Northside Food Forest
Community Resilience Project

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Intention

The Northside Food Forest is a Community Resilience Project that meets two primary objectives: ecological regeneration and strengthening of local community resilience, particularly (but not exclusively) with regard to food independence. We also see the project as a way to educate the public about lessening energy consumption and engaging sustainable practices. We are currently talking about phase one of our overall vision and feel hopeful that this project could serve as a pilot program that models ecologically sound food production, significant carbon footprint reduction, and localized resilience (as outlined in the Sustainability Framework Goals). We know that it is important to all of us, City Staff, local governance, and Ann Arbor residents to adapt to the circumstances of climate change in a timely manner and we are excited to be a part of this work that offers inspiration as well as a practical example. We would like to demonstrate how areas of our parks that are underutilized could serve to improve both ecological and community resilience.

Location: The proposed site of the Northside Food Forest, is on the outside of the asphalt trail on the South end of Leslie Park. Phase one of the Northside Food Forest (which we hope will convince us all of the viability of phase two) would occupy just under one fifth of one acre of land on the far south end of the park, near the playground. We are very familiar with park use here, as several of us involved in the project live on the park, and know that this area could well serve as a very real part of localizing resilience without compromising (even perhaps enhancing) traditional uses of the park.

We are also excited that this project is sited adjacent to Arrowwood Hills Co-op, one of Ann Arbor's few affordable living options. This helps the city to meet the important responsibility of attending to under-resourced residents and communities. As Ann Arbor aims to increase localized resilience as part of our future, addressing and engaging the communities among us that are most vulnerable to economic and food insecurity is an honorable choice.

The Food Forest Coalition: The Northside Food Forest is a proposal brought forth by a diverse coalition of Ann Arbor residents from both Arrowwood Co-op (as the project borders the co-op) and the wider city. See "Our Team" on page 11 for info on the core people donating time and energy to the project, bearing in mind that this is only a portion of the members of the coalition. The coalition brings together diverse skill sets, including permaculture and ecological garden design, community organizing, organic farming, engineering, construction, youth empowerment/community engagement, inclusion training, and many others. Several members of our coalition have lived in the community bordering the proposed Food Forest site for many years, and have deep roots in the community.

Ecological benefits: Excess carbon is a huge culprit in climate destabilization, and not only is a food forest carbon neutral, it actually sinks carbon from the atmosphere into the soil where it belongs. Carbon

sinking offers very real ecological regeneration and it is evident in the beauty and relief that an ecologically balanced space provides. A public feature such as the Food Forest also significantly reduces carbon emissions by lessening the mowing area (with zero regulations imposed on them, gas powered mowers constitute a staggering percentage of carbon emissions), establishing a permanent/perennial food source (conventional agricultural food production and transportation are among the highest carbon footprint we create), and significantly increasing biodiversity. As environmental education is essential to true ecological restoration, we are excited to demonstrate that solutions to the dire crises we face are accessible and can actually be joyful.

Economic benefits: An ounce of prevention is worth a pound of cure, and without intervention things will only get worse, environmentally speaking. As is evidenced all around us these days, the impact of environmental destabilization will continue to be costly in ways we cannot even imagine. While we are so very privileged to have such a beautiful and extensive parks system in Ann Arbor, we can see that the city is at or beyond capacity to optimally care for our parks and we are positing that inspired, well organized collaboration could be a very beneficial development. It is certainly worth a try. In truth, I keep thinking of something that one of our youth, Nora Berry (a sixteen year-old Community High student), said in her interview on the project. She said that a project of this nature builds trust and relationship between "those in charge of the city" and community members, and that it inspires a sense of agency and responsibility. We see this quite small project as one step in a much larger, solution-oriented dream; a dream of real ecological and community resilience brought about through well organized creative collaboration.

Addressing the scope of the environmental and economic crises we are faced with will require innovation and imagination as well as sound and proven science (permaculture). Crisis intervention, increased community services, and/or professional consultants (which we are), can all be very expensive. We are both offering our professional services (in ecological garden design and community organizing), and bringing together a volunteer team of professionals who are donating their time and services because they are excited about the merit of the project.

This project is a well-organized experiment that doesn't ask much of the city. While it is perhaps a surprise to talk about it in a wider context, we feel it is important to do so. We have hopes and we are not alone. Many, many cities are implementing innovative plantings and community engagement projects, and food forests in particular, to do just this. Here's one example in Atlanta Georgia, another in South Central L.A., and one in Seattle, WA. There are also some great community engagement videos about this Food Forest on the website of True Earth (an organization that a couple of our colaition members run). The Northside Food Forest aims to inspire, and skillfully organize, communal stewardship of this shared public space in a way that meets essential collective objectives, including the carbon and community resilience objectives of the city. Permaculture and ecological gardening work.

Community benefits: We are so in love with and inspired by the community building aspect of the project. The garden welcomes and our work days already bring together people of many ages (10 to 71 years to date), races, ethnicities, genders, and socio-economic positions. Inclusion, demonstrated in a welcoming intersectional environment and team are essential to our model from the start. There is incredible enthusiasm for the project among Arrowwood residents, which is critical because the co-op borders the site. The support for the project which we have gleaned through interviews and endless conversations during our three work weekends also extends not only to our wider Northside neighborhood, but to residents from across the entire city. People are excited about the possibilities, the model, the opportunities for education, and the fact that it is a very solution-oriented project occurring at a time where we need the relief of sound reason for hope.

Concept

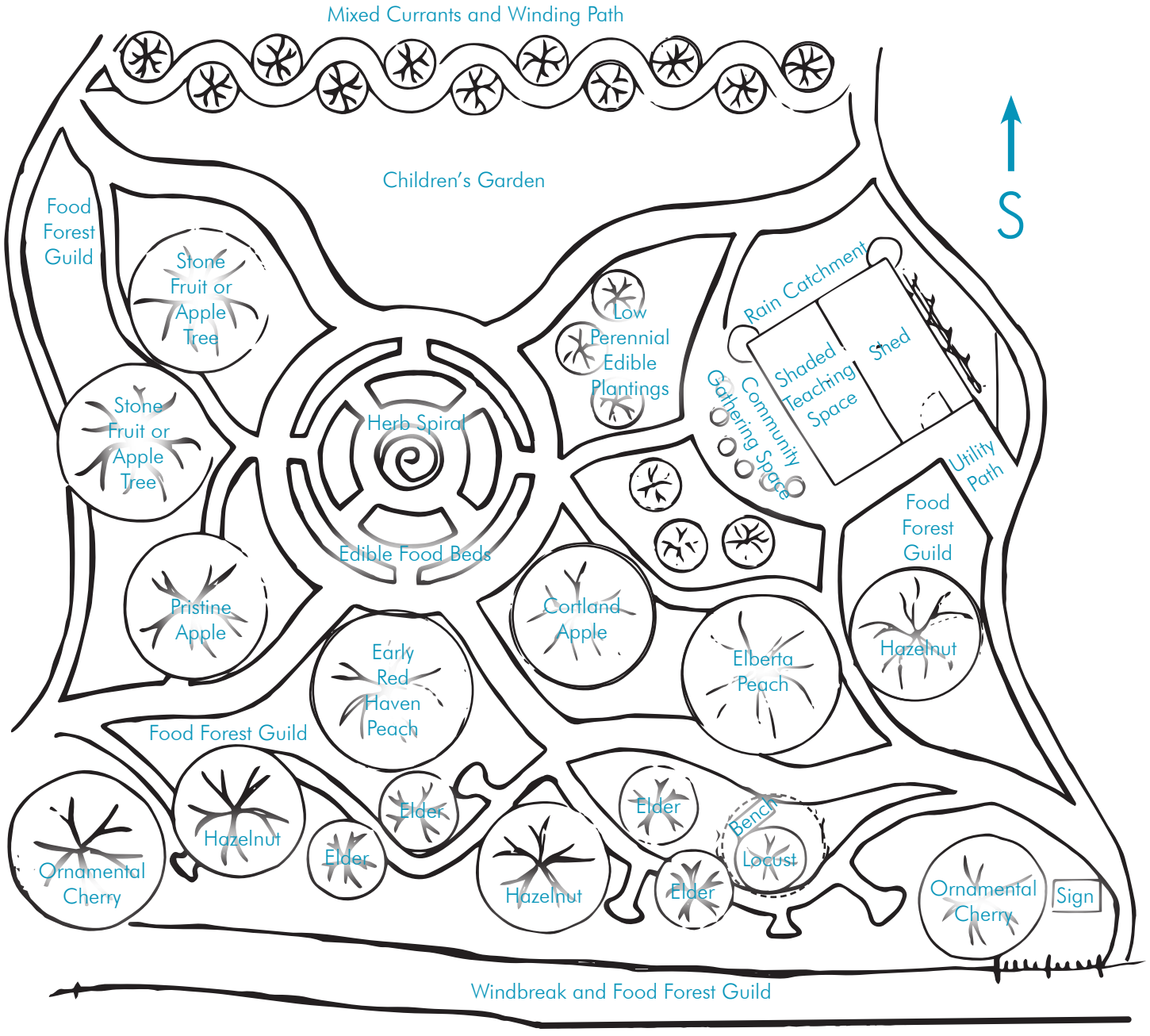
While the title of the project is The Northside Food Forest, the concept is actually an integrated food forest/ edible landscape hybrid project intended to be an educational and demonstration site. The initial installation will be approximately 75% self regulating food forest guild plantings, and approximately 25% annual food/ flower beds (allowing for transition to 100% perennial food forest guilds should that prove more practical). Food forest installations are typically quite casual and "organic" feeling, which can come across as unkempt. Creating a hybrid food forest/edible landscape allows for many areas of the site to be food forest guilds that self regulate and provide infinite benefit, while at the same time conveying a sense of intentional design and allowing some space for annual (vegetable) plantings.

Permaculture is a system of design that models itself after nature, in order to both meet the needs of people and support ecological regeneration. The original meaning behind the name was "permanent-agriculture" and it emphasizes design strategies that require as little energy expenditure as possible, addressing a design from a whole systems perspective, and stacking functions wherever possible. Through this design orientation, potential wastes or problems can actually become valuable resources that fuel creative solutions. Effectively executed permaculture designs have the capacity to eliminate waste, drastically improve an area's carbon footprint (often becoming carbon-negative), create or improve habitat, regenerate soil fertility, and provide for people's needs in ways that work in concert with, not in opposition to, the natural environment.

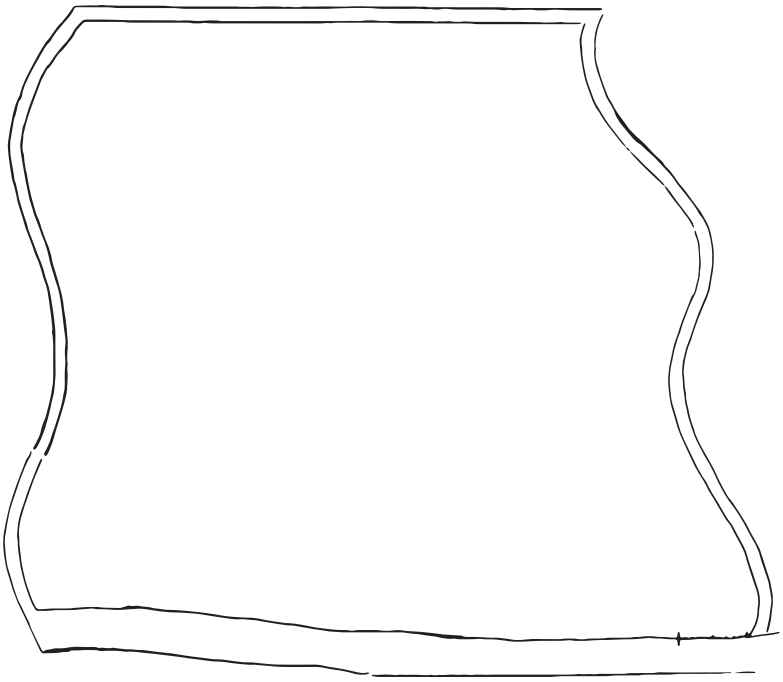
The Food Forest is an age old, well-established, and well-documented, concept of a self-regulating food system that mimics the ecological structure and function of a naturally occurring forest. It is classically made up of seven layers of plantings. The tallest (typically nut) trees would be to the north of the site, and remaining plantings of fruit trees, berry bushes, herbaceous perennials, ground covers, root plants, and climbing plants are integrated and layered throughout. Because of the size/nature of the Leslie Park site, we would be omitting the nut trees and keeping the installation to a six-layered reasonable scale. Once it is established a food forest is almost entirely self-regulating, meaning that it provides for all of its own needs (water, fertility, soil health, and pollination) through a closed loop system. If you are interested in learning more, check out this page on What a Food Forest Is available at the True Earth website.

The Edible Landscape concept allows for a bit more structure to the design and makes the site likely to be more appealing, and accessible to the public. As a design for park land that aims to educate and engage the public in regenerative agricultural practices, it is important to incorporate features that are easier to understand as food sources, while also introducing the community to less common (perennial) means of food production.

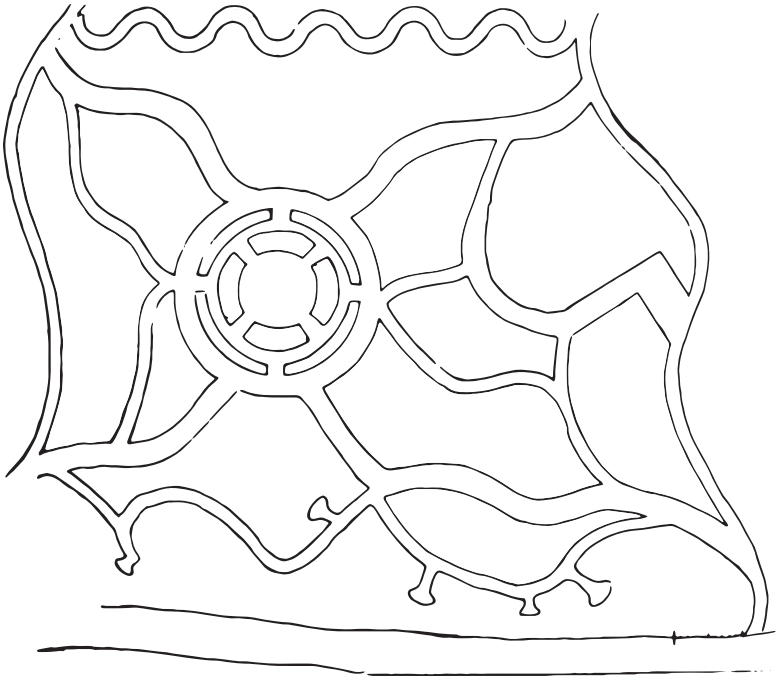
Design - Site Map (To Scale)



Design - Access

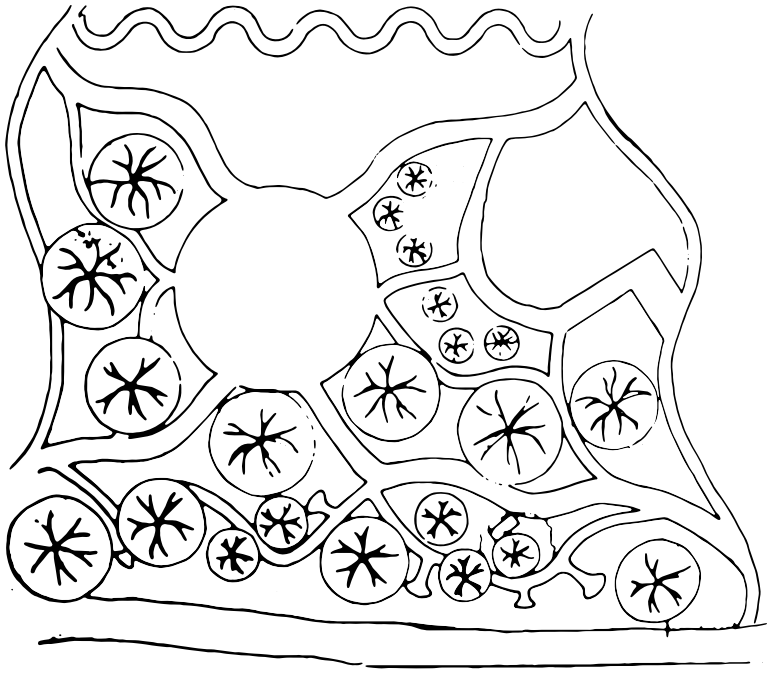


Perimeter: a two foot wide, clearly demarcated (sod removed), and deeply mulched border around the entire site that will allow for ease and mobility for mowers, as we know this is a concern for park maintenance. We have already implemented a trial of this method onsite and it is working well. As you can see on the site map there is plenty of space on the East and West sides of the installation, and there is a 10 foot distance between the South perimeter and the tree line.



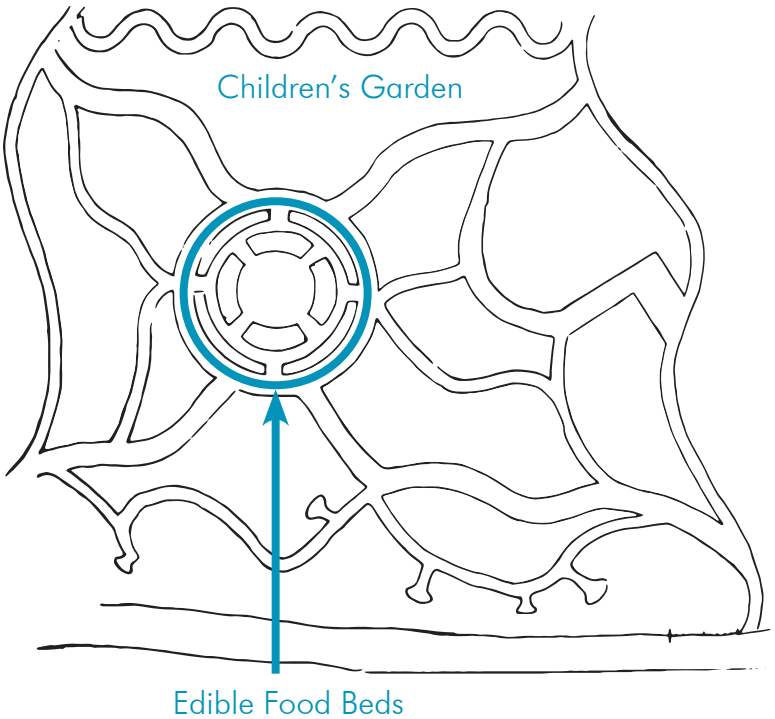
Paths: are an extremely important aspect of good design with regard to both beauty and function. The movement of paths through a space goes a long way toward shaping people's experience of the garden. We have opted for 4' wide curving paths as the primary travel paths. They lead to the central labyrinth feature at the heart of the garden as a place of repose. More narrow (2' wide) maintenance paths that include some "keyholes" (a permaculture concept) allow access to harder to reach areas. For this first year the paths will be the only area of the installation that remain as lawn and will be maintained with a rechargeable weed wacker, a minimum of bi-weekly, by volunteers on a schedule. By year two, and going forward, as the guilds and growing beds establish as plantings, the paths (and perimeter) will be mulched deeply once a year in the Spring by a volunteer crew on a schedule. We are hoping that the city can help with materials for this, but there are other free sources available (that just require more effort in coordination).

Design - Plantings



Food Forest Guilds : are planted in six layers (fruit trees, berry bushes, herbaceous perennials with various functions, root plants, ground covers, and climbing vines) with organic methods that maintain a regenerative agricultural approach. A guild is a cooperative group of plants that support each other and thrive when grown together. Plant species in a guild will bring a variety of benefits such as: providing food and medicines, improving the soil, deterring pests, conserving water, and attracting pollinators. Guild plants stack functions, so the majority of plant species in a guild work in concert with each other to maximize use of space and provide several benefits simultaneously. The general categories of necessary plants are:

- deep rooted dynamic mineral accumulators that help maintain vibrant soil
- nitrogen fixers - a minimum of 20% of the plantings need to fulfill this function
- pollinator plants - a variety of flowers active throughout the entire growing season that serve to attract a wider and more reliable range of pollinators, helping to ensure a healthy ecosystem
- biomass builders that are critical to overall health and increased topsoil. One of the most astonishing aspects of permacultural/ecological gardening is that it builds topsoil rapidly

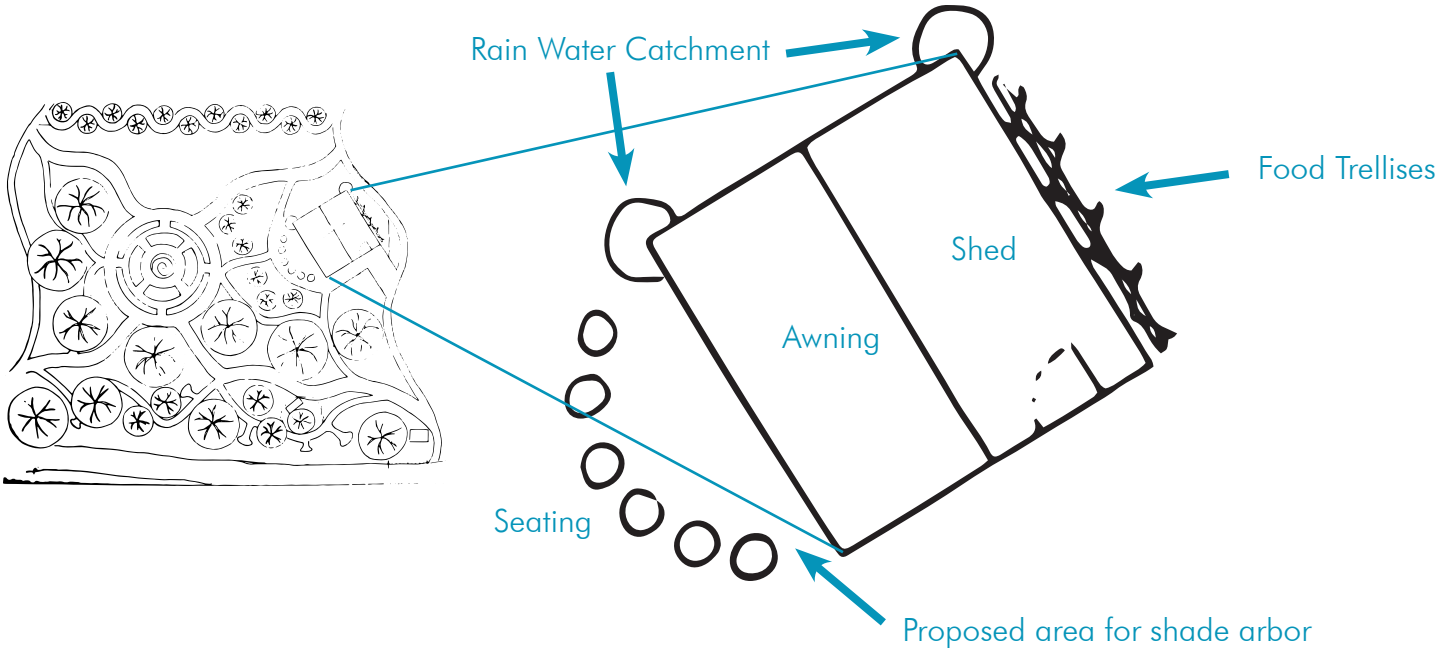


Edible Food Beds and Children's Garden: reserving this portion of planting is, as we said, an experiment that will weigh the annual food growing aspect of community engagement and follow through. There is still room for the community to weigh in on the children's garden area and what would be planted in food beds next year. There is already a robust planting of veggies in the four directional food beds this year that we are excited for the community to benefit from.

Design - Water Catchment, Energy Conservation, and Community Space

Once established, a food forest inherently conserves energy and water through dense plantings and natural biomass "self-mulching" that retains moisture, like a naturally occurring forest. As the forest establishes it will require less and less attention and resources. While the forest is young, and should the community demonstrate enthusiasm for continued annual food production, watering will need to happen. As of now we have organized a team of volunteers who are tending this aspect of the work, but we would ideally love to demonstrate sustainable principles through rainwater catchment off the roof of a small shed/awning that provides community gathering and work space. This segues into the next aspect of the proposal.

Community Gathering Space for Engagement, Education, Storage, and Workspace



We propose a simple building that has a 16' x 16' foot print, of which one side of the structure (8' x 16') is a closed shed to store garden equipment etc., and the other side of the structure (also 8' x 16') is an open air awning (on the side of the building that faces the garden). The awning would provide shade, work space, and a place to teach from (seating would simply be tree stumps). This building would provide the opportunity to demonstrate several important and sustainable stacking functions: as much of the building as possible would be built from repurposed materials, the roof would allow for rainwater catchment (of approximately 430 gallons per month of average rainfall given the square footage), the South facing wall would allow for vertical food production by training berries up a trellis, the shed/storage serves an essential function for a permanent installation, and the awning affords a place for community workspace. We have incorporated, and built many aspects of garden installations, but as this building is a custom design and on public land we have enlisted the volunteer help of a couple of professionals (an engineer and a contractor) to help us meet requirements and ensure the best outcome. We have more specs (not finished), including a budget, but will wait to put more effort into this aspect of the project until we hear back from you. We would also love to build a **shade arbor structure** over the (very casual) seating area we've outlined in the design to grow hardy kiwi vines (an AMAZING contribution to a Michigan food forest). Again, we have worked out the general concept and dimensions, and have been exploring possible materials, but will wait to move forward or put more effort in until we hear back from you.

Community Support and Opportunities for Engagement

The three Spring work weekends presented us with opportunities for engagement with people from all across the city including Arrowwood, our wider Northside neighbors, and all of Ann Arbor. Our core team (of people volunteering in support of the project) is made up of people living both in Arrowwood and around the city, you can see some members here sharing their perspectives on the value and importance of this project.

As the park explicitly borders Arrowwood, we thought it would be a good idea to solicit wider feedback from co-op members. We have created a survey to get feedback on the kinds of things they would like to see growing in the garden, what activities they are interested in, etc. Once we have clear approval from you and are decided on the bones of the plan, we intend to share this survey (online) with co-op members and invite further participation.

As the Food Forest establishes, both in the plantings and as a project that the city supports, there can be a variety of opportunities for people to come offer and receive education in permaculture and ecological gardening, often learning through hands-on experience. This will be both an excellent way to foster community engagement and resilience, and help provide for the forest's maintenance needs.

General Maintenance - Scheduling and Coordination

Keeping maintenance to a minimum, and organizing volunteers, is something we are taking into consideration from the inception of the project. While maintenance is inevitably an overarching, long term concern, permaculture design makes it entirely possible to curb the demands through thoughtful attention to detail in the planning stage. The Northside Food Forest design allows for clear distinction between the responsibilities of park maintenance crew and those of the Food Forest team, and it affords the parks crew easy access to areas for which they are responsible. Maintenance needs will evolve as the installation does, and maintenance will primarily lessen over time. The committed team we already have in place is here to observe and respond to the site, and develop a long term plan. With thirty years of experience in community organizing under my (ShuNahSii's) belt, I have a thorough understanding of the scope of this task of coordinating a crew and it is relatively small. We are confident that we can do a good job. I am personally making a minimum three year commitment to overseeing this project, and its maintenance needs, in order to help coordinate and streamline: systems of communication with volunteers, maintenance schedules, and basic weekly and seasonal checklists (including watering, weeding, pruning, and path maintenance). Clear systems will greatly simplify what it means to take good care of the forest going forward, as well as to delegate or hand off coordination jobs as needed.

Pest and Disease Management

We are 100% committed to non-toxic, organic methods of care for the Food Forest and we ask that parks always respect this, as it is an essential aspect to our approach and critical to the vitality and success of the project. From a long-term organic and ecological gardening perspective the first thing to understand about pest or disease management is the role that knowledgeable design, and in particular polyculture plantings, play in radically diminishing the likelihood and/or instances of ill health in the first place. Again, an ounce of prevention is worth a pound of cure. Conventional orchards are typically planted as monocultures, as are many demonstration gardens (think, rose gardens at conservatories etc.), and this is the worst thing for the health of the plants and/or the ecosystem. Nothing in nature grows as a monoculture, and nature's inherent intelligence is the model for the forest. Monoculture orchards not only diminish the overall vitality of the trees from the get go (no guild plantings beneath them to improve/maintain soil health and/or deter pests), but should one tree fall ill, this style of planting makes all of the trees easy prey.

For the most part, a thorough guild planting will head off any issues that would arise in terms of disease, insect invasion, and even most mammal feasters. We would like to put welded wire fencing enclosures around the fruit trees while they are young to give them a chance to get established.

Watering

As we have already stated, we hope to demonstrate water conservation not only through our planting/design (intensive planting, biomass mulching, etc.) but through the sustainable principle/practice of rainwater catchment and use. We have great, professional help on board (see: Our Team) and feel confident that we could do an excellent job. With your go ahead we will refine/complete details for this aspect of the design for your consideration/approval and include a request for funding in our grant application through the Sustaining Ann Arbor Together Neighborhood Grant Program.

Otherwise we will continue with what we are doing now; a shared and coordinated volunteer effort fulfilled by neighbors of the Food Forest bringing water (via wagon) from our homes in Arrowwood. In truth, even with the little rain we've had, watering needs are quite minimal and would be far less so if we decided to replace the annual veggie beds with perennial plantings.

Food Harvesting, Foraging, and Distribution

As with maintenance, the harvesting needs of the Food Forest will evolve as the project progresses. We intend to allow for open foraging for community members as communicated through clear signage at the site, as well as coordinated harvest days or small harvest festivals (with proper COVID-19 precautions) at key times of year that require more extensive harvesting. We are committed to prioritizing access to community-harvested produce for Arrowwood residents, and we plan to create a streamlined system to match the available produce to interested residents.

Timeline

In the long run, we have hope for further development of the site and are considering this facet of the design/installation phase one. If the process goes smoothly and the community/city demonstrates enthusiasm, we will happily offer details of our long term vision.

Year One, 2020: Spring, Summer, and Autumn.

- Establish Core Team - done.
- Confirm Design - in process.
- Complete and Install Signage - we have a clean aesthetic in mind, a quote for a professionally printed aluminum sign, and would love to move forward with signage ASAP in order to communicate to the community that the project is alive and well, and continuing with enthusiasm.
- Establish paths, perimeters, and beds through sheet mulching of all planting areas.
- Install many/most of the foundational plantings: trees, guilds around trees, and berry shrubs that establish South perimeter.
- Establish structural components: shed, trellis, and arbor.

Our Team

We have a team of consistently engaged volunteers that are excited to show up for scheduled work shifts on the project. We have also brought together a solid team of core volunteers to help with installation and maintenance in regular workshifts (respectful of the current need for physical distancing and COVID-19 safety measures), and professionals offering their time and expertise to support various aspects of the project.

ShuNahSii Rose - Project Manager. Thirty years of experience in teaching and community organizing, certification in permaculture design, twenty years of design/installation experience in ecological gardening.

Robin Greenwood - Assistant Project Manager. A strong foundation in community organizing, non-profit service, organic & permacultural farming, and certification in permaculture design.

Ile' Karoly - Environmental Science Major at EMU with a concentration on humans and the environment: youth leadership, program development, installation, and maintenance crew.

Nora Berry - Community High Student with a strong skill base in facilitation and community organizing: youth leadership, program development, installation, and maintenance crew.

Evan Daywell - Experienced organic farmer, family man and neighbor of the Food Forest. Evan is supporting the development of annual food beds, installation, and maintenance crew.

Maro Beauchamp - Graphic and Web Designer: Layout and design of signage, informational materials, and Food Forest web page, installation, and maintenance crew.

Vishnu Nair - Masters of Engineering and agricultural background in Southern India: structural design support, rainwater catchment advisement, installation, and maintenance crew.

Nyah Sealssie - Cultural Inclusion and Sensitivity Training, strong skill base in facilitation, grew up farming: program development, installation, and maintenance crew.

Kathleen Peabody - Bachelors in Land Use and Environmental Impact Assessments, Huron Watershed Volunteer: resident elder, installation, and maintenance crew.

Councilmember Jeff Hayner - Professional Builder/Contractor: structural design support, and building work crew leadership.