Second Campus Master Plan – Report

GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT
1 OF 2

20 September 2019

GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT

Biohabitats EQUINOX Hennebery Eddy Architects

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TABLE OF CONTENTS

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Rendering of proposed campus hub

Executive Summary

The Great Smoky Mountains Institute at Tremont ("Tremont") seeks to develop a second campus to meet the growing demand for their experiential programs. The vision for this campus is a world-class facility that models new ways in which communities may embrace an ethic of stewardship that is socially just and ecologically restorative. This will be a CAMPUS OF LIVING BUILDINGS — the first ever in Tennessee — located just a short hike from Tremont's current Walker Valley Campus.

LIVING BUILDING CHALLENGE℠

The Living Building Challenge ("LBC") is a philosophy dedicated to restorative buildings. The LBC is widely considered the most aspirational environmental building certification in the world — a significant step beyond LEED. Through the LBC, principles of ecological relationship, cultural heritage, stewardship, sustainability, and leadership will be introduced into all aspects of the design, construction, and operation of the campus, resulting in a "living lab" for life-changing experiences.

This master plan intends to provide a framework for the design of a second campus that will expand Tremont's capacity and reach. This second campus will allow Tremont to continue its focus on youth programs while also providing space to grow programming for lifelong learners, CARRYING TREMONT FORWARD INTO THE NEXT 50 YEARS, AND BEYOND.

Rendering of proposed campus entry

Introduction

"[Tremont is] the future. It is the foremost environmental learning center in the world."
-Participant response to initial visioning exercise

Throughout its 50-year history, the Great Smoky Mountains Institute at Tremont has excelled at connecting people with nature. Tremont currently operates its unique programming at a repurposed Job Corps facility, just inside Great Smoky Mountains National Park. Tremont has emerged as a leading residential environmental learning center with a broad reach and a vision that goes beyond what its current facilities can accommodate. In early 2019, Tremont purchased 152 acres immediately adjacent to the park, and in the summer of 2019, Tremont purchased an additional 42 acres, providing a 194-acre site on which to envision their second campus

Beginning in June 2019, Hennebery Eddy Architects of Portland, Oregon, led a team in developing Tremont's second campus master plan. The team included Equinox Environmental landscape architects, Biohabitats water planning and engineering, and CEC civil engineers.

PROJECT METHODOLOGY

Funded with financial support from Clayton and the Haslam Family Foundation, this master plan was developed over a period of two months through a series of meetings with Tremont's board, staff, and representatives from the National Park Service. The effort was focused on developing an initial program of campus needs, site planning, key sustainable design strategies, and initial building concepts.

Due to the accelerated timeline of the master plan, the campus planning was completed with limited background information, such as a full site survey and geotechnical information. While the team is confident in the feasibility of the planning as shown, it is expected that several modifications will be required in subsequent design phases when more detailed information is available.

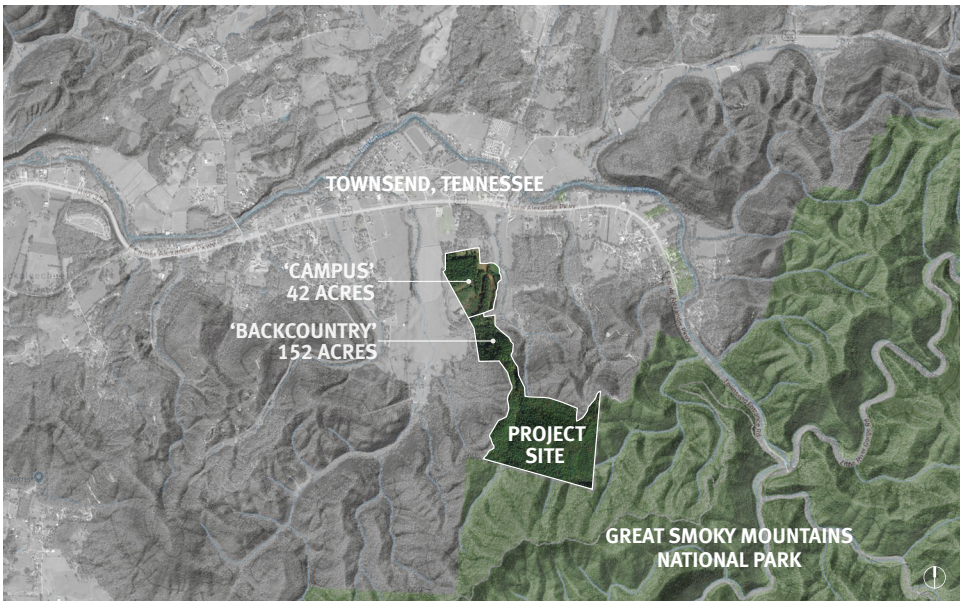
Rendering of proposed entry to the Education + Administration Building

Site Background

Tremont's second campus property is located in Townsend, Tennessee. The site abuts private land to the north, east, and west and ADJOINS GREAT SMOKY MOUNTAINS NATIONAL PARK to the south. The property is an approximately 10-mile hike from Tremont's current campus via the Chestnut Top trail.

SITE FEATURES

For the purposes of this report, the 194-acre site will be divided into two portions — the upper 42 acres ("the campus") and the lower 152 acres ("the backcountry").



The Backcountry

The backcountry is heavily forested, the terrain is steep, and opportunities for building sites are limited. The forest type varies, containing a mix of deciduous and coniferous trees. Fall Branch cuts through the southern portion of the backcountry, where it exhibits characteristics of stream impairment. However, a new floodplain has formed, indicating the beginning of natural stabilization. Further north, Fall Branch flows underground and forms the eastern border of the property.

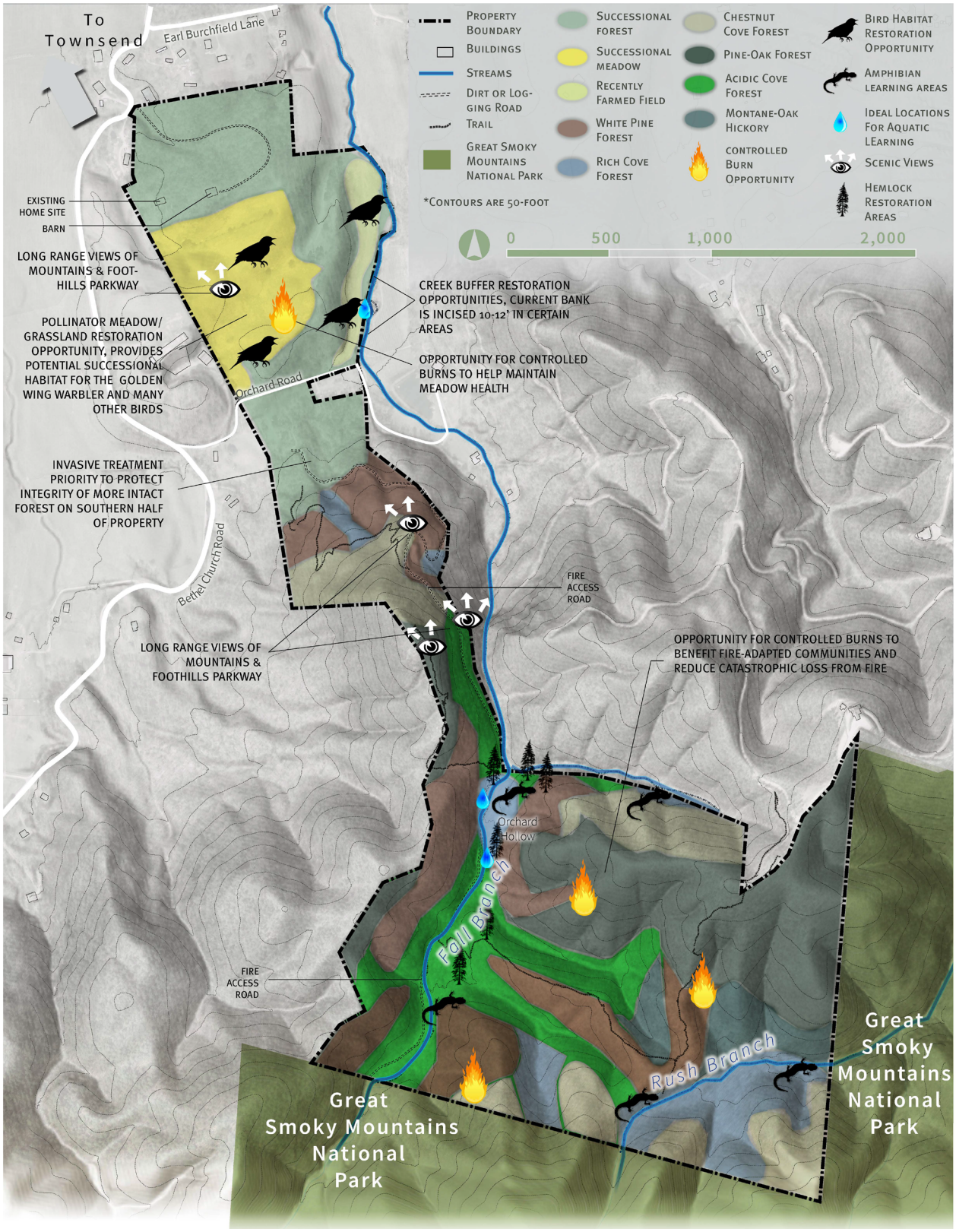
The Campus

The campus portion of the property is predominantly composed of rolling terrain, varying from a 0% slope to a slope of 25% or more. The MAIN FEATURE OF THIS PORTION OF THE SITE IS A LARGE FIELD, which is cradled by successional forest to its north, east, and south. An existing residence and barn on site indicate that this field is anthropogenic in nature, and was likely developed as a pasture or hayfield. This field provides an opportunity for the establishment of a wildflower/grassland meadow benefitting many species, including insects, small mammals, and reptiles.

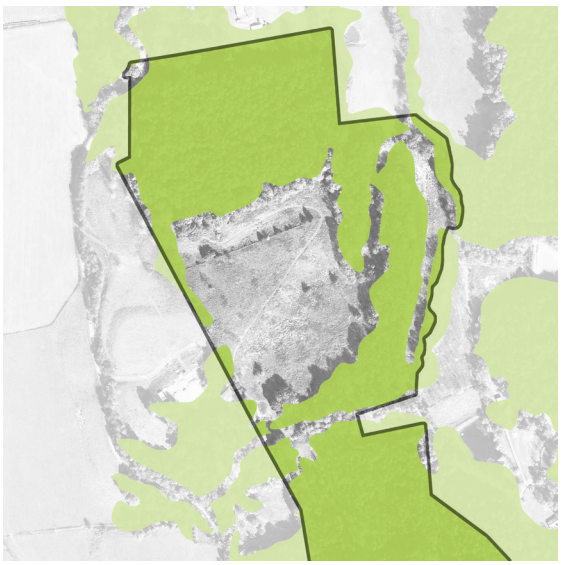
Allowing the meadow to continue its natural restoration will provide more habitat for indicator species such as the golden-winged warbler.

The PROPERTY AS A WHOLE CONTAINS ABUNDANT HABITAT FOR A VARIETY OF BIRDS, including common breeding and migratory species. The disturbed northern section of the property presents a potential golden-winged warbler habitat restoration opportunity. The existing successional habitat could be approached with planned management to eliminate invasive plants and promote scrub/successional habitat for breeding population of the species, which in Tennessee occurs only in the eastern mountains. A meadow restoration would also be supportive of other songbirds and raptors.

Additionally, the abundance of pine-oak forests and related fire-adapted ecosystems on the property present an opportunity for reintroduction of natural fire regiments as a mode of restoration.

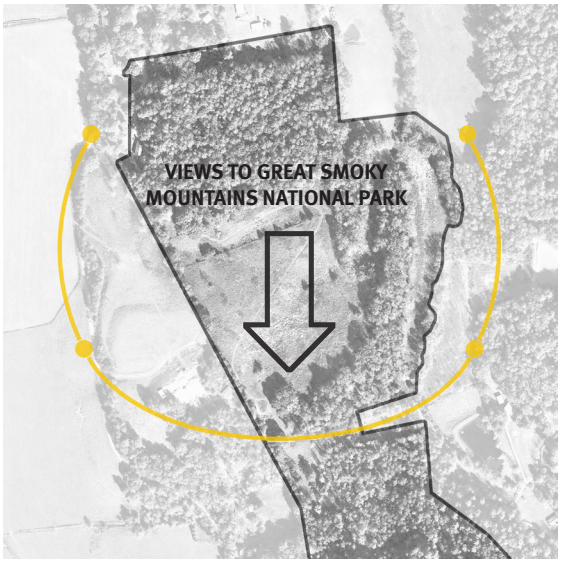


Site analysis map showing ecological values



Campus existing vegetation

Campus non-buildable area



Campus sun path and views

View from campus portion of site to backcountry

Existing barn on northern portion of site

View fron backcountry to adjacent properties

Rendering of proposed porch and dining room

Vision & Aspirations

"[We must] think big!"
-Participant response to initial visioning exercise

As part of the initial kickoff meeting, those in attendance were asked to answer a series of questions related to who Tremont is today and what Tremont will look like in the future (*see Appendix for additional information*). Out of these responses emerged a series of clear project goals.

Aspirational

TREMONT'S SECOND CAMPUS SHOULD BE ASPIRATIONAL in its goals. It should strive to meet the most rigid environmental standards. It should aim for inclusivity, to allow anyone the opportunity to participate in Tremont's unique programming — regardless of age, ability or social status. It should seek to be a leader.

Regenerative

TREMONT'S SECOND CAMPUS SHOULD BE REGENERATIVE. It should work to actively restore the environment, giving back more than it takes. Furthermore, these systems should act as hands-on teaching tools, supplementing the curriculum and prompting discussions on environmental responsibility.

World Class

Like its programming, TREMONT'S SECOND CAMPUS SHOULD BE WORLD CLASS. Its facilities should be unmatched. It should lead by example, acting as a model of conservation and stewardship.

THE LIVING BUILDING CHALLENGE

As an organization, Tremont recognizes its responsibility to be a living example of its core mission, and seeks to achieve the Living Building Challenge for the entire second campus.

The signature program of the International Living Future Institute, the LBC is achieved through meeting the requirements of 20 imperatives distributed among seven "petals" as outlined below. It is assumed that the project will pursue LBC version 4.0 certification, which was released in May 2019.

The Living Building Challenge is composed of 20 Imperatives grouped into seven petals. Some Imperatives are not required for all Typologies.

PETAL	IMPERATIVE	New Building
PLACE	1 Ecology of Place	
	2 Urban Agriculture	
	3 Habitat Exchange	
	4 Human Scaled Living	
WATER	5 Responsible Water Use	
	6 Net Positive Water	
ENERGY	7 Energy + Carbon Reduction	
	8 Net Positive Energy	
HEALTH + HAPPINESS	9 Healthy Interior Environment	
	10 Healthy Interior Performance	
	11 Access to Nature	
MATERIALS	12 Responsible Materials	
	13 Red List	
	14 Responsible Sourcing	
	15 Living Economy Sourcing	
	16 Net Positive Waste	
EQUITY	17 Universal Access	
	18 Inclusion	
BEAUTY	19 Beauty + Biophilia	
	20 Education + Inspiration	

CORE IMPERATIVE

SCALE JUMPING ALLOWED

HANDPRINTING IMPERATIVE

IMPERATIVE REQUIRED FOR TYPOLOGY

REQUIREMENT DEPENDENT ON SCOPE

NOT REQUIRED FOR TYPOLOGY

LBC Summary Table from the LBC 4.0 Standard distributed by the ILFI

THE LIVING COMMUNITY CHALLENGE

Tremont's second campus may also choose to pursue the Living Community Challenge ("LCC"). The LCC is a certification available to communities that can attain all imperatives as well as Living Building Certification for the majority of buildings on site. This path would allow LBC certification to focus on key buildings, yet provide a certification for the broader campus. Initial research indicates the project could achieve LCC certification, however, further analysis is required to determine LCC feasibility.

Rendering of proposed demonstration kitchen in repurposed barn

Program

Tremont's user groups fall into three categories: staff, volunteers, and guests. The majority of the guest groups hosted at Tremont's current campus are school groups. Tremont prides itself on its INNOVATIVE, UNIQUE CHILDREN'S PROGRAMMING, as well as its focus on "teaching teachers" — providing teachers with the tools to incorporate the lessons learned at Tremont into their classrooms at home.

However, in its next 50 years, Tremont looks forward to GROWING ADULT PARTICIPATION. This may be achieved through hosting conferences and retreats, increased adult programming, or other special events. This will allow Tremont to further expand its reach to new user groups.

PROPOSED PROGRAM

Over the course of two programming meetings, the team developed the campus needs shown in this section. This preliminary program is intended to reflect the maximum need within the capacity of the site. Further study will likely reveal opportunities for space efficiencies and program refinement. *See Appendix for additional information about key spaces.*

CAMPUS BUILDINGS

Dining + Gathering Building

The Dining + Gathering Building houses the main campus indoor gathering spaces, including a large multi-purpose dining room that comfortably seats 200 guests for meals and can accommodate up to 300 for presentations. Even larger groups can be accommodated by expanding onto the outdoor patio. A smaller multi-purpose room serves as a large classroom, conference room, or private dining room. A roof deck above this space can accommodate up to 50 guests. A commercial kitchen supports these facilities and works in tandem with the on-site farm to serve seasonal produce. The main campus loading and service access is also located here.

Education + Administration Building

The Education + Administration Building includes one science lab and one flexible classroom, as well as staff offices and meeting rooms. The administrative component includes a reception area and gift shop, where guests are greeted when they first arrive. A large patio located between this building and the Dining + Gathering Building provides a partially covered space for a variety of uses.

Service + Water Infrastructure Building

This building includes maintenance storage and offices as well as wastewater and graywater treatment equipment.

Residential Buildings

The residential footprints are designed to be flexible, allowing for adaptability should space needs change over time. Each building includes sleeping areas, restrooms, and a lounge that can function as an additional breakout space for guests. The exact number and layout of residential buildings is expected to be established in subsequent design phases.

Demonstration Kitchen

An existing barn on the campus property is proposed to be relocated near the campus farm and repurposed to provide facilities for food education and culinary instruction, allowing guests the opportunity to source their own ingredients and prepare their own meals while enjoying a view of the working farm in a true farm-to-table experience.

OUTDOOR SPACES

Outdoor spaces serve an important function for Tremont, as the MAJORITY OF TEACHING AND EXPLORATION ON CAMPUS TAKES PLACE OUTSIDE. An Entry Pavilion welcomes guests as they arrive and provides shelter as they wait for staff members to guide them to their accommodations. A seven-sided Council House is where many guests will begin and end their time on campus. An Open-Air Pavilion serves as a flexible space for both large-group programming and for small, informal gatherings in groups of rocking chairs. The Outdoor Spiritual Structure is a non-denominational space for individual or small group reflection. Several smaller shelters are also located on campus.

The campus also has a variety of uncovered outdoor spaces including fire pits, camping sites, and informal gathering spaces. These are located throughout the campus in key areas.

Images of Walker Valley campus and programs

PROGRAM SUMMARY

The program shown below and on pages 14-15 was developed based on a preliminary understanding of space needs. These estimated square footages are expected to change as the project evolves.

Campus Buildings	Est. Gross Square Feet
Dining + Gathering	13,200 gsf
Education + Administration	8,300 gsf
Residential Buildings (9 @ approx. 4,000 gsf/ea)	36,000 gsf
Service + Water Infrastructure	2,300 gsf
Tiny Homes (12 @ 500 gsf/ea)	6,000 gsf
Staff Communal House	1,300 gsf
Estimated Campus Buildings	**67,100 gsf**

Outdoor Structures	Est. Gross Square Feet
Open-Air Pavilion	2,300 gsf
Council House	750 gsf
Entry Pavilion	600 gsf
Outdoor Spiritual Structure	200 gsf
Demonstration Kitchen	2,700 gsf
Open-air Shelter (2 @ 250 gsf/ea)	500 gsf
Estimated Outdoor Structures	**7,050 gsf**

CAMPUS CAPACITY

Residential buildings are designed around a standard footprint, approximately 4,000 square feet, which can accommodate multiple configurations. Within each of the nine residential buildings, central gathering spaces are sub-dividable, providing collaboration opportunities for various size groups. Wide corridors also terminate in small-scale gathering spaces for two-to-three people. As envisioned, the CAMPUS CAPACITY IS LIKELY BETWEEN 210-270 PEOPLE, depending on the use. The following is a potential breakdown of room types.

Room Type	Occupants Per Room	Number of Room Type	Total Occupancy
Single room en suite	1	30	30
Double room en suite	2	24	48
Double room	2	4	8
Dorm room	8	16	128
Tiny home	1	12	12
Staff room ensuite	1	4	4
Scenario Campus Occupancy			**230**

PROGRAM

Dining + Gathering Building

Dining			
Mudroom	300sf	1	300sf
Dining Hall	4000sf*	1	4000sf
Storage	500sf	1	500sf
Multi-Purpose Room	1200sf*	1	1200sf
Storage	100sf	1	100sf
NSF			6100sf

Kitchen			
Commercial Kitchen	1500sf	1	1500sf
Service Area	400sf	1	400sf
Office	100sf	1	100sf
Dry Goods	250sf	1	250sf
Dish Room	300sf	1	300sf
Freezer	200sf	1	200sf
Fridge	150sf	2	300sf
NSF			3050sf

Other			
Public Restroom	300sf	2	600sf
All-User Restroom	55sf	2	110sf
Laundry	300sf	1	300sf
NSF			1010sf

Total Net Square Feet	10160sf
Net-To-Gross Factor (incl. MEP, circulation)	1.30
Dining + Gathering Building (GSF)	**13200sf**

*15sf/person - sized for tables and chairs

Education + Administration Building

Education			
Science Lab	900sf	1	900sf
Storage	80sf	1	80sf
Classroom	900sf	1	900sf
Small Meeting Room	250sf	2	500sf
NSF			2380sf

Administration			
Reception/Interpretive Center	500sf	1	500sf
Volunteer/Outreach Storage	250sf	1	250sf
Gift Shop	400sf	1	400sf
Gift Shop Storage	80sf	1	80sf
Staff Offices	120sf	4	480sf
Open Office	600sf	1	600sf
Staff Storage	80sf	1	80sf
Staff Lounge	200sf	1	200sf
Small Meeting Room	80sf	2	160sf
Conference Room	500sf	1	500sf
NSF			3250sf

Other			
Public Restroom	150sf	2	300sf
All-User Restroom	55sf	3	165sf
First-Aid Area	80sf	1	80sf
NSF			545sf

Education + Administration Building (NSF)	6175sf
Net-To-Gross Factor (incl. MEP, circulation)	1.35
Education + Administration Building (GSF)	**8300sf**

Service + Water Infrastructure

Workshop	750sf	1	750sf
Tool Storage	250sf	1	250sf
Equipment Room	750sf	1	750sf
All-User Restroom	55sf	1	55sf
Service + Water Infrastructure Building (NSF)			1805sf
Net-To-Gross Factor (incl. MEP, circulation)			1.25
Service + Water Infrastructure Building (GSF)			**2300sf**

Residential Building Type A - Dorm		**6**	
Double Room En Suite	230sf	1	230sf
Double Room	125sf	1	125sf
Dorm Room - 8 Person	210sf	4	840sf
Mudroom/Entry	100sf	1	100sf
Lounge	600sf	1	600sf
All User Restroom	65sf	1	65sf
Kitchenette	50sf	1	50sf
Shared Restroom	425sf	2	850sf
NSF			2860sf
Net-To-Gross Factor (incl. MEP, circulation)			1.40
Residential Building Type A (GSF per building)			**4000sf**

Residential Building Type B - Single En Suites		**2**	
Single Room En Suite	230sf	10	2300sf
Mudroom/Entry	100sf	1	100sf
Kitchenette	50sf	1	50sf
Lounge	200sf	2	400sf
NSF			2850sf
Net-To-Gross Factor (incl. MEP, circulation)			1.40
Residential Building Type B (GSF per building)			**4000sf**

Residential Building Type C - Doubles/Double En Suites		**1**	
Double Room En Suite	230sf	5	1150sf
Double Room	125sf	5	625sf
Mudroom/Entry	100sf	1	100sf
Kitchenette	50sf	1	50sf
Lounge	300sf	2	600sf
All User Restroom	65sf	4	260sf
NSF			2785sf
Net-To-Gross Factor (incl. MEP, circulation)			1.40
Residential Building Type C (GSF per building)			**3900sf**

Residential Building Type D - Tiny Houses		**12**	
Tiny House	450sf	1	450sf
NSF			450sf
Net-To-Gross Factor (incl. MEP, circulation)			1.00
Residential Building Type D (GSF per building)			**500sf**

Residential Building Type E - Staff Communal House		**1**	
Bedroom	110sf	4	440sf
Kitchen	150sf	1	150sf
Common Area	300sf	1	300sf
All-User Restroom	65sf	2	130sf
NSF			1020sf
Net-To-Gross Factor (incl. MEP, circulation)			1.25
Residential Building Type E (GSF per building)			**1300sf**

Open-Air Pavilion		**1**	
Open-Air Pavilion	2250sf	1	2250sf
NSF			2250sf
Net-To-Gross Factor (incl. MEP, circulation)			1.00
Open-Air Pavilion (GSF)			**2300sf**

Council House		**1**	
Council House	750sf	1	750sf
NSF			750sf
Net-To-Gross Factor (incl. MEP, circulation)			1.00
Open-Air Pavilion (GSF)			**750sf**

Open-Air Shelter		**2**	
Open-Air Shelter	250sf	1	250sf
NSF			250sf
Net-To-Gross Factor (incl. MEP, circulation)			1.00
Open-Air Pavilion (GSF)			**500sf**

Entry Pavilion		**1**	
Entry Pavilion	600sf	1	600sf
NSF			600sf
Net-To-Gross Factor (incl. MEP, circulation)			1.00
Open-Air Pavilion (GSF)			**600sf**

Outdoor Spiritual Structure		**1**	
Outdoor Spiritual Structure	200sf	1	200sf
NSF			200sf
Net-To-Gross Factor (incl. MEP, circulation)			1.00
Open-Air Pavilion (GSF)			**200sf**

Demonstration Kitchen		**1**	
Demonstration Kitchen	800sf	1	800sf
Outdoor Seating Area	1150sf	1	1150sf
Restroom	55sf	2	110sf
Storage	200sf	1	200sf
NSF			2260sf
Net-To-Gross Factor (incl. MEP, circulation)			1.20
Demonstration Kitchen (GSF)			**2700sf***

*approximate size of existing barn

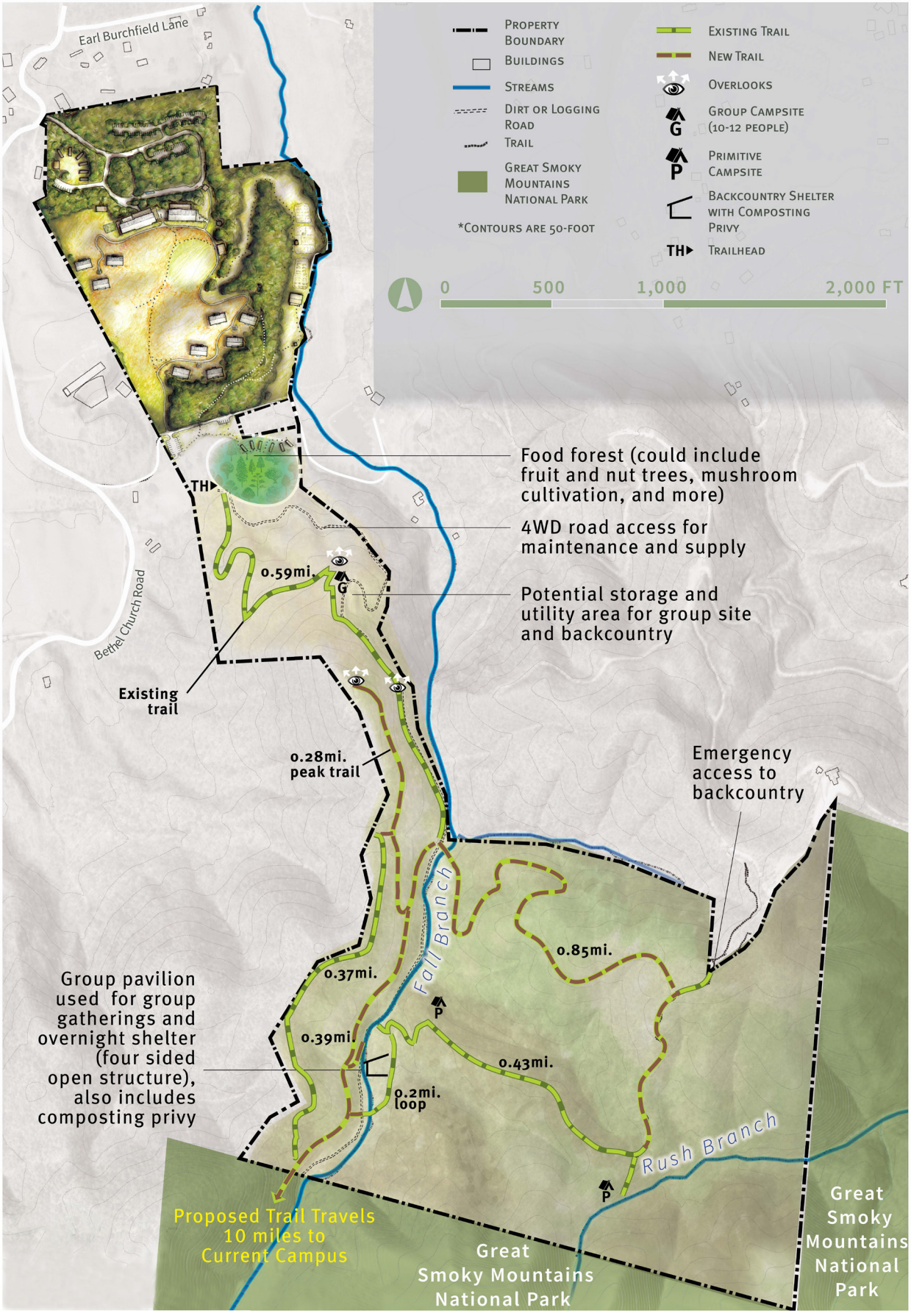
Rendering of proposed outdoor gathering space at residential buildings

Proposed Concept

The conceptual campus site design emphasizes gathering spaces and universal access while preserving the large, open meadow. The arrival sequence suggests that vehicles, with the exception of service and emergency services, are not permitted beyond the parking and arrival loop. Buildings are sited at the successional forest edge, minimizing visual impact and creating distinct zones. Furthermore, planning minimizes grading and maximizes opportunities for passive heating and cooling, as well as solar energy generation.

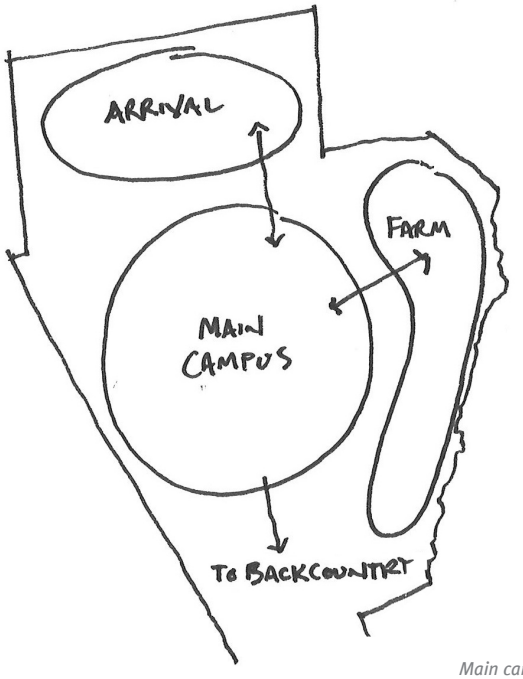
Regenerative features integral to the campus form a closed-loop system where all energy, water, and waste-processing demands are met within campus boundaries. As design progresses, it is recommended that key sustainable design features are located in public areas visible to visitors.

The campus design promotes a gradient of density, from the northernmost main campus to the southern edge of the property, which borders Great Smoky Mountains National Park. Here, the backcountry is conceived as a place of MINIMAL IMPACT TO THE NATURAL LANDSCAPE. The proposed trail system utilizes existing trails whenever possible. New trails follow the existing grade and lead visitors to naturally occurring viewpoints and places of ecological interest. Interventions proposed here include a food forest and both group and primitive campsites. The proposed trail system connects with an existing trail system at the south end of the site that leads to Tremont's current Walker Valley Campus.

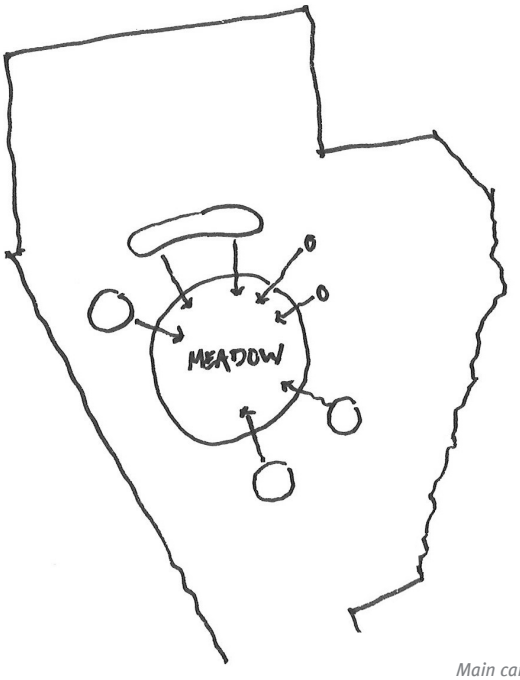


Overall site concept

MAIN CAMPUS CONCEPTS



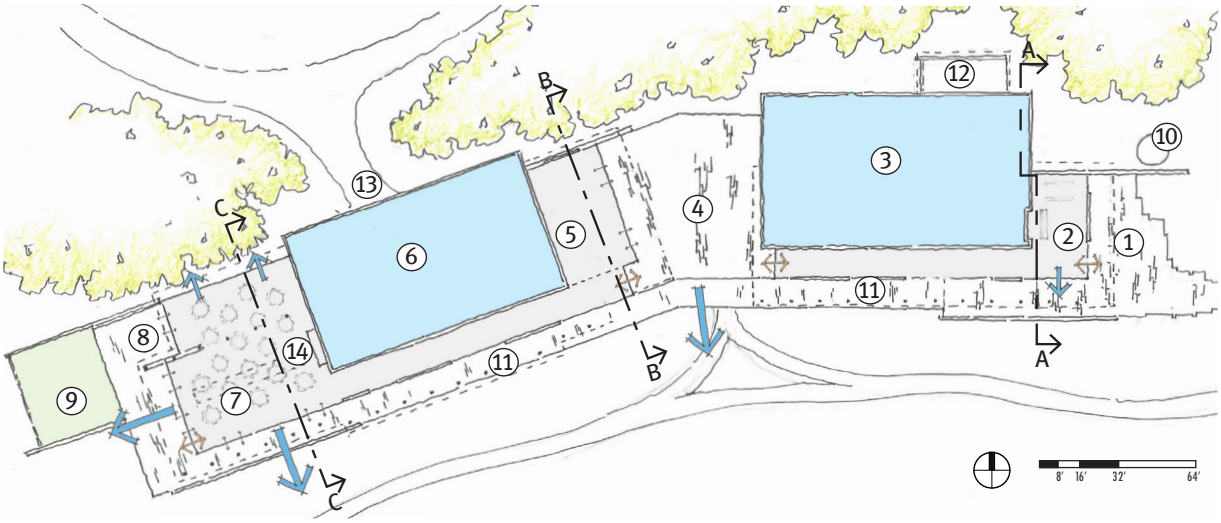
Main campus zones



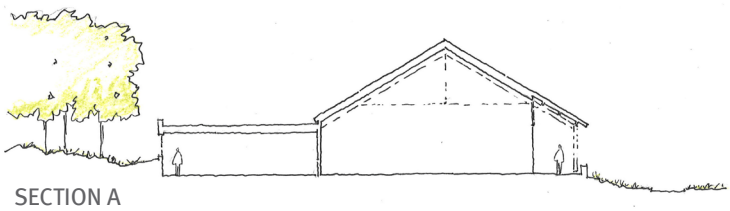
Main campus organization

1	campus entry	8	open-air spiritual space	15	mown path
2	entry pavilion	9	residential buildings	16	parking (~100 spaces)
3	education + admin building	10	staff housing	17	small gathering shelter
4	dining + gathering building	11	in-residence housing	18	trail
5	service + water infrastructure	12	demonstration kitchen	19	bus parking
6	open-air council house	13	farm	20	deliveries/loading
7	open-air pavilion	14	universal access path	21	water treatment wetland

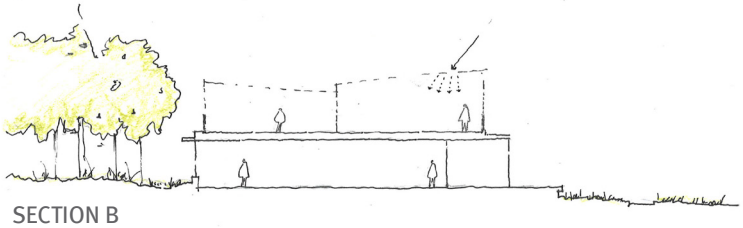
CAMPUS HUB



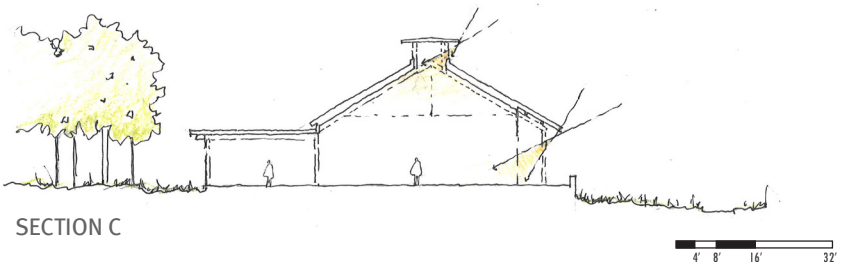
1	entry patio	6	kitchen/mechanical/storage	11	front porch
2	reception/gift shop	7	dining/gathering	12	back porch
3	offices/meeting/classrooms	8	dining patio	13	loading/deliveries
4	central patio	9	water treatment wetland	14	hearth
5	multi-purpose room	10	rain water cistern		



SECTION A

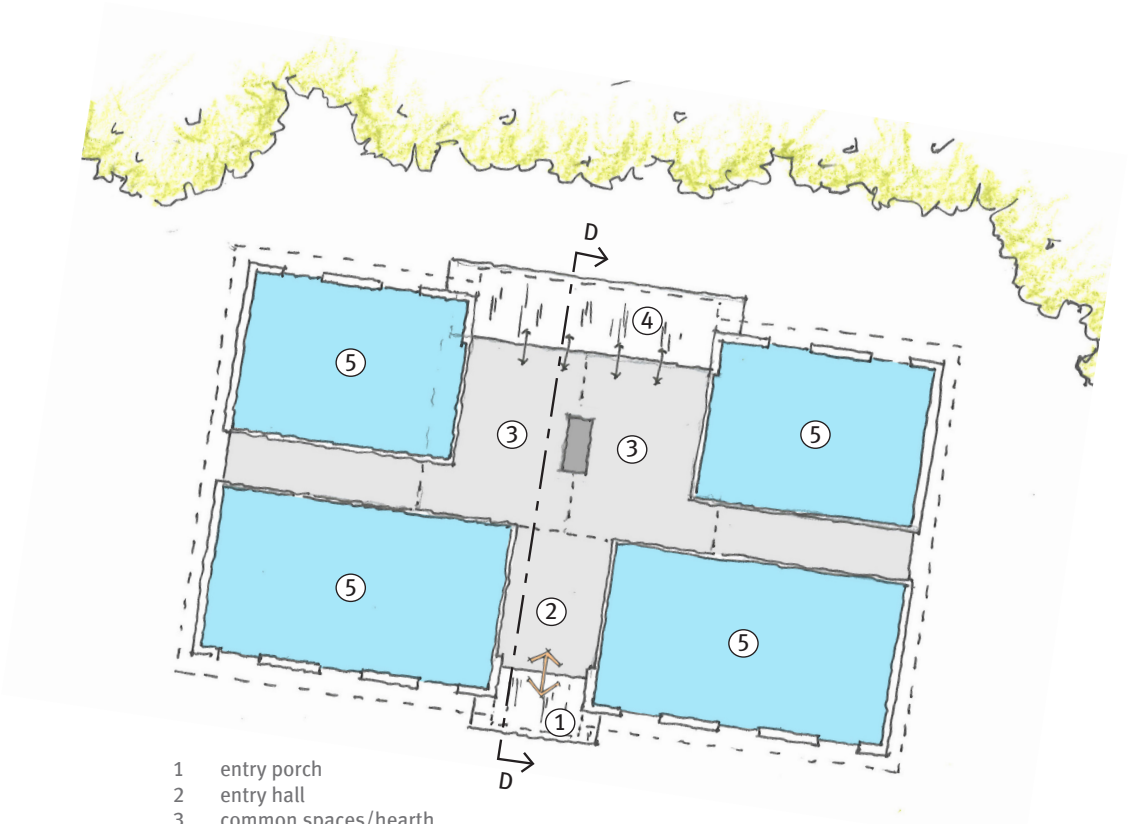


SECTION B



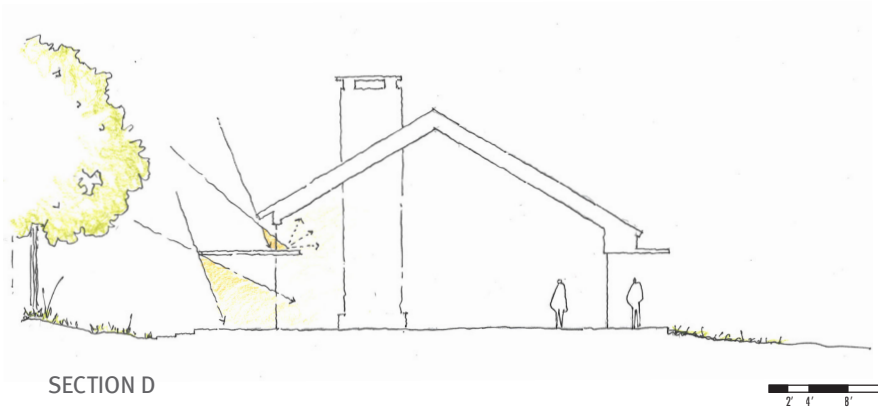
SECTION C

RESIDENTIAL BUILDINGS



1 entry porch
2 entry hall
3 common spaces/hearth
4 back porch
5 residential wing*

**number of sleeping rooms and layout varies by residential building*



SECTION D

ACHIEVING THE LIVING BUILDING CHALLENGE

Water

Tremont's Second Campus targets NET-POSITIVE WATER. This ambitious goal is achieved through aggressive water-use reduction strategies employed throughout campus, such as foam-flush composting toilets installed in all buildings. Rainwater collected from the Education + Administration and Dining + Gathering roofs and stored in a rainwater cistern can meet campus non-potable water needs. Groundwater is likely to be the best source of potable water, with surplus collected rainwater providing a supplementary source if necessary. Permeable paving on campus paths and roads allows stormwater to infiltrate naturally, promoting groundwater recharge. A constructed wetland treats campus wastewater for on-site reuse and infiltration. In the design phase, the team will explore multiple water systems to find the ideal system for the campus. *See Appendix for the full Integrated Water Strategies Report.*

Energy

Integral PV roofs provide net-positive energy for the entire campus

This project also targets NET-POSITIVE ENERGY. Campus energy needs will be significantly reduced through high-performance enclosure (roof, wall and floor assemblies) design and sustainable strategies such as balanced daylighting and passive cooling. With the implemention of these strategies, preliminary calculations indicate that campus energy consumption could realize up to an 80% improvement over baseline. This improvement makes it feasible for power generated by integral photovoltaic shingle roofs to produce up to 150% of campus energy needs, meeting the LBC net-positive energy requirement. In the design phase, detailed energy modeling will help to establish the exact amount of on-site solar needs.

Health + Happiness

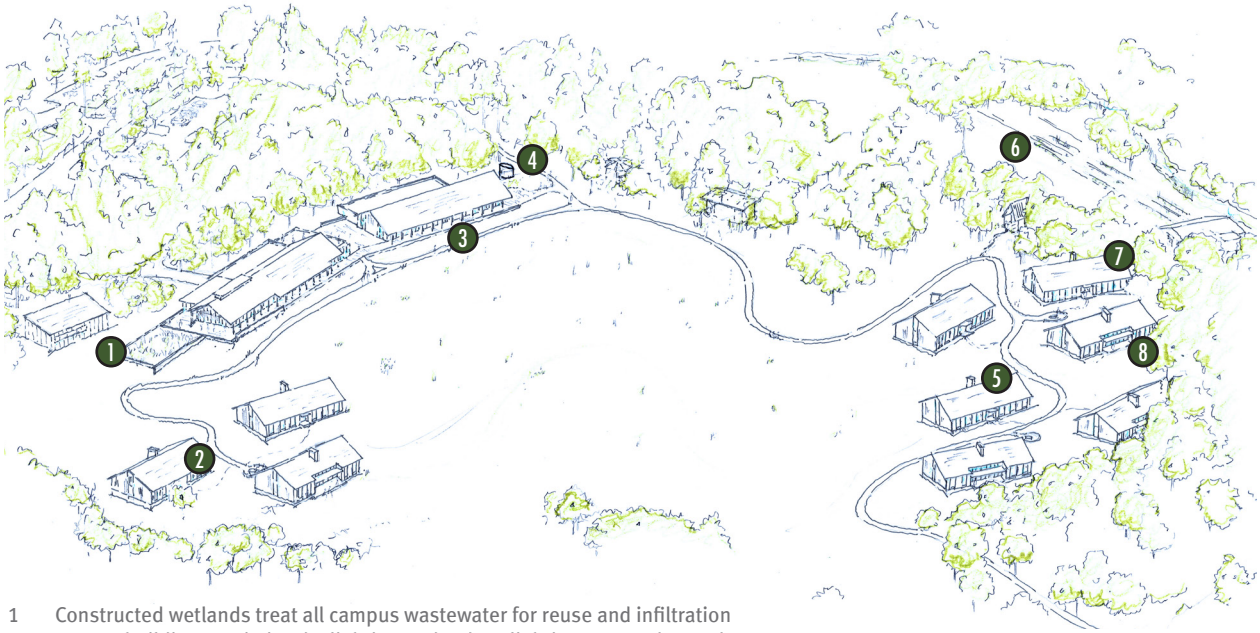
Key spaces in the campus plan are sited to maximize daylighting and views to the exterior. In future design stages, systems planning will promote healthy interior spaces through indoor air quality measures exceeding industry standards.

Equity

The campus is designed to universal accessibility standards, encouraging ANYONE, REGARDLESS OF THEIR AGE, ABILITY, OR STATUS, TO EXPERIENCE TREMONT. This well-connected campus will support interaction and exploration throughout. Site planning prioritizes pedestrians over cars by limiting vehicular access into the main campus.

Place

Proposed development is selective and concentrated so that ALMOST 150 ACRES OF THE SITE ARE PRESERVED for habitat and educational opportunities. Site planning takes cues from the Cherokee, who once thrived in Eastern Tennessee. Campus buildings are sited around a large central meadow which, when restored, will increase habitat for indicator species, serve as a hotspot for biodiversity, and promote the establishment of native grasslands. Building concepts emphasize regional forms and materials – blending simple gables with deep porches and a palette of glass, wood, and stone.



1 Constructed wetlands treat all campus wastewater for reuse and infiltration
2 Narrow buildings optimize daylighting and reduce lighting energy demand
3 The use of foam-flush composting toilets reduces water demand by up to 70%
4 All water needs are supplied though rainwater collection, on-site well water, and treated reuse
5 Generous hearths celebrate cultural heritage
6 An on-site working farm provides both food and an opportunity to learn about local agriculture
7 Solar roof shingles generate up to 150% of annual campus energy needs
8 Porches provide shade and reduce space cooling energy demand

Beauty

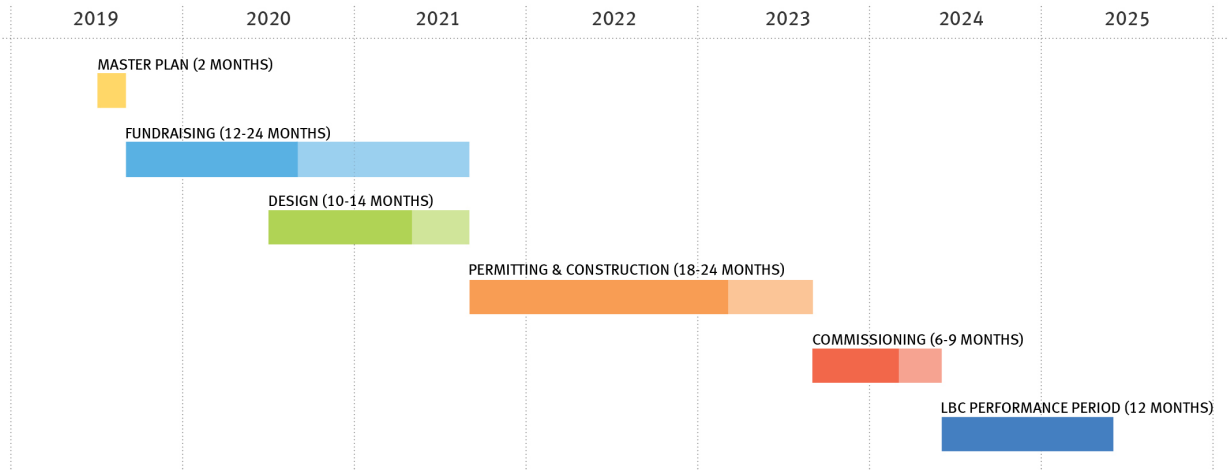
Materials such as Tennessee fieldstone highlight the natural beauty of the region

Through the use of local materials, daylighting, and form, the campus design concepts are intended to foster a connection to nature. Buildings are arranged on the forest edge, creating a STRONG LINK WITH BOTH THE FOREST UNDERSTORY AND THE CAMPUS MEADOW. Materials such as sustainably harvested wood and local stone provide guests a tactile connection to natural materials and textures. This will be further developed in the design phase through a full-day biophilic design workshop, which will define key biophilic elements to be incorporated into the project.

Materials

Buildings are crafted with dowel-laminated timber and other eco-friendly products without toxic adhesives or VOCs

A limited palette of REGIONALLY APPROPRIATE, LOCALLY SOURCED, RENEWABLE, AND FORWARD-THINKING materials are proposed for the campus. Wood structure, siding, and interior finishes bring familiar tones and textures that create a warm and inviting space while referencing the logging history of East Tennessee. A series of walls built of locally sourced stone anchor the main buildings on campus. This modern approach to vernacular architecture creates a strong connection between interior and exterior spaces. The existing barn on site is salvaged and re-purposed as a demonstration kitchen and dining space adjacent to the campus farm. Additional salvaged wood and other recycled and repurposed materials are used where possible. Next-generation products, such as solar shingles, integrate technology into building systems and put sustainable systems on display in a meaningful way.



Next Steps

This master plan is intended to provide a FRAMEWORK FOR A MORE IN-DEPTH DESIGN EFFORT. Prior to proceeding with the design, it is recommended that the following work be completed.

Feasibility Study
A feasibility study will provide insight into potential user groups and demand. After this study is complete, the program should be revisited and fine-tuned to ensure compatibility with desired uses.

Site Survey
A site survey will determine precise property boundaries and locations of existing structures, identify existing utility locations, and provide detailed grading and slope information.

Geotechnical Report
A geotechnical report will describe the soil types and other geological conditions of the site. This will aid in determining the location of buildings and their foundation requirements.

With this additional information, the design team can move confidently into the next stage of design and continue to work toward creating a WORLD CLASS CAMPUS that will carry Tremont forward into its next 50 years.