

NACF PERMACULTURE DESIGN PLAN



BY THE STINGRAYS: RACHEL, LILLY, LINCOLN, JACOB, THEO



NACF MISSION



STRENGTHENING THE COMMUNITY

Beautify the site and host variety of events to welcome people to engage with the farm in a meaningful way that keeps them invested!

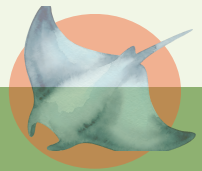
GROWING FOOD

Increase food production to aid in feeding the community throughout all seasons.



FINANCIAL SOLVENCY

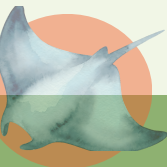
Reach financial stability to secure the future of the farm.



INTERVIEW RECAP

“Where is the point of equilibrium between financial stability and community involvement?”

- Food production is king! NACF should help feed the community through all seasons
- Farm was left in somewhat unpleasant shape, aesthetic beautification is a significant need
- There is a desire to form stronger bonds with UMass institutions and students
- Conditions surrounding the APR are somewhat unclear and difficult to navigate
- COVID brought a serious jump in sales, proving NACF is integral to Amherst residents



SITE CONTEXT

The population of Amherst changes constantly because of the local Five College community, but there are several low-income and POC groups in the area. Therefore, NACF needs to become well-known in Amherst to continue its legacy not just with a singular set of people, but with newcomers as well. Furthermore, despite being in an area intimately focused on agriculture, most of Amherst is a food desert, with a severe need for fresh and accessible produce. These factors show that NACF has a niche it can readily fill to benefit the community.

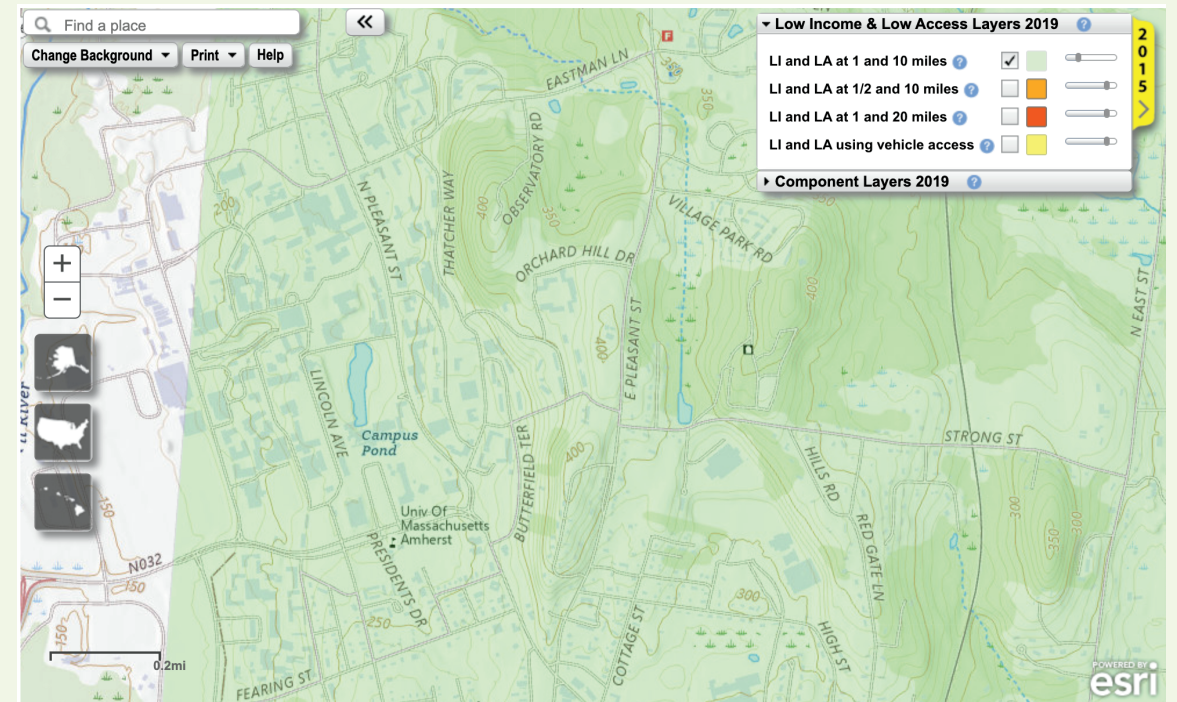
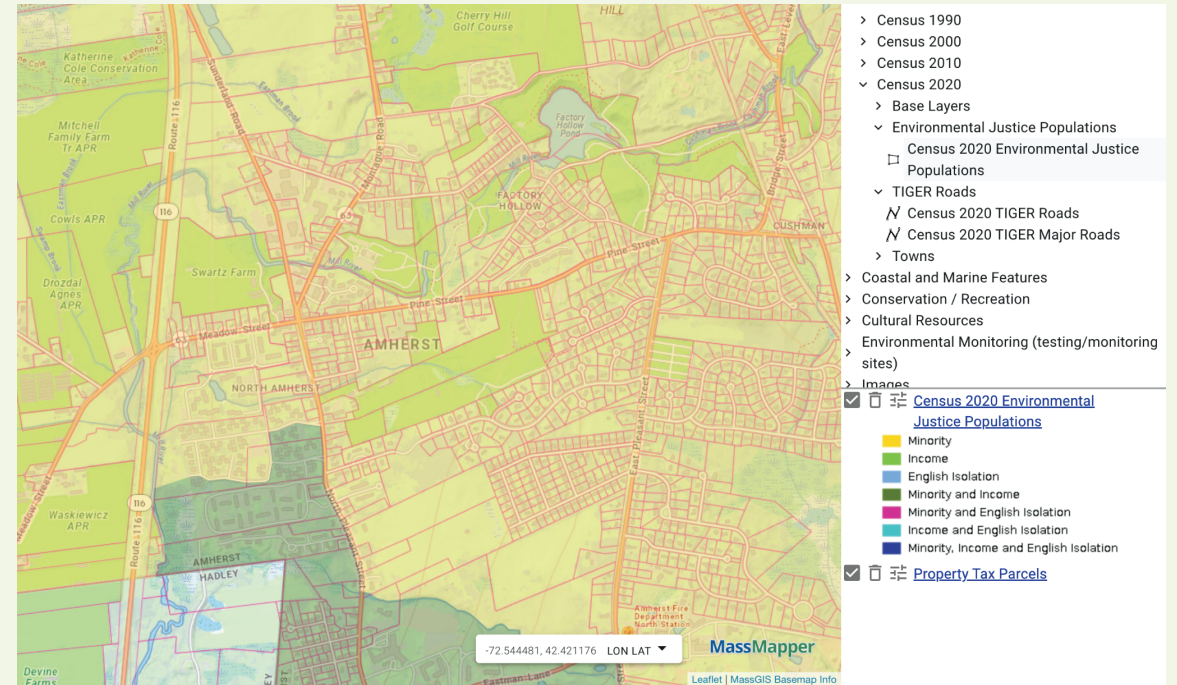
SWOT

Weaknesses and Threats:

- Poor site circulation
- Lack of signage
- Lack of involvement from younger people

Strengths and Opportunities:

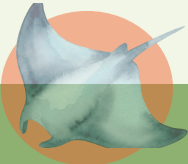
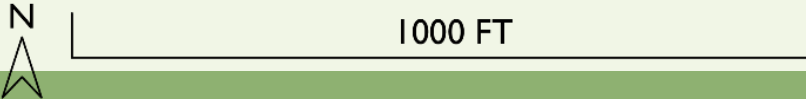
- Established infrastructure/irrigation
- Proximity to people
- 200+ previous investors
- Agri-tourism



ANALYSIS MAP



- KEY:
- PATH
 - STREAM
 - WETLANDS
 - BEST SOIL
 - TREES
 - GREEN HOUSE
 - BARN
 - MISC BUILDING
 - DENSE TREES
 - RESIDENTIAL
 - NEEDS CLEANING



ZONES OF USE



SITE ANALYSIS

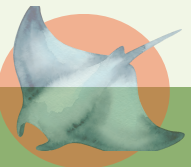
There is a coinciding of areas of disrepair and the areas most desired for the community to use (e.g. Festival Hill). Most of the site is in full sun, which will be beneficial for producing food. However, the edges of the site are shaded trees, which will provide natural shade to cover circulation paths around the farm.

Wet areas are also a noticeable problem, specifically on the walking paths and the western areas of the farm.



OPPORTUNITIES!

- Agri-tourism
- Advertising to transient population through internships and CSA/U-pick
- Collaboration with other nearby farms
- Value-added events - music, classes, food, communal space
- Community Gardens
- Recreation spaces
- Greater Bio-Diversity

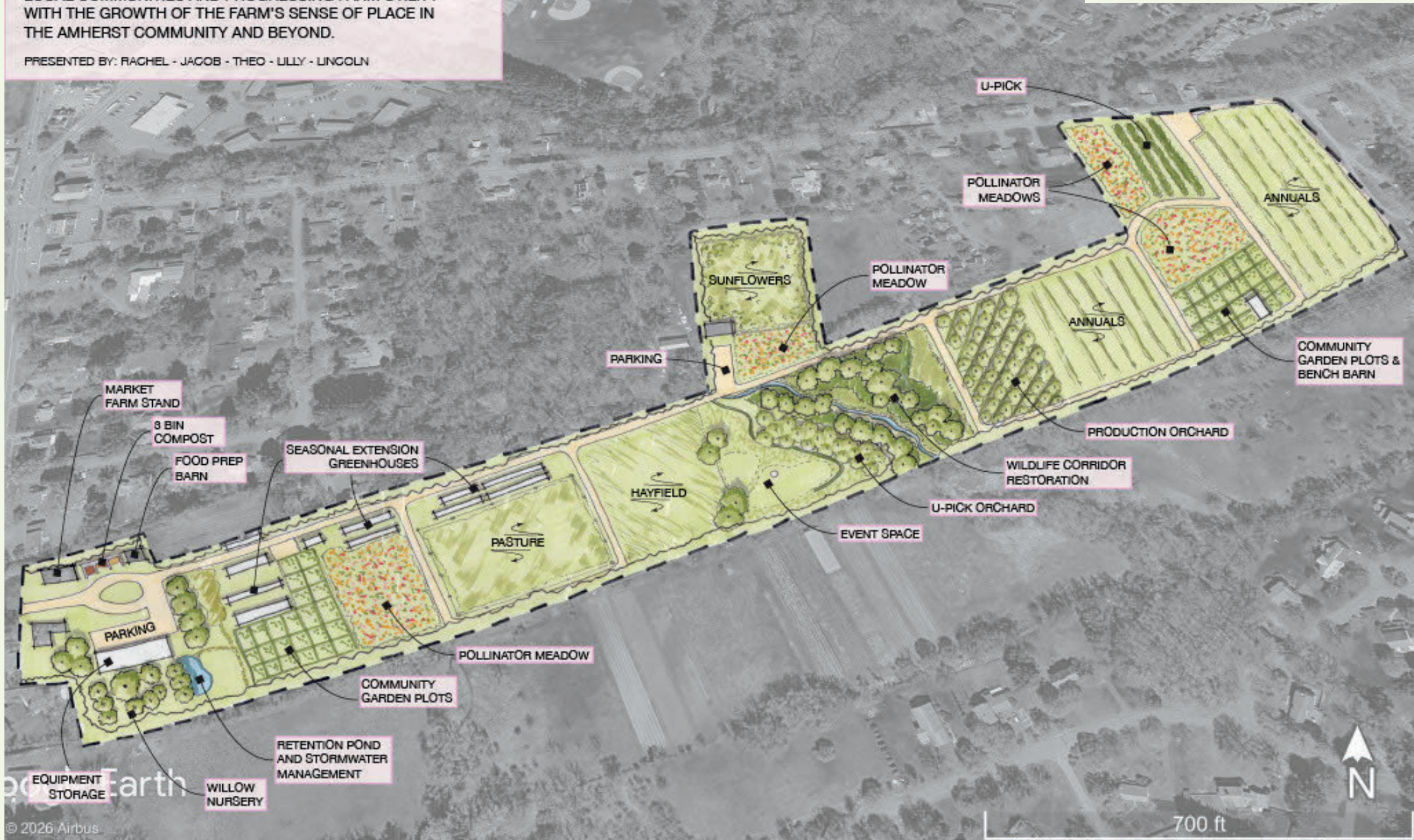


NACF 100 YR VISION AND CONCEPT

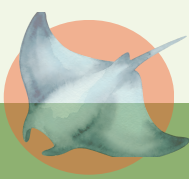
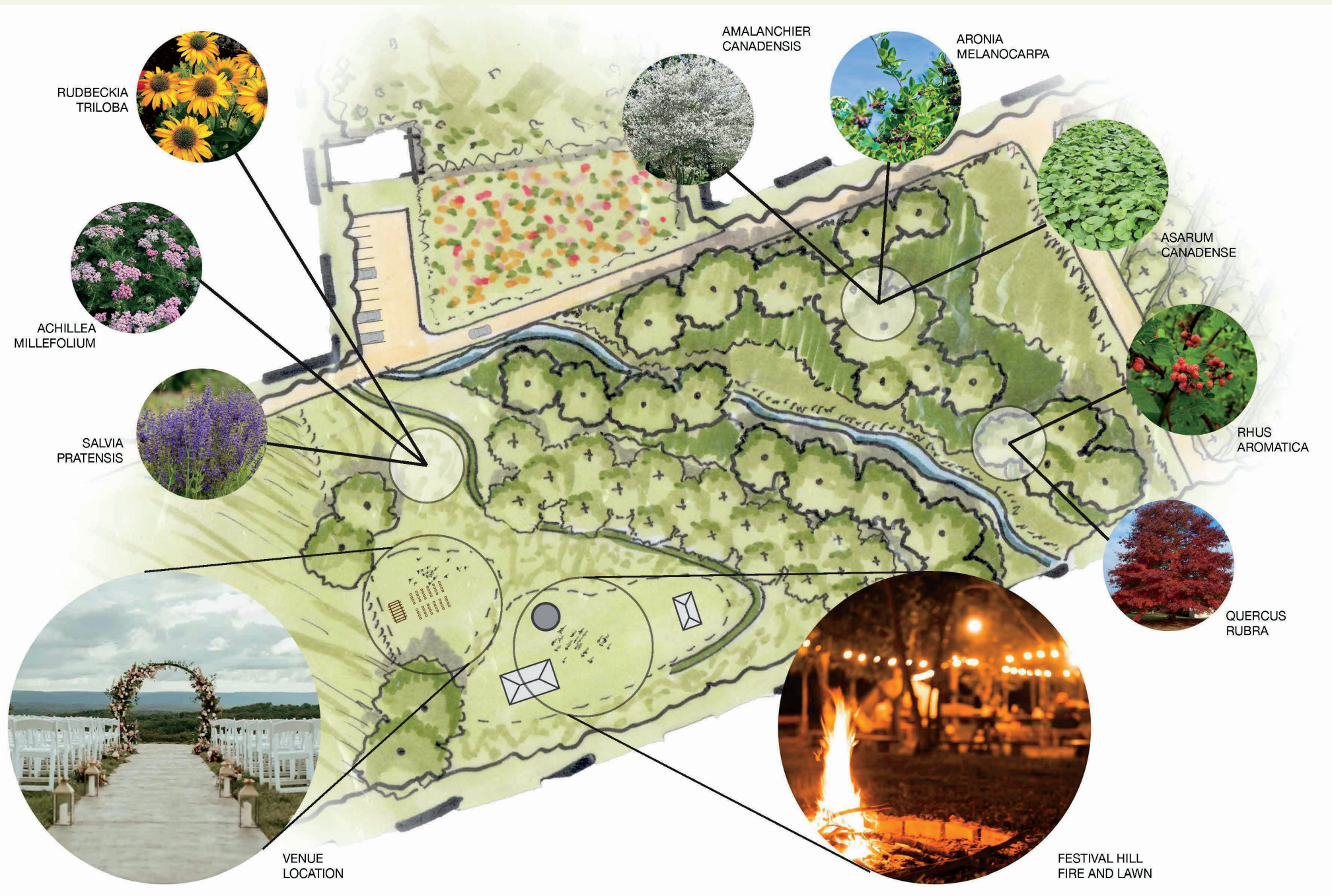
A NEW ENGLAND FARM THAT EMBODIES PRINCIPLES OF LONGEVITY AND CONNECTION BY EMPOWERING LOCAL COMMUNITIES AND PROGRESSING FARM UTILITY WITH THE GROWTH OF THE FARM'S SENSE OF PLACE IN THE AMHERST COMMUNITY AND BEYOND.

PRESENTED BY: RACHEL - JACOB - THEO - LILLY - LINGOLN

MASTER PLAN



DESIGN SPECIFICS: FESTIVAL HILL



DESIGN SPECIFICS: U-PICK

U-PICK ON PINE ST.

It could be run digitally, with pre-sale tickets based on crop availability. Limited parking can be managed with 1-hr u-pick windows

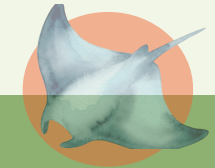
Potential Crops:

- Cut flowers
- Strawberries, blackberries, grapes
- Cherry tomatoes, cucumbers, peas, basil



EXPANSION POTENTIAL

In the field bordering the Pine St. cohousing, sunflowers could be planted as a beautiful soil-building crop which U-Pick customers could enjoy.



DESIGN SPECIFICS: THE ORCHARD

The Orchard on Festival Hill is a great location to initiate a pickable food forest. A food forest is designed to maximize multiple canopy layers and a level of diversity only matched by a real forest. We calculated a total of 250 trees per acre with a mix of herbaceous edible plants filling in the gaps. Each canopy will include suggested plants with labels that acknowledge their strengths.

CANOPY

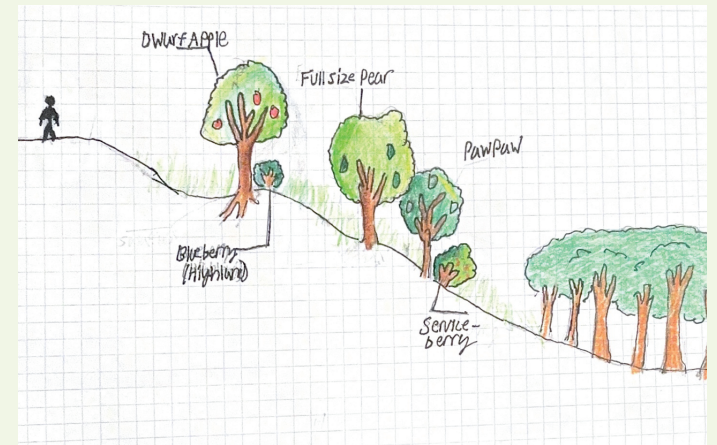
Apple					
Pear					
Persimmon					
Quince					
Nannyberry					
Quince					
Walnut					
Peach					
Pawpaw					

HERBACEOUS LAYER

Comfrey							
Serviceberry							
Goumi							
Elderberry							
Highbush Blueberry							

ORCHARD ORIENTATION

Along contour on Festival hill
North/South in the Production



- Wet soil
- Moist soil
- Dry soil

- Nectary
- Wildlife
- Pest confuser

- Sunny
- Partial shade
- Shade

- Nitrogen Fixer
- Self fertile

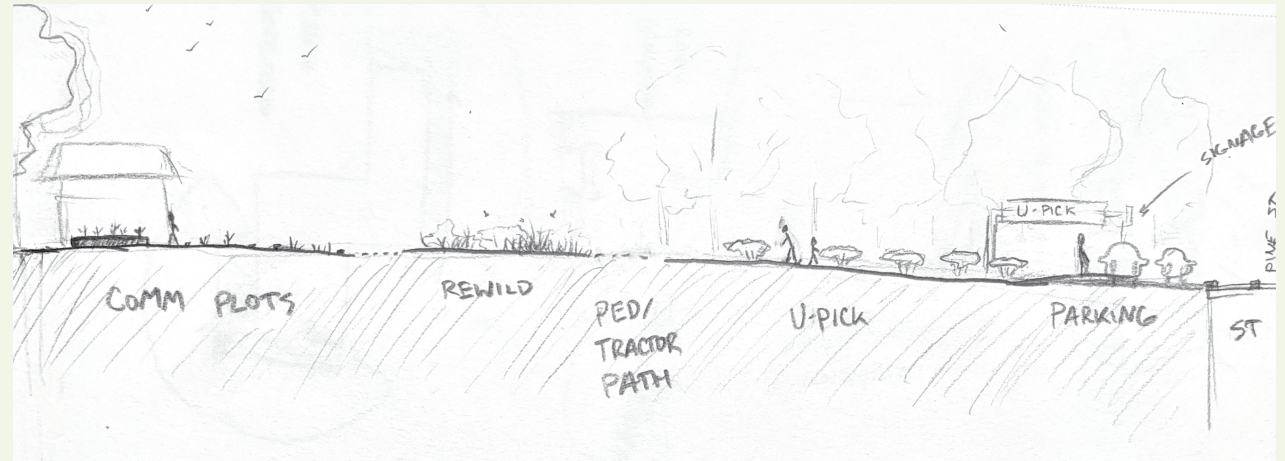
- High pH
- Medium pH
- Low pH



DESIGN SPECIFICS: COMMUNITY GARDENS



Community garden plots can be expanded with interest. The plots are designed to be 20'x20', with the ones nearest the barn being raised to allow easier access for older or disabled folks. The barn can be repaired into a communal tool storage and wash area.



The pollinator plantings above can include native species such as:

- Butterfly weed
- Coneflowers
- Queen Anne's lace
- Yarrow
- Clover
- Low-profile berry bushes

These will not only provide habitat and food sources for pollinators, but will attract them to the gardens to pollinate the communities crops.



DESIGN SPECIFICS: THE POND

HOW?

- Geosynthetic clay liner
- Small excavator
- Make use of the hydrology features behind the big barn
- Direct flow from the fields above towards pond with seasonal drainage



WHY?

- Provide habitat for diverse wildlife
- Improve water management
- Create a recreation area near the weeping willow tree
- Terraces create habitat for more plant and animals



1-2 YEAR PLAN

Invite community members to engage with farm in new ways

- Establish community garden areas, and begin to improve amenities for plot tenders.
- Improve and expand recreation areas, signage, parking, and
- Rebuild wooden stage on festival hill

Increase bio-diversity on the farm

- Plant edible, medicinal, and biomass plants in margins and along borders
- Install a wildlife pond, and plant water-loving natives
- Establish orchards, bolster wildlife corridors

Improve farm management logistics

- Convert land use away from annual production → comm. gardens, orchards, recreation, u-pick
- Use the best soils for an annual vegetable production operation

5 YEAR PLAN

Continue to increase community involvement throughout the farm

- Expand community gardens
- Continue to improve site circulation
- Beautify common spaces
- Host events, live music, picnics

Increase bio-diversity on the farm

- Reintroduce livestock to the farm, whether as farm pets or as part of farm production
- Manage orchards, and continue to plant in understory and margins
- Annual spring plant sale for community gardeners

Improve climate change resilience

- Save seeds as a community
- Expand and improve water management from top to bottom of site
- Bring more people on to the land to grow food intensively

100 YEAR PLAN

Serve the surrounding North Amherst community

- Provide classes, tours, internships, and incubator farm opportunities
- Donate excess foods in times of great abundance
- Exist as a place where families and friends love to convene

Expand the North Amherst Community Farm

- Convert more and more of the farm to community gardens and recreation space, and lease adjacent land to graze animals and grow crops

Achieve Financial Solvency

- Pay down debts and build farm emergency funds
- Raise funds to improve infrastructure, access, and hydrology
- Benefit from NRCS + other grants



VISION STATEMENT

We envision vast green areas where people gather for picnics, pick-your-own fruits, and farm events. A place where curiosity keeps the community there; not just a productive farm, but a staple of Amherst that attracts the constantly changing population of the town. A location where fresh produce is grown locally and made accessible in an area already struggling with food desertification. Finally, one where the farm pays itself not just in financial wealth but in time spent together to build community.

