilities that integrate student housing, faculty housing, and new amenities.







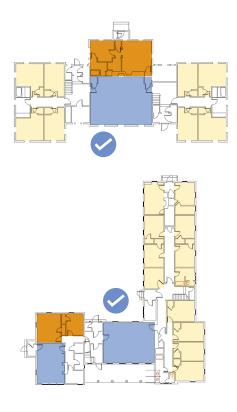
## Maintain Unique Housing Mix

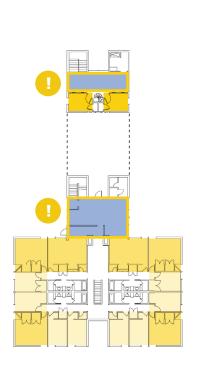
The student residential experience at The housing model is as critical to a Bennington education as the curriculum. From its inception, Bennington is deeply rooted in the "house" housing at Bennington has never been about system, comprised of a collection of small houses with 35-40 residents each. Houses providing lodging while students take courses are clustered in groupings based on typology: but establishing a framework for learning by the Colonials, the Barnes houses (or "milk living as part of a community. Just as in the crate" houses), and the Woo houses (or classroom, students from all class years benefit in their living environment from each other's "new"houses). Each house has its own unique community identity and character, and most ideas and experiences. In order to support students become deeply connected to their the above, the College provides a range of house; house traditions and culture are passed housing options to enable student development, on from year to year. The conviviality fostered honoring individual needs as appropriate (and as by the design of homes and assemblage of resources permit), and attesting that we learn neighborhoods is an integral part of each best together, and not in isolation. student's experience at Bennington, and should be preserved in all future housing endeavors.

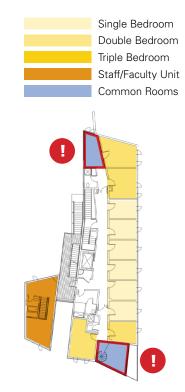


#### Preserve Community Scale & Character

## Analysis







Colonial Houses contain the preferred proportion of bedrooms to common rooms

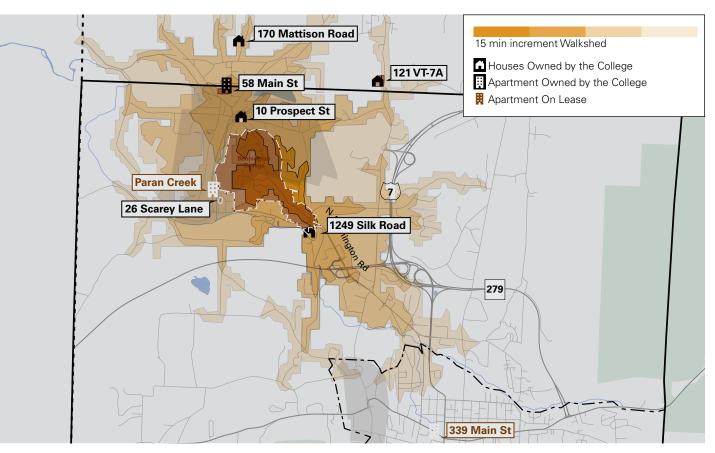
Barnes Houses have recently converted common rooms to triple bedrooms, leaving students with very few social spaces

Woo Houses have a marked reduction in common room sizes, often underused given their restrictive size and peripheral placement

## Pressures on Social Spaces & Unit Types

Each house has a common room (i.e. living room) that serves as the central social space, as well as one or two small kitchens, and shared non-gendered bathrooms. Recent pressures to accommodate more students in each house have caused common rooms to be reduced (as in the Barnes houses) or underused due to their peripheral placement (as in the Woo Houses), both detrimental to each house's social life and unifying sense of community. Additional feedback from students indicated that the most requested amenities in student housing include more extensive kitchens to support students cooking their own meals, more privacy in bathroom arrangements, and more private spaces for study within the houses.

In recent years, the Residential Life group has seen a marked increase in the number of requests for single rooms through the ADA accommodations process. Such accommodations are often requested to support mental health needs, as opposed to physical disabilities. While singles have typically been "quaranteed" for seniors (4th year students), the growth in accommodation requests for singles from 1st year to 3rd year students is putting increasing pressure on residential space: when there are not enough singles to meet all needs, doubles are converted to singles, diminishing capacity overall.



3.4% Vacancy (Vermont) 4000 Rental Units Demand (Vermont)

#### **Regional Housing** Issues & Opportunities

The current local housing market is highly In conjunction with strategies for the expansion constrained. It is difficult for staff and faculty to of student housing capacity, the creation of find high-quality, affordable housing either for new housing venues for faculty represents rent or for purchase. This is a state-wide issue an opportunity to engage the wider housing in Vermont, which has recently identified the shortage in a productive way. The strategies described here each have different implications housing shortage as a primary concern, and is working to direct resources towards developing for the residential makeup of the Bennington solutions. In this context, it is both necessary campus as well as the adjacent area. The and financially prudent for the college to invest viability of any one strategy will depend on in procuring or developing new housing in the factors such as the state of the local housing immediate vicinity of the campus, including market at the time, as well as finances, capacity options for development on the campus itself. needs, and available lead time

\$825 /unit Median Rent (Town of Bennington) 2.29 Average Household Size (Town)

\$48,929 Median Income per household (Town of Bennington)

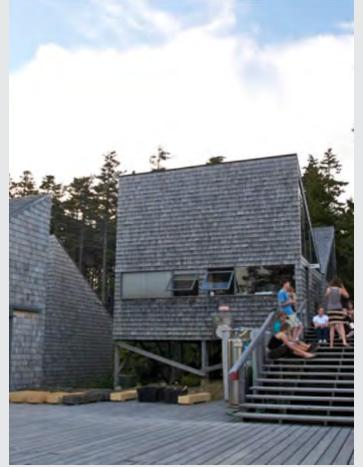
## Recommendations



## **Respect Campus** History & Context

Creating new homes on campus will necessitate an approach informed by the campus' rich history and context that adds to Bennington's established character, not detract from it.

- Maintain ideal clusters of 30-40 students, woven on-campus
- Increase range of accommodations within a house and cluster to meet changing student needs
- Consider new Faculty Housing that could support connections with North Bennington



## Introduce Mixed-Use Hubs for Living & Working

A Bennington education occurs both inside and outside the classroom. Introducing new modes of live/work residences will aid the college's mission to champion self directed learning anywhere and at any time.

- Offer a variety of nearby work/study spaces to support the creative process
- Ensure residences account for the differing interests of all class years
- Create new Faculty Housing which could provide studio space



## Center Growth with **Communal Spaces**

Communal spaces serve as the essential backdrop for discourse, inclusivity, and empathy through the ongoing practice of personal and social responsibility and shared governance.

- Ensure communal spaces are generous and high quality within new and existing housing
- Foster a sense of belonging and engagement for all students

MLTW, Sea Ranch Condominium One



## Create Intimate & Fun Landscape Nodes

The College community emphasized the critical role that outdoor spaces play in their daily lives—acting as essential corollaries to the tight fabric of buildings on an already intimate campus. Offering outdoor spaces at a variety of sizes allows people to find privacy, gather in groups, study, play music, and other activities as desired. Offering spaces with varied intensities of infrastructure—such as hard paving, furniture, outlets, overhead cover, and proximity to buildings—allows for a range of uses that adapts with the seasons and community needs.

## Recommendations

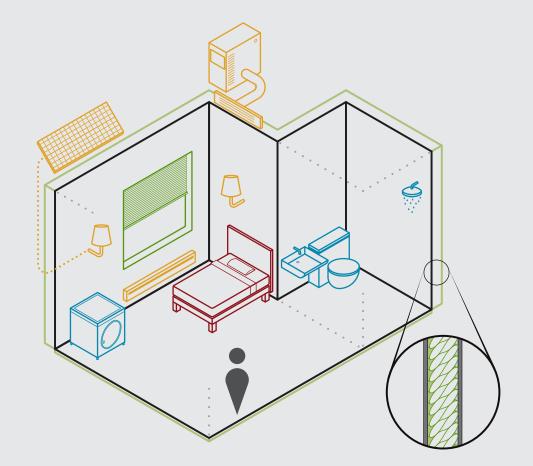


## Extend Indoor Living to the Outside

Students and faculty on campus expressed the importance of having outdoor corollaries to indoor spaces and, to preserve privacy, foster creativity, and feel at home:

- Campus as kitchen: Support the Purple Carrot Farm through infrastructural investment, and provide shared outdoor kitchen and work space
- Campus as living/common room: Continue to create spaces which support intimate moments as well as large groups by appropriate sizing, planting, and furnishing
- Campus as study: Provide light infrastructure such as overhead coverage, lighting, or outlets to allow community members to live and play outside year-round





## Improve Health & Comfort

Bennington College should continue to implement sustainability strategies that focu on enhancing health and wellness in future projects that also contribute towards the College's goal of becoming carbon neutral by 2030. It is critical that living spaces are healthier and more comfortable for occupant when considering future renovations and new construction projects. While there are a varie of residential spaces on campus with unique attributes, Bennington College should consid implementing the general strategies outlined in the diagram for all future residence-oriented projects. More specific recommendations fo individual residence buildings are included at th appendix of the report.

		Energy
JS	_	Efficient mechanical systems such as ground source or cold-
		climate heat pumps
	_	LED lighting & Energy Star appliances
	_	Renewable energy products
		Envelope Upgrades
	—	Super insulated envelopes
	—	Triple pane windows
ts	—	Air sealing to minimize drafts
		Water
W	—	Low flow plumbing fixtures
ety	—	Efficient dishwashers and clothes washers
Э		Permeable paving for stormwater management
-		Materials
der	_	Low/No VOC materials
d	_	Materials with recycled content and FSC wood
ed		Materials with EPDs and HPDs
or		
t the		

# LEARNING

## Engagement Feedback

Recently placed on the National Register of Historic Places, many of the academic mid-century modernist structures were recognized for how the college integrates its vibrant intellectual and artistic history with its need for innovation. Much of the engagement focused on how to better utilize existing spaces and tuning to particular classroom and study space needs.

Everyone has their artistic niche [at Bennington]. It could be dancing, drawing, painting, photography, etc. -Students spend so much of their time in VAPA. It would be awesome to have more practice spaces that are closer than Jennings - a lot of students don't want to walk that far and will practice in their room.

SCT doesn't have a building. This limits our interactions with the students, and ability to establish a sense of community.

I think a centralized scheduling system can be implemented to better utilize unused spaces - just because you are not playing music does not mean you can't book the DCB. We have so many classrooms, and there are always random empty ones.

> I would love rooms with adjustable desks so I can fit my wheelchair more comfortably under them, along with studio spaces that are larger in general for someone with physical disabilities to move around in.

More study spaces, more science! It's such a small campus it's hard to find a private place to study.. The only two I can think of are commons and the library.

Many of the classrooms in Commons are too small to meet the class size of many of our classes... Rooms seem crowded when numbers rise over 16

Bigger classrooms (20-24) that are technologically equipped to handle hybrid learning. Many of our classes are in the 18-20 student range, and while we currently have enough classrooms on campus to support these numbers, with the projected growth, we may not have enough space.

Bennington College Adaptive Framework Plan

#### Values & Principles

Augment the multi-disciplinary learning environments that characterize Bennington

Reinforce and introduce productive adjacencies between fields of study and faculty

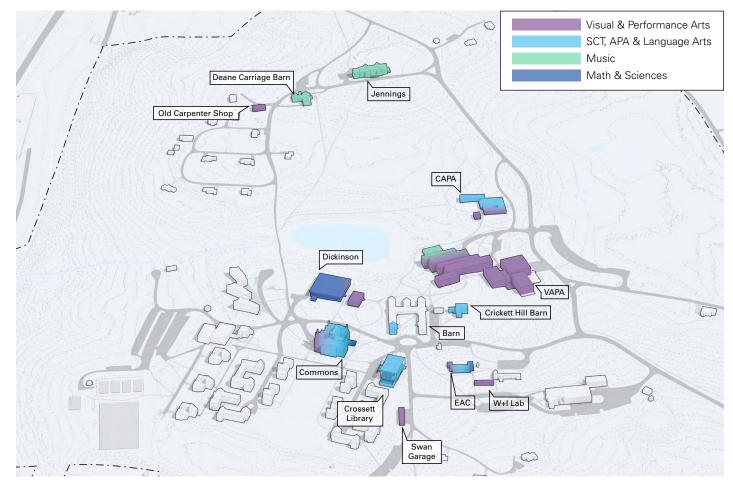
Enhance and add instruction spaces to accommodate a wide range of fields

Ensure existing and new spaces are accessible for all

Implement upgrades and additions in service of zero carbon goals

## LEARNING

## Analysis

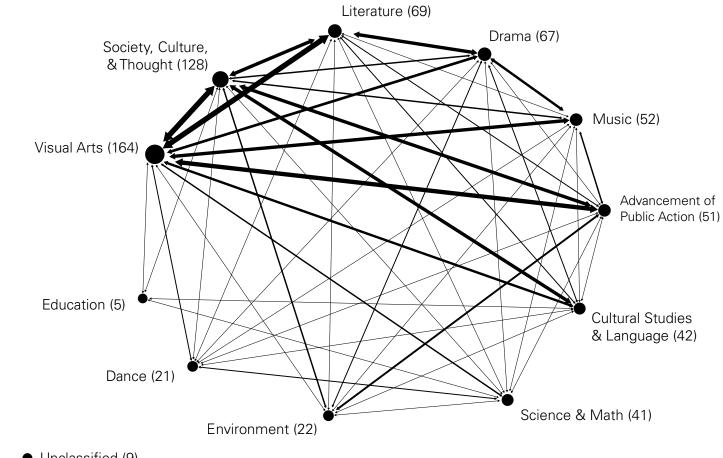


## Mix of Uses Across Campus

Central to Bennington's founding vision is the belief that education is most meaningful when self-directed. Bennington's nearly 800 students (697 undergraduate and 102 graduate) engage intensively with its wide range of spaces to forge individualized and hands-on educational paths around their driving questions and interests. Based on classroom use data, the most well-used buildings on campus include VAPA, Commons, Dickinson, CAPA, and the pair of music practice/performance spaces in Jennings and Deane Carriage Barn.

Though some buildings are largely used by one field of study, classroom use shows many buildings are shared by various fields, as visualized diagrammatically above.

These circumstances can grant Bennington's students and faculty to make use of its academic buildings as robust instruments in the search for productive adjacencies and alignments between pedagogies.

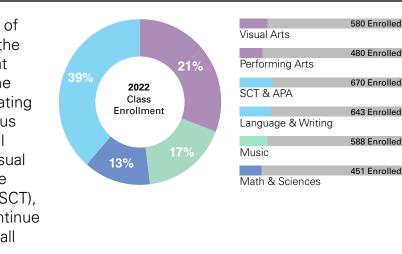


• Unclassified (9)

## High Level of Multi-Disciplinary Work

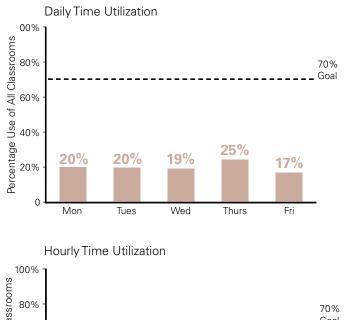
Visualizing the field of study specializations of recent Bennington graduates helps define the magnitude of cross-disciplinary learning that occurs at the college. The prominence of the visual arts is apparent, as 30-40% of graduating seniors name visual arts as the primary focus of their studies each year. As the first liberal arts college in the country to include the visual and performing arts as equal partners to the humanities (Society, Culture & Thought, or SCT), the next chapters of Bennington should continue to pioneer meaningful endeavors between all fields of study.

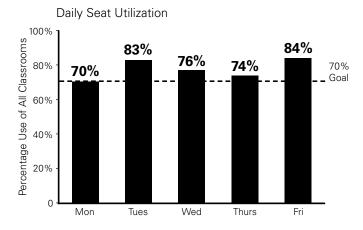
Diagram based on student specialization data of graduates from Dec 2019-June 2022

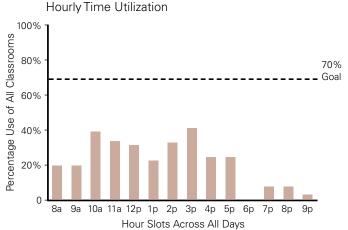


## LEARNING

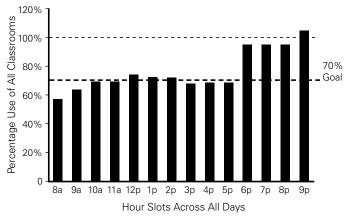
## Analysis

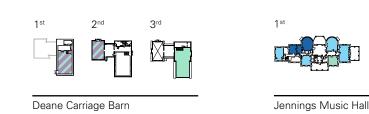


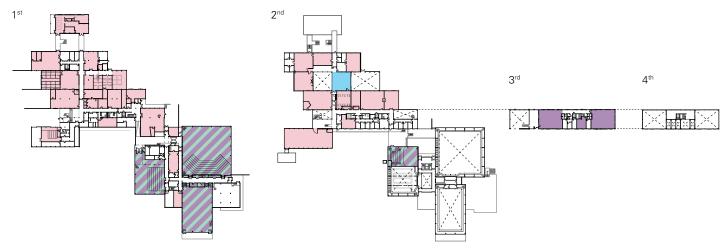


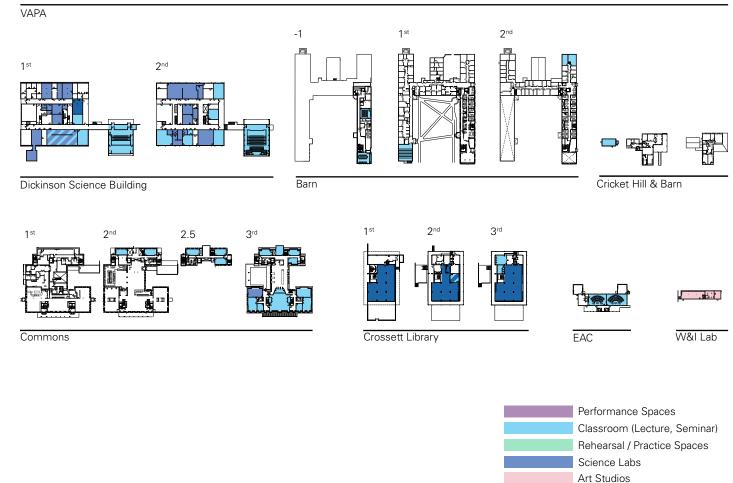












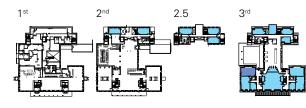
Low Room Utilization

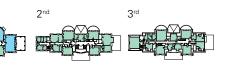
Academic buildings currently appear to have appropriate seat utilization, with classes generally above 70% of room capacity. Enlargements or construction of larger classroom spaces will need to be addressed in the near term as student growth continues across all fields of study. Classroom use is low overall, with only three classrooms reaching a 70% benchmark. Rooms are most utilized on Thursdays and between 10am - 3pm running one-third to one-half of capacity.

20.2% Average Time Utilization across 314 Classes in **61** Classrooms

Bennington College has a wide range and guantity of learning spaces that, as expressed in the campus survey, are being underutilized due to deficient technology in classrooms, unsuitable furniture/room sizes, and little sound isolation. This has caused many classes to flock to a select few rooms on certain days of the week when faculty are able to teach, frequently forcing classes to make due in incomplete learning environments.

75% Average Time Utilization with 698 Students







CAPA

**Quiet Study Spaces** 

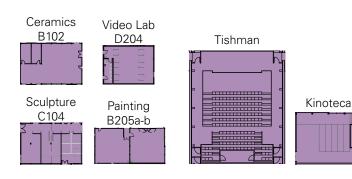
# LEARNING

# Analysis



#### Auditorium & Theater

Rehearsal & Practice **Conventional Instruction & Lecture** 



Lecture & Instruction

Flexible Instruction & Seminar

Commons

326

Crossett

**3F** Classroom

### Space Needs Visual & Performance Arts

Studio

- Greater quantity and maintenance of studio spaces for Architecture, Ceramics, Painting & Drawing, Photography, Video
- Upgrade and dedicate space for Digital Fabrication Lab, integral to all disciplines
- Enlarge computer labs shared by Animation, Architecture, Digital Arts, Photography, and Video
- Storage solution for equipment/props taking up high value Performing Arts space
- Sound-proof theater spaces to allow concurrent classes in all spaces
- Address accessibility issues to Greenwall Theater
- Improve lighting, sound, recording systems in performance areas

### Space Needs SCT, APA & Language Arts

— Create dedicated teaching and study spaces for SCT and Language Arts disciplines. Classes are currently spread across Barn, CAPA, Commons, Crossett, Dickinson, and EAC in spaces too small for growing class sizes of 20-25

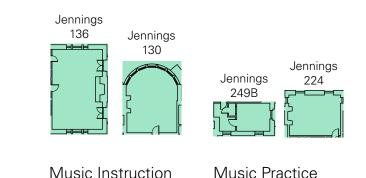
CAPA

DL

Commons

318

- Upgrade furniture in classrooms currently in use to allow more collaborative and flexible organization



Greenwall DCB 1st Floor "The Pit"

Music Performance

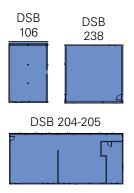
### Space Needs Music

- Storage solution for large equipment/ instruments taking up high value space
- Increase quantity and improve soundproof practice rooms
- Add performance and teaching spaces the accommodate 20 students or more
- Add and improve faculty office spaces
- Add and soundproof recording and e-mu studios
- Weatherproof porches for outdoor performance
- General maintenance and accessibility improvements to aging Jennings building
- Improve lighting, sound, recording systems in performance areas

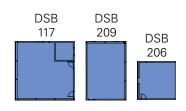


Visual & Performance Arts SCT, APA & Language Arts Music Math & Sciences

Rooms enlarged for visibility, not to consistent scale



Math & Science Lab



Math & Science Lecture

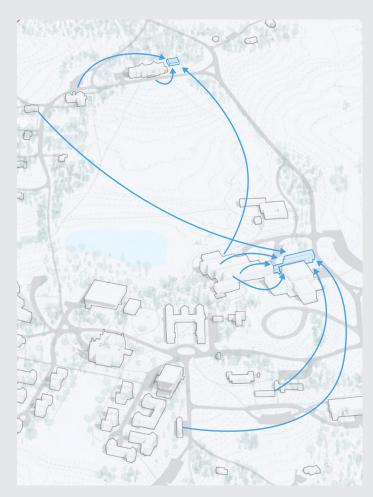
### Space Needs Math & Sciences

	<ul> <li>More spaces for group work, independent</li> </ul>
	research equipped with white boards and
ofing	computers
	— Enlarge lab spaces and more faculty offices.
nat	<ul> <li>Resolve scheduling issues from sharing</li> </ul>
	classrooms with other disciplines
	<ul> <li>Improve outdoor spaces for greater use</li> </ul>
sic	- Upgrade furniture to allow more collaborative
	and flexible organization of large rooms

— General maintenance to aging Dickinson building

# LEARNING

# Recommendations



### Consolidate Disparate Programs

Dispersed locations for academic programs have prevented learning spaces from being utilized to their full potential.

- Move studios in Swan Garage, Old Carpenter Shop, and Word & Image Lab to a new VAPA Studio building
- Centralize digital fabrication equipment to a space in a new VAPA Studio building
- Unify Photography and Video studios in a more spacious location in a new VAPA Studio building

## Intensify Academic Zones & Bolster Multidisciplinary Work

As Bennington continues to grow its academic programs, it will be increasingly necessary to gradually offer more learning spaces that support a wide range of fields.

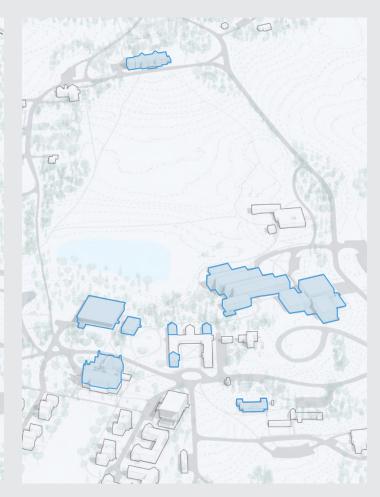
- Construct modular barn-like structures to support growth of all fields as necessary and connect to existing buildings where appropriate
- Consider prefabricated construction methods of new learning spaces to expedite construction
- Aggregate new, small structures to create new academic zones (an approach similar to the design of CAPA)



### Alleviate Existing High-Value Spaces

The accumulation of ad-hoc spaces and fluctuating programming occupies a restriction amount of Bennington's high-value spaces, a seen in VAPA, Dickinson, Deane Carriage Ba and Jennings.

- Construct a storage building to consolidate unused equipment and various archival material
- Restore and improve former storage spa as learning spaces

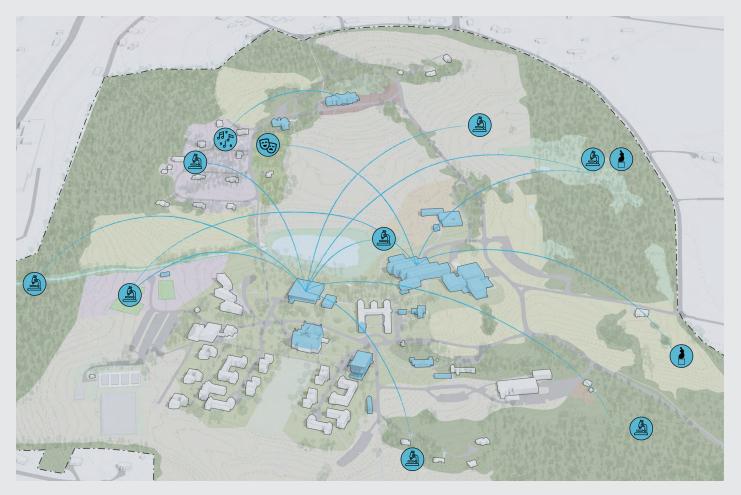


### Improve Overall Classroom Utilization

ve as rn,	Analysis has shown that many of Bennington's academic spaces, especially those for conventional lecture / seminar classes, are underutilized or that classes are distributed unevenly across the week.
te	<ul> <li>Implement room scheduling software for all learning spaces</li> <li>Standardize teaching technology across all</li> </ul>
ces	<ul> <li>existing rooms</li> <li>Distribute classes more evenly throughout the week</li> <li>Introduce electric key fob access to frequently used areas for greater access to students</li> </ul>

# LEARNING

## Recommendations

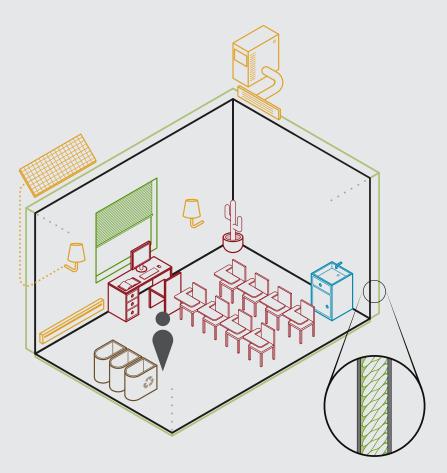


### Extend Indoor Learning to the Outside

Students and faculty noted particular opportunities to expand their learning beyond buildings:

- Campus as stage, setting: Provide more outdoor spaces that support visual and performance arts, including an amphitheater
- Campus as gallery, inspiration: Maintain the landscapes to preserve their creative contribution, and leverage the whole campus and its diverse landscapes in service of visual art display
- Campus as research lab, sanctuary: Utilize the unique ecologies on campus in service of academic programming, research, and learning, and use academic programming in service of bettering the campus ecologies





### Adapt Buildings Responsibly & Efficiently

Academic buildings as a whole represent a significant part of Bennington College's overa energy and water consumption, given the lar amount of time that the college community spend in these buildings. Continuously occur throughout the day, it is important that efficie is a primary focal point for future upgrade projects. Atelier Ten analyzed lab/research and other academic buildings separately as the equipment associated with them typically consumes more energy than other academic buildings and classrooms. Individu sustainability recommendations were provide for each, however, general strategies for futu projects on all consistently used academic buildings are outlined in the diagram.

all rge		Energy Replace heaters and boilers with efficient systems Occupancy sensors, daylight sensors, and LED lighting Renewable energy production Envelope Upgrades
pied ency	=	Super insulated envelopes with triple pane windows Roof replacement if necessary Water
		Low flow plumbing fixtures Consideration of stormwater collection and detention Install permeable paving and regrade the site as necessary for stormwater management Waste
ial led	-	Recycling and electronic waste disposal infrastructure Composting program for buildings with food service areas Divert 75% of materials from landfills during future construction projects Materials
ure		Low embodied carbon structure and enclosure materials Low/No VOC materials Vegetation and natural materials throughout the space

# RECREATION

# Engagement Feedback

Bennington College has a robust set of social and recreational spaces, mainly concentrated across the spine of the southern portion of campus but many are underutilized and not aligned with student needs. Comments ranged from creating warm and inviting spaces that are knit in the fabric of the campus to new spaces that support health and wellness. The campus landscape was discussed as a key part, activating outdoor intentional spaces for play.

The designated social buildings are sad and empty feeling. The student center is cool in theory but the vibes are so weird there. A campus market (small grocery and heat yourself take away) could be a good way to assist students who prefer to cook for themselves and support our community

I feel like the Student Center is so far away with not a lot of appeal that it isn't really worth the walk.

Commons 1977 Lounge, Roz's Cafe, Lawn between Commons and Dickinson, Commons Lawn; these are all easily accessible and are gathering places for almost everyone in the community, they are spacious and have good places to sit.

The gym currently has a dingy, neglected atmosphere that is at best unconducive and at worst hostile to students attempting to get healthier, which of course has knock on effects on students mental health.

> I think we'd all benefit from more defined organizational/HQ spaces for student and faculty organizations, on yearly or multiyear "lease" agreements

Why don't we talk more about play? It's curious that we assume once you get to college, you no longer want to play or simply enjoy the landscape

I do most of my socializing in the dining hall There aren't a lot of intentional outdoor spaces. What about a 'wellness walk'?

The upper level of the Barn is always warm, so I like to work up there and see the folks walking through the hallways.

It'd be nice to have more spaces where someone can be alone and focus as an individual without fear of being in the wrong place or being kicked out of a space because of other students. Values & Principles

Enable students, staff, and faculty with spaces that are theirs to mold & shape

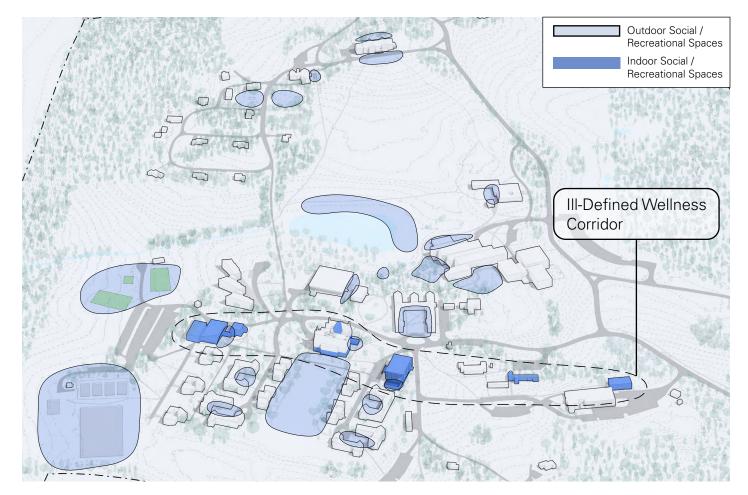
Enhance environments for a range of uses and experiences - indoor & outdoor, intimate & collective, quiet & loud

Design with joy and holistic wellbeing in mind

Create and improve spaces for a range of bodies, abilities and extended use during all seasons

Extend opportunities for learning into the campus & landscapes

# Analysis



### Underutilized Indoor & Outdoor Recreation Spaces

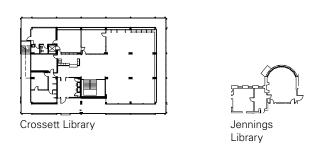
RECREATION

One of Bennington's most valued resources is its landscape and entire land holding. Despite the potential, most social and recreational spaces are concentrated near the center of campus without activating the peripheries. This set of buildings and spaces are occupied in an ad-hoc manner without clear signage or connections and lack intentional programming.

Outdoor spaces are also only enjoyed when weather permits and indoor spaces for both quiet and loud recreational use are not as abundant and overall not well-maintained.

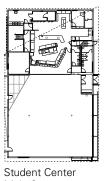
Though social and recreational activities occur in both residences and academic buildings, most of the buildings specially dedicated to recreation form an ill-defined "Wellness Corridor" between residences around Commons Lawn and the main academic core. Conceptualizing this set of recreation spaces as its own network that can connect the north and south as well as with the entire landscape can become an intermediary between residential and academic life will help to improve the college community's quality of life.

#### Spaces ranging from Most Private to Semi Private



#### Spaces ranging from Semi Public to Most Public

Student Center

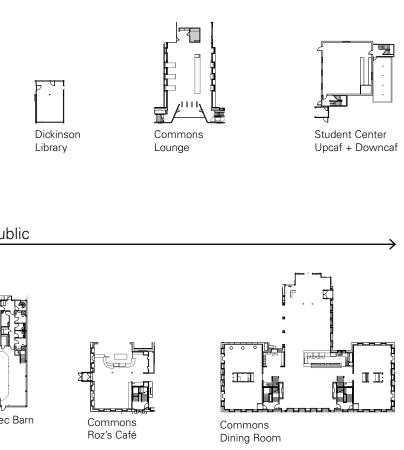




Main Space Addition

### Need for Variety & Flexible Spaces

The scarcity of quiet spaces that would balance student services/programs can better support the largely public existence at Bennington was the college community. Many of Bennington's a point continuously reiterated in engagement. existing recreation spaces can be improved to better facilitate such bonds. Of all recreational Though the few existing indoor quiet spaces are well used, they are mostly concentrated in spaces, the Student Center and Meyer Rec the Wellness Corridor, with few elsewhere on Barn were consistently named as areas that campus. Potential solutions to remedy this issue would benefit most from improvements. As the are explored further in the Recommendations main gym and wellness center for Bennington, section concluding this analysis and in the much of the main improvements for Meyer Rec Projects and Initiatives section. Barn relate to improving current conditions maintaining and upgrading ventilation, storage, Best exemplified in the Commons dining room equipment, and converting the underutilized and cafe, public recreational spaces have great faculty dance space as an auxiliary space for the potential to convene people (who otherwise Rec Barn's existing programs. Improvements might not have crossed paths) around regular to the Student Center are explored on the rituals, as well as offer formalized spaces where following page.



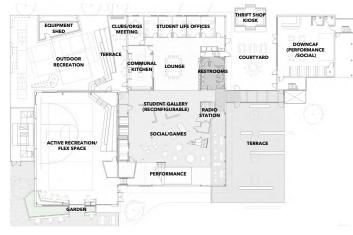
# RECREATION

## Analysis









### Student Center in Need of a Re-Imagining

The Student Center is underutilized due to its scale not aligning with programming needs, often feeling too big or too small. However, there have been encouraging accounts of students modifying the Student Center addition to their needs. Photos from John Umphlett's advanced sculpture class on the left show such instances of students using the space and furnishings in service of their work. The Student Center can be a lively and valuable resource for its community if students approach this space as a tool that is theirs to mold, and if the space is re-imagined to be conducive to this attitude.

The 2019 Student Center renovation plans (shown above to the right) were developed

with student engagement. This would need to be revisited as student needs are continuously evolving, but represent some of the main components missing from the current arrangement. The Student Center could benefit from less static furnishing and instead, could implement modular and movable "rooms" that house these discrete programs and can be arranged to allow various layouts that make use of the entire space. Student organization offices and spaces for quiet study or small meeting were key components noted with engagement. The proposal also looks to integrate a communal kitchen, a range of athletic spaces, and support indoor/outdoor connections.



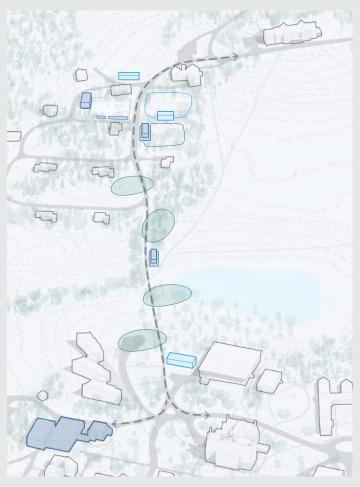


### **Minimal Access** to Campus Landscape

Outdoor recreational space is currently characterized by domesticity and proximity to the core of campus, the spaces beyond which are characterized by a lack of accessibility. The majority of outdoor recreation takes place in existing lawns and terraces, although the campus contains a multitude of different landscape types to experience, which each present different recreational opportunities throughout the year. A comprehensive recreational approach understands that the majority of the academic year falls in colder winter months, and provides year-round outdoor recreational opportunities, in the forms of infrastructure, landscape maintenance, and programming.

# RECREATION

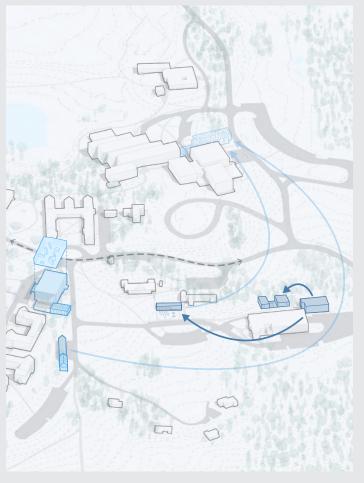
# Recommendations



# Activate Connection to the North

The current west path that connects North and South ends of campus currently feels like a long journey that discourages movement. Introducing new programs and points of interest along this spine can help strengthen this connection.

- Construct new modular wellness spaces near north and south extents of path for both quiet and loud activities
- Introduce more seating areas and pockets of landscape interventions



### Bolster Existing Wellness Corridor

Conceptualizing the area spanning Student Center, Commons, Crossett Library, and Meyer Rec Barn as a "Wellness Corridor" mediating between residential and academic life will help to improve the college community's overall quality of life.

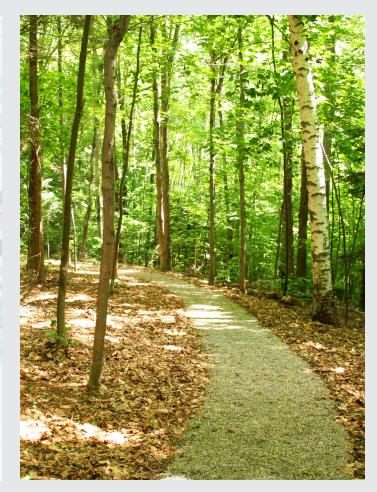
- Introduce flexible furniture and distinct pockets to Crossett Library to expand its potential uses
- Move Word and Image Lab to new VAPA Studios and re-program with wellness program
- Perform deferred maintenance on Meyer Rec Barn and distribute wellness program into underutilized dance studio



### Create New Student Center Hub

Rethinking the static arrangement of the cur Student Center and containing student-facing programs into discrete, movable "rooms" ca convert the space into a lively and valuable resource, molded by students.

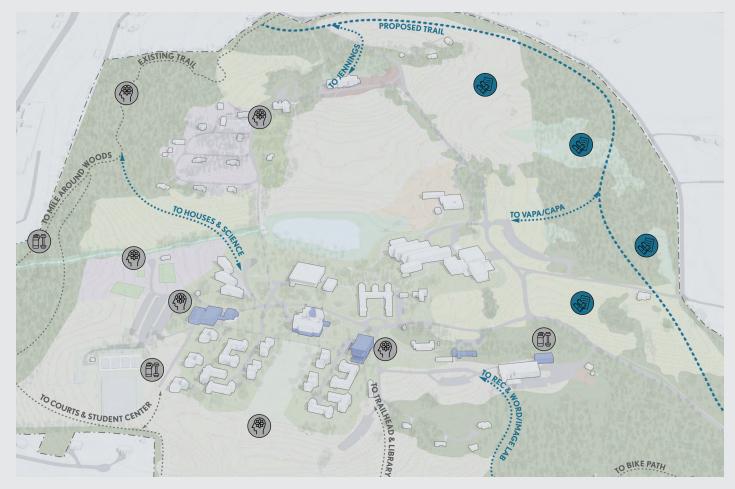
- Incorporate existing student programs int modular, movable "rooms" that allow the entire area of the main student center to activated for programming
- Renovate the current kitchen portion of the Student Center to house programs that students voiced a desire for, granting more space for student-facing programs
- Construct other portions of the 2019 Student Center Renovation plans



### Form Campus Wide Trail Network

rrent ng an	A campus-wide trail network, connecting the western trail to the rest of campus in a loop around the perimeter, offers boundless opportunities for recreation, respite, and enrichment not currently available on campus. A completed trail loop can offer access to
nto e o be the	unique ecologies on campus, serve as a hiking destination, and even a skiing or snowshoeing trail in winter months. Providing trail outlets along the route increases accessibility by difference Houses and departments.

# RECREATION Recommendations

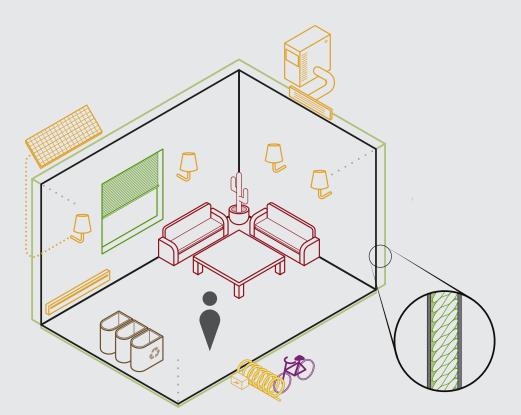


# Extend Recreational Activities to the Entire Campus

Working groups and survey respondents alike expressed a desire for the following diversity of recreational experiences:

- Campus as event space: Provide outdoor spaces of varying scale and infrastructural intensity to support acitivities from first dates, to birthday parties, to performances
- Campus as gym: Create a "Wellness Walk" loop trail around campus, containing both accessible and challenging routes, furnishings and exercise equipment, suitable for cross country skiing or snowshoeing in winter
- Campus as retreat, respite: Design with the intention to allow both gathering and solitude.





### Improve Health & Comfort

Bennington College has various social and recreational spaces for students and faculty. These spaces range from the dining hall in Commons to the open court in the Student Center, and provide spaces to gather and socialize outside of classes. Occupant comfor should be a primary focal point for future soci and recreational projects to ensure a better user experience. Atelier Ten has analyzed soci and recreational spaces throughout campus to develop strategies that both maximize sustainability in these areas while enhancing occupant comfort. General sustainability and occupant comfort strategies for these space are outlined in the diagram.

		Energy
	—	High efficiency mechanical systems with proper ventilation
	—	Occupancy sensors, daylight sensors, and LED lighting
	_	Renewable energy production
		Envelope Upgrades
	—	Super insulated envelopes and triple pane windows
	—	Strategically installed glazing to maximize useful daylight
ort	_	Air sealing to minimize drafts
cial		Transportation
	—	Transportation infrastructure such as bicycle racks
منما	—	Electric charging stations for electric bicycles and scooters
cial	—	Upgrades to landscape and walking paths to encourage
		student activity
		Waste
~	—	Recycling and electronic waste disposal infrastructure
J	—	Composting program for buildings with food service areas
t k	_	Materials reuse system for items like art supplies
S		Materials
	—	Low/No VOC materials
	—	Vegetation and natural materials throughout the space
	_	Materials with good acoustic properties



### *iii*. **Projects & Initiatives**

This section highlights key projects and a full menu of potential initiatives which synthesize architectural, landscape, and sustainability recommendations from the previous chapter. These look to address zones of the campus through strategic moves to support the larger framework ideas and accommodate the need to grow.

Each zone starts with a sketch view of a key moment, outlines the major projects, and presents a full list of projects. These are part of the larger project matrix to support implementation outlined in the next section.

- 1.
- FOREST ROW 2.
- 3.
- 4. ORCHARD CONNECTOR
- 6. CAMPUS ECOSYSTEMS
- 7.

**ARRIVAL & ACADEMIC HILL STUDENT CENTER & FIELDS** 5. JENNINGS & LONGMEADOW SUSTAINABILITY UPGRADES

### Projects & Initiatives Summary

From initial analysis through scenario development, the team refined a set of six goals in relation to current issues and opportunities. These relate to the specific space constraints and opportunities of the existing buildings and landscape to support larger strategic goals of the college. They were developed in dialogue with the Strategic Plan work and note opportunities both on and off campus. The student experience and academic growth is at the heart, providing the infrastructure for continued learning and innovation. There is a need for growth in the student body and with that the opportunity for developing new programs and fields of study.

Bennington College has been a leader in sustainability and these accomplishments have been widely recognized. The potential is to deepen this leadership with the existing ecosystems and become a model for how to adapt with climate change.

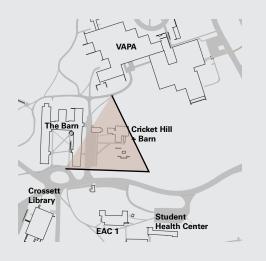
The next set of goals relate to the physical campus, reinforcing connections within the campus and new bridges to adjacent towns and the region. This may be through mobility improvements but also how campus buildings are utilized and open to multi-disciplinary work and community programs. A key part is the sense of arrival and orientation.





A new visitor interaction with the campus today is unclear, with multiple intersections to navigate, a congested circle in front of the barn, and often extending to the west lot to find parking with a disorienting walk back to the center of campus. The campus safety booth often unintentionally functions as a welcome center.

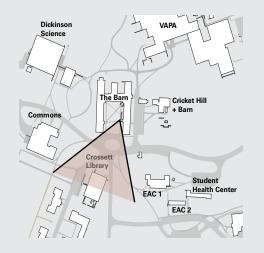
In reframing a sense of arrival the major move is to utilize the hill between Cricket Hill House and south of VAPA which could be completed with a steam line replacement needed from Buildings and Grounds to VAPA. Creating a clear connection with the south entry points would streamline the visitor experience and create a new ah-ha moment. Providing a new dropoff area at the top of the hill will increase accessibility and provide new public programming connections. This could directly connect to both Admissions within the Barn as well as Usdan Gallery at the corner of VAPA and to the various performance spaces.



Right: View from new Arrival Loop looking towards Cricket Hill (right) and The Barn (left)



This transformation of the arrival experience to the east of the Barn would free the Barn Courtyard, Barn Circle, and College Drive to function as a new space for campus gathering. This is often utilized for Student or Alumni events with a small tent or tables placed in the center of the circle. Improving the pedestrian experience along College Drive and connecting this circle to the Barn Courtyard would enable an improved connection from the Colonial Houses to VAPA and center this side of Commons and Crossett Library as the historic core of campus. A temporary or permanent shade structure could enable a wide range of uses within this space from classes to convocation.



Right: View from Barn yard looking towards Crossett Library











### New Arrival Experience

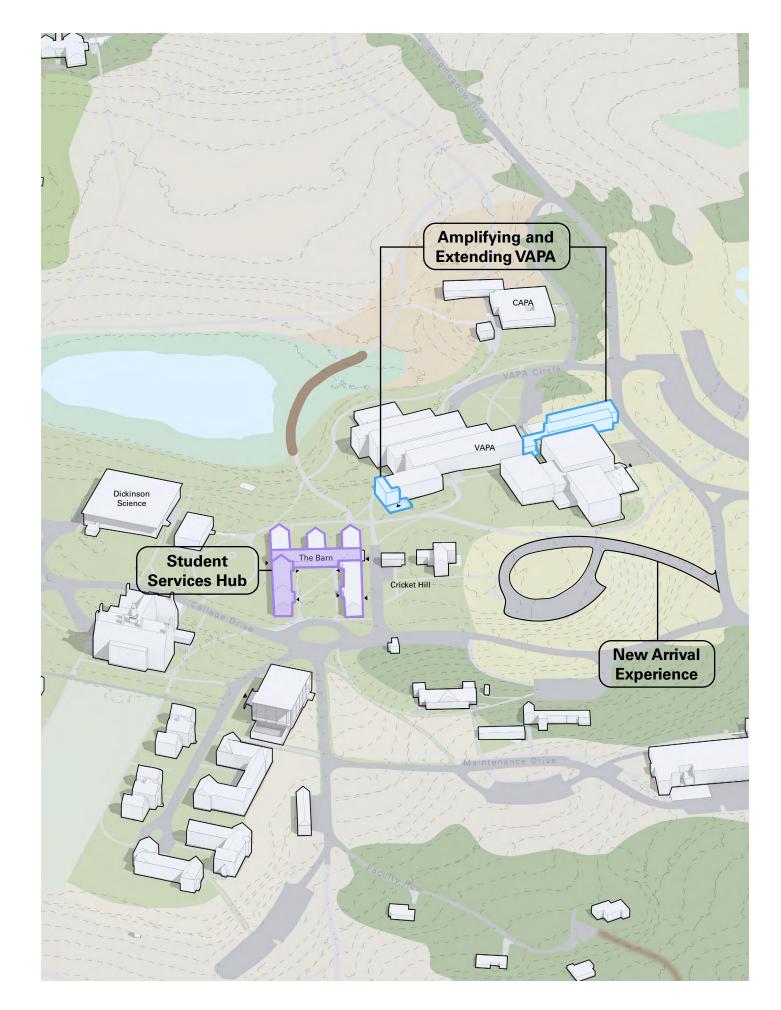
The proposed new arrival loop and entry sequence would bring visitors closer to the center of campus. Proving a clear dropoff point and covered outdoor gathering would support both everyday shuttle usage and part of admissions and tour experience. This underutilized space at the top of the hill provides a view of Bennington Monument and hills around.

### Student Services Hub

As the founding building on campus, the Barn is a spectacular example in reuse and adaptation. This is exemplified through the recent renovation of the southeast wing. The renovation provided a new gathering hub, classroom, and offices which area an example for re-envisioning and fully utilizing the balance of the space. One key move is to create a new East-West Connector with a student services hub at the core.

### Amplifying & Extending VAPA

VAPA is an incredible heart of creativity on campus and a high-value space proposed to amplify through a number of reconfigurations and improvements within as well as additions on east and west ends. Improvements to Usdan Gallery would provide a new public face and accessibility to programming and studio additions to the west would consolidate disparate and needed working space in support of VA along with potential for new digital fabrication space.



Project Menu

#### 1A Arrival Loop

Clarify arrival with a new road and entry sequence

#### 1B Arrival Links

Create new paths to the Barn, VAPA, and VAPA lots

#### 1C Arrival Gathering

Create a new viewpoint from the top of the hill by Cricket Hill House Porch with Outdoor Gathering for tour groups and shuttle access

#### 1D Wayfinding

Clarify campus circulation with signage and lighting starting from new main visitor access point

#### 1E Security

Decouple campus safety and welcome experience, potentially relocate and expand safety booth

#### **1F** Shuttle Connections

New shuttle connections on Longmeadow Drive to North Bennington

#### 1G Separate Modes

Design paths primarily for pedestrians and improve bicycle infrastructure

#### 1H VAPA Studios

Consolidate disparate Visual Arts studios into new building connected to VAPA, consolidate digital fabrication equipment to new making space off VAPA Circle

#### 1I VAPA Multipurpose

Build a new room over Topnotch Terrace area as central addition to existing structure and solving maintenance issue

#### 1J VAPA Greenwall

Add a floor level at Greenwall Auditorium to include new storage and classroom space below

#### 1K VAPA Acoustics

Add acoustic insulation to key shared walls and consider vestibules for further buffering

#### 1L VAPA Terrace

Create infrastructure for movies at Petrie Terrace with projections screen, portable projector and chairs

#### 1M VAPA Sculpture

Add a floor over sculpture area with access from Galleria

#### 1N VAPA Kinoteca

Optimize storage with new location by Buildings and Grounds to free up classroom space and improved location for Kinoteca

#### 10 Usdan Gallery

Expand gallery to the West with new public entry, curator's office, and classroom. Activate terrace to the East with a new door to Gallery

#### 1P Barn East-West Connector

Unify isolated student supporting admin offices into larger open spaces, and create entry on the West, facing Commons

#### 10 Barn Southeast Wing

Complete interior building of lower level of new Southeast Wing, infrastructure in place

#### 1R Barn 100 Repurposing

Update historic and underutilized tiered lecture hall with new technology and furniture

#### **1S Barn West Wing Rebuild**

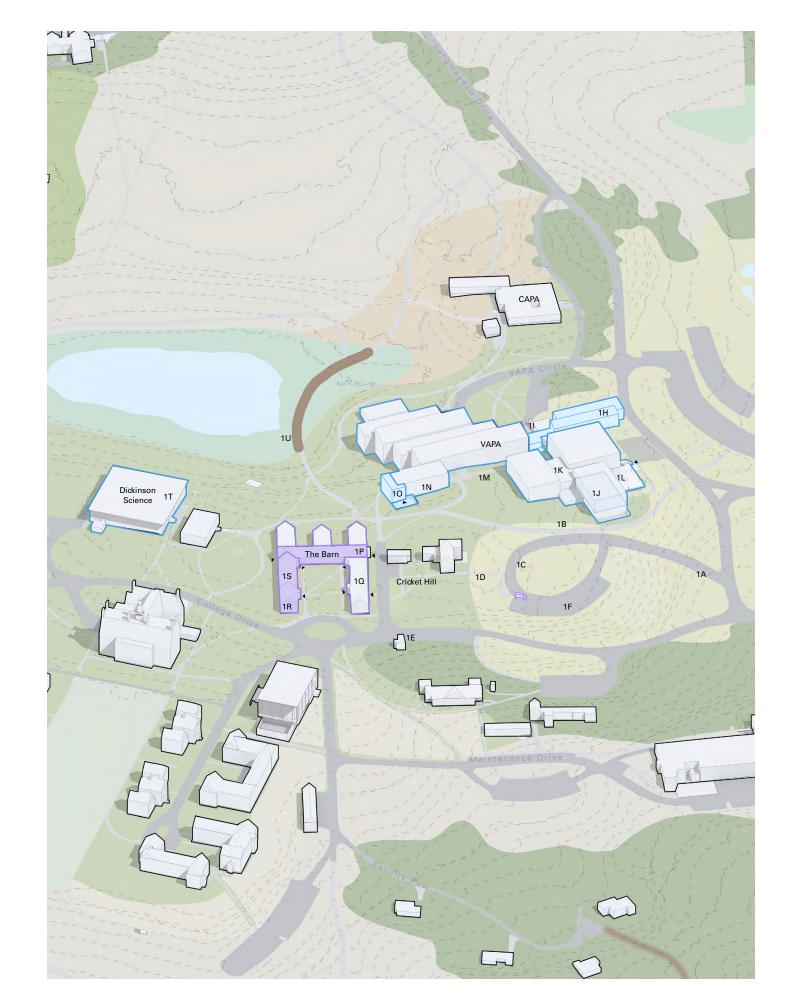
Rebuild entire western wing of the barn and add second floor, similar to 2022 SE Wing renovation

#### 1T Dickinson Storage

Relocate storage and create new teaching/lab space

#### 1U Boardwalk

Engage pond edge with new accessible boardwalk

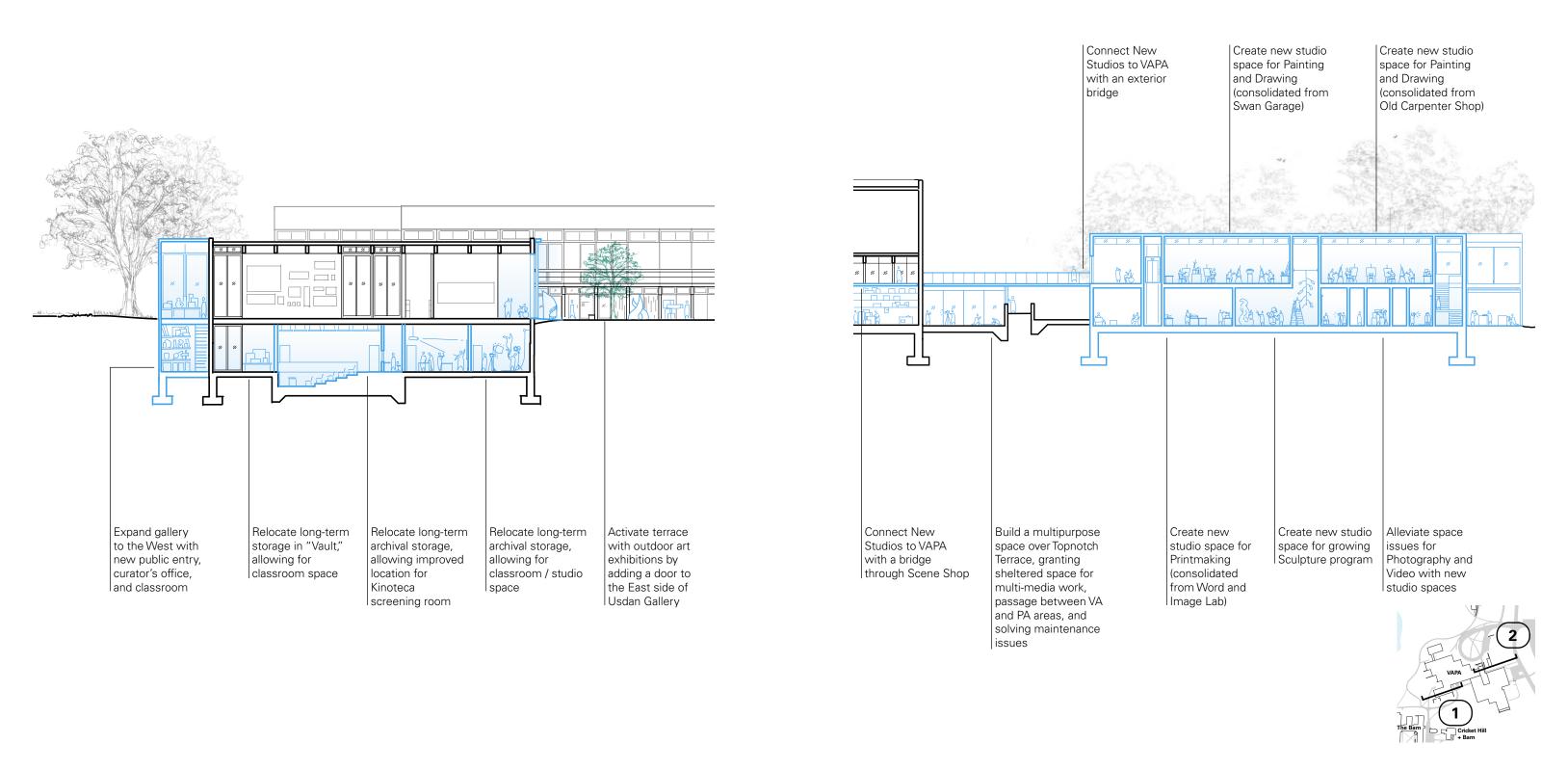




# Projects Combined

1. Improved Usdan Gallery Section

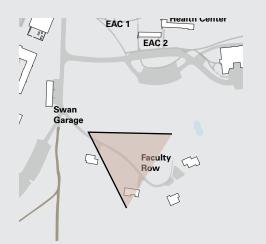
2. New VAPA Studio Section



The set of four faculty homes off Old Faculty Road is a place many students do not frequent or perceive as part of the campus, tucked on the edge of the forest on a dead end road. Currently consisting of shared faculty housing, this location is less desirable for faculty given its districting and separate character. With increased housing options in Downtown Bennington and North Bennington there are more options being explored which will maintain the current faculty housing count.

Through improvements to Crossett and potential transformation of existing studio spaces there are programmatic and physical ways to knit this back into the campus. With conversions, additions, and new housing potential this envisioned to be a new cluster of student housing providing units with amenities such as a kitchen which could take the place of the function of Paran Creek today.





Right: View of Forest Row (currently Faculty Row)









### **Reinvisioning Crossett**

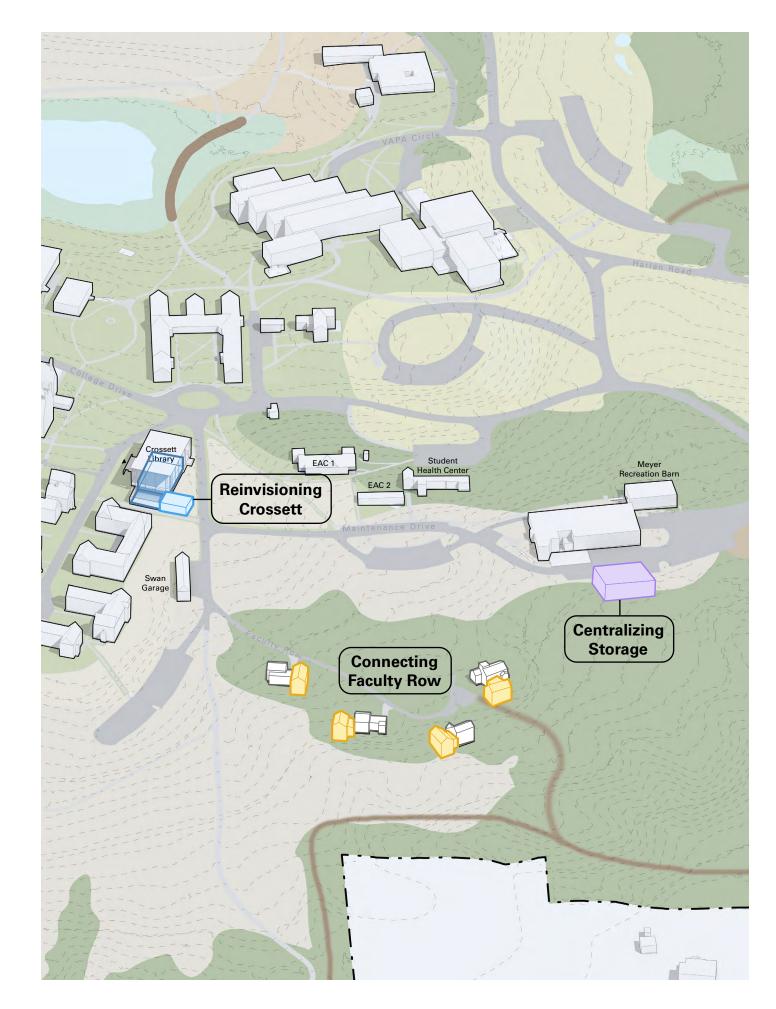
Crossett Library is an incredible building and resource at a hinge point of the campus which provides both small classrooms, an array of quiet working spaces and a variety of resources. Increased accessibility at the northwest corner, flexible interventions within, and additional space at the southeast would increase utilization and centrality on campus.

### Connecting Faculty Row

Currently a tail of the campus to the southwest, Faculty Row provides an important level in aligning student housing need with growth. Reframing at Forest Row, connecting paths, and providing new common spaces along with the conversions, additions, and new buildings, would create a natural cluster of housing, organic with the context.

### Centralizing Storage

Providing a new storage building near Buildings and Grounds would free up high-value space in many of the academic buildings. This could include archives currently adjacent to Usdan Gallery, various uses within VAPA, and IT uses within Dickinson. A simple building frame with appropriate materials, insulation, and heating/ cooling would provide and efficient means to increase overall utilization.



# Project Menu

#### 2A Meyer Rec Barn Improvements

Renovate outdated fitness facilities and incorporate infrequently used dance studio for fitness/wellness programming.

#### 2B Auxiliary Fitness Center

Add Wellness modules near Meyer Rec Barn to support growing college community with additional fitness/ wellness spaces around existing facility

#### 2C Fitness Center Relocation

Repurpose program area and free spaces with relocated fitness to Student Center addition (see Student Center concepts)

#### 2D Path Improvements

Improve accessibility and lighting on steep slope paths to **2N** lower parking areas and Buildings and Grounds

#### 2E Word & Image Lab

Move print making equipment to new VAPA Studios and convert to recreational/wellness space

#### 2F Storage Building

Alleviate high value academic spaces around campus by consolidating all long term storage items

#### 2G Student Housing Conversion and Addition

Convert Faculty Row homes to a new student neighborhood, with added accessible entries, bedrooms, bathrooms, and vertical circulation to the garage side of existing buildings to increase house capacity

#### 2H New Student Housing Construction

Build new student residences that step down along the hillside to support growth

#### 21 Swan Garage Repurposing

Renovate Swan Garage as improved academic/teaching space with potential expansion, creating a new hub for SCT in tandem with the proposed Library addition to terrace

#### Crossett Accessibility

2J

Create new accessible connection from the northwest corner at grade to simplify access to Commons and the Barn

#### 2K Crossett Interior

Enliven existing spaces with flexible furniture

#### 2L Crossett Addition

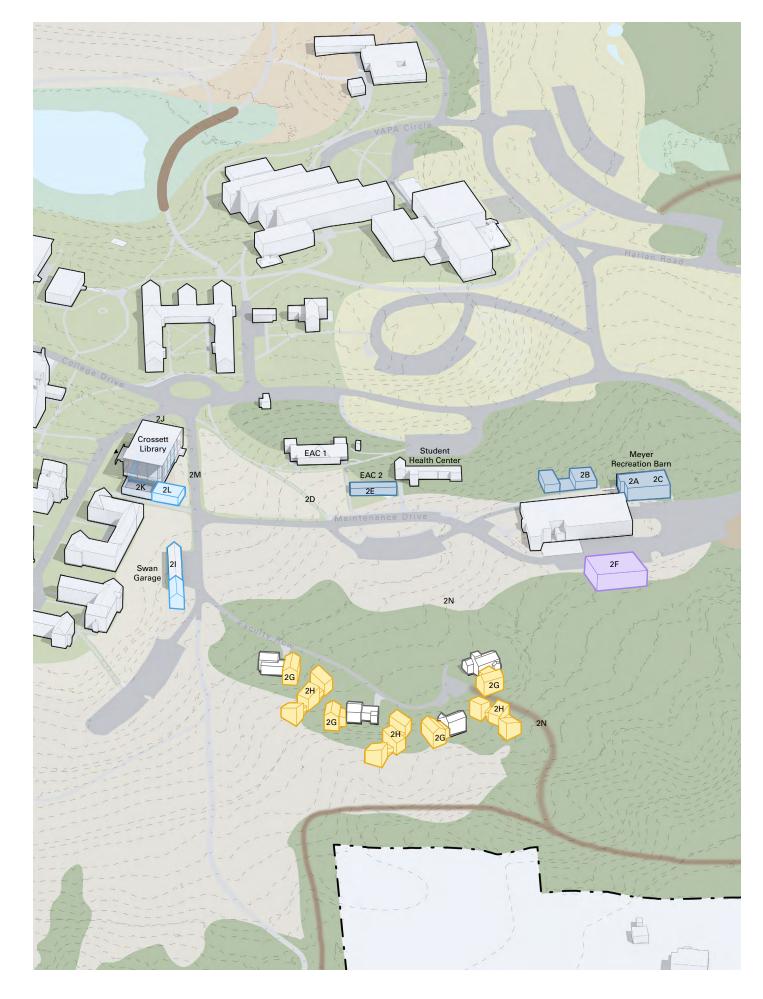
Increase the college's limited supply of quiet spaces with a study/teaching space attached to the terrace

#### 2M Relocate Crossett Parking

Move parking by main entrance to Crossett to the east side along Old Faculty Road

#### Path Connections

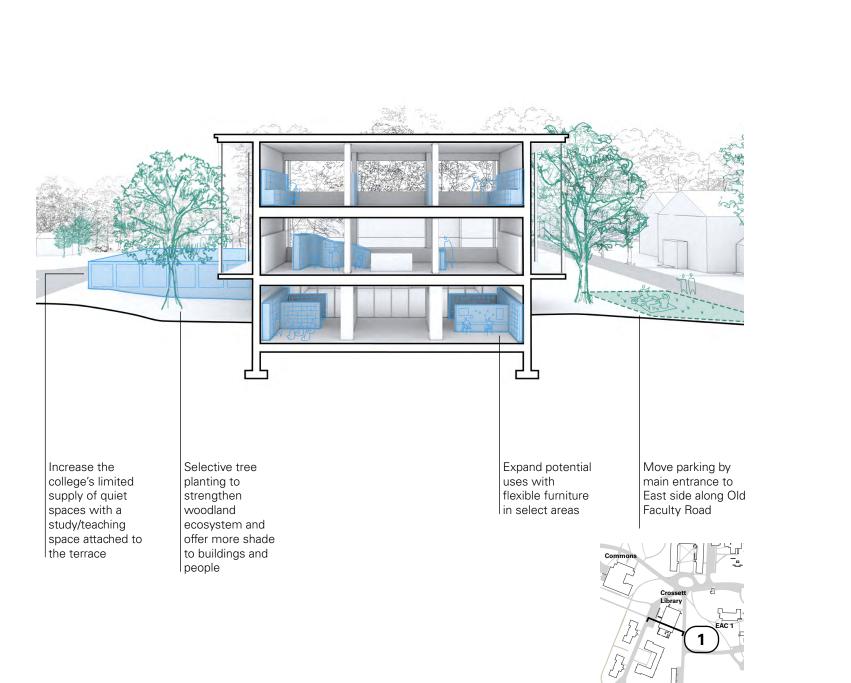
Create new pathways that connect from existing trail network



# Projects Combined

1. Crossett Library Section

#### 2. Student Housing Conversion & Addition



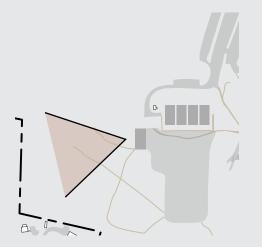




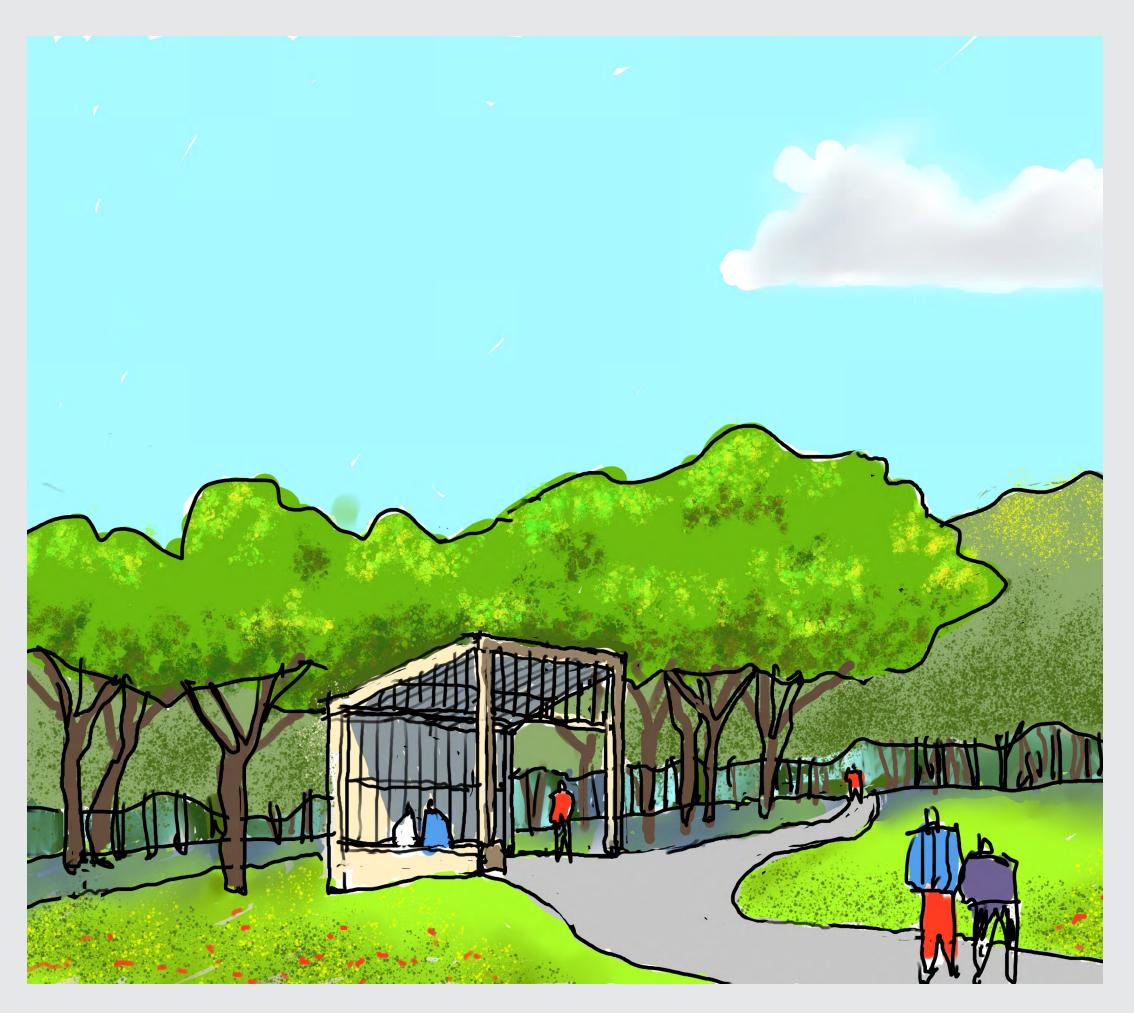
# 3. STUDENT CENTER& FIELDS

On the opposite side of the historic lawn, the Student Center and Upcaf/Downcaf anchor a broad swath of land with recreational potential. The Student Center itself, serving last as a Dining swing space for the Commons renovation, has been rethought by students and drawn conceptually as a multifunctional space providing increased recreational area, student office space, and flexible gathering area.

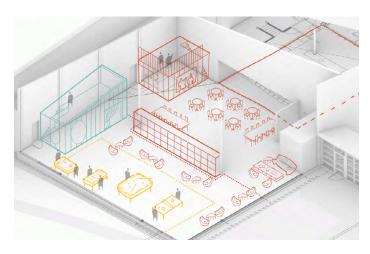
The athletic fields are also poised to be rethought to support an array of programs and serve as a transition point to an incredible set of trails which could be connected around the campus. To help highlight this potential network we propose to build a pavilion as part of this corner of campus to provide a new marker, space for quiet reflection, and anchor point for the network.



Right: View from path to Paran Creek, looking towards woodlands and Trailhead Pavilion



# STUDENT CENTER & FIELDS







### Remaking the Student Center

Big Moves

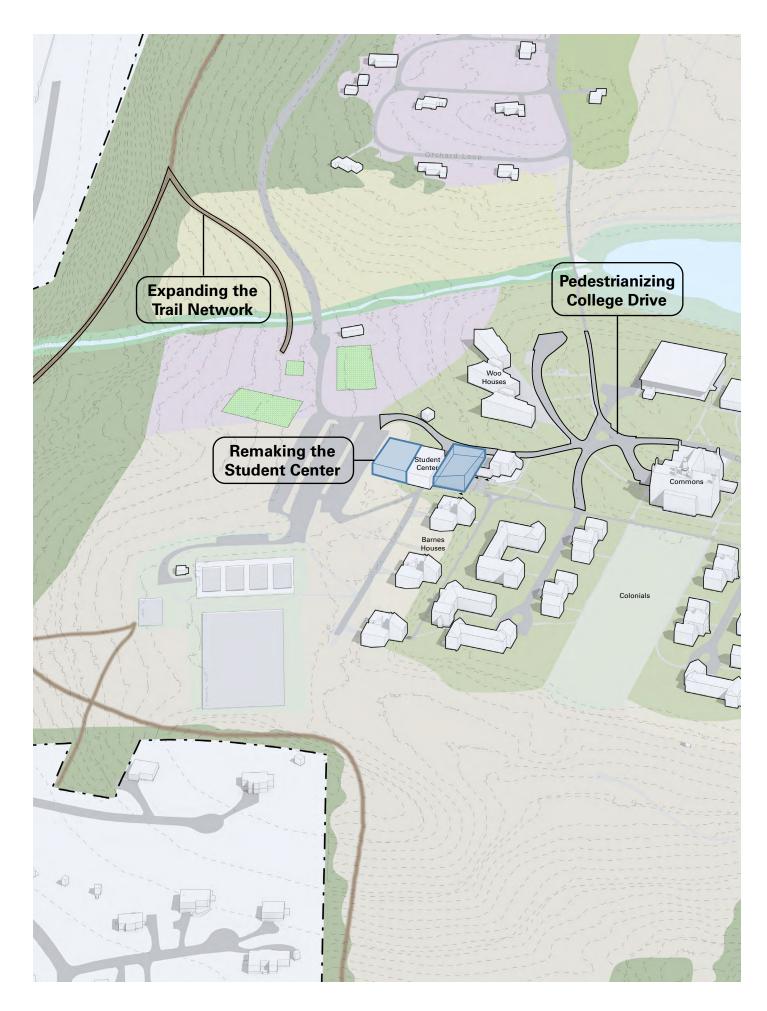
Given the pandemic and new trends in recreation and wellness, along with changing student needs, a first step would be to restudy and build off the concept design which was completed in 2018. Student organization offices needed as well as a more dynamic way to use the building. We propose a flexible adaptation of the center space with movable furniture to support various scales and types of activities.

### Pedestrianizing College Drive

Part of the navigational issues in this portion of campus are the web of paths and undefined intersections. As a result the Student Center and Orchard seem perceptually disconnected. With a reduction in traffic from the new arrival loop, we would look to remake this series of paths in line with the pedestrian and bicycle circulation needed.

### Expanding the Trail Network

With a key gateway from the Athletic Fields, one main proposal is to complete the trail network along campus perimeter from north entry to main entry, activating trail with landscape nodes for socializing and enjoying respite, infrastructural upgrades to support learning, and supporting paths that access various academic precincts around campus.



# 3. STUDENT CENTER& FIELDS

Project Menu

#### 3A Student Center Renovation

Full interior renovation based on 2018 schematic design of kitchen area and Upcaf/Downcaf

#### 3B Indoor Gym Expansion

Extend Student Center addition by twice its length with expanded space for fitness and recreation program

#### 3C Flexible Modules

Diversify potential uses inside the primary building with movable and modular "rooms" built within the space

#### 3D Exterior Recreation

Potential for various activities in paved area south of Student Center addition which could include skate park features, handball, etc.

#### 3E Trailhead Pavilion

Mark new campus trail entries with an open air pavilion

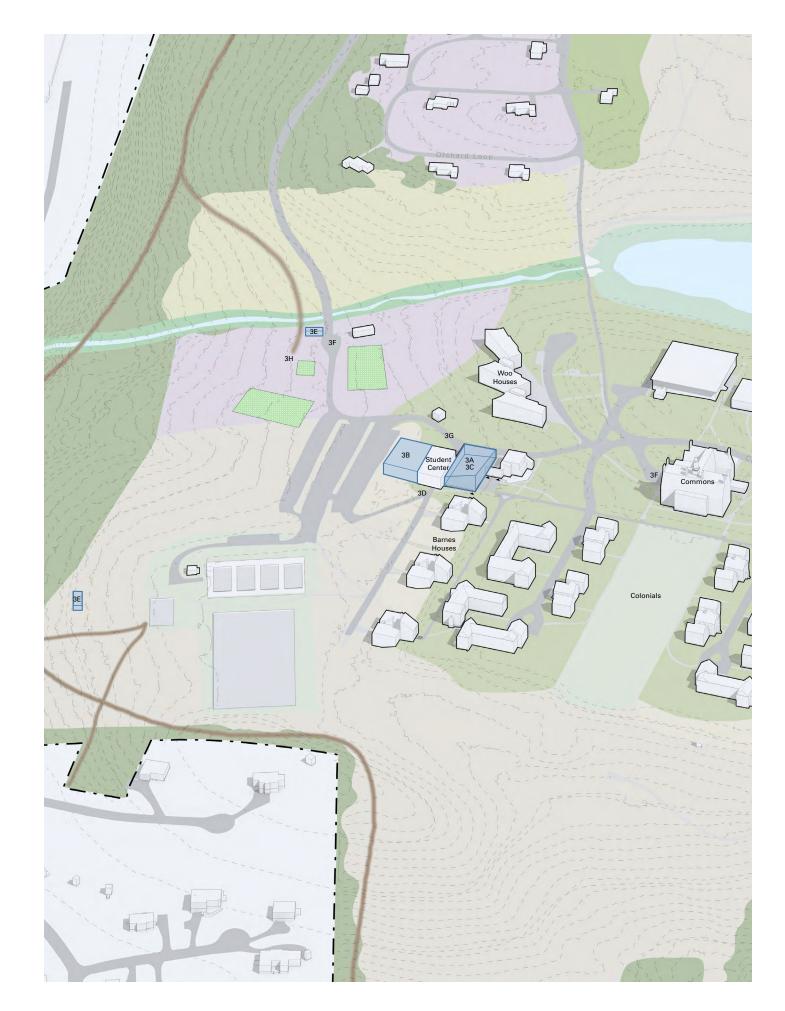
#### 3F Commons Deliveries

Improve access and delivery sequence to Commons to support greater pedestrian accessibility to the center and north of campus

#### 3G College Drive

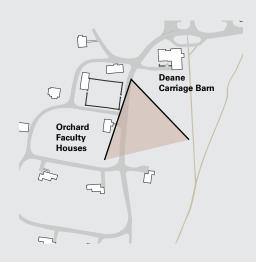
Improve pedestrian and bike priority through the center of campus

#### 3H Campus Trail Entries



Stepping across the small bridge to the north of campus can seem like you are entering another place. Heading up the hill to the Orchard Houses, Dean Carriage Barn, and Jennings can seem like another campus given the quiet nature, and the distance extended. The gate to North Bennington seems even further though it is only a 15-minute walk from Commons.

There is also a character of place these projects are looking to expand on while making the path a more dynamic transition. Increased density of student housing will bridge the divide and the road has a potential to be flanked by a series of spaces for wellness and the arts, such as an outdoor performance space to the south of Dean Carriage Barn. With lighting and path accessibility improvements this has the potential to knit together the campus in line with its rural character.



Right: View from beside Secret Garden looking South towards Orchard









### Strengthen Character

Given the Orchard's loop roads and single family homes, the spaces between can seem leftover but can form places in line with the topography and framing of a greater density of activity. The lawns within each loop, as well as the special nature of the Secret Garden can be amplified through new landscaping and common outdoor gathering spaces.

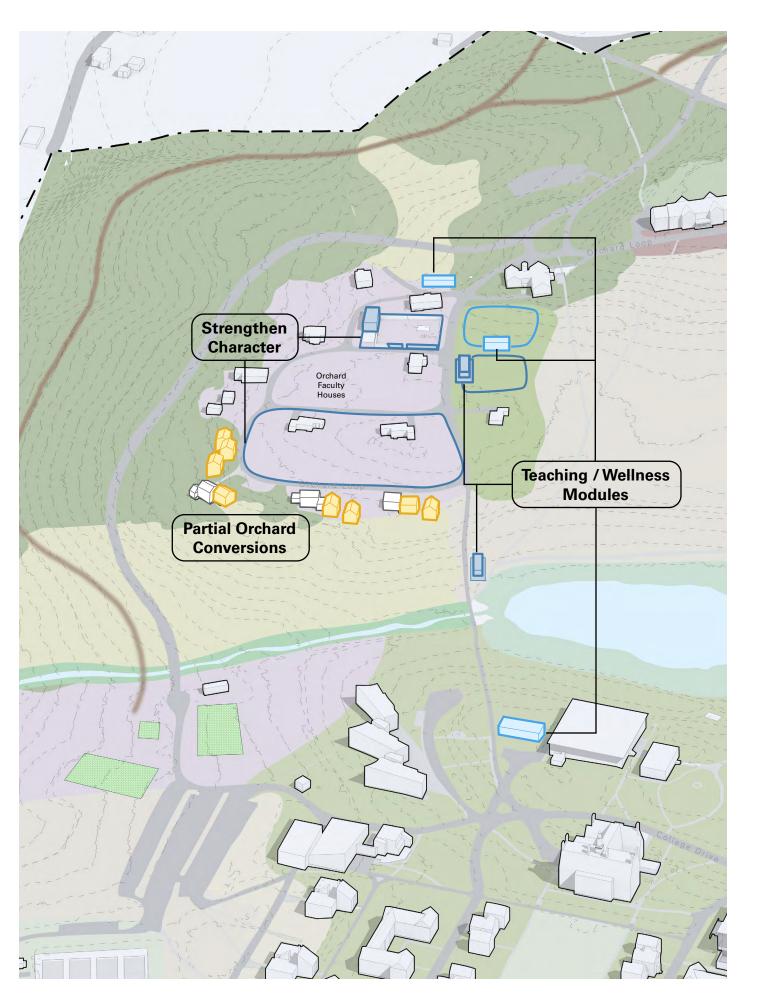
### Teaching / Wellness Modules

In two key locations along this path, modular structure and decks can serve as flexible spaces for small group use to quiet reflection. We would propose locating the first at the edge of the woods just off the pond and second heading up the hill with a backyard clearing for outdoor fitness and recreation.



### Partial Orchard Conversions

Balancing the need for growth in student housing and providing faculty housing, one scenario discussed is maintaining four of the Orchard Homes for Faculty Use, primarily for families new to the College. The south edge of homes has potential for conversions, additions, and new building in strategic places between.



Project Menu

#### 4A Added Teaching Spaces

Potential location for small music practice / conventional teaching space to support growth

#### 4B Orchard Tree Planting Expand orchard by continuing tree planting

**4C Old Carpenter's Shop Repurposing** Renovate Old Carpenter's Shop as a quiet study/teaching space

#### 4D Secret Garden Improvements

Enclose Southern portion of Secret Garden, maintaining entries from Orchard Path and Old Carpenter's Shop

#### 4E Hedgerow Room

Enliven existing clearing with added music practice space and porch near the bottom of the hill for outdoor performances

#### 4F Wellness Space Addition

Add Wellness module near Orchard Path, leaving the adjacent clearing open for outdoor fitness/recreation

#### 4G Support Forests

Plant young canopy and understory trees among existing mature trees to foster multi-aged forest over time

#### 4H Student Housing Conversion and Addition

Convert 3 Southern Orchard homes to a new student neighborhood, with added accessible entries, bedrooms, bathrooms, and vertical circulation to the garage side of existing buildings to increase house capacity

#### 4I New Student Housing Construction

Build new student residences that neighbor existing homes to support growth

#### 4J Potential Future Housing Site

Build new student residences with 60 beds to support growth long-term growth

#### 4K Wellness Space Addition

Add Wellness module as a folly along Orchard path, occupied by a quiet Wellness program

#### 4L Invasive Species Removal

Selective clearing and re-planting of invasives will aid ecosystem health and open views along the western corridor, visually and physically re-connecting the core to the orchard

#### 4M Separate Modes

Design paths primarily for pedestrians and improve bicycle infrastructure

#### 4N Dickinson Lot

Support growth with additional classroom, study, and lab spaces connected to Orchard Path.

#### 40 Connection

Perimeter loop road for isolated vehicular travel and access

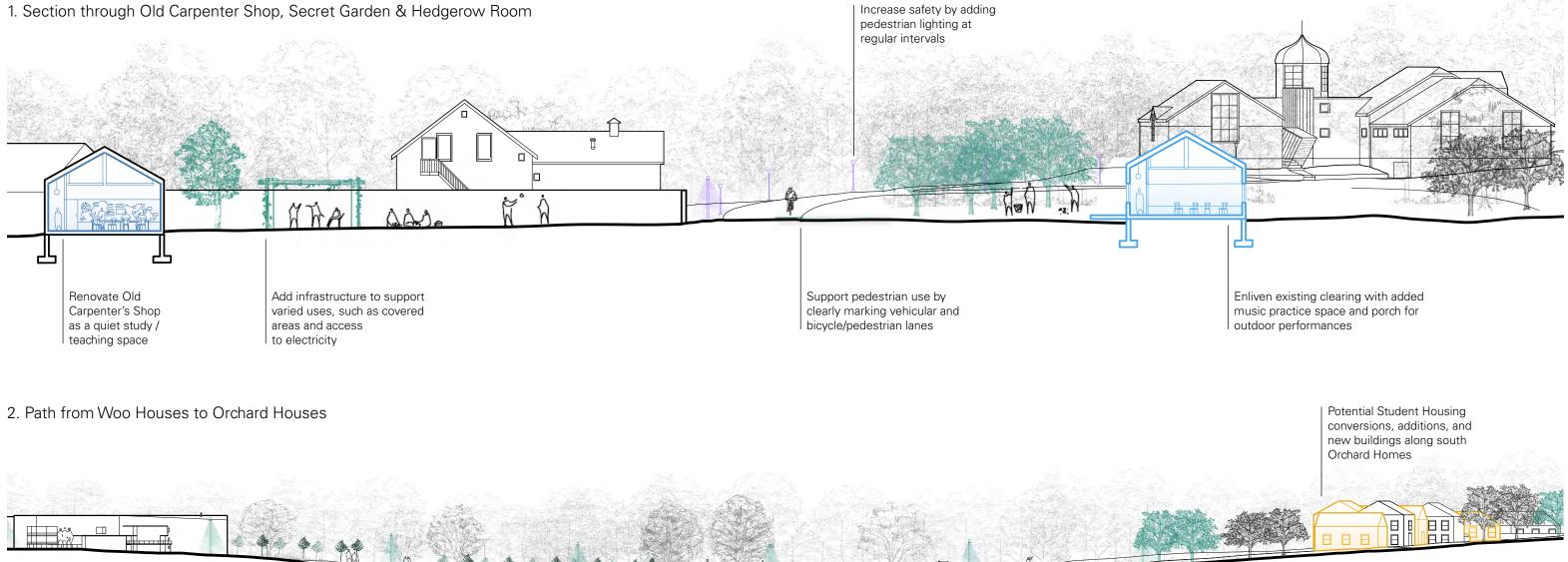
#### Connection

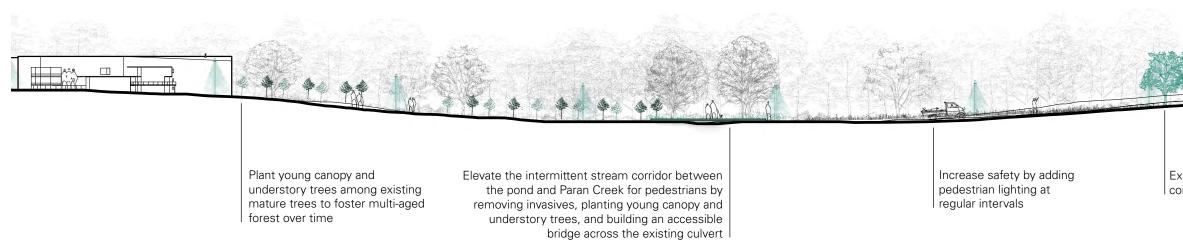
4P

Reinforce mown path with regular maintenance and seating

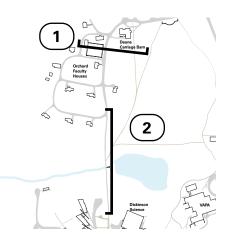


# Projects Combined





Expand orchard by continuing tree planting



# 5. JENNINGS & LONGMEADOW

The Jennings Estate to the north has a stately presence from the south of campus and offers an even more incredible view from the patio to the south. Given the age of the building there is a long list of maintenance needs and upgrades to effectively serve the music program. This series of proposals looks to expand Jennings presence in anchoring this part of campus and making it a part of the greater whole.

Geographically the north patio is close to the north gate and lawn but needs to be reenvisioned as a new loop and cluster. With the clearing of trees and slope down to the north this has a potential to provide new faculty and student houses which do not impede the existing viewpoints over the central meadow.



Right: View in front of Jennings



# 5. JENNINGS & LONGMEADOW

# **Big Moves**







### New Mixed-Use Housing

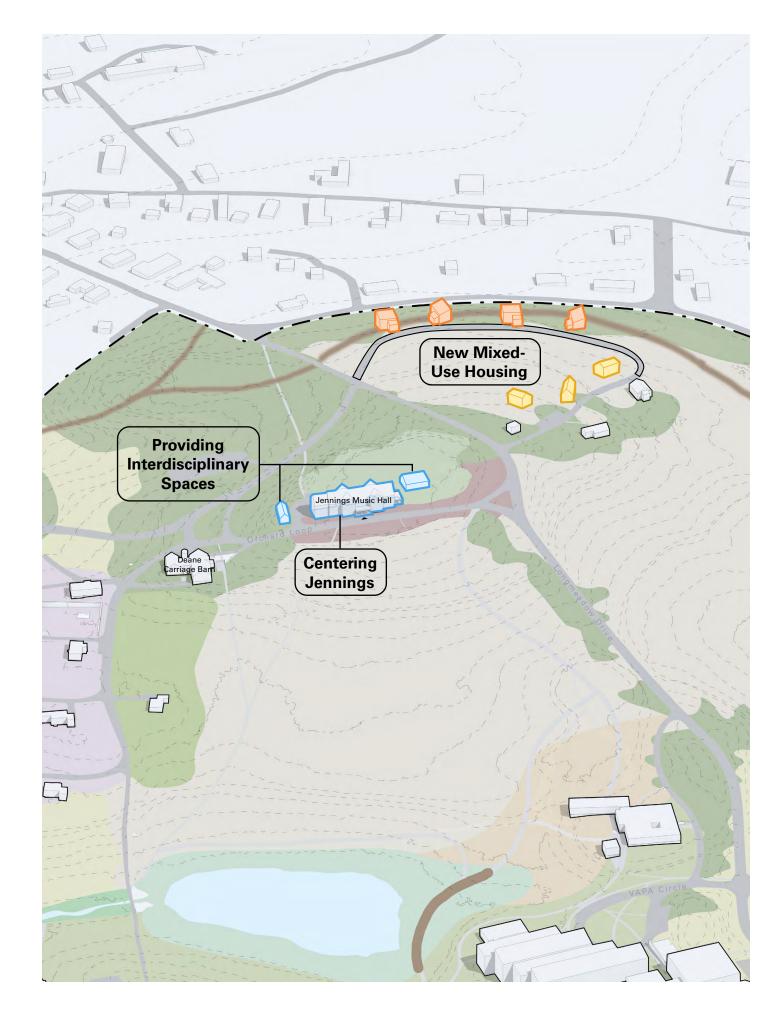
The clearing to the north of Jennings Drive has potential to offer new types of mixeduse living and working. The concept shown includes a loop road around from the existing Longmeadow student house to near the north gate with faculty housing and potentially studio space respecting scale and spacing along College Road to the north. New Student housing can also be provided to the south.

### Centering Jennings

Jennings functions for the music programming but adjustments and improvements can extend the use of this building into a new hub for the campus. The ground floor has a potential to open and extend use to the south patio and north clearing. The basement can be renovated to provide new classroom and office space with light well, and upper rooms can be improved with technology and sound functionality.

## Providing Interdisciplinary Spaces

In addition to what can be provided in the building, small structures adjacent can provide complimentary program space and the opportunity for state of the art small group and rehearsal space which is knit within the landscape. This will open and extend the functionality of the building and opportunity for cross-disciplinary use.



# 5. JENNINGS & LONGMEADOW

Project Menu

#### 5A Jennings Rehearsal Space

Support interdisciplinary ventures with a new space for large group rehearsals and performances beside Jennings

#### 5B Jennings Backyard Lightwells

Integrate lightwells in the backyard of Jennings that allow light and air into basement spaces

#### 5C Jennings Basement Buildout

Renovate as much of the basement as possible - with initial focus on Western rooms with daylight - to create soundproof music studios and practice rooms with acoustic isolation

#### 5D Jennings Renovation

Improve soundproofing between practice rooms and faculty offices

#### 5E Jennings Front Terrace

Reinvigorate and expand existing terrace to make functional and accessible

5F Music Practice Rooms

Potential locations for small music practice / conventional teaching space to support growth

#### 5G Potential Parking Lot

#### 5H Campus Trail

Construct and complete campus trail loop across campus

#### 5I Longmeadow Student Homes

Support long-term growth with new student housing in existing Longmeadow area

#### Longmeadow Faculty Homes

Support long-term growth with new faculty homes near College Rd, with potential to be rented during nonacademic seasons.

#### 5K Longmeadow Extension

Extend existing Longmeadow neighborhood with new road connecting student and faculty homes

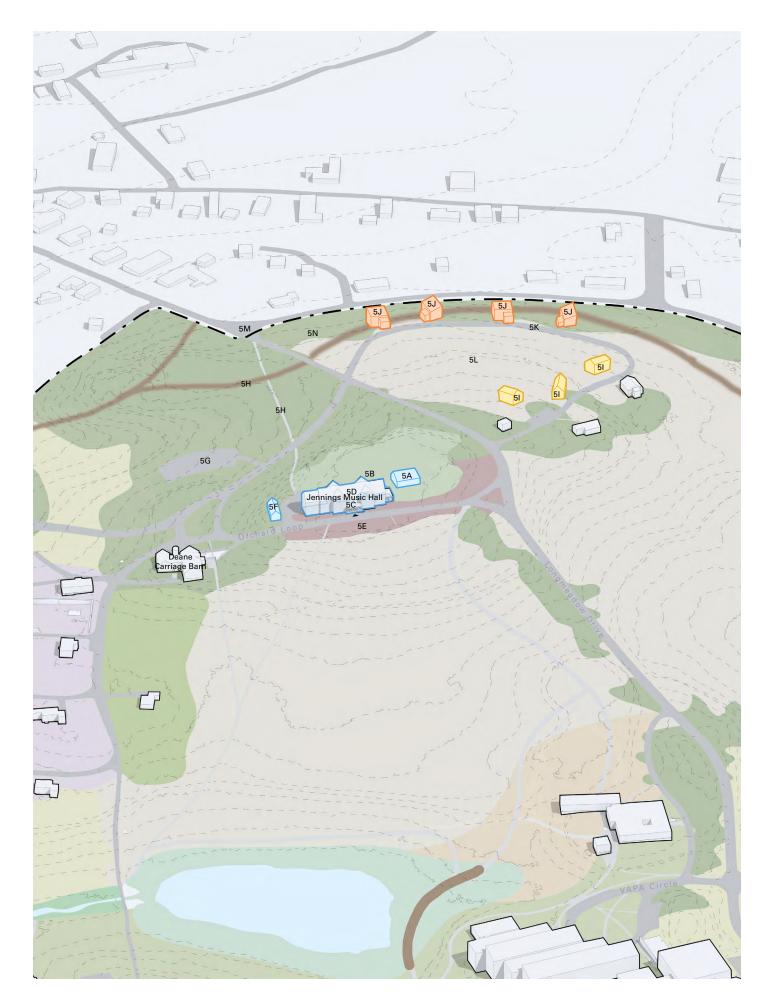
#### 5L Meadow

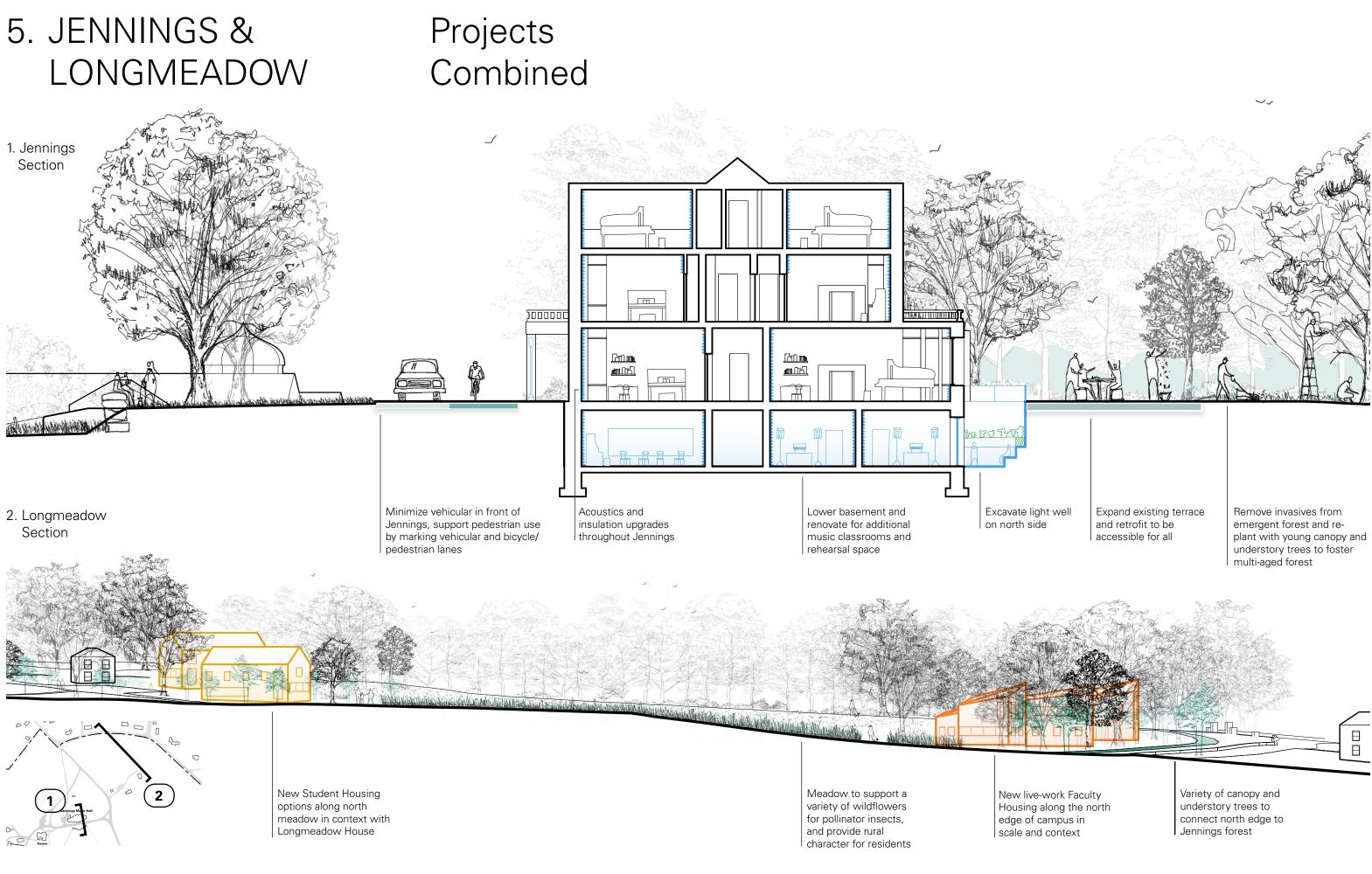
5J

5M Campus Gate

#### 5N Reinforce Forest

Additional canopy and understory trees to reconnect canopy to Western forest





Bennington College Adaptive Framework Plan

Students, staff, and faculty agree, "the landscape is a huge part of why I chose Bennington and part of why I love it here so much." The many ecosystems of the College are not only essential habitat for flora and fauna, but inspire creativity, provide rich learning opportunities, and act as both social backdrop and place of peace. The campus can and should reflect the estate, agricultural, and institutional eras that shaped it—and look forward to a vibrant future. Although deferred maintenance and climate change might negatively impact campus landscapes, a holistic understanding of the campus and proactive approach towards supporting character, habitat, and water systems will provide opportunities for teaching and learning, enjoyment and recreation, essential habitat, and the "aha" moments that inspire College community members.



### Regenerate Woodlands

Issues of aging woodlands, decreasing plant diversity, increasing invasives and deer browsing, and the pressures of a warming climate threaten this resource. Important ecologies are aging without a reliable way to renew. With 9 distinct ecological typologies, the campus is a precious habitat for plants and animals. With 440 acres overall, of which 128 are forested and 105 are fields, it is also critical infrastructure for climate change readiness, with the power to contribute to both flood management and water quality benefits, and to capture carbon and mitigate warming.

#### 6A Increase forest structure and age-class diversity Use forestry practices to convert even-aged forests to a more diverse, multi-layered, and multi-aged structure. Use crop tree release forestry practices and girdling to expedite growth of large trees and increase abundance of large diameter snags and eventually downed woody material.

**6B** Encourage a diversity of tree species that are suited to the site's current and future growing conditions Manage for a mix of at least 4-5 tree species in each canopy layer, including the overstory, midstory, and understory. Where tree species diversity is lacking, supplementally plant tree seedlings. Favor a mix of species adapted to alkaline soils or that can grow across a range of conditions. Favor a mix of climate adapted species

# 6C Encourage and protect existing tree regeneration, including seedlings and saplings and smaller pole-sized midstory trees

Where there is understory tree regeneration, experiment with using tree shelters to protect hardwood seedlings and younger saplings from deer browse. Where there is understory tree regeneration and it is being suppressed by invasives, cut back competing invasives every 1-3 years until seedling or young sapling reaches 6-10 ft in height; Where there is mixed-quality midstory tree regeneration, release pole and large sapling-sized oaks, sugar maple, cherry, pine, hemlock, and hickories from competition with ash, beech, red maple, hophornbeam, and any non-native trees. Where there is midstory tree regeneration and it is dominated by a single species, encourage and release other species from competition. Where there is tree regeneration and it is being suppressed by the overstory, variably thin overstory canopy and/or create small canopy gaps with girdling or felling trees.

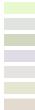
6D Establish and protect new tree regeneration Where tree regeneration is absent or very limited, stimulate germination of new tree seedlings by creating small canopy gaps with girdling and/or felling trees. In existing or newly created canopy gaps, plant hardwood tree seedlings with tree shelters.

### 6E Minimize the impacts of invasives and deer on forest regeneration

Prior to any forestry practice to encourage new tree regeneration, chemically or mechanically treat invasives in project area; Where there is understory tree regeneration and it is being suppressed by invasives, cut back competing invasives every 1-3 years until seedling or young sapling reaches 6-10 ft in height; Protect planted and naturally occurring hardwood seedlings with 3-4ft tall tree shelters; and Experiment with exclusion fencing to protect young hardwood seedlings and saplings.

6F Consider increasing connectivity between largest forest patches at north end of campus Reforest field to connect largest forest patches.





Athletic Field Open Lawn Canopied Lawn Orchard / Productive Meadow Fragmented Meadow Wet Meadow



Wetland Pond Edge Riparian Estate Hedgerow Room Emergent Woodland Established Woodland

Protect Sensitive Ecologies

Climate change is altering the synchrony of plant flowering and pollinator emergence. Having a diversity of pollinators on site maximizes the chance that plants have a suitable pollinator even if the plant flowering or insect emergence change.

- 6G Use a varied, delayed, and rotational mowing regime to maintain diversity of field habitats for pollinators, birds, and other wildlife living in the fields. The mowing also keeps invasive shrubs from encroaching into the fields.
  - Annually mow approximately 50% of the field habitat
  - Each year, rotationally mow approximately 25% of the remaining field habitat, leaving 25% of the field habitat uncut each year.
  - Within the annually and rotationally mowed areas, leave small, un-mowed patches that shift in location over time. These un-mowed patches should be mowed during the next cycle.
  - Over the long-term, the varied mowing regimes should be rotated across the field habitats.
  - Where possible, mow lawns every two or three weeks, allowing for clover, dandelion and other flowers to emerge.
- 6H Resurvey and manage for fringed gentian.

In the summer of 2023, survey known location for fringed gentian, also survey nearby fields with similar microhabitat.

If the plant is relocated, contact the Native Plant Trust and/or Vermont Fish and Game for guidance on maintaining, managing, and encouraging expansion of the plant occurrence.







# Collect, Clean & Infiltrate Water

Bennington College has a unique opportunity to utilize its campus landscape to assist in the implementation of integrated stormwater management strategies that will help to mitigate the impact of climate change. Regionally, the impacts of climate change are anticipated to include: increased temperatures, more frequent and extreme precipitation thus flooding events which can be exacerbated if amounts of impervious surface aren't reduced.

Bennington College should implement lowimpact development (LID) techniques in future landscape-oriented projects, to improve the resilience of the campus and minimize some of the potential impacts of climate change. These LID techniques work to manage stormwater using strategies such as preserving vegetation on site, minimizing impervious cover, installing rain gardens, and regrading areas on campus. At a minimum, Bennington College should implement rainwater management strategies to ensure that the landscape is capable of managing 80th percentile rainfall events in order to reduce the anticipated effects of climate change on campus.

In addition, Bennington College should consider the Three-Acre Rule for stormwater that will impact landowners with more than three acres of land in the Lake Champlain watershed basin. While Bennington College is not currently part of the Lake Champlain watershed basin, Otter Creek has noted that is anticipated to change in or around 2025. The Three-Acre Rule requires landowners to treat as much impervious water on site as possible, with a minimum requirement of treating 50% of the water.

### 61 Pursue and implement strategies from sustainable design/wellness benchmarking systems.

6J Use methods of diversion, direction, and dispersal, to manage and clean stormwater runoff from buildings and paved areas.

Architectural examples include green roofs, rainwater collection, and rain gardens. Landscape examples include swales, planted buffers and wetlands, settlement basins, and protected outlets.

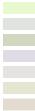
#### Consult the Bennington College Stormwater Infrastructure Mapping Project (October 2017) for

6K

- a complete map of stormwater infrastructure on campus
- identification of outlets off campus, to nearby rivers, and into greater watershed
- suggested strategies to create a Spill Containment, Control, and Countermeasures plan to meet regulatory requirements

6L The BC SIM has already identified the potential for an infiltration basin in subwatershed 3, to treat runoff before it enters the receiving Walloomsac River.

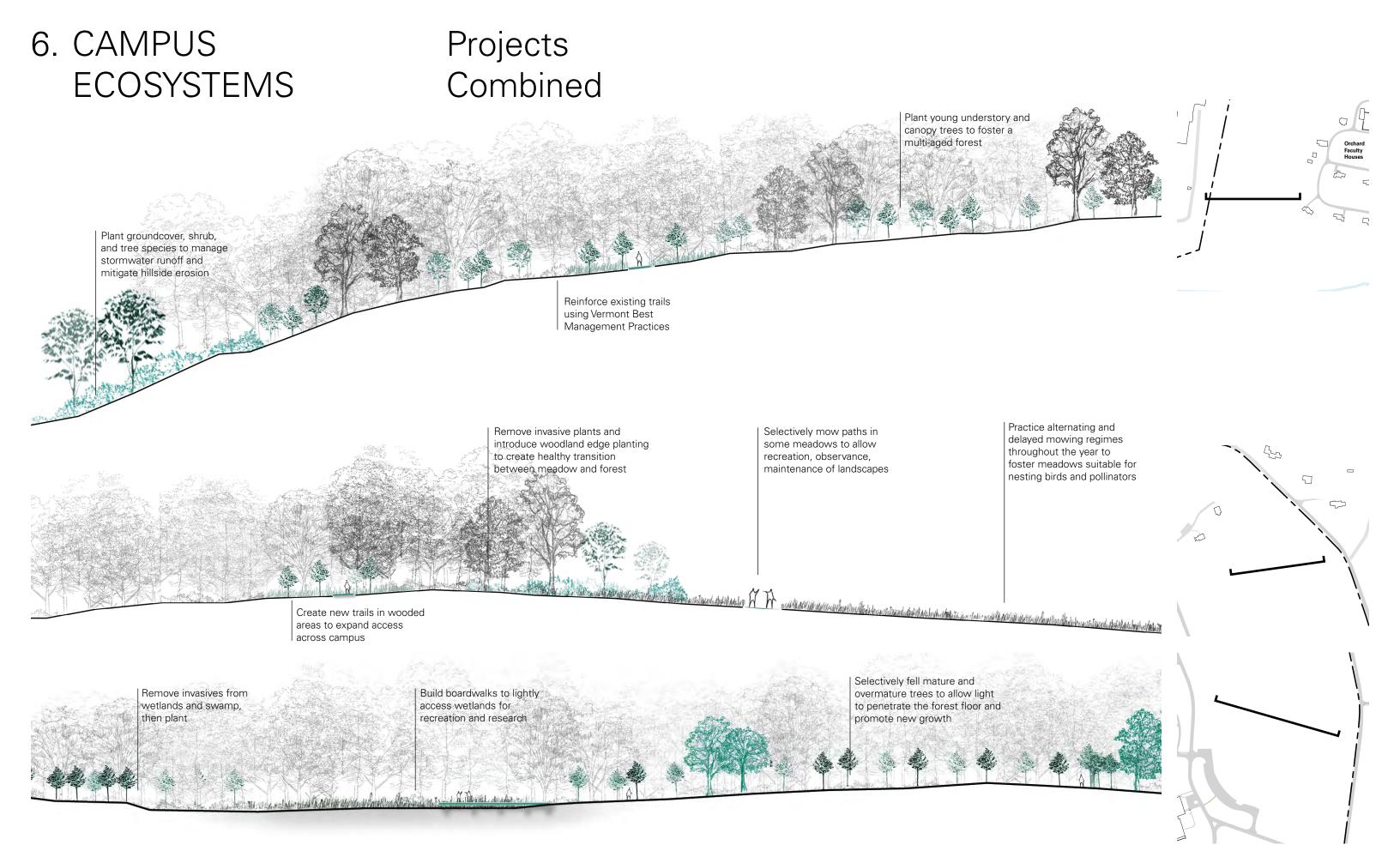




Athletic Field Open Lawn Canopied Lawn Orchard / Productive Meadow Fragmented Meadow Wet Meadow



Wetland Pond Edge Riparian Estate Hedgerow Room Emergent Woodland Established Woodland



The Bennington campus is like a small town, comprised of buildings and infrastructure that have been developed progressively since the late 19th century, beginning with the estate and farm buildings that occupied the site prior to Bennington's founding. Today, the collection of over 60 buildings has a wide array of systems and deferred maintenance needs. Based on an analysis of the energy consumption by building and renovations and upgrades that have been completed to date, the appendix lists building by building recommendations that should be considered for future projects.

Larger system initiatives including waste reduction measures such as additional recycling and composting systems and transportation upgrades from reducing car trips to electrifying the campus fleet make up the first category of initiatives for future projects. Renewable energy opportunities such as solar photovoltaics were frequently noted on campus and could work well over parking areas.

The second and third categories relate to exterior and interior improvements of individual buildings. Many roofing projects have been completed across the inventory but the need for heating and cooling systems upgrades and envelope improvements still remains. Interior environments from the materials to fixtures and appliances are key to address with ongoing upgrades.



### Systems Initiatives

#### 7A Waste Reduction

Several of the comments received during the engagement process were related to waste reduction, recycling, and composting on campus. Currently, Bennington College has recycling infrastructure in buildings throughout campus, however, the college should ensure that easily accessible recycling areas are included in all housing areas. In addition, Bennington College should establish a composting program that primarily focuses on areas with significant food waste, such as the Commons or other dining areas. As part of introducing a composting program and enhancing recycling infrastructure, the college should provide instructional signage on what types of materials can be recycled and composted to ensure that these programs are effective.

Finally, students have recommended incorporating materials reuse programs for things like art supplies in VAPA to avoid unnecessarily wasting materials that other students can use. Bennington College should consider implementing donation and reuse programs in academic building throughout campus.

#### 7B Transportation

As a result of the centrally located parking spaces on campus, many students tend to drive between academic buildings and their housing despite most of the campus being accessible by walking and biking. In addition, due to a lack of available transportation to downtown Bennington, driving is typically the most realistic option. With driving being a primary form of transportation amongst students, there is potential as part of the Framework project to reduce emissions associated with transportation.

Relocating parking areas was discussed during the initial analysis phase, however, there are several other strategies that can help to reduce transportation emissions on campus. Bennington College should consider installing bicycle racks throughout campus to ensure that students are easily able to bike to and from class. In addition, carpool and shuttle programs could be implemented to more efficiently transport people to and from campus and downtown Bennington. Finally, electric charging for electric vehicles, bikes, and scooters should be installed throughout campus as electric bikes and scooters are popular on campus.

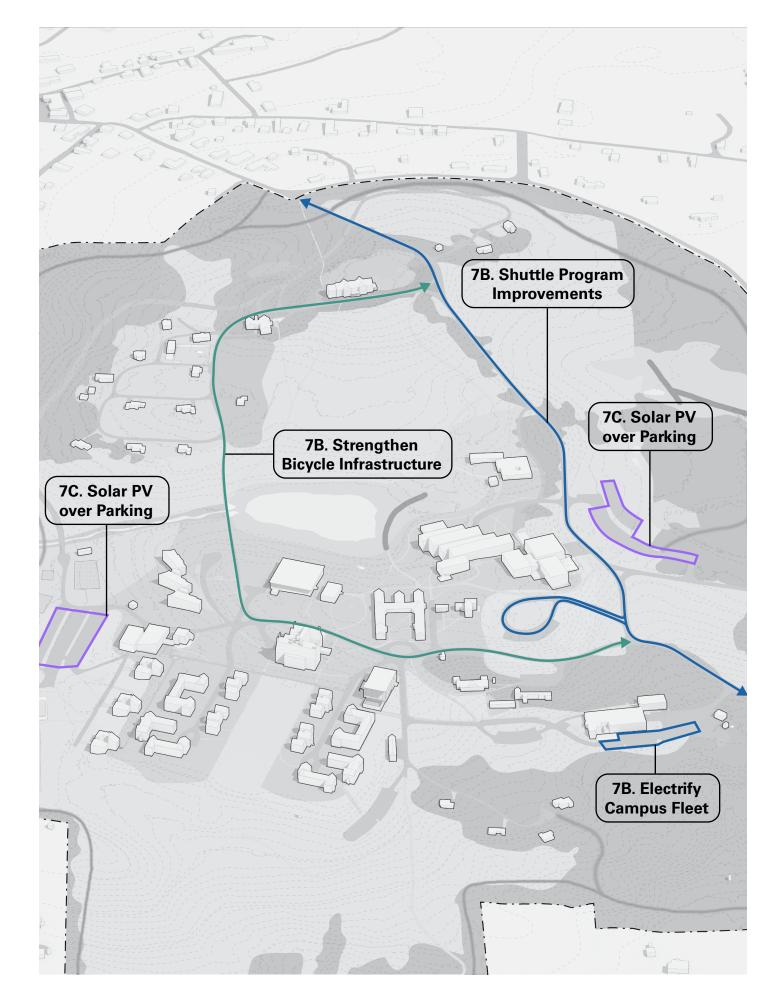
In addition to students and faculty driving on campus often, Bennington College's vehicle fleet is currently made up of gas-powered vehicles. The college should consider replacement of the campus fleet vehicles with more efficient hybrid or electric vehicles.

#### 7C Renewable Energy

Based on meter data from the eGauge database, the campus as a whole uses approximately 3.4 GWh of energy per year. Currently, Bennington College is engaged in a power purchase agreement for 1.5 MW of renewable energy. Additional investment into renewable energy can contribute significantly towards the college's goal of achieving carbon neutrality by 2030.

Given the large amounts of space on campus, there is potential for Bennington College to install solar PV as a way of offsetting current energy consumption. Based on the analysis of individual buildings, there are several large buildings that will soon require roof replacements and could be good candidates for rooftop solar. In addition, installation of solar PV above parking areas should be considered as it is an efficient use of space and can help to reduce the heat island effect on campus. As noted in the initial analysis section of this chapter, one of Bennington's long-term sustainability goals is to further implement flexible load management and ultimately be separate from the grid. Use of renewables and battery storage technology can help to reduce reliance on the grid and help to achieve this goal.

Another option is to purchase off-site renewable energy to offset some or all of the campus' energy consumption. Bennington College should consider the potential for engaging in other power purchase agreements or purchasing RECs and off-site renewable energy to further offset the energy consumption of the campus.



### Building Performance Initiatives

#### 7D Envelope Upgrades

While conducting assessments of each building, it was determined that in general the building envelopes on campus need to be upgraded. Many buildings have inefficient single-pane windows with aluminum frames and they are lacking insulation. As a result, these buildings are often not thermally comfortable for occupants and are very inefficient from an energy use perspective. Upgrading insulation and windows in these buildings, in addition to additional air sealing around the envelope, can have a significant impact on the energy efficiency of the buildings and occupant comfort, especially during the summer and winter months.

Depending on the building, the following strategies should be considered for each building on campus that wasn't constructed or hasn't had a major envelope renovation in recent year.

- Replace single-pane windows with double- or triplepane windows
- Replace aluminum window frames with a different material that has less thermal conductivity
- Add exterior wall insulation to areas where insulation is lacking
- Replace roofs and roofing insulation for buildings with old roofs
- Air seal cracks and openings in the envelope to minimize outside drafts from entering the building

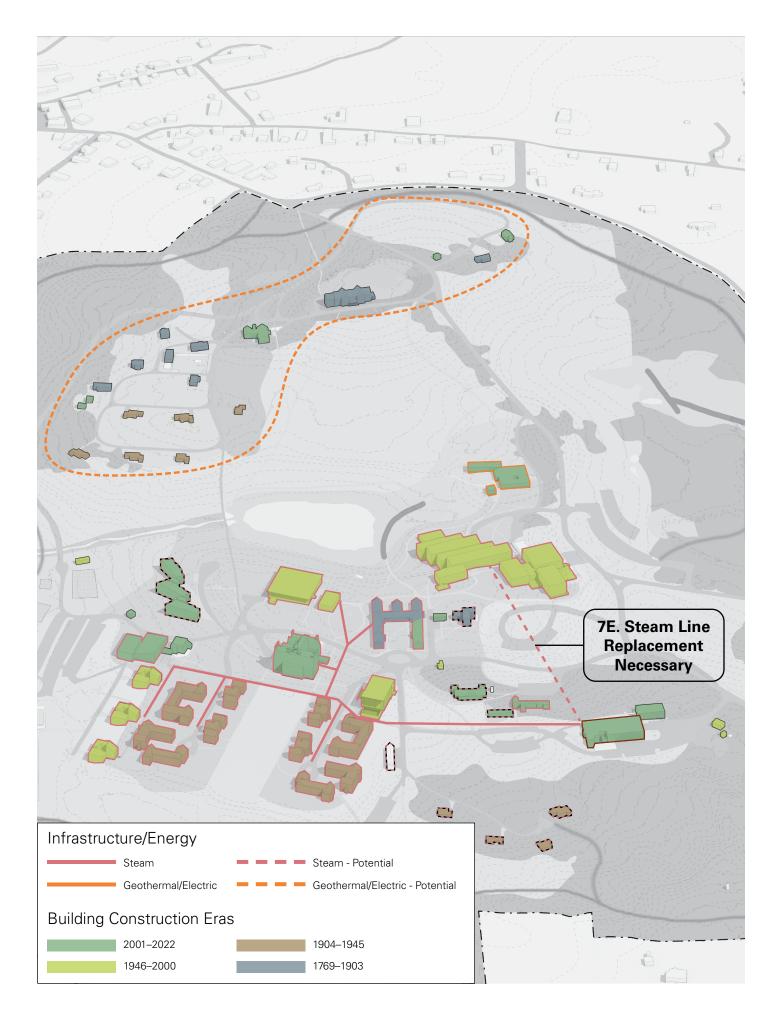
#### 7E Efficient HVAC

Currently, many of the buildings on campus have heat supplied by the steam lines from the biomass plant, however, some buildings still use oil boilers for heating, especially housing buildings. In order to reduce reliance on oil boilers for heating, Bennington College should consider connecting these buildings to the campus steam lines where possible.

Several of these buildings are located in the north part of the campus which is relatively far from the biomass plant and steam line infrastructure. As a result, these buildings would be good candidates for ground-source or cold-climate heat pumps to provide heating and cooling. Ground-source and cold-climate heat pumps are far more efficient than oil boilers and would contribute towards Bennington College's sustainability goals of reaching carbon neutrality by reducing oil consumption.

In addition, many buildings on campus don't currently have cooling installed as it is largely unnecessary given the climate. However, with the impending threat of climate change, Bennington College should begin to consider active and passive cooling strategies to ensure that building occupants are comfortable year-round. Cooling systems could be installed in these buildings, however, strategies like using natural ventilation through operable windows and installing ceiling fans or other alternative cooling systems are worth considering first.

Finally, Bennington College should conduct a refrigerant inventory on campus to determine if and where the environmentally harmful CFC based refrigerants are still being used. If CFC refrigerants are being used on campus, the college should develop a plan to phase them out. For any equipment requiring refrigerant, Bennington College should ensure that refrigerants with low global warming potentials (GWP) are specified.



### Healthier Environments

#### 7F Materials

Specifying healthy and sustainable materials can have a major impact on both indoor air quality and reducing embodied carbon associated with the extraction, manufacturing, and transportation of materials. For future renovation and new construction projects, Bennington College should thoroughly vet materials based on their embodied carbon. Materials with EPDs indicating the embodied carbon impact, materials with recycled content, FSC certified wood, and bio-based materials should be specified to reduce embodied carbon and establish a more sustainable built environment on campus. Bennington College should consider mass timber from vendors implementing sustainable forestry strategies as a primary option for future construction projects to reduce the college's carbon footprint.

Healthy materials selection is also critical to enhancing indoor air quality and occupant comfort. Certain products emit volatile organic compounds, which negatively impact indoor air quality and human health. As a result, future renovation and construction projects on campus should review wet applied products to ensure they comply with the VOC content limits outlined by the South Coast Air Quality Management District (SCAQMD) Rule 1113 and Rule 1168. In addition, products with VOC emissions evaluations such as Greenguard Gold certificates should be specified to further minimize negative impacts to indoor air quality.

#### 7G Efficient Fixtures and Appliances

Another strategy for reducing energy consumption on campus is to upgrade fixtures and appliances to ensure that they are efficient as possible. Areas such as kitchens and dining halls that are relatively large and have a lot of equipment and appliances should be examined to determine where more efficient equipment can be installed. ENERGY STAR is a program that certifies all types of appliances and equipment for having a low energy demand. To reduce the overall energy consumption of high traffic and energy intensive areas on campus, Bennington College should specify ENERGY STAR equipment where possible.

In addition, Bennington College should ensure that all light fixtures on campus are LEDs to maximize lighting efficiency and reduce total energy demand. To further contribute towards the lighting efficiency of the campus, daylight and occupancy sensors can be installed to turn off and on lights depending on the availability of useful daylight and whether people are using the space.

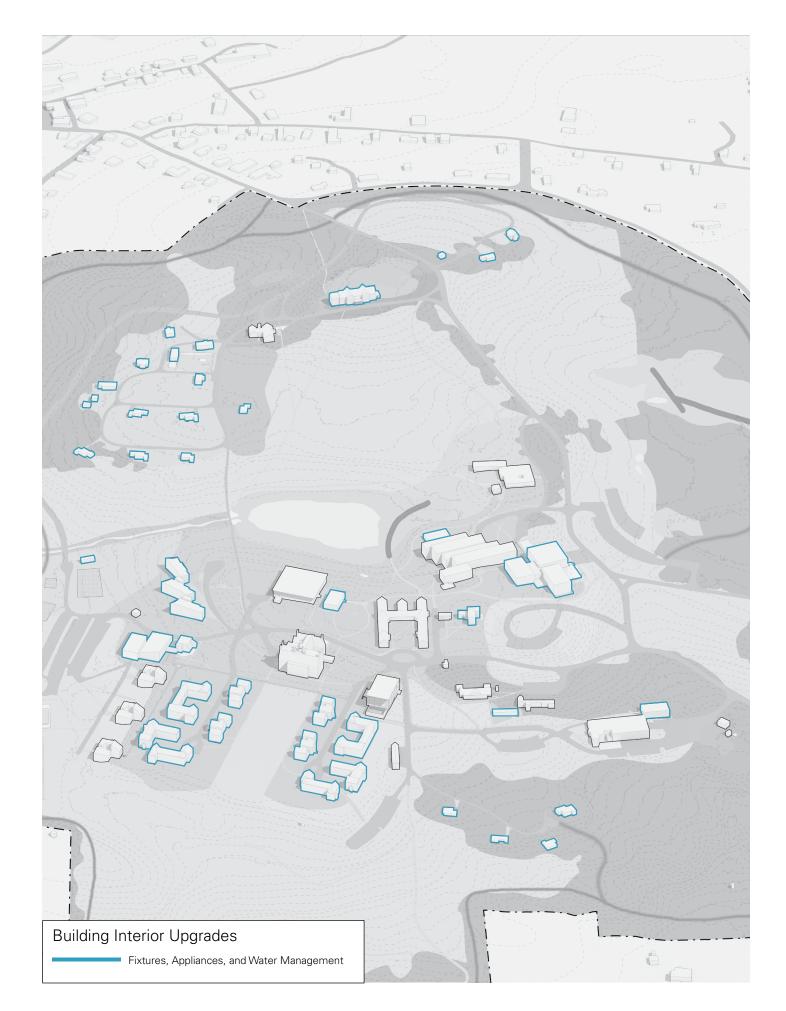
#### 7H Water Consumption and Stormwater Management

In past Bennington College building improvement and renovation projects, the college has replaced old, inefficient plumbing fixtures with low-flow plumbing fixtures to save water. The college should continue to make these upgrades in buildings to ensure that water isn't being unnecessarily wasted. Recommended flush/ flow rates for low-flow fixtures to maximize indoor water use reduction include:

- Toilet: 1.1 to 1.28 gpf
- Urinal: 0.125 gpf
- Lavatory sink: 0.35 gpm
- Showerhead: 1.5 gpm
- Kitchen Sink: 1.5 gpm

Bennington College should require that all newly installed plumbing fixtures are EPA WaterSense labeled to ensure that low-flow fixtures are specified and maximize water efficiency on campus.

In addition, as noted in the Landscape chapter of this report, Bennington College should consider implementation of low-impact development (LID) techniques on future landscape-oriented projects to enhanced the stormwater management capabilities of the campus.





# iv. Moving Forward

The most important part of the Adaptive Framework Plan is the process of enacting projects that are in alignment with changing needs. This section outlines a decision making framework based on the resources and values discussed with the Board of Trustees and Working Group throughout this process. Underlying the projects defined in the previous section are a range of scales, costs, and timelines which can relate to the projected growth in enrollment over the next decade. The Project Matrix is a key tool which further breaks down metrics per project and can be filtered and actively updated. Ultimately this framework is a planning tool for when a need is defined that there is a way to select and potentially combine or synthesize projects to achieve well rounded values and enable the most effective potential.

How do we create opportunities for innovation and emerging directions? Levers for Action Time Resources People How do we model for inclusivity, accessibility, and health?

In the face of climate change, how do we foster resilient ecosystems?

Innovation

### Creating a Participatory Planning Process

The values noted above are the result of discussion and refinement with the Board of Trustees and Working Group. The overarchin message was to prioritize the community an to define projects which are well-rounded. T five points can be used as an evaluation tool each point in the process from project defini to final completion. This set of criteria will ge future conversations to ensure Bennington's planning is in line with its values. How Bennington "selects" from this menu over the next several years will depend on institutionan needs and priorities, some of which are predictable, while others will be emergent.

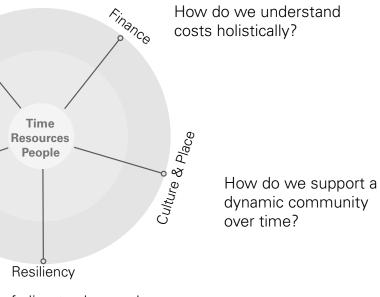
Understanding the

**Fundamental Levers** 

The fundamental levers for action in executing any project or initiative are time, resources, and people. The time lever relates to when something is needed, a certain number of beds or classroom type, and the amount of time needed to complete. Advance planning is key to allowing space for the need to be identified, options to be developed, and the design and construction process.

Resources relate to both the financial and physical. The funding needs to be secured for each project which can range from a visible building to invisible infrastructure improvement. This needs to be initiated early in the planning process working hand in hand with definition of the size, characteristics, and location. Physical resources are the carbon impacts of materials, construction, and operation. Many of the projects envisioned are renovations, conversions, or adaptations which are the greenest in terms of embodied carbon but still need analysis to optimize what is used and the long-term impacts.

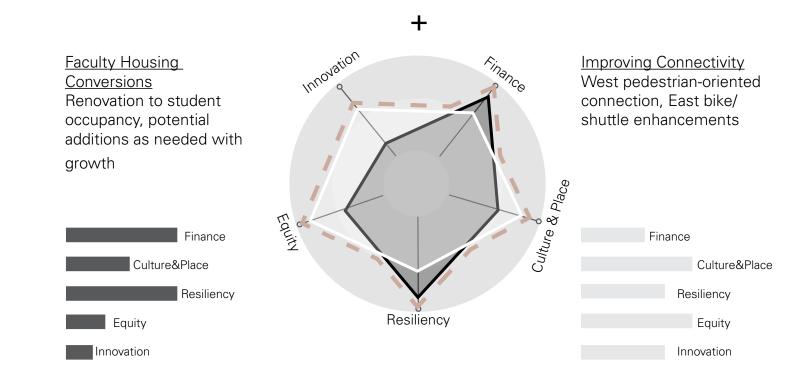
The people lever is broad, from the decisionmakers to the designers and builders and ultimate users. The fullest spectrum should be involved in projects to align needs with the most optimal solution. The creativity and innovation lies in a open dialogue between each person in this process.



of	Key strategies around building the capacity to enable change:
ning and The	<ul> <li>Build interdepartmental commitment to define and stand behind designs</li> </ul>
ol at nition guide	<ul> <li>Expand agency, build more partnerships</li> <li>Understand and balance two kinds of investment, capital vs. maintenance dollars</li> </ul>
ı's	<ul> <li>Commit to an inclusive process as part of the implementation</li> </ul>
the mal	<ul> <li>Elevate the standard of care, Bennington as continued model</li> <li>Commit to stewardship of the land and creation of more stewards</li> </ul>
•	

### Strategic Combinations

		INTERVENTIONS	BRIDGING PROJECTS	VISION/STRATEGIC PROJECTS
	Project Scale	<b>XSS</b>		
		Tactical projects, quick and low cost to implement	Necessary to support growth of college to 870 students, across all categories	Requires lead time for fundraising, developing plans and approvals, long-term needs
			Years 2-10	Years 5-10
<b>⊢</b> −−1	Timeline	Anytime		
$\bigotimes$	Execution Timeframe	< 6 mo.	6 mo 2 yrs	2+ yrs
\$	Budget	\$0-\$50K	\$50K-\$5M	\$5M+



Small Projects or Interventions represent low cost, relatively simple projects that can be executed in a very short timeframe but create a meaningful impact by augmenting or shifting the potential uses of existing spaces. An example could include the introduction of new or different furnishings in an existing space to accommodate different uses.

Bridging Projects represent mid-scale projects that invest more significant resources (time and money) into existing buildings to expand their capacities in the near term, while building a "runway" towards the future. These projects can be thought of as localized renovations or small-scale additions that require design, planning and permitting, but not on the scale of wholesale renovations or new buildings.

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### Project Matrix

One of the primary tools informing the framework together is the Project Matrix. A full version of this matrix is included in a later chapter as a summation of all of the ideas gathered and synthesized into projects small and large. This is more than just a spreadsheet it is meant to be a active tool, a living document that can be acted on and adjusted over time as ideas evolve and new possibilities are identified. Project ideas within the matrix can be sorted based on parameters such as size, rough cost range, program potentials, and other factors in order to provide a quick glimpse into possible solutions for emerging space needs.

The spreadsheet format enables ease of adding new projects as they emerge or adjusting as needs change. In the evaluation of projects, the matrix can serve to facilitate the discovery of "both-and" solutions, combination between projects, finding productive overlaps and synergies for cost-effective projects that addressing of needs at different scales and for various constituents, with an eye to building on the potential of existing buildings and infrastructure, as well as addressing existing building needs.

	A	В	С	D	E	F	G	Н		1	J	К	L
1	ID	Building / Space	Description	Detail	Goal 1	Goal 2	Project Type	Framework Category	T	Area (SF)	Cost Range	Program Opportunities	Constraints/Considerations
4	1C	Barn	Barn West Wing Rebuild	Rebuild the entire western wing of the barn and add 2nd floor (currently attic), similar to 2022 SE Wing renovation	Support growth	<ul> <li>Adaptation</li> </ul>	<ul> <li>Exg Footprint Reconstructio</li> <li>n</li> </ul>	Vision/Strategic	•	9000-12000	(\$5M-\$10M ▼	Administrative, Teaching, Storage	Would require complete rebuilding of the wing, including foundation (could include occupiable basement space as well). Would need to house about 5000 SF of admin office space in temp quarters for duration of renovation.
9	28	Student Center	Westward expansion of Student Center Pre-engineered metal building	Extend existing building by twice its length	Support growth	<ul> <li>Adaptation</li> </ul>	<ul> <li>Addition/Expa nsion</li> </ul>	Vision/Strategic	•	5000	\$1M-\$5M 🔻	Student Activities/Fitness/Re	c Consider relocating Rec Barn fitness center to new space (and repurpose Rec Barn for other uses). Would need to add restroom/locker room facilities in addition to open space. Could include mezzanine at upper level of building for more square footage
15	4C	VAPA- VA	Levels 1 & 2: Relocate and Consolidate Digital Fabrication equipment to new "making space" at Level 1, exterior storage building at VAPA Circle	This would include relocating existing laser cutters (x2), 3D printers (X4), CNC mill (x1) and other small digi-fab equipment into a standalone building created at the existing "storage" building adjacent to VAPA. Would include small expansion of this builiding to create daylight/access. Would free up space in VAPA for both footprint and infrastructure of these machines, and provide general access to equipment for all programs.	growth	<ul> <li>Adaptation</li> </ul>	<ul> <li>Addition/Expa nsion</li> </ul>	Vision/Strategic	•	1500 (est)	\$50K-\$250K <b>*</b>	Visual Arts	Actual area impacts difficult to assess without detailed study. Would require new storage area to accommodate materials currently stored in existing storage building- perhaps implement with storage space suggestion below?
17	4E	VAPA- All	New Dedicated Storage Building	New building on footprint of brick Patio outside "Green Room" (east of Scene Shop) with tie-ins at Levels 1 and 2. Free up all the storage space inside VAPA and repurpose as program space	Support growth	<ul> <li>Adaptation</li> </ul>	<ul> <li>Addition/Expa</li> <li>nsion</li> </ul>	Vision/Strategic	•	1400-2800	•	Consolidated storage space for VA and PA	Would allow easy access from grade at exterior, access to VAPA at "hinge" point between VA and PA sections.
18	4F	VAPA- VA	New Dedicated Studio/Fabrication "Barn"	Build a low-cost single-floor high-bay building (possibly with interior mezzanine") for student studio space, crit space and fabrication lab. Would be located on an expanded footprint of the existing storage building at VAPA circle, designed as a "banked barn" with partial embedment into hill to east. 5000-7500 SF. Relocate ALL student studios into this building, adjacent to fabrication space for digital fab equipment.	Support growth	<ul> <li>Adaptation</li> </ul>	<ul> <li>Addition/Expa nsion</li> </ul>	Vision/Strategic	•	5000-7500	\$50K-\$250K •	Consolidated studio space, centralized fabrication center for digital fab equipment (and possibly other fabrication as well TBD).	Requires new construction, but relatively low-cost with primarily open space, concrete slab on grade, and pre-engineered or til-up construction techniques. New building would need ventilation for specialized equipment and general air quality, but much easier to do in an open, single story new building than in existing VAPA bldg. Frees up more square footage than it uses due to inefficiencies of current studio spaces in existing buildings. Frees up multiple satellite studio venues (Swan Garage, Old Carpenter Shop) as well as significant footprint in VAPA. Creates a locus of student independent workspace, crit space, and fabrication. If letterpress printing area is included as well, can free up EAC2 building for other programs as well.
23	5B	Jennings Music Building	Full Basement Level Buidout	Renovate as much of basement as possible to create music studios, practice rooms, and other program that does not require daylight but prefers solid construction, acoustic isolation, etc.	Support growth	<ul> <li>Adaptation</li> </ul>	<ul> <li>Exg Footprint Interior Only</li> </ul>	Vision/Strategic	T	5000	\$1M-\$5M 🔻	Music Practice, Studio, Teaching	Significant work to abate hazardous materials, waterproof and insulate envelope, and add infrastructure. But many music and media-related programs could utilize this space, and would allow for re-thinking of upper levels of Jennings. May

### The Framework as Planning Tool

1 Identify Need	2 Funding/Timeline	3 Options	4 Evaluate/Refine	5 Refine Sc
	Clarify Req: — Size — Characteristics — Location	Review Adaptive Framework Plan for possible matches / combinations	Participatory Planning Tool	Select Preferred — Concept — Schematic
		₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩	Evaluation Finance Culture & Place Resiliency Equity Innovation	

The process outlined above is one that works for any scale or type of physical improvement campus. Clear execution of each of these st is critical to making sure the final product alig with the need and is delivered on time.

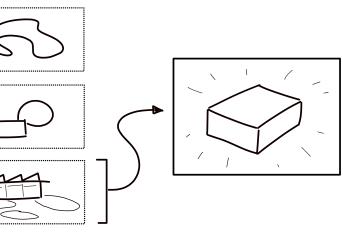
The need should be defined by a variety of stakeholders and translated with the College leadership through clarification of the main requirements such as size, characteristics, ar location. The Adaptive Framework Plan shou be used as a tool as part of this process to review the larger realm of possibilities and fi possible matches or combinations which cou productively support the need and create a larger positive impact. This should be evalua

### Solution

### 6 Design/Construct

### red:

#### Design Development and Construction



teps gns	through the Participatory Planning Tool noted above for a well-rounded project which excels in all five values. The design team should be part of refinement of the solution from multiple Concept Options to Schematic Design review. Once a preferred project is selected the Design Development and Construction would be completed under continued engagement with key leadership and users.
nd	
uld	With the incredible depth of analysis, engagement, and wide array of framework ideas
ind uld	that have emerged, this adaptive framework plan is not meant to be a report on the shelf, but an active tool in the future of Bennington
ated	College.

