DESIGN PROPOSAL

NORTH AMHERST COMMUNITY FARM

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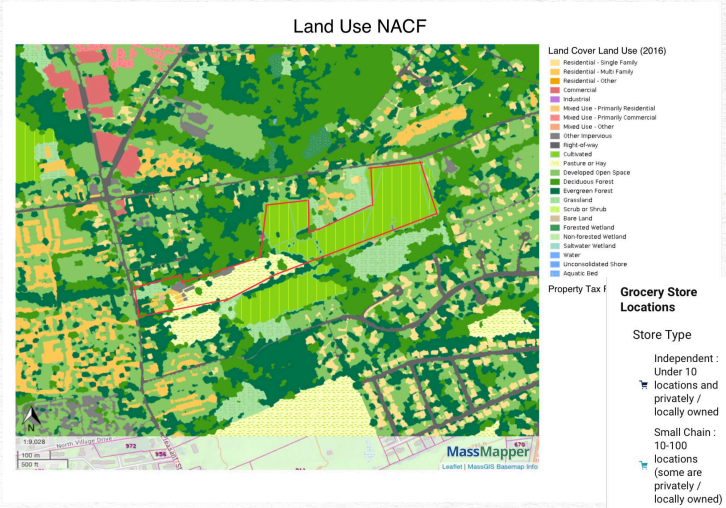


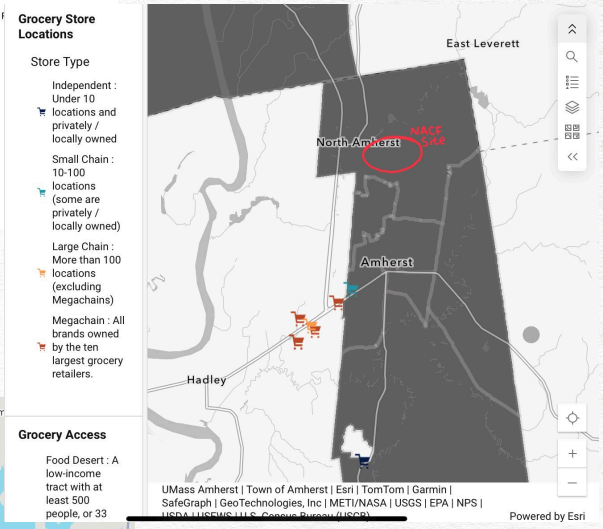
SITE CONTEXT

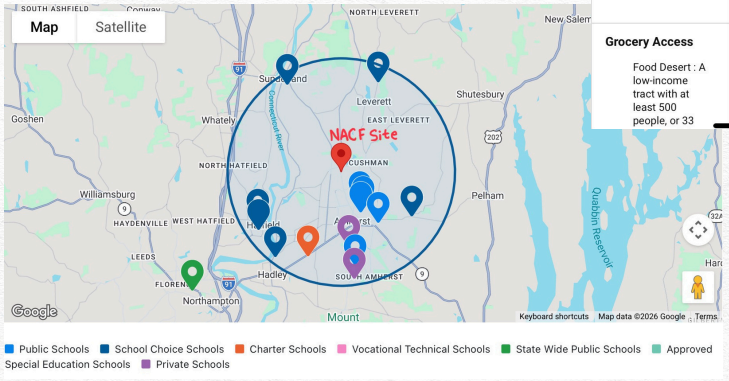
North Amherst is located in a food desert, meaning that residents in this area are more than 1 mile from a grocery store in areas designated as urban. NACF is situated across the street from higher density multifamily residential buildings and closely surrounded by single family homes on other sides. This dense residential area has the opportunity to benefit from and engage with the site as a local food source in addition to recreation and educational opportunities.

The NACF is located within 5 miles of 27 schools which is a great opportunity for collaborative educational programs.

Due to increasingly variable weather patterns in the region many farms have experienced intense flooding in recent years. While the NACF site is not directly in the path of predicted flood zones, the climate crisis poses a regional risk for greater variability of drought/flooding. Wetlands on the site have the potential to mitigate these risks and increase resilience in a changing climate.







GOALS

NACF is a haven for plants, animals, and natural systems.

- Wetland restoration creates habitat, stabilizes soil, and sequesters carbon.
- Vegetation buffers protect the creek
- New tree and perennial plantings create habitat and facilitate wildlife movement.



NACF inspires and educates current and future generations to care for this land and each other.

- NACF supports and provides land for incubator farms to establish themselves
- Educational programs engage participants of all ages with the farm, agriculture, and local ecology
- The farm is a free, accessible, landscape for people to relax in nature



NACF provides fresh fruits, vegetables, and animal products to surrounding communities.

- The community garden and educational programs grow food for donation
- Incubator farms sell their food at the farm store and local farmer's markets

SWOT ANALYSIS

Strengths

The farm is in close proximity to different communities, such as those from the neighborhoods, plazas, and schools, meaning there are plenty of people we can easily reach out to outside of the farm.
The location is also in proximity of two bus lines which make it convenient for those who do not have a car as a means of transportation, such as the large student population in the area. Lastly, the location allows for great views on the farm which makes the farm an aesthetic location to visit.
The farm has existing equipment and structures that seem to be usable such as the greenhouses, coolers, and the farmstand. Much of the infrastructures are in great or repairable conditions, meaning less money would have to be invested in buying new equipments.The wood chip burner in particular is a great resource the farm already has, with the benefit of providing the farm with energy in a sustainable manner by reducing emissions.
The swales on the land are helpful to us as it acts as a natural stormwater catcher, reducing floods. The swale additionally hosts wildlife thus increasing biodiversity, maintaining resilience on the land, which addresses our goal to fight climate change.

Weaknesses

We have found during our visit that there was a lack of distinction between the private and public spaces on the farm. Without this distinction, farming operations could risk being disturbed. In other cases, people may feel less inclined to visit due to the lack of direction. The path itself on the farm could play part in the lack of distinction, with wet soils that are difficult to walk on.







Opportunities

Taking advantage of the digital era we live in and following trends such as the use of social media will give us the opportunity to reach a larger audience, especially those of the younger demographic who reside in Amherst.
The urban development of Amherst indicates the need for recreational areas allowing people to stay in touch with nature. Simple additions like picnic benches and designated viewing spots will be beneficial to the farm by providing the community a place to easily relax.
Designated rest spots would be especially helpful to college students who want a change in environment from their campus and be in nature.

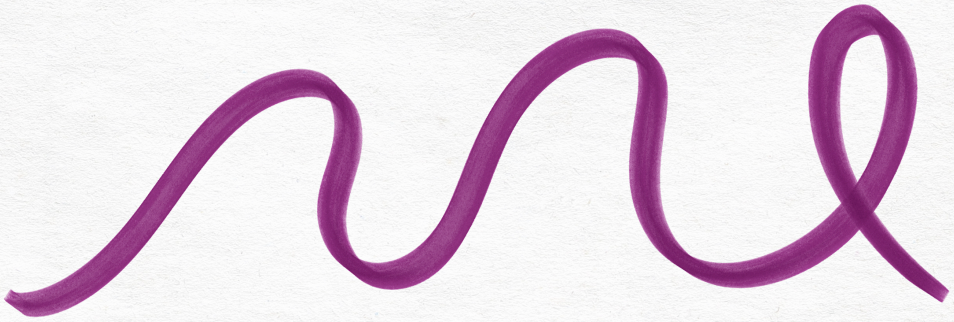
There is a demand for produce in Amherst as a town considered a food desert. As noted previously, there is a dense urban population in Amherst and only a few grocery stores in the area, even less that sell fresh produce. The farm would be an accessible place to purchase fresh food, helping to relieve food insecurity.

There are many students in the five colleges who could use volunteer or field experience and would benefit from learning from the farm. The farm could be an opportunity to support first generation farmers in Amherst as another educational resource.

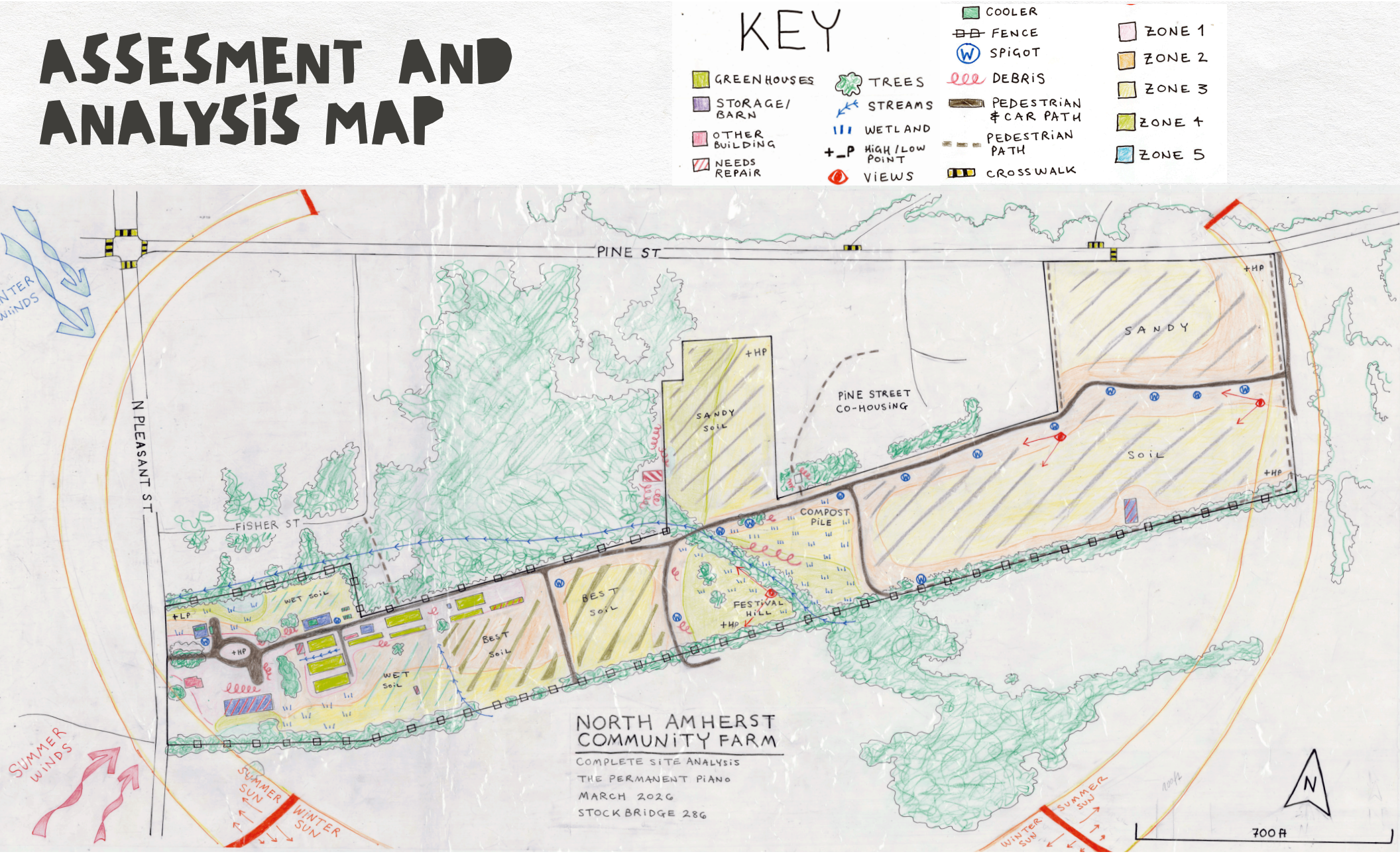
Threats

A threat we identified was the economic standpoint of both the town and the farm itself. Steadily increasing inflation has been making the cost of living difficult for many people to maintain, meaning that produce will have to be priced accordingly to pay for farmers, relieve existing debt, and continue to care for the land. This price may not be preferable or appealing to the large student population who may not have the means to prioritize quality over cost.
In addition, the lack of funding for sustainable agriculture due to recent budget cuts will make sustainable agriculture difficult to keep up with, which would interfere with our goal in reducing climate impact.

A goal that was mentioned was in building a stronger community. Amherst as a college town has many short term residents which creates difficulties in forming new, solid communities. During break times during the winter and summer, the farm may also find a decrease in sales as students go out of town for vacation.



ASSESMENT AND ANALYSIS MAP



CASE STUDY

THE FARM SCHOOL

AN ANALYSIS FOR THE NORTH AMHERST COMMUNITY FARM



Mission and Operations:

The Farm School is based in Athol, Massachusetts and is designated as a 501(c)(3) non-profit organization. Their mission is to connect with people with the land and educate the next generation of farmers through academic programs and hands-on experience in agriculture. Their primary focus is children's programming, however some of their long-term goals are to build a relationship with the Nipmuc people, address the pressures of climate change and support the ecosystem, address racial justice and land-based inequities. The Farm School is operated by a board of directors including a CEO, President, Vice President, Treasurer, as well as Clerks. Their staff is made up of 52 employees and 13 volunteers and include the administrative team, and instructors with specialized programming expertise.

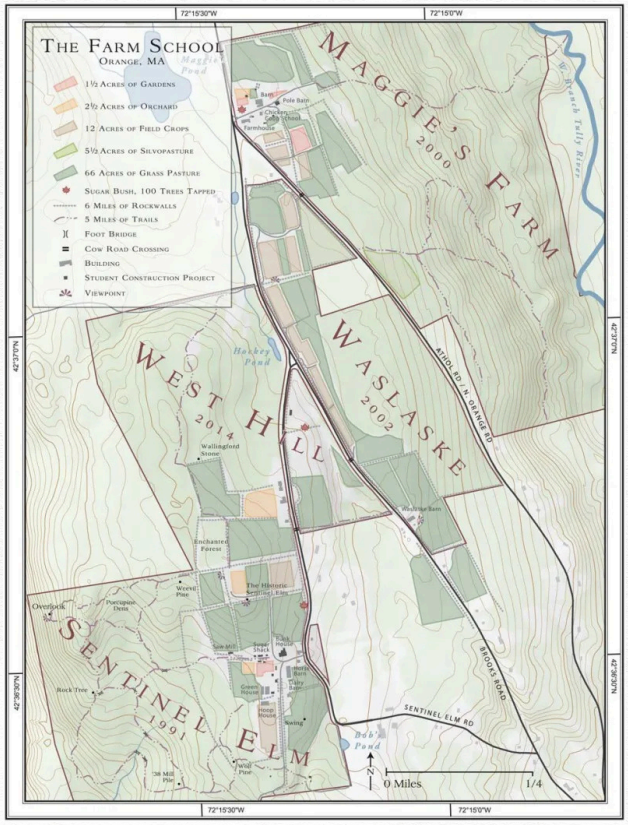
They operate on an annual budget that remains earned each year. To maintain additional financial stability they also have an endowment known as the Foundation. The Foundation allowed them to maintain their high level priorities through two main sources of funding; innovation funding and stability funding. Innovation funding allows them to pursue new endeavors that will eventually become self sufficient. While the stability funding can temporarily make up budget shortfalls



The Farm School has sugar maples for tapping, fruit tree orchards, and a woodlot. The livestock includes milking cows, beef cows, oxen, pigs, chickens, and goats. Vegetable production happens in the gardens in the Sentinel Elm portion of the site.

THE LAND!

The Farm School is made up of lands from Sentinel Elm Farm, Waslaske Farm, a property in the town Rowe, and a farm formerly known as Maggie's Farm which has been reoccupied by the Nipmuc community. The lands combined totals to 400 acres, with 130 acres(40 acres of open land and 90 acres of wood) utilized for farm production in the student programs.



EDUCATION

Program for Visiting Schools (PVS)

In the PVS, school groups of up to 40 schoolchildren from around the state stay overnight at The Farm School for three days. The children help on the farm, build community, and "experience first hand what it means to be stewards of the earth."

Schools are charged tuition on a sliding scale based on the percentage of students enrolled in a federally funded school lunch program.

Summer Overnight Camp

The Farm School runs 5- or 11-day overnight camp sessions for youth between the ages of 10 and 16. Campers work on the farm, do activities, cook, play games, and do a "farm course" on a topic chosen by the campers.

Tuition is on a sliding scale based on household income. Additional financial aid is available, which comes from donations.

Chicken Coop Middle School

Chicken Coop Middle School teaches students in 7th and 8th grade on traditional school subjects as well as "farm life" and land stewardship curriculum. Students work with farmers on seasonal projects and are involved in day-to-day farm operations.

Additionally, The Farm School offered a Learn to Farm program for adults for 16 years. The farm discontinued that program and is currently shifting the resources into two yearlong vegetable grower apprenticeship positions.

SHARING

During the pandemic, The Farm School “quickly mobilized and leaned into our deeply held relationships with visiting school teachers in a new way in order to identify families that were facing increased food insecurity amid COVID-19 and get the food we produce to them.” They partner with Quabbin Harvest, a local grocery co-op, to sell their products and distribute it for donation.

Since then, the organization has shifted its focus to donating food rather than selling food. Food is donated to local seniors, families and communities of schoolchildren in the PVS, and communities around the farm. The farm is working to center food production with the PVS program.

The Farm School used to have large vegetable and meat CSA participation but is moving away from CSA shares as an income source. Now, most of the farm operations are covered by donations. Program tuition is also an income source, and it is possible that federal, state, and nonprofit grants are as well.



Nipmuc Land Project

Peqoig Farm



The Farm School aims to engage with land back initiatives by returning unseated land to indigenous communities. This process bagan back in 2022, when stewardship was returned to the Nipmuc. In the summer of 2025, they officially transferred what was once “Maggies Farm”, 181 acres of farmland, to the Nipmuc tribe at no-cost. It is now held communally with the goal of supporting stewardship and reacquaintance with the land.



The farm is only open to the Nipmuc community, not the border community. The Peqoig Farm aims to advance “Nipmuc food sovereignty by building a healthy, robust farm ecosystem that provides food, medicine, land based education, and cultural connection for our tribal community.” They offer food with a pay what you can model that is supported by their meat CSA.



Permaculture Ethics and Principles

Permaculture Ethics

Permaculture ethics consists of the concepts, People Care, Earth Care, and Fair Share. People Care aims to help the community by fulfilling general human needs while Earth Care aims to support the resilience of the ecosystem. Finally, Fair Share proposes an equal distribution of resources in which people only take no more than what they require. These ethics are reflected throughout the way in which The Farm School operates, with their constant efforts to be mindful of the community and the land they are operating on.

Principle #2: “Catch and store energy”

The Farm School is in the process of reducing their environmental impact this year, helping to conserve resources on the land through attention to soil health, erosion mitigation, and forest management, along with considerations for carbon sequestration, local energy production and regenerative agriculture. Additionally, the farm conserves human energy through their schooling program, using produce grown from it for the CSA, while simultaneously providing agricultural education for the children. The farm yet again ethics of permaculture by aiding the people and the environment through conservation or fair distribution of energy.

CHILDREN'S PROGRAMMING AT NACF

How would NACF have to adapt this to work with their specific site and organization?
NACF is within a 15-minute drive of fourteen elementary, middle, and high schools. Its location could make it a great option for youth and parents seeking agricultural and environmental education. A diversity of ages live close by, so NACF can offer multi- and inter-generational programming.
We suggest that NACF start small, doing one-off workshops, like school day trips or weekend workshops, and transitioning to regular and more complex programming like after school programs, apprenticeships, camps, and skill-training.
he Farm School has a sliding tuition scale for PVS, Chicken Coop School, and its summer camp. Donations supplement operations. NACF could do the same, as it has a strong donor base and seeks to provide access to land and agriculture for people with limited access and means.

Example ideas for youth programming at NACF:

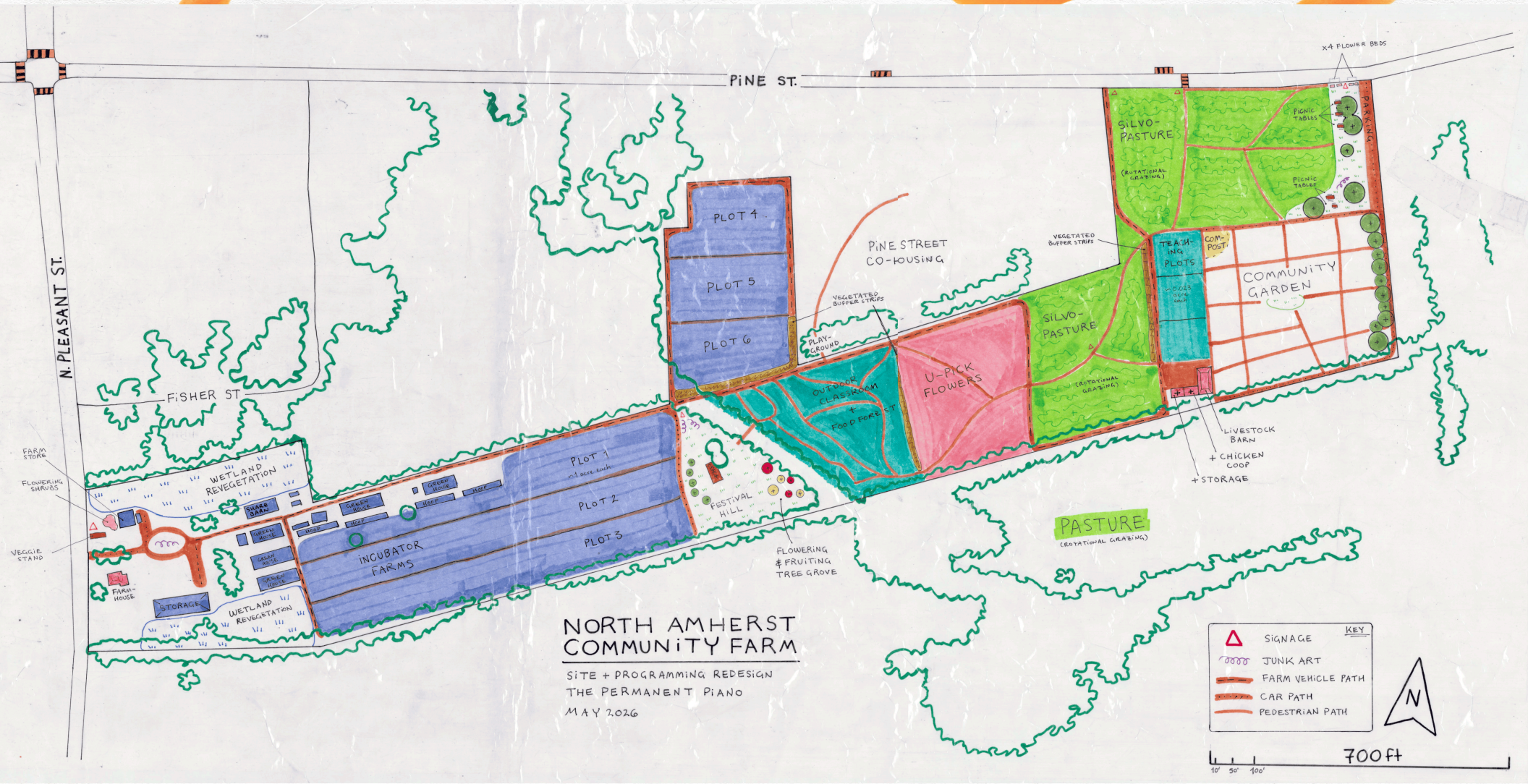
After-school programs

- **"Harvest Week"**
  - Participants harvest vegetables, fruit and nuts in the afternoon during the fall until the harvest season is over
  - The cohort could change week to week (5-day program) or stay the same (program lasting several weeks)
  - Autumn
  - Vegetables, fruit, nuts
- "**Egg to Chicken"**
  - Participants raise chicks from eggs to juveniles, learning about animal development and care
  - 4-6 week program
  - Late winter-summer

Farm Skill Training

- Pre-teen and teen training
- Many youth in the Pioneer Valley grow up on farms and will take over the farm from their family
- NACF connects with local middle and high schools to provide training in farm skills and management for interested youth
- NACF workshops count as credit for high school students

DESIGN CONCEPT MAP



NORTH AMHERST COMMUNITY FARM

SITE + PROGRAMMING REDESIGN
THE PERMANENT PIANO
MAY 2026

FARM POSITIONS

Hiring a variety of positions will allow the farm to run more smoothly and help the farm engage more fully with the broader community. Their positions could be funded by community garden plot fees, summer camps, and the u-pick fields.

Program and Event Coordinator

The Program and Event Coordinator duties would include:

- Running educational programing
- Scheduling events for community spaces
- Managing the farm interns

Farm Manager

The Farm Manager position would perform these main duties and help with overall farm function:

- Daily care of livestock
- Managing livestock rotations
- Helping manage the incubator farms

Community Garden Coordinator

The Community Garden Coordinator runs garden operations, advises and instructs gardeners, and coordinates with education staff on the teaching plots

Farm Interns

Farm interns would be hired seasonally (spring, summer, and fall positions) to help run educational programing and other farm labor.

FOOD FOREST

Basics of a Food Forest

Food forests are complex ecological systems that aim to combine native ecosystems and agriculture. They typically involve multiple layers of production, from the canopy down to the ground cover. The diversity of this kind of system creates greater stability, which is key in our rapidly changing climate.

Context of the NACF

Within the greater context of the NACF site, a community based space with a focus on education is a great way to build community and help develop sustained interest in the farm. Kids programing in particular provides an easy way to give back to the community. Additionally, the food forest will produce a variety of foods that can be given away or sold at the farm store.

Educational Programing

The food forest serves as a space for schools to come and learn about local agroforestry. Additionally, afterschool programs and summer day camps involve kids from surrounding neighborhood to explore hands on, about topics in ecology, agriculture, environmental science, and natural dyeing.
Programing is run by farm interns who work under the farm manager.

Outdoor Classroom

The outdoor classroom includes a log and bench circle with enough seating for about 30 people. Additionally there are three large picnic tables interspersed throughout the space that are great for smaller workshops or group picnics.

Additional Features

Placing the food forest east of Festival Hill and alongside the stream will broaden the wildlife corridor that cuts through the farm, while also maintaining the space for human and agricultural purposes.
Due to its central location and higher usage the food forest will also include a composting toilet and small washstation that can also be used for workshops.

Food Forest Design

Proposed Plants

The plants selected for the food forest were chosen for a variety of reasons including climate resilience, food production, shade, wildlife needs, natural dyes, and suitability for the soils. (Additional plants are included in the site design)

Pawpaw Trees:

- Reach maturity at ~5 years
- Grow well in wet areas
- Produce edible fruit
- Thrive further south (climate resilient)

Goldenrod and Purple Asters:

- Thrive together in open areas and at the edge of fields
- Key pollinator species
- Used for natural dying

Wood Sorrel and White Clover:

- Resilient ground cover in areas with high foot traffic

Canada Wild Ginger:

- Able to grow under oak trees
- Edible

Staghorn Sumac:

- Grows alongside streams
- Edible
- Used for natural dying

White Oak:

- Live for hundreds of years
- Lower tannin quantities than other oaks (better for eating and preferred by wildlife)
- Excellent shade trees



COMMUNITY GARDEN

Community Garden Plots

- Gardeners can rent a 100 or 200 sq foot plot.
- A portion of the plots are raised beds for those with mobility impairments and/or mobility aids.
- Gardeners pay a yearly fee for their plot, adjusted on a sliding scale based on financial need.
- Gardeners volunteer a minimum of 8 hours a year in the nearby teaching plots, volunteer plots, touch-and-smell plot, or meeting circle beds.
- Food in the teaching and volunteer plots is donated.
- The touch-and-smell plot contains plants with strong fragrances and interesting textures for visually-impaired visitors to enjoy, especially children.







Circulation

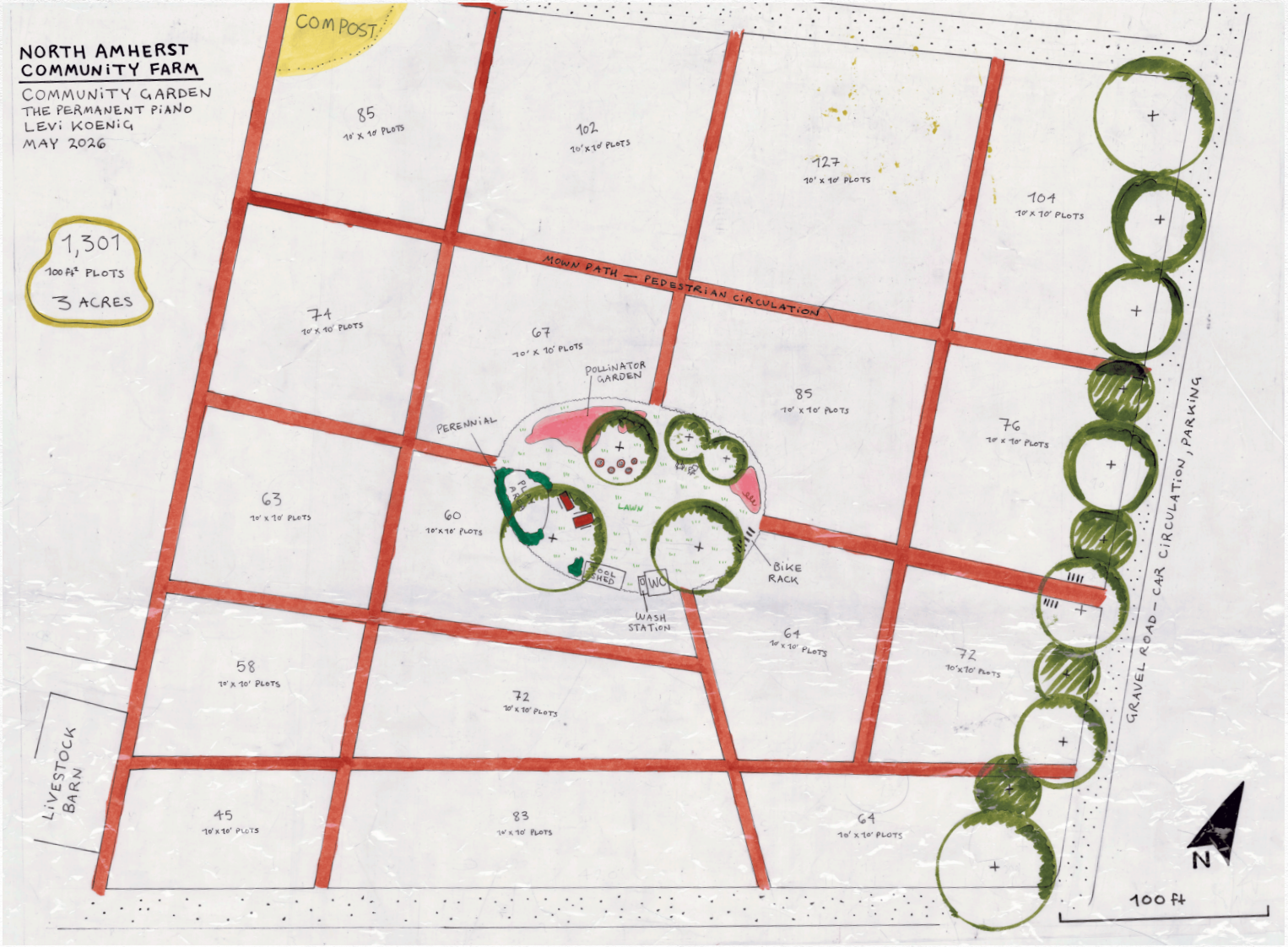
- Cars park on the side of the 16’ wide gravel paths. Additional parking in the 30’ wide lot on the NE edge of the farm.
- Bike racks are located by the Meeting Circle and on the gravel paths.
- The garden has a grid of 6’ wide mown paths and smaller mown paths within those “blocks”.
- A decorated, inviting gravel entrance leads visitors to the Meeting Circle.



Meeting Circle

The central Meeting Circle is the heart of the garden. Here visitors and gardeners relax, chat, and share knowledge in the open lawn, seating, and picnic tables. Pollinator garden beds bring beauty and attract beneficial insects and birds. There is a composting toilet outhouse, wash station, and a communal tool shed. Shade trees on the south edge cool the space and provide animal habitat while minimally blocking sun on nearby plots. “Junk art” is a reminder of agricultural history on the site that ties the space aesthetically to the rest of the farm.

COMMUNITY GARDEN DESIGN



Entrances and Circulation

The two main entrances of the farm(located West and Northeast), are designed with the focus of adding color to the farm, creating a welcoming atmosphere and eye-catching displays for visitors.

West Entrance

- shaded cart of vegetables and fruits harvested from the plant nurseries, giving people a glimpse of what is being grown and sold in the farm. This will be placed directly where people enter, on the left of the start of the walking path.
- Next to the cart will be a cork bulletin board holding posters of events on the farm as well as around town, encouraging community bonding activities.
- In the West entrance, there are existing shrubs by the farm store. Maintaining and planting additional shrubs and flowers within the open spaces, and edging the plants with stones will make the area appear neat while adding liveliness to the entrance. Shrubs like smokebush, sweet pepperbush, and flowers such as daylilies and salvias add interesting shapes and colors to the bed.

Northeast Entrance

- Large sign of the North Amherst Community Farm that can be easily read by people passing in cars.
- 2x8 ft raised flower beds, two on each side of the entrance. Using a raised bed will not only relieve maintenance but help to prevent possible runoff from road salt into the flower soils. The flower chosen will have varieties of colors and will invite pollinators to increase biodiversity. Flowers such as camellias, zinnias, and marigolds are known to be bright in colors and are favored by pollinators.
- As people enter, on the right side will be three picnic tables for a relaxing sitting area where they can watch the sheep grazing the field. On the left will be trees offering light shading. Nearing further towards the community farm where the best view of the farm is, there will be two more picnic tables.

Entrances and Circulation





- Walking paths of the farm will be in the form of a “zig-zag”(refer to map on pg. 14) to offer different perspectives showing off the entirety of the farm space and prevent congestion in traveling.
- As many of the paths are indistinguishable and too wet to tread or drive on, gravel will be laid on public paths up to festival hill. The West side of the farm will not have gravel laid as it will be primarily used by farmers who will use equipment such as tractors which do not require compact paths.
- Paths will have grass buffer strips to prevent erosion.
- Along the walking path on a corner, there will be colorful signage directing people to the different areas of the farm such as the U-Pick flower field, festival hill, and the farm store. There will also be small wooden arrow signs indicating the directions of the walking path.

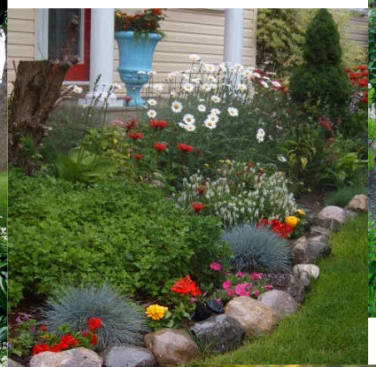


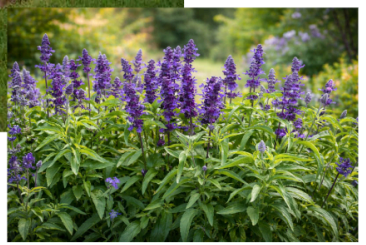
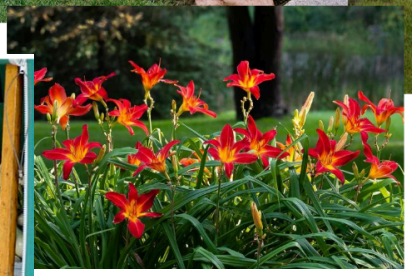


- Unused equipment and materials that can be salvaged will be used around the farm by being repurposed as junk arts. A junk art will be placed in the northeast entrance by the two picnic tables near the edge of the community farm, designating the area as a scenic, photo-taking spot. Another junk art will be placed in the west entrance by the farm store on the open space inside the circular driving path. 2-3 more junk arts will additionally be spread throughout the farm, decorating the walking paths.

Entrances Mood Board













FESTIVAL HILL

Wedding Venue

The seating will be pulled off the stage and arranged in rows under new shaded area. While shade trees are first growing, tents can be bought at the expense of the client and be brought in to be set up over the seating area. Mixture of Pear and Peach trees will be planted behind alter/stage so that when blooming season comes a variety of white and pink flowers will be present in the background of the venue.

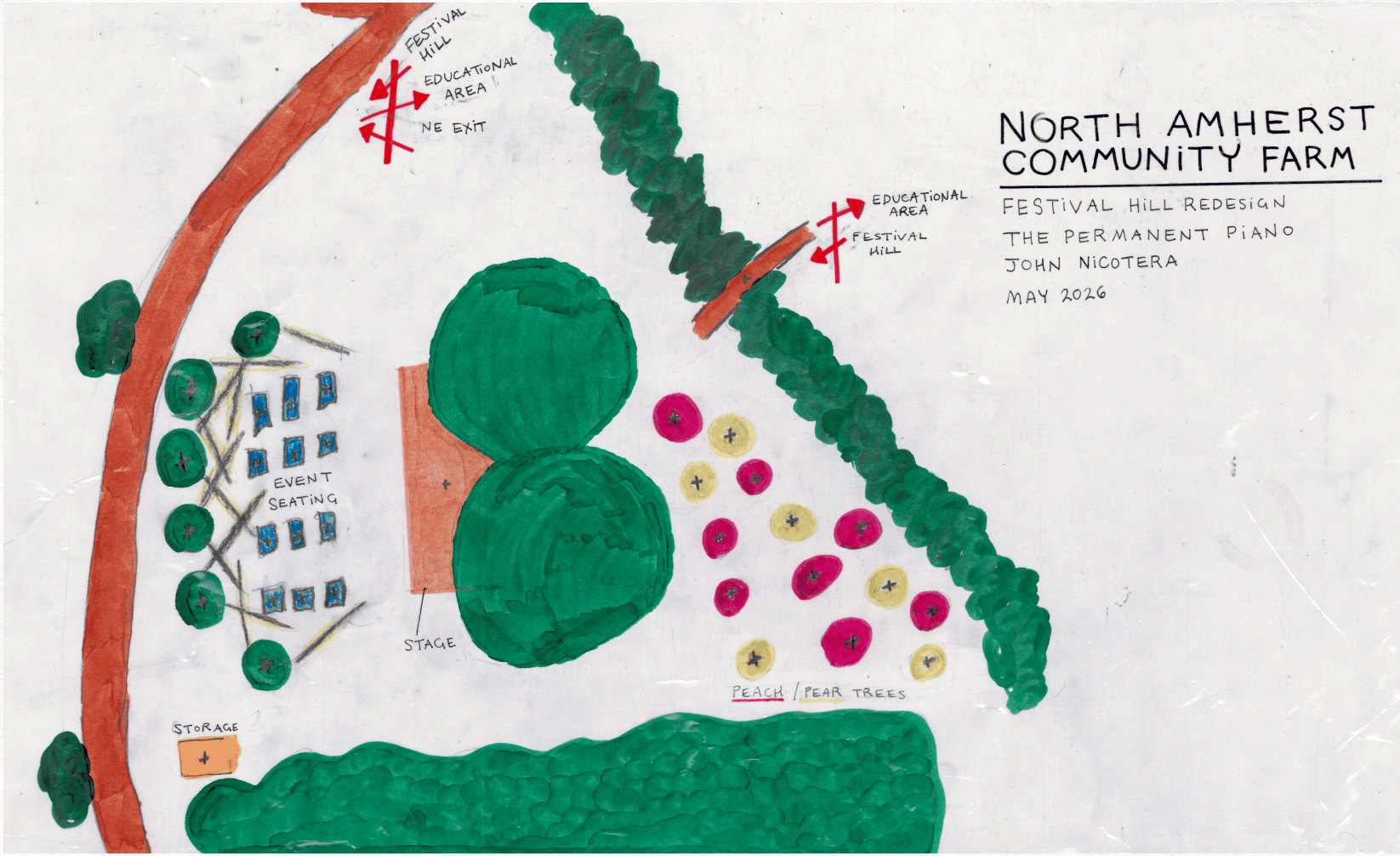
Concerts and Live Music

The seating arrangement will be moved away from stage and surrounding area so that an open field in front of the stage to fit as many people as possible without crowd crush, implementing a light system that overhangs the stage would benefit the atmosphere as well as sound systems; speakers and mixers. Small storage area located outside of the venue area between the path and the shaded area to accommodate seats as well as store lighting.

Educational Space

The stage will be arranged with benches/seats on top of the stage to accommodate a smaller more intimate learning environment where a close circle can be formed for seminars or lessons that can educate the future generation of farmers in the North Amherst area. Additionally this space can be used for programs running in the community garden and food forest.

FESTIVAL HILL DESIGN



PHASE DESIGN AND IMPLEMENTATION

Food Forest

The space the food forest will be located will need to be cleared of excess materials and invasive species. Early on incorporation of paths, and the outdoor classroom will increase engagement.

The food forest can be planted in stages with certain species (i.e. pawpaws, mulberries, flowers, ground cover, and fruiting bushes) growing quickly in the first couple of years. Followed by slower growing ones like the oaks.

As the space develops, incorporating additional infrastructure such as the bathroom and picnic areas, will bring the space into its final stage.

Circulation

Buffer strips will need to be established on the paths, followed by the graveling process which includes stripping of the top soil and compaction of the soil.

The buffer strips may take 1 to 2 years to establish. The gravel path will need yearly maintenance of possible grading and weeding.

Path signage and decorations will follow the pace at which each public area is established.

PHASE DESIGN AND IMPLEMENTATION

Festival Hill

Stage needs to be built, as well as pear and peach trees planted as soon as possible. Storage shed for lighting, equipment, seating, and audio built behind new shaded area; which will be American linden trees that will be planted before anything is built on the hill to get the shaded area progress on track as fast as possible. Clients will be able to book the venue for their wedding and seating will be distributed underneath shade, floral designs on the trees and stage. For concerts lighting and stage equipment will be set up from storage and seating will be cleared to accommodate more people. Regarding the smaller educational area seats will be set in a ring and lectures will be held in a seminar format

Community Garden

Year 1: Advertise community garden plots for lease. Plant trees in meeting circle and on eastern edge. Construct tool shed and source tools. Connect irrigation to area. Mow out pedestrian paths and grade car paths. Begin construction on composting toilet (or, temporarily place porta-potties near car path and arrange their servicing). Sheet mulch land to provide nutrients and prevent soil erosion. Hire Community Garden Coordinator.

Year 2: Dig garden plots for registered gardeners, volunteer work plots, and future plots. Construct raised beds. Install bike racks and signage. Garden Coordinator and gardeners plan meeting circle plant palette. Expand gardener base. Prune trees for future structure and health. Maintain pedestrian paths by mowing.

Years 3-10: Composting toilet should be operational by Year 4. Create new plots/raised beds as needed with new gardeners. Receive feedback from gardeners, neighbors, visitors, and the land and adapt practices accordingly. Create programming and educational and service opportunities for the garden. Prune trees for desired outcomes every 5 years.



CREATED FOR PERMACULTURE DESIGN AND PRACTICE AT UMASS IN THE SPRING OF 2026