

Sustaining Health: The Role of Green Spaces in Improving Nutrition and Mental Wellness in Cincinnati

How can incorporating living art and food plants improve Cincinnati residents' nutritional and emotional health?

Avery Tanner



Image of the skyline of Cincinnati with greenery in the foreground, representing the integration of nature in the city for improved health and well-being.

Lost With Lydia. Skyline of Cincinnati. Top 10 Things to Do in Cincinnati, Lost With Lydia, <https://www.lostwithlydia.com/destinations/usa/oh/Top-10-Things-to-do-in-Cincinnati/>. Accessed 27 Feb, 2025].

How can incorporating living art and food plants improve Cincinnati residents' nutritional and emotional health?

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HORT 4092: Horticulture Senior Project
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Student Identification and Previous Experience



Headshot of Designer (Photographed by Alex Lowenthal, 2023).

Avery Tanner

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“To plant a garden is to believe
in tomorrow.”-Audrey Hepburn

2024-2025

Spring 2025, Senior Project Horticulture, HORT 4092

Professor Stevie Famulari

Projects Include: Senior Capstone Project

2024-2025

Spring 2025, Urban Landscapes Interiors, HORT 3054

Professor Stevie Famulari

Projects Include: The Ivy Room, Flourishing in Motion

2024-2025

Spring 2024, Intro to Nature Based Therapy, MEDS 2092

Dr. Barbara J. Walker

Projects Include: Your Own Nature RX, 30x30 Project

2024-2025

Fall 2024, Plant Morphology, HORT 4010

Professor Brian Grubb

Projects Include: Asteraceae Poster, Plant Collection, Plant Journal

2024-2025

Fall 2024, Urban Landscape II: Agriculture, HORT 3042

Professors Brian Grubb and Hye Yeon Park

Projects Include: Bearcat Pantry Garden Redesign

2024-2025

Fall 2024, Computer Graphics, HORT 3071

Professor Jane Bian

Projects Include: Mapping in ArcGIS Pro, Imageability Map, Thematic Map, 3D Modeling, Visual Essay

2024-2025

Fall 2024, Horticulture Crop Physiology, HORT 4020

Professor Dan Petersen

Lectures on photosynthesis, plant light requirements, and plant nutrients.

2024-2025

Summer 2024, Edibles for Sustainable Landscapes II, HORT 3031

Professor Brian Grubb

Projects Include: Fig Alley Steps Design

2024-2025

Summer 2024, Herbaceous Ornamentals II, HORT 2033

Professor Jim Hansel

Projects Include: Eden Park Mini Perennial Garden Design, Annual Garden Display Design

2023-2024

Spring 2024, Plant Propagation, HORT 4012

Professor Brian Grubb

Projects Include: Seed Propagation, Hardwood Cuttings

2023-2024

Spring 2024, Herbaceous Ornamentals I, HORT 2032

Professor Brian Grubb

Projects Include: DAAP Annex Rain Garden Design

2023-2024

Spring 2024, Edibles for Sustainable Landscapes I, HORT 3030

Professor Stevie Famulari

Projects Include: The Tanner Family Terrace, Stratford House Garden, Ault Park Design

2023-2024

Fall 2023, Urban Landscapes – Forestry, HORT 3040

Professor Davis Gamstetter

Projects Include: Tiken Farm Project

2023-2024

Fall 2023, Plant Pathology and Microbiology, HORT 2020

Professors Dan Peterson and Brian Moody

Projects Include: Plant Disease Fact Sheets, Soil Tests

2023-2024

Fall 2023, Landscape History, HORT 3050

Professor Stevie Farmulari

Projects Included: Hustle Grind Skatepark

2022-2023

Spring 2023, Woody Ornamentals II, HORT 2030

Professor Stephen Foltz

Projects Included: School Tree Identification Map

2022-2023

Spring 2023, Sustainable Landscape Design and Construction II, HORT 2041

Professor Katherine Kady

Projects Include: Loveland Grail Park

2022-2023

Spring 2023, Soil Science and Plant Nutrition, HORT 3010

Professor Tania D. Burgos Hernandez

Lectures Include: Erosion and Soil Management, Plant and Soils Nutrition

2022-2023

Spring 2023, Horticulture Chemistry, HORT 1011L

Professor Brian Grubb

Projects Include: Hydroponic Lettuce Experiment

2022-2023

Fall 2022, Woody Ornamentals I, HORT 2030

Professor Stephen Foltz

Projects Include: Evergreens and Ornamental Tree and Shrub Identification

2022-2023

Fall 2022, Sustainable Landscape Design I, HORT 2040

Professor Katherine Cady

Projects Include: Loveland High School Tiger Trail Redesign

2022-2023

Fall 2022, Native Plants I, HORT 1030

Dr. Donna McCollum and David Gressley

Projects Include: Field Journal, Comparison of Forest Soils, ID Booklet

2021-2022

Spring 2022, Agriculture Ecology

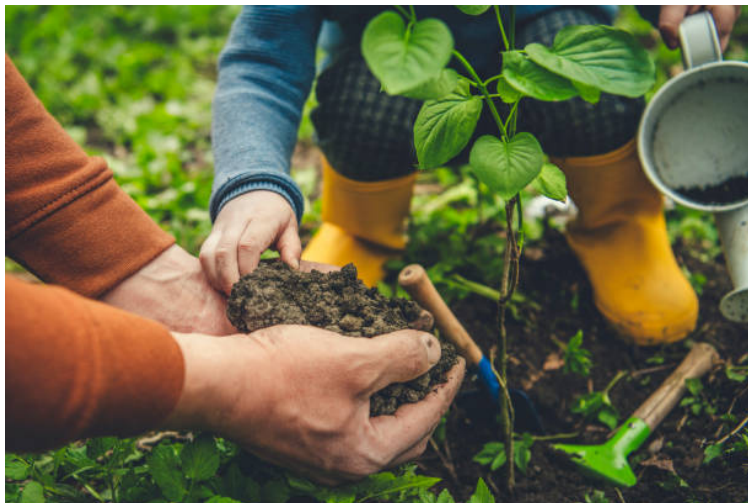
Professor Tania D. Burgos Hernandez

Projects Include: Farm Project, Soil Test

Abstract

Access to fresh, nutritious food and green spaces is essential for both physical and emotional well-being, yet many urban areas, including downtown Cincinnati, remain food deserts with limited access to these resources. Food deserts “describe neighborhoods and communities that have limited access to affordable and nutritious food,” as defined by the National Library of Medicine (National Research Council). This capstone explores how incorporating living art and food-producing plants into urban spaces can improve Cincinnati residents’ nutritional and emotional health. Through the design of a community garden in downtown Cincinnati and the creation of a living art installation, this project examines the intersection of horticulture, public health, and artistic expression.

Green spaces provide numerous benefits, including reducing stress, improving air quality, fostering social connections, and encouraging physical activity (Barton and Rogerson). They have been linked to enhanced mental health and overall well-being, making them vital in urban planning. The design of a community garden in downtown Cincinnati, incorporating living art, provides residents with access to fresh produce while creating a visually engaging and restorative environment. By blending art and horticulture, the space serves as both a functional and cultural hub, promoting food security, environmental awareness, and community engagement.



Close up of hands planting, representing community engagement, nourishment, and growth.

"Parents Hands and His Child Helping Gardening on Arbor Day in Springtime." iStock, <https://www.istockphoto.com/photo/parents-hands-and-his-child-helping-gardening-on-arbor-day-in-springtime-gm1148820807-310370493>. Accessed 2 Mar. 2025.

Key Words

The Americans with Disabilities Act (ADA): A U.S. civil rights law enacted in 1990 that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and public spaces (ADA National Network). Compliance with ADA is required.

Biodiversity: refers to the variety of different plants, animals, and other living things in an area, and how they interact.

Community Engagement: Working with people in a community to address issues, make decisions, or improve well-being.

Community Garden: shared space where the community can come together to grow plants.

Food Deserts: Communities that have limited access to affordable and nutritious food. These communities have limited access to transportation and live a half mile or more from a supermarket (National Research Council).

Food Insecurity: A condition where people do not have reliable access to affordable and nutritious food.

Horticulture: The science and practice of growing and caring for plants.

Living Art: An art form that involves living organisms, such as plants. It emphasizes growth, change, and interaction with the environment.

Landscape Design: Process of planning and creating outdoor spaces.

Noise Pollution: Unwanted or excessive sound that can have deleterious effects on human health, wildlife, and environmental quality (Berg and Nathanson).

Nautilus: A type of shell found in the deep ocean known for its spiral shape. The shells are a symbol of order amidst chaos (Beaton).

Sustainability: Using resources in a way that meets current needs without compromising the ability of future generations to meet their needs.

Urban Green Spaces: Areas in cities that provide environmental, social, and health benefits, offering spaces for recreation, improving air quality, and increasing biodiversity.

Understanding the Project

Problem Statement

How can incorporating living art and food plants improve the nutritional and emotional health of Cincinnati residents?

Problem Justification

This project demonstrates how integrating living art and food-producing plants into urban environments can enhance both the nutritional and emotional well-being of Cincinnati residents. By blending horticulture with artistic expression, this project addresses food insecurity while fostering mental health, community engagement, and environmental awareness. Community gardens not only provide fresh produce but also serve as restorative environments that encourage social interaction and education on sustainability (Public Works Partners).

Inspired by successful urban agriculture projects such as The Farm for the City by Viridian Landscape Studio and The Sunset Park Farm by Brooklyn Grange, I created a dynamic community garden that functions as both a food source and an interactive community space. These urban farms have successfully combined design, sustainability, and art to revitalize communities and promote self-sufficiency. Similarly, this capstone incorporates living art installations influenced by artists from the literature review, reinforcing the connection between creativity, environmental awareness, and well-being.



Aerial view of downtown Cincinnati, showing the lack of green spaces.

"Downtown Cincinnati Aerial." Skyline Scenes, www.skylinescenes.com/products/downtown-cincinnati-aerial. Accessed 2 Mar. 2025.

Living art installations, which merge plants with artistic elements, have been shown to increase biodiversity, improve air quality, and provide interactive learning experiences (Biome Idaho). These installations enhance the garden's aesthetic appeal and serve as an educational tool, demonstrating plant care, ecological balance, and sustainable urban practices. To further community engagement, the garden offers gardening classes and other community classes that empower residents with the knowledge and skills needed to cultivate their own food at home.

By creating a multifunctional space that nourishes both the body and mind, this project highlights the potential of living art and urban agriculture to transform underutilized areas into thriving, sustainable, and inclusive environments. Through this initiative, Cincinnati residents gain greater access to fresh food, mental restoration, and a deeper understanding of how green spaces contribute to a healthier, more connected urban community.

User/Client Description

This community garden and living art space is designed primarily for the residents of downtown Cincinnati, particularly those experiencing food insecurity due to the area's classification as a food desert. The garden also serves as a space for education, social interaction, and artistic expression. The user groups include residents, urban gardeners, artists, educators, and community organizations.



Image of people working in a garden together.

"Community Gardening Day." Stockcake, stockcake.com/i/community-gardening-day_969086_819843. Accessed 2 Mar. 2025..

Primary User Groups

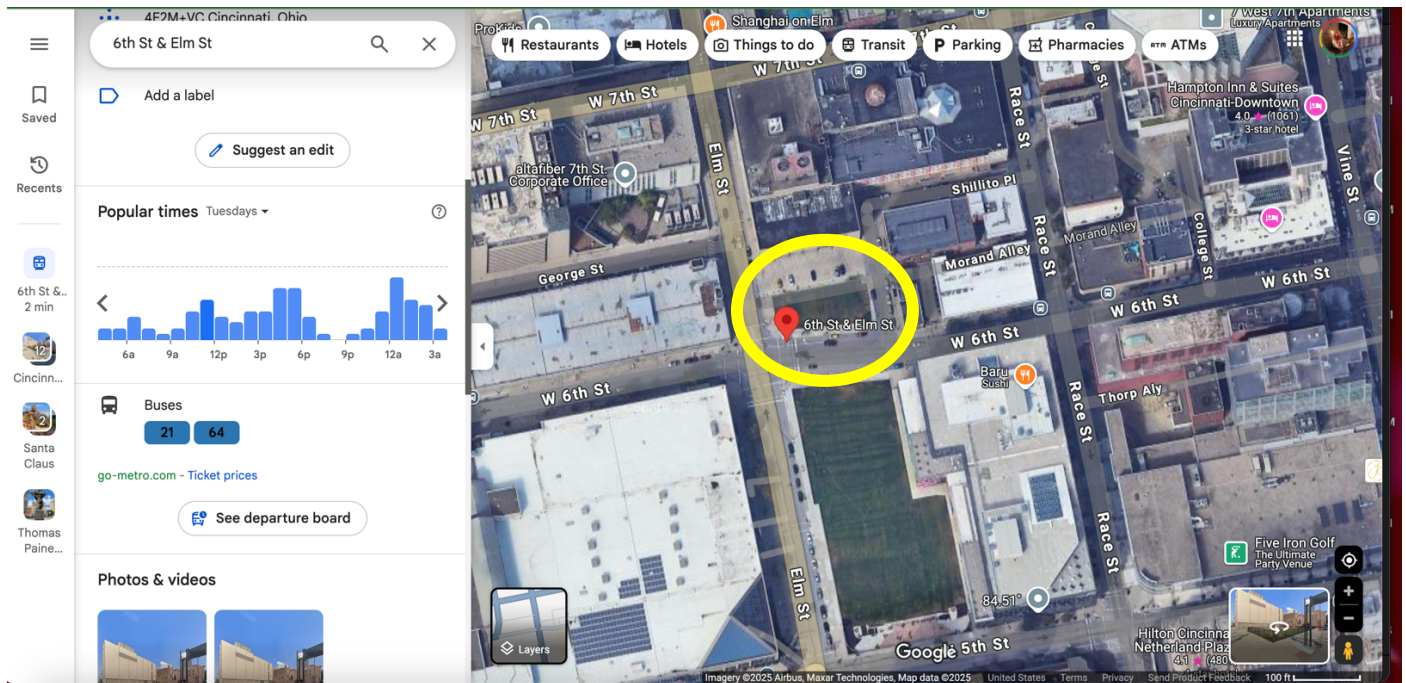
1. Local Residents, Focusing on Those Living in Food Insecurity.

-Unique Requirements: Access to fresh produce, space for relaxation and social engagement, and educational opportunities on gardening.

-Quantitative Needs: The site is in an urban area with many residents lacking access to fresh food sources. The site, located in Cincinnati's Business District, has a Walk Score of 98 (Cincinnati Walkability Map). It is estimated that over 900 residents live within .25 miles of the site (Cubit).

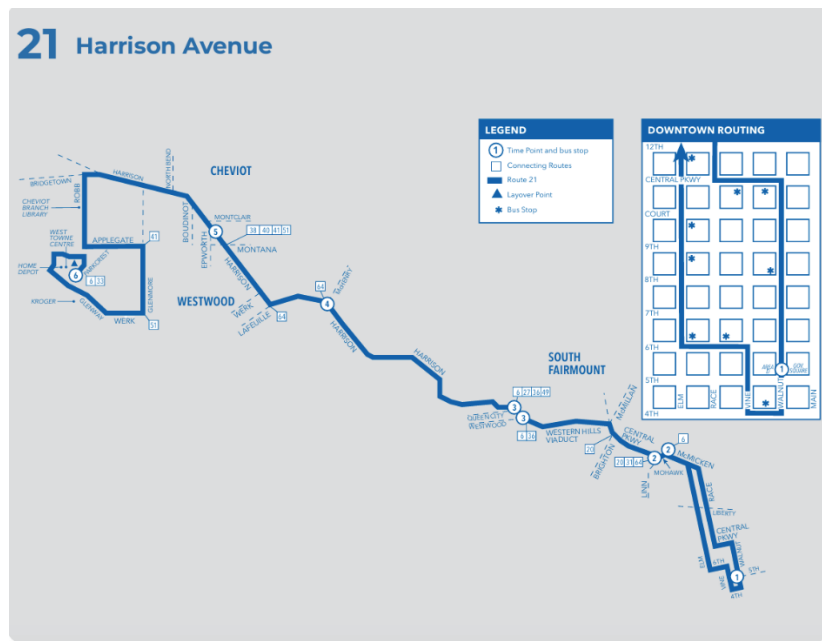
-Peak Usage: Weekends and evenings are expected to be the busiest times, as residents can visit after work or during leisure hours.

-Parking Requirements: Many users walk or use public transportation. There is a small lot behind the garden, street parking surrounding the garden, and a public parking garage across the street.



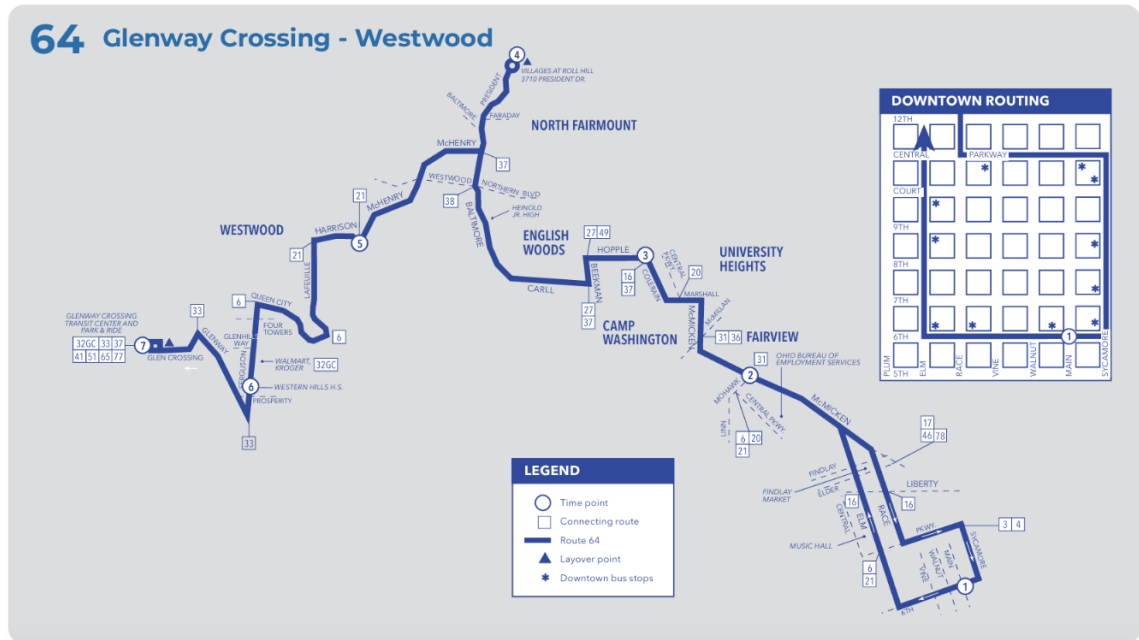
Map showing bus stop. Metro busses 21 and 64. The image shows popular times of the bus, which is about the same throughout the week.

Google, Google Maps, maps.google.com, West 6th Street. Accessed Feb. 25, 2025.



Metro Bus Schedule for Bus 21. The full schedule with individual stops can be found at https://www.go-metro.com/bus_routes/harrison-ave/

"Metro: Cincinnati's Public Transportation System." Go Metro, <https://www.go-metro.com/>. Accessed 25 Feb. 2025.



Metro Bus Schedule for Bus 64. The full schedule can be found at https://www.go-metro.com/bus_routes/glenway-crossing-westwood/

"Metro: Cincinnati's Public Transportation System." Go Metro, <https://www.go-metro.com/>. Accessed 25 Feb. 2025.

2. Urban Gardeners and Volunteers

-Unique requirements: Raised beds or accessible planters for varying physical abilities, access to water (for drinking and plants), composting stations, and storage for tools.

-Quantitative needs: The garden anticipates two full-time gardeners and two part-time gardeners during the spring and summer. The garden anticipates 5-10 volunteers maintaining the space, with additional seasonal participants.

-Peak Usage: Early mornings and weekends, when gardening activities are most feasible. Peak usage is in the Spring and Summer months.

3. Artists and Educators

-Unique Requirements: Dedicated space for workshops, interactive art installations, and educational programming.

-Quantitative Needs: The site accommodates 50-75 active gardens and 100-200 people for events and casual use.

-Peak Usage: Scheduled programming times, with potential for special events drawing larger crowds.

4. Community Organizations and Schools

-Unique Requirements: Space for educational programs, community gatherings, and outreach events. Raised beds for teaching sustainable farming methods.

-Quantitative Needs: Anticipated collaboration with local schools, hosting gatherings of 100-200 students at a time.

-Peak Usage: School hours and summer programs for children, with additional programming on weekends for community events.



Image of kids learning in a garden.

Nourishing Neighbors, www.nourishingneighbors.com/articles/32-community-gardens-find. Accessed 2 Mar. 2025.

Accessibility Considerations

- The site includes ADA-compliant pathways to ensure accessibility for individuals with mobility impairments.
- Raised garden beds and seating areas are designed to accommodate users with physical limitations.
- The garden considers the mental health benefits, providing a quiet and reflective space for users who may experience stress or anxiety in urban environments.



Image of permeable pavers, the ground cover used in the garden design. They are good for managing storm water runoff, reducing erosion, and are ADA-compliant.

"Permeable Paver Entryway to Home." Angi, photographed by KCULP, 7 Aug. 2024, www.angi.com/articles/environmental-benefits-permeable-pavers.htm. Accessed 2 Mar. 2025.

Social, Cultural, and Economic Considerations

- The space is inclusive, welcoming diverse groups from different socioeconomic and cultural backgrounds.
- Bilingual signage and education materials are considered to engage non-English speaking residents. QR codes are on each sign, directing users to a website where they can choose their preferred language.



Example of plant identification sign with QR code. After scanning the code, visitors will be able to access plant information in their desired language.

WVXU. "QR Codes Make Plant Identification Easier at Cincinnati Parks." WVXU, 22 Oct. 2012, www.wvxu.org/environment/2012-10-22/qr-codes-make-plant-identification-easier-at-cincinnati-parks. Accessed 2 Mar. 2025.

- Food grown in the garden is distributed to residents in need or used in educational programs to promote healthy eating habits.
- This project is a collaborative effort, with local government, nonprofit organizations, and community members involved in its long-term sustainability and management. The design reflects the needs of its users while fostering a sense of ownership and stewardship among the community.

Major Project Elements

The project transforms an underutilized urban space into a community garden and living art installations, designed to promote food accessibility, sustainability, and community engagement. Below are fundamental components that define the space:



Image showing fresh food at a farmers market, highlighting the importance of healthy eating.

Hall, Marc. "Locally Grown Food for Sale at the Hillsborough Farmers' Market." NC State Extension, 2023, www.ces.ncsu.edu/2023/01/promoting-healthy-locally-grown-food/.

1 Community Gardening and Urban Agriculture

- Raised garden beds:** A mix of in-ground and elevated beds to ensure accessibility for all users, including those with mobility challenges.
- Pollinator and Native Plant Gardens:** Designed to support biodiversity and improve soil health.
- Edible Planting Areas:** Sections dedicated to growing fruits, vegetables, and herbs for community distribution.
- Composting Station:** A communal composting area to promote sustainable waste management.
- Rainwater harvesting system:** A sustainable irrigation system to reduce dependence on municipal water sources.

2 Public Art and Interactive Installations

-Sculpture Planters and Living Art Pieces: Creative installations integrating plant life as an artistic medium.



Inspiration for living art installation. No artist found.

"Flowers Pouring Out of Watering Can." Pinterest, www.pinterest.com/pin/35192466013461/ Accessed 2 Mar. 2025

-Vertical Gardens and Green Walls: Maximizing greenery while utilizing vertical space effectively.

-Community Mural or Educational Signage: Informational displays on food security, sustainability, and the local environment.

3 Gathering and Educational Spaces

-Outdoor Classroom and Workshop Area: Designed for gardening classes, sustainability workshops, and public discussions

-Demonstration Gardens: Sections showing innovative urban farming techniques such as vertical garden walls, companion planting, pollinator gardens, native plants, heritage crops, composting, and rainwater harvesting.

-Children's Discovery Zone: A dedicated area where children can interact with plants and learn through hands-on activities.

4 Circulation and Accessibility Features

-ADA-Compliant Pathways: Ensuring mobility access for visitors with different needs like visual impairments, hearing impairments, mobility impairments, and cognitive disabilities.

-Seating and Shaded Rest Areas: Benches, tables, and shaded spaces to encourage social interaction.

5 Social and Community Amenities

-Community Bulletin Board: Space for event announcements and gardening updates.

-Tool Lending Library: Shared access to gardening tools and equipment.

-Outdoor Market/Food Distribution Station: Allowing for harvested produce to be shared with the local community.



Image of people packaging and distributing food from a community garden.

Jansen, Andrew. "Community Gardens in the Ozarks." News-Leader, 9 July 2016, www.news-leader.com/picture-gallery/news/local/ozarks/2016/07/09/photos-community-gardens/86905998/.

6 Sustainability and Environmental Features

-Stormwater Management Systems: Permeable pathways, rain gardens, and runoff mitigation, reducing flooding risks.

-Use of Recycled and Sustainable Materials: Upcycled wood, metal, and eco-friendly building materials for installations.

-Energy-Efficient Lighting: Solar-powered lights for evening use and security.

7 Parking and Transportation Considerations

-Public Transit Accessibility: Located directly next to a Metro bus stop.

Metro Information
Metro Información 

Fare

Tarifa

21 Harrison Ave.

Fare: \$2.00 Local service

30-day rolling pass: Local service \$80

Contacting Metro

Cómo comunicarse con Metro

Bus info/Customer Care Center 513-621-4455

Información sobre autobuses

Customer Care Center 513-632-7575

Relaciones de clientes

Lost & Found 513-632-7699

Objetos perdidos y encontrados

Access information 513-632-7590

Información sobre medios de acceso

Fare Deal information 513-632-7540

Información sobre el programa

Fare Deal

TDD Ohio Relay Service 800-750-0750
 (for deaf/hearing-impaired customers)

Servicio de relevo mediante TDD
 de Ohio (Para clientes sordos/con deficiencias
 auditivas).

www.go-metro.com



please recycle

[Fares effective April 4, 2021]



Harrison Ave.

service seven days a week

Serving:

Brighton Corner

Cheviot

Downtown

Glenway Ave.

Harrison Ave.

Kroger (Western Hills)

Music Hall

South Fairmount

Western Hills Plaza

Western Hills Shopping Center

West Towne Centre

Westwood



metro
 your way to go

Metro Sales Office • 120 E. Fourth St.

Mercantile Center arcade

Weekdays 7:30am - 4:30pm

bus schedules • information • passes • stored-value cards

go-metro.com

Image showing the communities Metro Bus 21 serves.

"Metro: Cincinnati's Public Transportation System." Go Metro, <https://www.go-metro.com/>. Accessed 25 Feb. 2025.

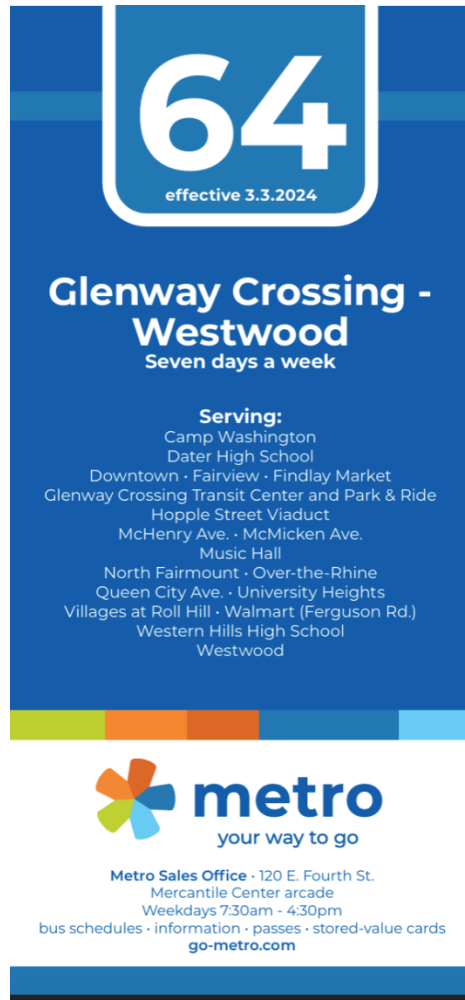


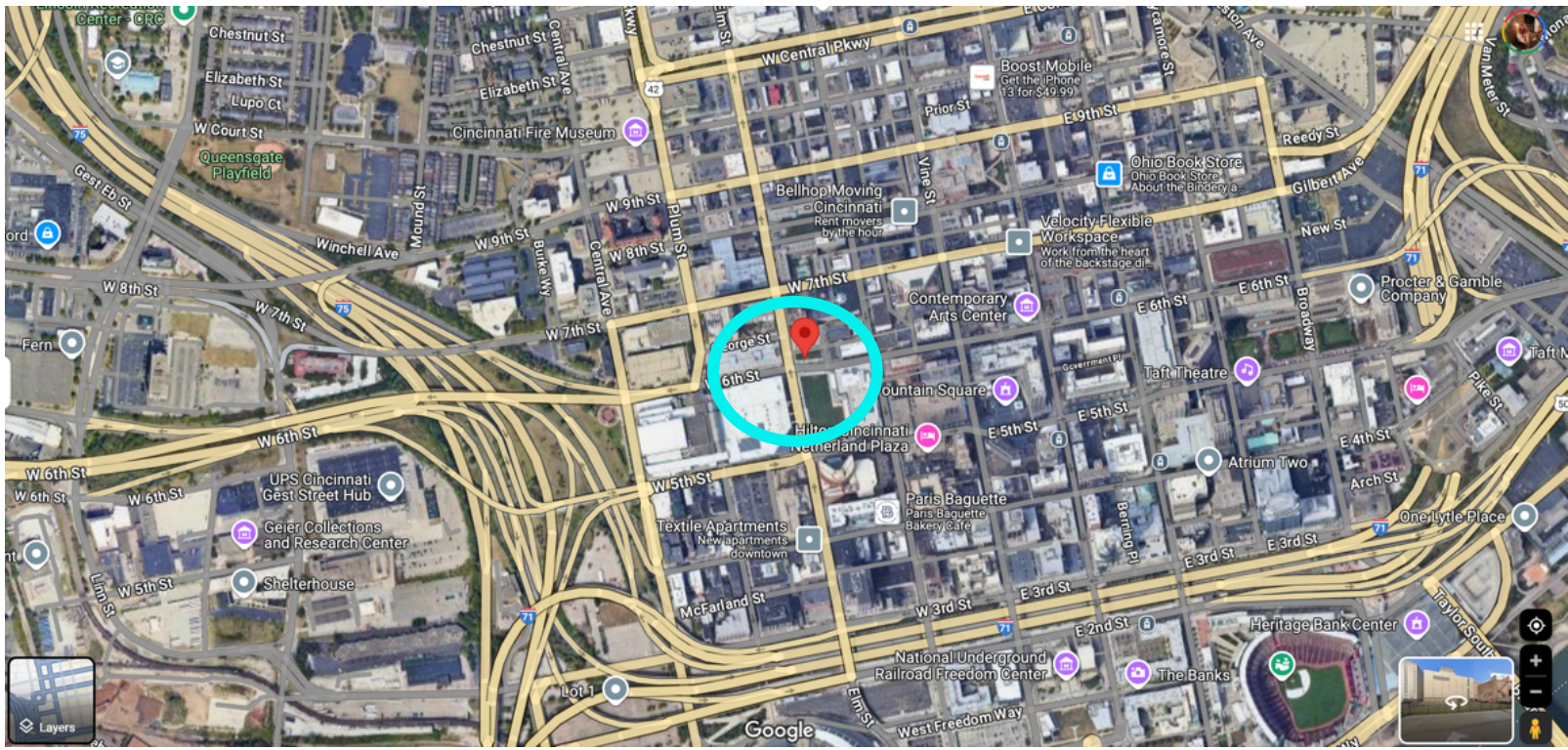
Image showing Metro Bus 64 and the communities it serves.

"Metro: Cincinnati's Public Transportation System." Go Metro, <https://www.go-metro.com/>. Accessed 25 Feb. 2025.

-Bike Racks and Pedestrian-Friendly Design: Encouraging sustainable transportation options.

-Limited On-Site Parking: Reserved for deliveries and accessible parking needs. Street parking and a nearby parking garage are available.

Site Information



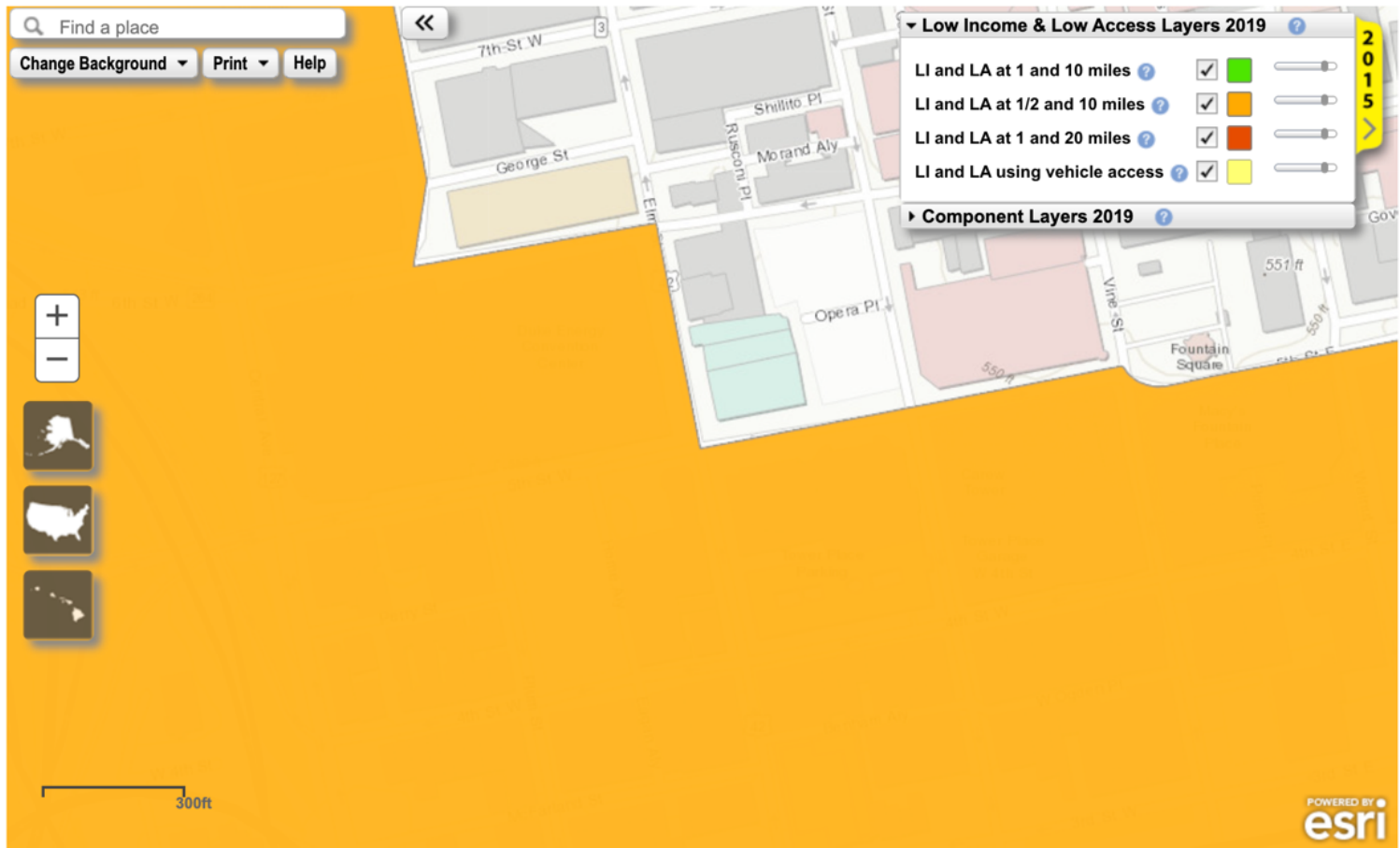
Location of the site on the map. The image shows the surrounding city.

Google maps. "Satellite View of Downtown Cincinnati." Google Maps. 11 Feb. 2025. www.google.com/maps.

This site, located in downtown Cincinnati at West 6th Street, directly behind 500 Elm Street, offers a prime location for integrating green space in an urban setting. Positioned at the intersection of W. 6th Street and Rusconi Place, it provides direct access to public transportation via the 6th and Elm Street Metro bus stops for busses 21 and 64, with additional accessibility through street parking and a nearby public parking garage. The site's significance lies in its proximity to key cultural and commercial landmarks, including the Contemporary Arts Center, Fountain Square, and The Lofts at Shiloto Place, fostering an environment where art, community, and sustainability can intersect. Additionally, it is a short distance from Paycor Stadium, a major venue for sporting events and concerts, ensuring high foot traffic and public engagement potential.

Surrounded by restaurants, business offices, residential buildings, and local shops, the site provides a unique model for addressing urban food insecurity while enhancing public interaction with green space. Importantly, this location has a relatively high number of households without vehicles and is more than one-half mile from a supermarket,

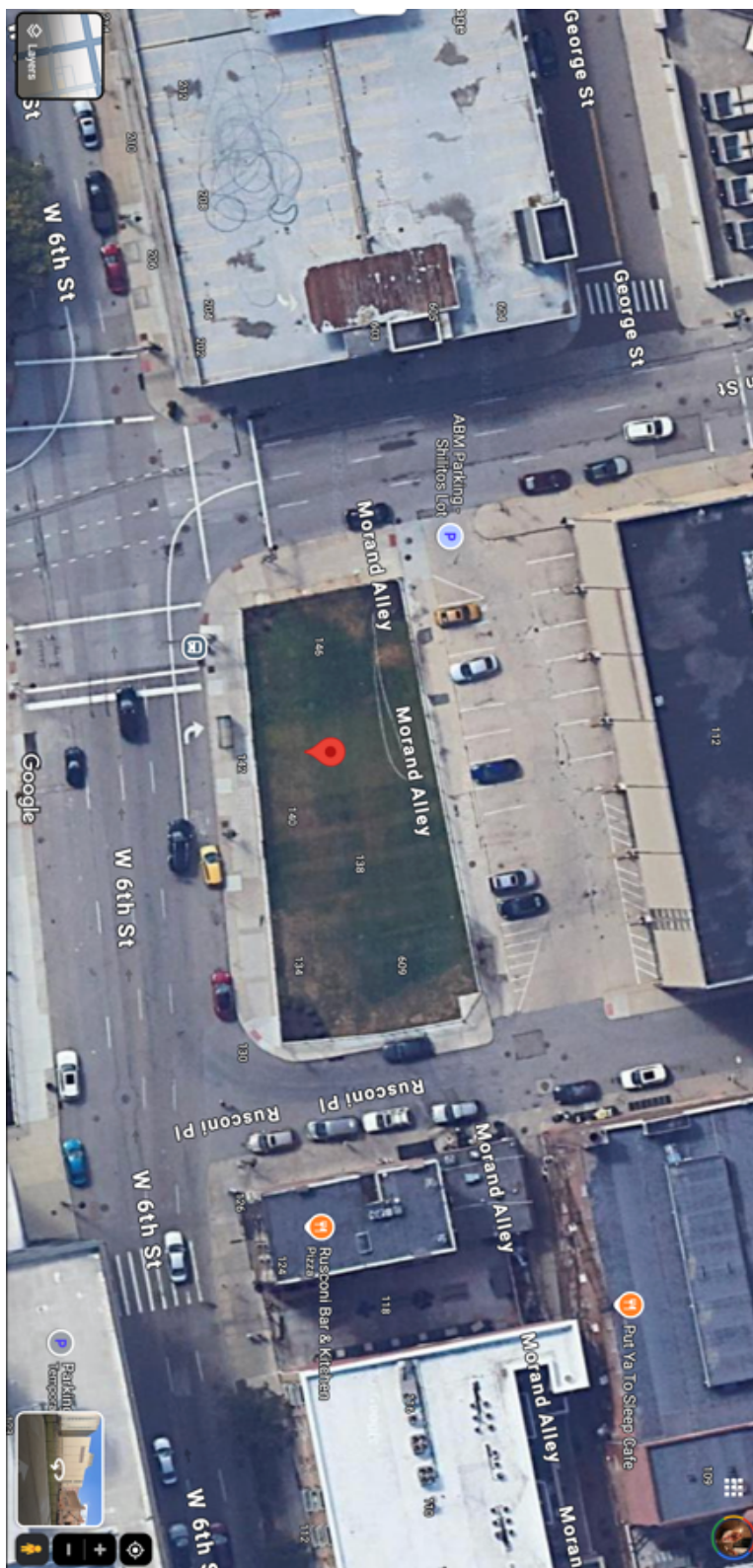
classifying it as a food desert (USDA Food Access Research Atlas). This makes it a good space for a community garden that provides fresh food access while fostering education on sustainable practices.



USDA map showing the site is in a food desert. The site is in a location where residents are more than a half mile from the nearest supermarket.

United States Department of Agriculture. Food Access Research Atlas." Screenshot of map showing West 6th Street". U.S. Department of Agriculture. 11 Feb. 2025. <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas>.

The site originally is enclosed with a gate. The gate is removed for the community garden, making it open, accessible, and inviting. Its urban setting highlights the importance of reclaiming underutilized spaces for sustainability, education, and public well-being. The site's visibility and accessibility make it an inviting project for integrating horticulture into dense metropolitan areas, encouraging both environmental and social benefits.



Closer satellite image of site.

Google Earth. "Satellite View of Downtown Cincinnati." Google Earth. 11 Feb. 2025. <https://earth.google.com/>.

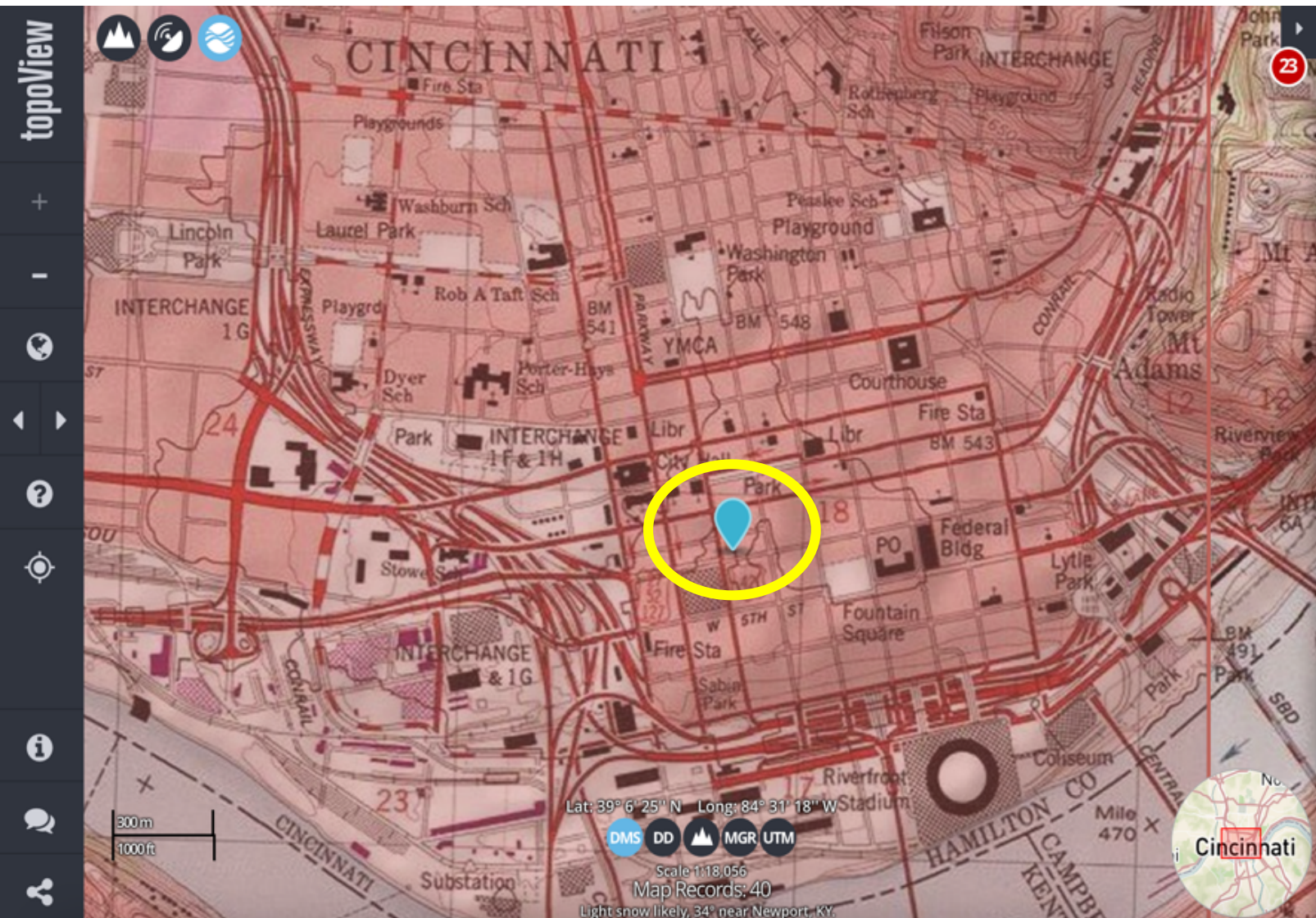
Site Inventory and Analysis: Quantitative

When planning a landscape design, conducting a thorough site inventory and analysis is essential to understanding the physical, historical, and social factors that influence the space. Before 2017, this space was privately owned and contained a building. In 2021, the building was demolished and replaced by a parking lot. Surrounding the site are an apartment building, an athletic club, and a restaurant, as well as other mixed-use buildings. In 2022, a green space replaced the parking lot containing turf grass and small mulched corners containing shrubs. A water pump is located on-site. The site is relatively flat, with a minimal slope of less than 2%, as confirmed by topographic maps. It consists of compacted urban soil, likely a mix of clay and fill dirt, which may require remediation to improve fertility and drainage. A soil test would help determine pH levels, nutrient content, and potential contamination risks.



Topographic map of the site.

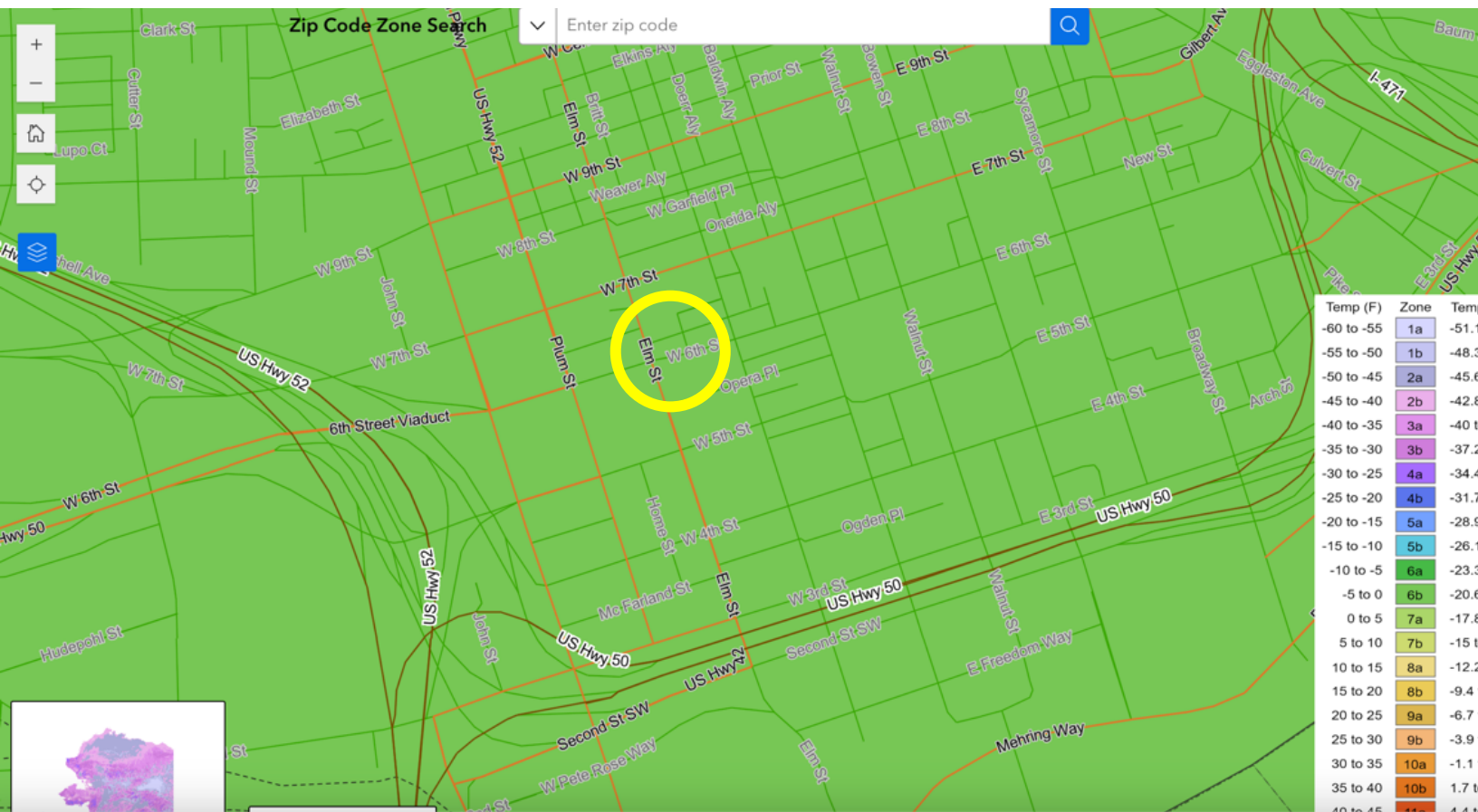
"Cincinnati Topographic Map." Topographic map. 11 Feb. 2025. <https://en-gb.topographic-map.com/map-kfws8/Cincinnati/?center=39.10246%2C-84.51531&zoom=17>



Another topographic map of the site.

"Cincinnati Topographic Map." Topoview. 11 Feb. 2025. <https://ngmdb.usgs.gov/topoview/viewer/#14/39.1094/-84.5313>

The site receives full sun for most of the day, with shading occurring in the late afternoon due to the adjacent apartment building, about 17 stories high, which also acts as a wind barrier. Sun angles and seasonal variations in sunlight influences plant selection. The site is in USDA Plant Hardiness Zone 6b, which supports a variety of plant species suited to Cincinnati's climate, characterized by cold winters and hot, humid summers. According to Climate Check, Cincinnati gets about 40 inches of rainfall per year, with the wettest months occurring in spring and summer, making water management strategies beneficial (Climate Check).



Plant Hardiness Zone Map of Hamilton County, Cincinnati, OH. Map shows site is in hardiness zone 6b.

United States Department of Agriculture, Agricultural research Service. ASDA Plant Hardiness Zone Map. 11 Feb. 2025.

<https://planthardiness.ars.usda.gov/>.

Historically, the site has been part of an urbanized area, with land use likely contributing to soil compaction and potential pollutants such as heavy metals (e.g. lead, cadmium), construction debris, and chemical residues from previous industrial activities. Additionally, street pollution from vehicle emissions, including nitrogen oxides, have impacted the site, contributing to air and soil contamination. Ownership records indicate that the site is publicly owned, which may allow for easier community access and programming opportunities, though gatherings may require compliance with city zoning and land-use policies. Surrounding materials include concrete sidewalks, asphalt roads, and brick and glass from adjacent buildings, which contribute to the urban heat island effect, which happens when cities experience higher temperatures compared to surrounding rural environments.

The site's proximity to public transit, including the 6th and Elm Street Metro bus stop, and the availability of street parking and a nearby parking garage, make it highly accessible. The flat terrain of the site enhances accessibility for individuals using wheelchairs, scooters, canes, or other mobility aids. Since the site is in a food desert, being more than one-half mile from a supermarket, this site fills the need for a food source and promotes education and community engagement.



Image showing 6th and Elm Street Metro bus stop, located directly outside of the site.

Tanner, Avery. Bus Stop. 11 Feb. 2025. West 6th Street, Cincinnati, OH.

Site Inventory and Analysis: Qualitative



Images of the site, surrounding buildings, and existing fencing.

Tanner, Avery. Full site images. 11 Feb. 2025. West 6th Street, Cincinnati, OH.

The site, located in the heart of downtown Cincinnati, offers a unique opportunity for urban revitalization through green spaces. Its proximity to public transportation, parking, and a mix of commercial and residential buildings makes it highly accessible. However, it currently lacks inviting features, leading to underutilization. The site experiences significant noise pollution from nearby traffic, construction, and emergency vehicles. Sun exposure is high throughout most of the day, with nearby buildings providing some wind protection and shade in the later hours of the day. The site is relatively flat, making it suitable for development and accessible for individuals with mobility aids.



Images showing full sun site, and existing vegetation on site.

Tanner, Avery. Full site images. 11 Feb. 2025. West 6th Street, Cincinnati, OH

Vegetation is minimal, with only turf grass and four shrubs, limiting biodiversity and ecological benefits. A water pump is available on site, which supports future plant growth. The site's fencing provides security but may also create a barrier to accessibility. Sustainability considerations include the potential for stormwater management and soil improvement, as urban soil conditions may require amendments for plant health.



Image showing existing water pump on site.

Tanner, Avery. Full site images. 11 Feb. 2025. West 6th Street, Cincinnati, OH

Though currently not a habitat for many animals, introducing food plants may attract wildlife, such as birds, pollinators (bees, butterflies), small mammals (squirrels, rabbits), and beneficial insects such as ladybugs. These species help with pollination, pest control, and seed dispersal, promoting a balanced ecosystem. Additionally, the presence of wildlife contributes to biodiversity, improving soil health and enhancing the overall sustainability of the garden. Socially, the site sits in a food desert, with a high number of households lacking vehicle access, increasing the necessity for fresh food sources. Historically, the site does not appear to have a significant cultural background, but its redevelopment could contribute to the city's green infrastructure and public engagement efforts. Overall, while challenges include noise, soil conditions, and current underutilization, opportunities for community engagement, urban biodiversity, and sustainability initiatives make this site a strong candidate for transformation into a living art and food garden.

Site Summary:



Image showing the surrounding views at the site.

Tanner, Avery. Full site images. 11 Feb. 2025. West 6th Street, Cincinnati, OH

The site analysis has revealed several key factors that shape the next stages of design. Its small size and urban setting call for careful planning to maximize functionality while minimizing disruption. To address noise pollution, the built elements are made off-site, and only handheld tools are used during installation and for gardening practices. Since the existing vegetation is minimal, it can be replaced with sustainable plantings that support urban agriculture and biodiversity.

Accessibility is another critical factor. While the site's flat terrain is beneficial, an ADA-compliant pathway must be incorporated to ensure inclusivity. The site's existing fencing is removed and replaced with plants, making the space welcoming and accessible while providing a private feeling. Given that this is a permanent installation, all materials and structures must be durable and sustainable.



Image showing gating around site.

Tanner, Avery. Gating. 11 Feb. 2025. West 6th Street, Cincinnati, OH

Moving forward, the design balances functionality and aesthetics, incorporating living art installations that engage the community while addressing food insecurity. The strategic placement of garden beds, gathering spaces, and educational signage enhances usability, while sustainable design choices ensure long-term success. The information collected in this phase guides the selection of materials, layout design, and programmatic elements to create a resilient community garden.

Case Studies

Viridian Landscape Studio in Collaboration with The Pennsylvania Horticultural Society: The Farm for the City (2018)



Image showing The Farm for the City, located across from City Hall in Thomas Paine Plaza, Philadelphia, PA. Viridian Landscape Studio. The Farm for the City. Viridian Landscape Studio, <https://www.viridianls.com/farm-for-the-city>. Accessed 3 Feb. 2025

Cultivating Equity: Urban Farming, Sustainable Design, and Food Justice

One in five Philadelphians is food insecure, meaning they have limited or uncertain access to healthy and nutritious foods, and in 2017, Viridian Landscape Studio worked alongside the Pennsylvania Horticultural Society (PHS) to address this issue. To do this, they worked to transform Thomas Paine Plaza, located in the heart of Philadelphia, PA, directly across from City Hall, into a delightful 2,000-square-foot community garden. The community garden, named The Farm for the City, grew for one growing season in 2018 and “aimed to demonstrate how city residents can harness the power of horticulture to enrich and strengthen their communities and help make healthy food more accessible” (Viridian Landscape Studio). In one growing season, the production farm produced over 1,200 pounds of produce, feeding over 8,600 people and donating the food to Broad Street Ministry, a nearby organization serving the homeless (The Pew Center for Arts and Heritage).



The average grand piano weighs 1,200 pounds, which is the amount of food produced at The Farm for the City over four months.

Kawai. Image of a grand piano. Kawai US, <https://kawaius.com/product/kawai-ex/>. Accessed 3 Feb. 2025



The average movie theater in the United States has 200 seats. The Farm for the City fed roughly 8,600 people. 43 average-sized movie theaters would fit 8,600 people.

Simonet, Jorge. Cinema Auditorium, Wikipedia, https://en.wikipedia.org/wiki/Movie_theater#/media/File:Sala_de_cine.jpg. Accessed 3 Feb. 2025.

The Farm for the City aimed to be a sustainable urban garden. The American Horticultural Society (AHS) defines sustainable gardening as combining organic gardening practices with resource conservation (American Horticultural Society). AHS states that sustainable gardening values ecosystem support, makes as little negative impact on the earth as possible, and works with nature instead of against it (American Horticultural Society). To achieve a sustainable garden, The Farm for the City team used materials inspired by those commonly found in community gardens. The materials selected were chosen for their potential to be reused or repurposed in other settings after the project ended. Viridian Landscape Studio stated, “At the conclusion of the growing season, all of the garden’s pieces and parts were repurposed and redistributed to community gardens across the city,” to demonstrate their sustainability pledge and to show that nothing was wasted after the project (Viridian Landscape Studio).



Photo showing renewable materials used on site.

Viridian Landscape Studio. Build Process and materials used for The Farm for the City. American Society of Landscape Architects, 2021, <https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.

The urban farm demonstrated sustainable gardening by repurposing recycled materials such as plastic barrels, wooden produce boxes, and metal troughs, showcasing how visitors could grow their own produce (Viridian Landscape Studio, 2021). To minimize environmental impact, nearly all materials were sourced locally, with any unavailable items obtained from nearby cities. The Pennsylvania Horticultural Society donated chairs, umbrellas, and tables that had been abandoned in a warehouse, giving them a new purpose on-site.

Viridian Landscape Studio emphasized that the design team carefully considered strict weight and wind load requirements, as the plaza floor also served as the roof of city offices. The team used a soil blend of compost, topsoil, and composted pine bark to improve drainage and prevent root rot in crops (Viridian Landscape Studios). To draw attention to the garden, local artists created eye-level flags, adding a vibrant and engaging visual element for passersby (Viridian Landscape Studio).



Image showing renewable materials used on-site. The image shows components of the farm that were built off-site and installed in one week.

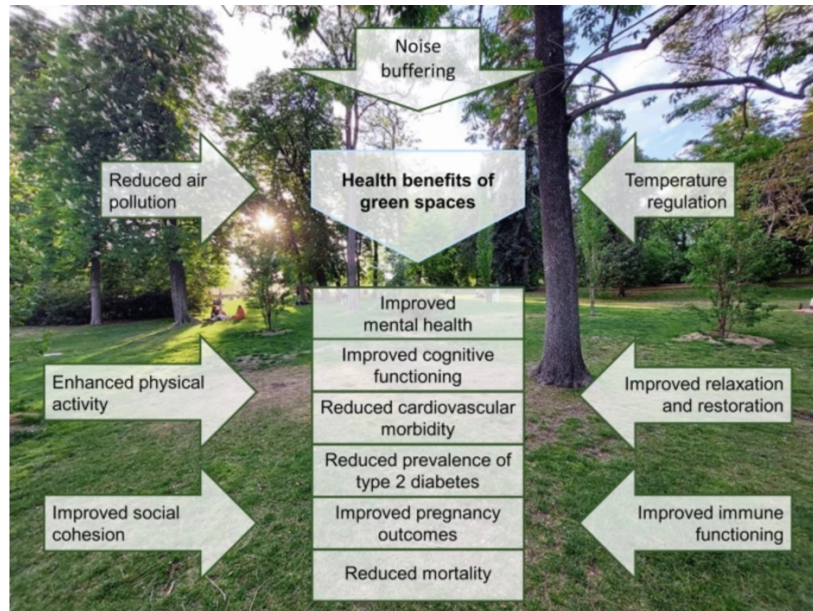
Viridian Landscape Studio. Build Process and materials used for The Farm for the City. American Society of Landscape Architects, 2021, <https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.



Image showing how everyday objects were used to bring life to the space.

Viridian Landscape Studio. Materials used for The Farm for the City. American Society of Landscape Architects, 2021, <https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.

One aspect of sustainability that can be overlooked is noise pollution. Noise pollution is defined as unwanted or excessive sound that can have deleterious effects on human health, wildlife, and environmental quality (Berg and Nathanson). To minimize noise pollution, necessary materials for the site were constructed and inspected off-site and brought to the plaza by hand (Viridian Landscape Studio). This is not the only way The Farm for the City team tackled the issue of noise pollution. Helen Millar for Medical News Today reported that individuals living with noise pollution may experience irritability, anxiety, and frustration (Millar). Millar also noted that environmental noise can contribute to sleep disturbances (Millar). Trout Brook Arborists state, “The presence of trees not only reduces actual noise levels but also provides psychological benefits that can make noise pollution feel less bothersome. The sight of greenery and rustling of leaves can have a calming effect, making noise pollution more tolerable” (Trout Brook Arborists) The Farm for the City provided a respite from the hustle and bustle of urban life, offering visitors a peaceful green space where trees and plants helped buffer city noise while also encouraging relaxation and mental well-being.



World Health Organization showing the benefits of green spaces.

World Health Organization. Urban Green Spaces and Health. WHO, Regional Office for Europe, 2016,

<https://apps.who.int/iris/handle/10665/345751>

The Farm for the City aimed to educate the community on growing their own produce while demonstrating that gardens serve as spaces for connection and collaboration, as emphasized by the Pennsylvania Horticultural Society. To achieve this, the farm hosted gardening workshops, large-scale community dinners, and performances, fostering engagement and learning. Additionally, it organized interactive panel discussions focused on food access and community revitalization (The Pew Center for Arts and Heritage).

Viridian Landscape Studio and PHS developed creative strategies to encourage community participation and education. Over the farm's four-month growing period, two community dinners were held using food grown on-site. These gatherings brought together 150 people from diverse backgrounds-defined as individuals with varying ethnicities, cultures, socioeconomic status, and lived experiences-to share a meal and discuss food security and community-building (Viridian Landscape Studio). Beyond daily talks, classes, and events, outside organizations also utilized the urban farm. For example, the Youth Advocate Program in Fairfill introduced young gardeners to the fundamentals of gardening, the cost of produce, and leadership skills (Hall).



Image showing Youth Advocate Program from Fairfill working in the garden and learning the fundamentals of gardening.

Episcopo, Dominic. Garden class. Edible Philly, <https://ediblephilly.ediblecommunities.com/food-thought/farm-city> Accessed 3 Feb. 2025.



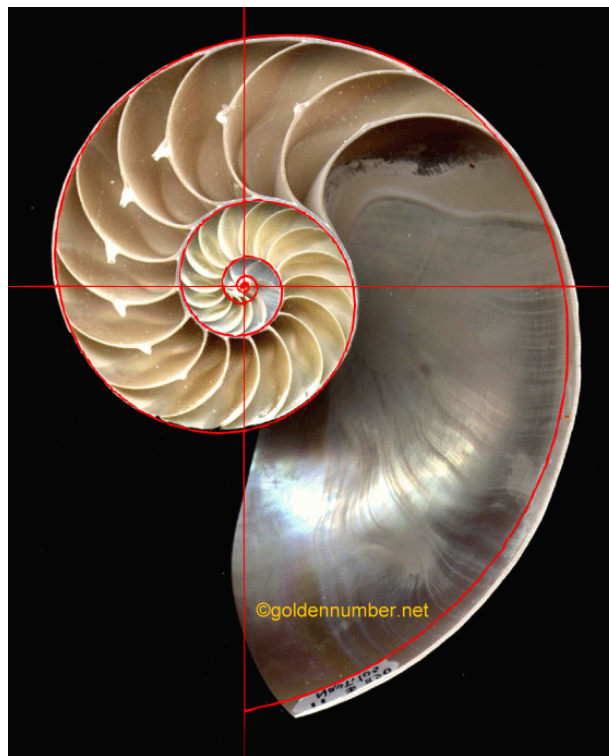
The image shows the multi-purpose uses of the space. People are sitting around the amphitheater.

Viridian Landscape Studio. Multi-purpose spaces on site. American Society of Landscape Architects, 2021, <https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.



The creators of The Farm for the City describe it as a “temporary farm-as-art project,” a concept reflected in its thoughtful and engaging design (Viridian Landscape Studio). From June to September 2018, the interactive exhibit transformed a lifeless concrete plaza into a vibrant community space. Viridian Landscape Studio emphasized that the project demonstrated how quickly a public space can be revitalized into a meaningful asset for the community.

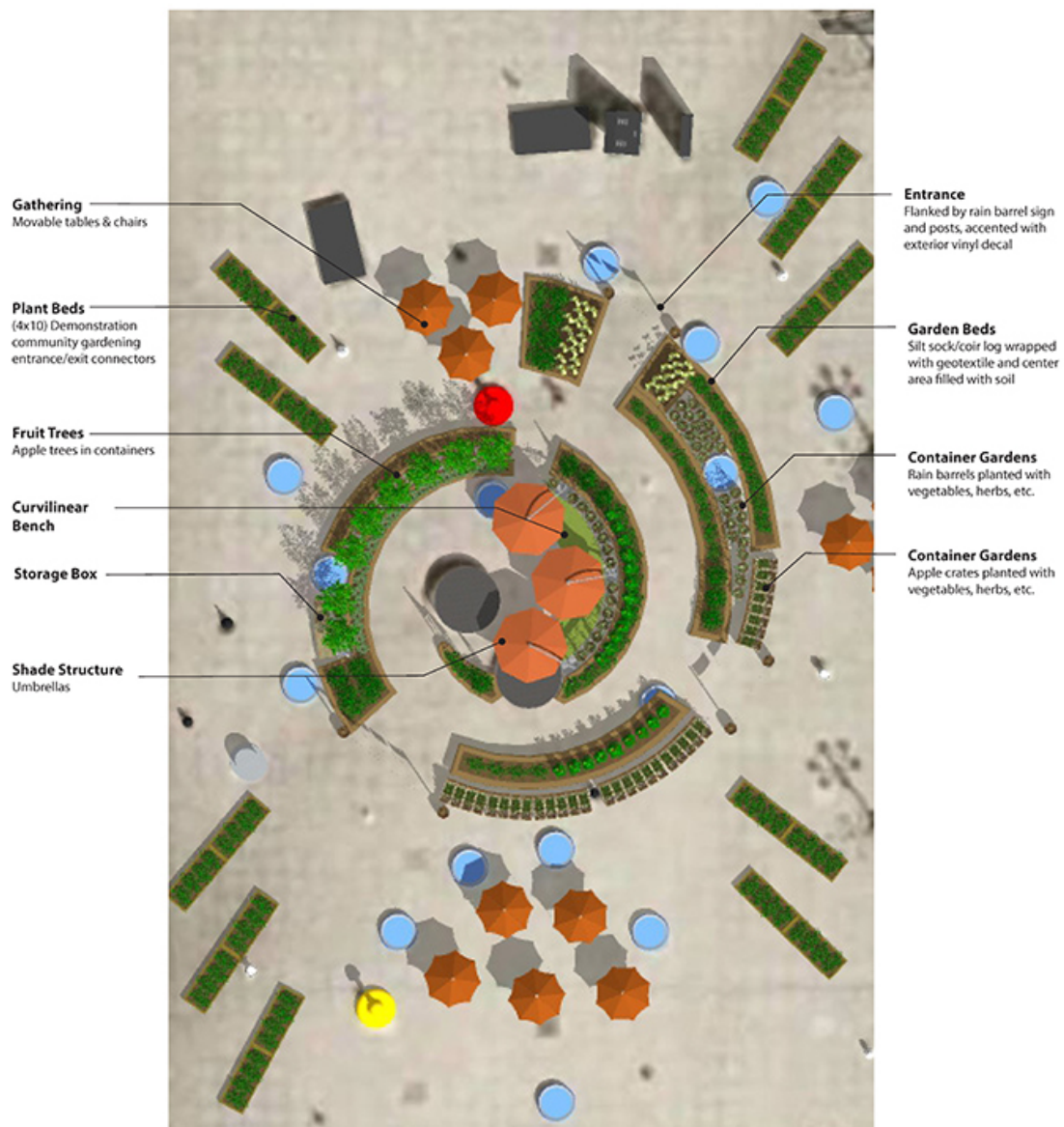
The garden's layout draws inspiration from a nautilus shell, a symbol of growth, expansion, and renewal. Dr. Beaton, a licensed psychologist, refers to the nautilus as "a symbol of order amidst chaos," reflecting the urban garden's role in fostering harmony within a bustling city (Beaton). The design team incorporated existing large chess piece sculptures from the plaza into the layout, allowing the garden to spiral around them, mimicking the shape of a nautilus. This spiral design not only made the space visually inviting but also represented the concept of visitors carrying their newly acquired knowledge from the garden back into the city (Viridian Landscape Studio). Situated in the heart of the city, the garden was visible from surrounding buildings, providing a visual escape for those nearby. At the center of the space, an amphitheater was built to host daily community events. To connect with the existing chess sculptures, the stage featured oversized checker pieces as a creative and functional element (Viridian Landscape Studio).



Nautilus shell shape.

Meiser, Gary. Nautilus shell. Golden number, <https://www.goldennumber.net/nautilus-spiral-golden-ratio/>

Accessed 3 Feb. 2025.



Pennsylvania Horticultural Society Farm for the City
 Thomas Paine Plaza
 1401 John F Kennedy Blvd, Philadelphia, PA 19102
 Viridian Landscape Studio & Think Green
 February 28, 2018



The Farm for the City Master Plan

Viridian Landscape Studio. *The Farm for the City Master Plan*. American Society of Landscape Architects, 2021,
<https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.



The Farm for the City Perspective Image.

Viridian Landscape Studio. Perspective image of the farm. American Society of Landscape Architects, 2021, <https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.

Viridian Landscape Studio and the Pennsylvania Horticultural Society collaborated with farmers and chefs to carefully select crops that honored cultural diversity, enhanced the garden's aesthetics, and contributed to high-quality meals. To further emphasize community engagement, they chose heritage crops. Heritage crops are varieties of vegetables and fruits that predate commercial agriculture and have been passed down through generations (Charbonneau). Many of the seeds were sourced from Philadelphia immigrant seed banks, with some brought to the United States over 30 years ago (Viridian Landscape Studio). More than 50 crops were planted, including rosemary, squash, kale, luffa, corn, and beans.



*Image showing cross-cultural crops.
Viridian Landscape Studio. Cross-cultured
crops. American Society of Landscape
Architects, 2021,*

<https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.



*Image showing varied vegetation.
Viridian Landscape Studio. Varied vegetation on site. American
Society of Landscape Architects, 2021,*

<https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.



Farm For The City Infographic Showing Statistics From One Growing Season
Viridian Landscape Studio. Infographic for The Farm for the City. American Society of Landscape Architects, 2021,
<https://www.asla.org/2021awards/2693.html>. Accessed 3 Feb. 2025.

The Brooklyn Grange: Sunset Park

Beyond Food Access: How Urban Agriculture Improves Nutrition, Mental Health, and Community Resilience

Experiencing food insecurity can have both physical and mental health consequences. Jessica Caporuscio, writing for *Medical News Today*, explains that “people living in food deserts may be at higher risk of diet-related conditions, such as obesity, diabetes, cardiovascular disease, and micronutrient deficiencies,” highlighting the serious health impacts of food insecurity (Caporuscio). The 2020-2025 Dietary Guidelines for Americans emphasize the importance of maintaining a nutrient-dense diet at all stages of life, with a focus on fruits, vegetables, and whole foods (Dietary Guidelines for Americans). However, individuals facing food insecurity lack access to grocery stores and affordable food, forcing them to rely on fast food or convenience stores, which may lack essential nutrients. Food insecurity also affects mental health. The stress of not knowing when or where the next meal will come from can lead to heightened anxiety and emotional distress. Research has shown that chronic food insecurity is linked to increased rates of depression and anxiety, as the uncertainty surrounding basic nourishment creates a constant state of stress (Ejohou et al.).

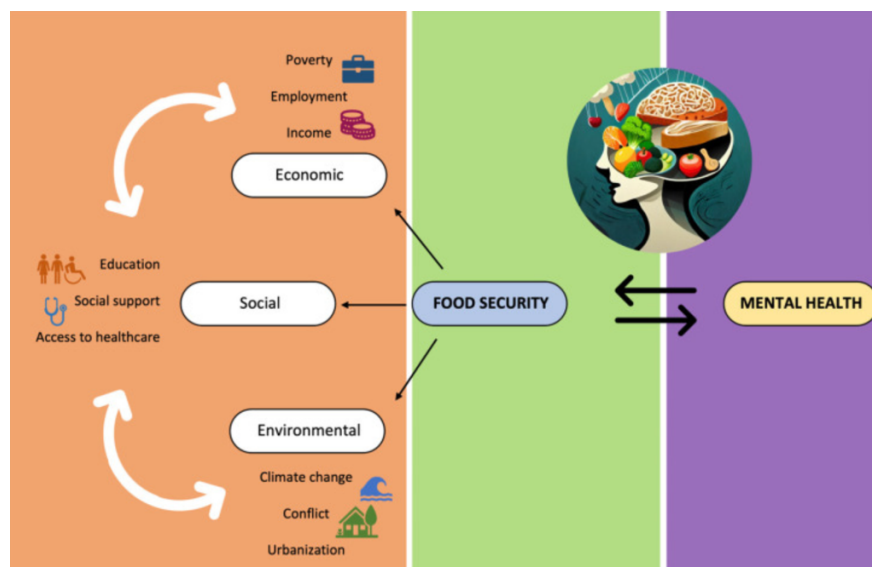


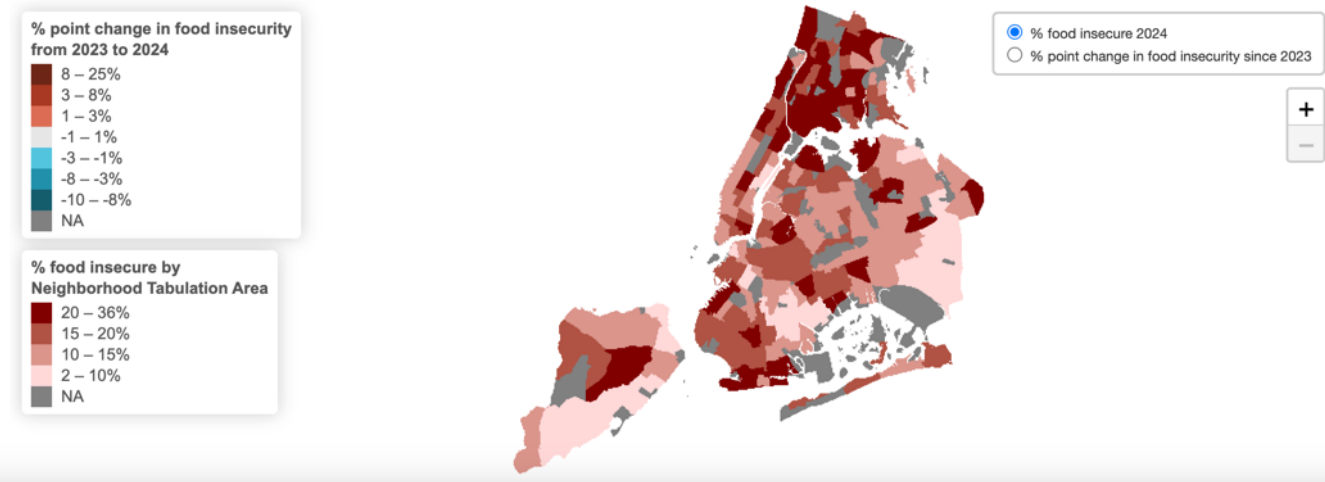
Image showing how mental health is linked to food security and other aspects of our lives.

Ejiohuo, Ovinuchi et al. "Nourishing the Mind: How Food Security Influences Mental Wellbeing." *Nutrients* vol. 16,4 501. 9 Feb. 2024, doi:10.3390/nu16040501

In 2022, the New York City's Mayor's Office of Food Policy *Annual Food Metrics Report* estimated that 1.2 million New York City residents were living in food insecurity (New York City Council). As of 2024, Brooklyn, one of the city's five boroughs, had a poverty rate of 19.8% (New York City Council). While New York City has over 500 emergency food provider locations, like soup kitchens, the demand far exceeds available resources due to

Food Insecurity in NYC

Food insecurity rates range between 5% and 32% in New York City Neighborhood Tabulation Areas (NTAs). Nationally, the food insecurity rate is 13.5%.



the city's large population

Map Showing Food Insecurity in New York City

New York City Council. "Emergency Food in NYC." New York City Council, <https://council.nyc.gov/data/emergency-food-in-nyc/>. Accessed 4

Feb. 2025

Brooklyn Grange, a leading rooftop farming business, is working to address this issue by making fresh produce more accessible. In addition to offering low-cost or free produce to those facing food insecurity, the farm fosters community engagement through educational programs and events. Brooklyn Grange describes its mission as striving to “restore the connection between people and the natural world” by creating urban green spaces that promote livability, climate adaptation, and sustainability (Brooklyn Grange).

Spanning nearly five acres across multiple rooftops, Brooklyn Grange produces 100,000 pounds of food annually (Brooklyn. Grange). In 2018, the organization launched an equitable food distribution program to ensure greater food access for underserved communities. This initiative includes funding partnerships and collaborations with local community organizations, as well as a sliding-scale Community-Supported Agriculture (CSA) Membership. The CSA model allows members to contribute at a level that fits their

financial situation while still receiving fresh fruits and vegetables from the farm. According to Brooklyn Grange farmer Abdul, this approach helps remove financial barriers and ensures equitable food distribution (Brooklyn Grange).



Like this Boeing 737-500, an empty commercial plane weighs 100,000 pounds, the same amount of food Brooklyn Grange produces annually.

FliteLine. Boeing 737-500. FliteLine, <https://www.fliteline.com/aircraft-guide/passenger-aircraft-models/737-500>. Accessed 5 Feb. 2025.

Participants in the program have shared how they gained access to fresh produce, learned valuable farming skills, and discovered new ways to prepare their food. Many describe the rooftop farm as an urban oasis, providing a much-needed escape from the city's fast-paced environment (Brooklyn Grange). Through the equitable food distribution program, Brooklyn Grange donates 60% of its annual harvest to New Yorkers at little or no cost (Brooklyn Grange). Additionally, the farm hosts seasonal farmers' markets throughout the summer and fall, which are free and open to the public.



Image showing Brooklyn Grange Farmers' Market at Sunset Park

Brooklyn Grange. People shopping at farmers' market. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025.

This case study focuses on Brooklyn Grange's Sunset Park rooftop farm, which spans 3.5 acres, making it the largest rooftop farm the organization has designed to date (Brooklyn Grange). Overlooking downtown Manhattan, the New York Harbor, and the Statue of Liberty, this farm serves as both a productive urban green space and a community gathering place. The site includes an outdoor patio and walkways made from locally sourced bluestone slabs, and it hosts indoor and outdoor events that emphasize sustainability. The farm also features a botanical and vegetable-forward drink program, which creates alcoholic and non-alcoholic beverages using plants from the farm, with a



zero-waste commitment (Brooklyn Grange).

Drawing of Sunset Park Farm by Tracy Loughlin

Loughlin, Tracy. Illustration of Sunset Park Farm. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 5 Feb. 2025.

Brooklyn Grange is committed to sustainable design, prioritizing reclaimed, recycled, or responsibly sourced materials. The Sunset Park Farm also follows these practices. The farm incorporates sustainably sourced lumber, recycled green roof materials, and long-lasting, durable materials (Brooklyn Grange). All plantings use certified organic soil, and no chemical fertilizers or pesticides are applied, ensuring the safety of visitors and the surrounding ecosystems. The farm's soil blend, composed of horse manure and aggregate, is carefully selected for its lightweight and drainage properties, making it ideal for a rooftop garden. Farmers enrich the soil with compost made from organic waste, keeping it nutrient-rich and continuously evolving (Brooklyn Grange). To maintain soil health during winter, cover crops such as oats, clover, and peas are planted to prevent erosion and restore nitrogen levels (Brooklyn Grange).

The farm employs a drip irrigation system equipped with rain sensors and timers, which help prevent water waste. Additionally, the rooftop retains tens of thousands of gallons annually, reducing stormwater runoff and sewer overflow issues (Brooklyn Grange). On-site composting is another key sustainability feature, with plant waste, food scraps from events, and donations from neighboring businesses contributing to nutrient-rich soil. Even materials like trash bags and wood chips are repurposed until they can no longer be used. Brooklyn Grange also takes a zero-waste approach to plants, nursing failing or damaged plants back to health for ornamental use (Brooklyn Grange).



Image showing hydroponic system inside the greenhouse.

Crop selection is highly intentional, with farmers analyzing past growing seasons to determine which crops performed well and were most appreciated by the community. The farm follows a crop rotation system to prevent disease and maintain soil fertility. To protect against pests without chemicals, Brooklyn Grange introduces beneficial insects, such as ladybugs and praying mantises, and, when necessary, applies organic insecticidal soap diluted with water (Brooklyn Grange).

The farm prioritizes low-impact, eco-friendly farming techniques. Instead of heavy machinery, the crops are cultivated and harvested by hand, reducing noise pollution and environmental impact. Upcycled materials, such as tarps and sawdust, are used to suppress weeds naturally, eliminating the need for herbicides (Brooklyn Grange). Harvested produce is transported using recycled plastic bins from winery shipments, and when packaging is required, biodegradable plastic bags are used (Brooklyn Grange). The rooftop farm demonstrates how urban agriculture can be a model of sustainability, enhancing food security, environmental resilience, and community engagement while integrating nature into the built environment.

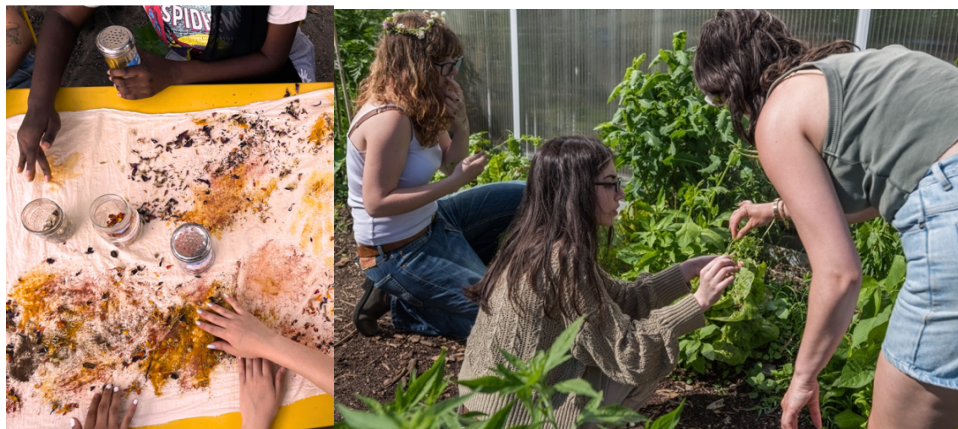


Image showing the use of low-impact tools on site.

Brooklyn Grange. Farmer working in the field. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025.

The Sunset Park farm spans 14,000 square feet and was designed with a strong emphasis on community engagement. The design team embraced the community-oriented approach, which Brooklyn Grange defines as a human-centered, participatory practice focused on enhancing public spaces, identity, and shared experiences (Brooklyn Grange). A key feature of the farm is its 6,000-square-foot indoor event hall and kitchen, allowing for year-round programming and gatherings. However, the farm offers much more than just an event space-it serves as a hub for education, creativity, and sustainability.

The farm hosts a variety of educational programs aimed at teaching the public about gardening and food systems. These include gardening workshops, school field trips, urban ecology classes, natural dye workshops, and pollination exploration sessions. Additionally, the space is used for art exhibitions, such as fashion shows, further integrating art and culture into the urban farming experience.



Images of the dye workshop and urban ecology class at Sunset Park Farm.

City Growers. Images of people attending workshops at Sunset Park Farm. <https://www.citygrowers.org/on-farm-field-trips>. Accessed 4 Feb. 2025.

The Sunset Park farm offers breathtaking panoramic views of the Manhattan skyline, enhancing its role as both a productive urban farm and community gathering space. Adjacent to the event space, a 5,000-square-foot greenhouse serves as a year-round growing area for herbs and hydroponic crops (Brooklyn Grange). From May to November, farmers cultivate a diverse range of crops in the outdoor garden beds, using natural and sustainable farming practices (Brooklyn Grange).



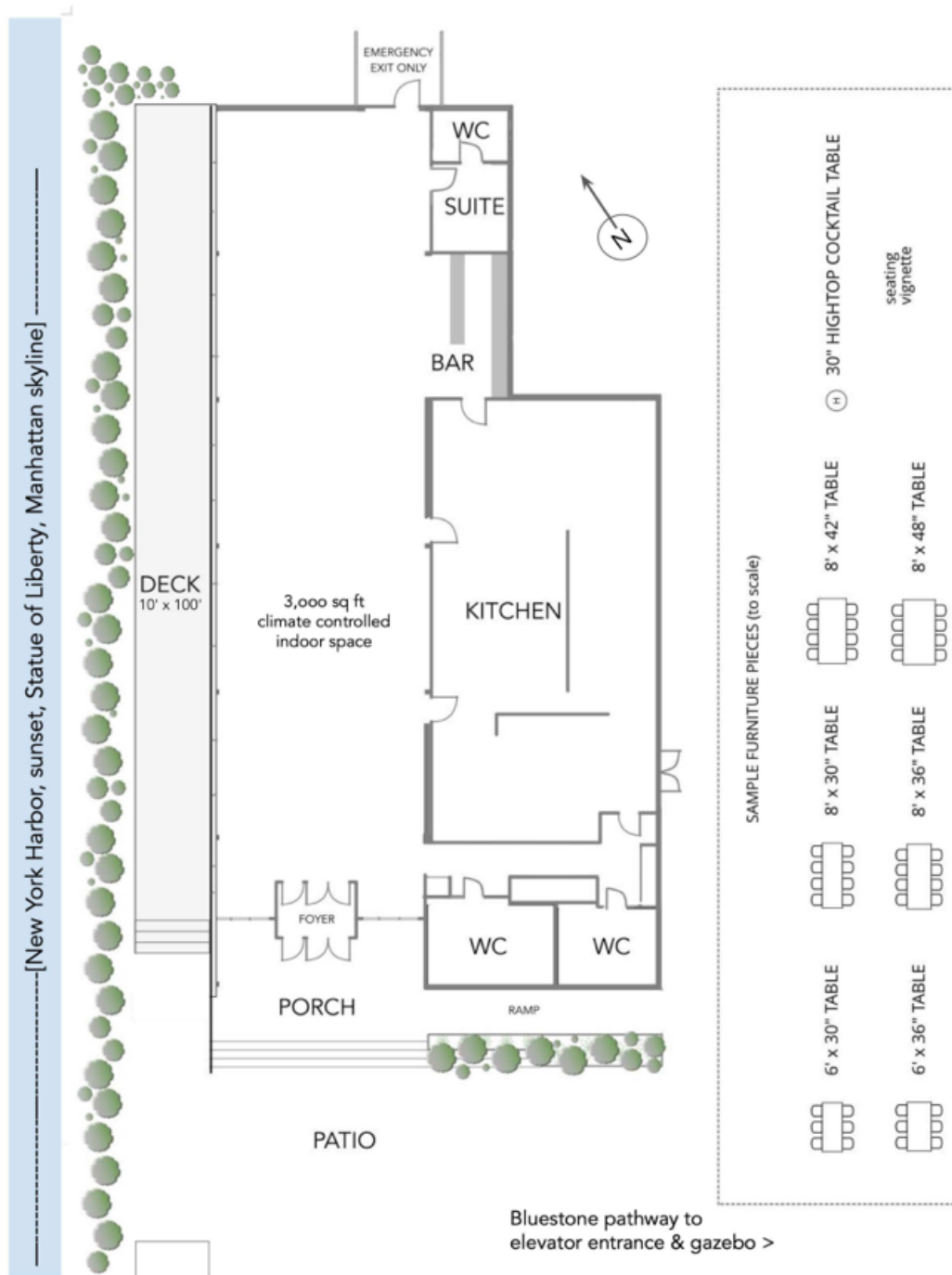
Photo of inside the greenhouse

Brooklyn Grange. Image of the greenhouse. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025



Image of completed Sunset Farm showing the size of the site.

Brooklyn Grange. The Sunset Park Farm. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025



Floor plan of the Sunset Park Farm

The design incorporates bluestone pavers, which provide both aesthetic appeal and functional stormwater management. These pavers form a 2,000-square-foot patio, offering an inviting space for visitors to gather and interact (Brooklyn Grange). Sunflowers and ambient outdoor lighting frame the space, creating a sense of privacy within the open rooftop setting. A gazebo, surrounded by wildflowers and illuminated by string lights, adds to the charm and atmosphere of the space (Brooklyn Grange). Despite being located on a rooftop, the farm is designed with accessibility in mind-featuring sliding glass doors, direct elevator access, and ADA-compliant pathways and restrooms, ensuring that visitors can navigate the space safely and comfortably (Brooklyn Grange).



Image showing rooftop crop fields.

Brooklyn Grange. Rooftop growing space. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025.



Ariel view of The Sunset Park Farm.

Brooklyn Grange. Ariel view of the farm. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025.



Photo of the view from the site, showing the Manhattan skyline.

Brooklyn Grange View from The Sunset Park Farm. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025.



Photos showcasing different uses of the space. On the right is a pollination workshop. On the left is the venue set up for an event dinner.

Brooklyn Grange. Events at The Sunset Park Farm. Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025.

Images showing the versatile uses of The Sunset Farm Park. The first image shows the space being used on a normal day. The second shows a yoga class in the indoor event space. The third shows the garden being used to host a fashion show. The fourth image shows the garden being used for a concert. The final image shows the space being used for a wedding.





Brooklyn Grange. Different events taking place at Sunset Farm Park.

Brooklyn Grange, <https://www.brooklyngrangefarm.com/>. Accessed 4 Feb. 2025.

Literature Review

Topiary Joe Creations



Kyte, Joe. No Title, No Date. Topiary Joe. <https://www.topiaryjoe.com/gallery-1/>

Joe Kyte is an artist located in Tellico Plains, Tennessee, whose goal is to create dynamic, living sculptures designed to bring joy and inspiration. He selects plants that thrive in the region he is designing for, ensuring beauty and sustainability. Joe's primary goal is to spread happiness through his art, using nature as his medium. Joe established his business, *Topiary Joe Creations*, in 1992 after being inspired by topiary sculptures at Disney Parks (Topiary Joe). The company uses steel wire to frame the sculptures, and then either have shrubbery grow into the frame or stuffs the frames with Sphagnum Moss (Topiary Joe). Sculptures are then planted with vines, succulents, annuals, or perennials, resulting in vibrant, lasting works of art. (Topiary Joe).

Sophie Parker



Parker, Sophie. *A Serpent in the garden*. 2017. <https://www.sophieparker.net/2017/7/5/b7x04xb6hwd7a52hazcu4ky47muctb>

Parker, Sophie. *Speaking in Tongues*. 2017. <https://www.sophieparker.net/2017/7/5/b7x04xb6hwd7a52hazcu4ky47muctb>

Sophie, Parker. *Mating Dance*. 2017. <https://www.sophieparker.net/2017/7/5/b7x04xb6hwd7a52hazcu4ky47muctb>

Sophie Parker is an artist who lives in Brooklyn, New York. Sophie is originally from the Ozark Mountains, and “draws from her roots in the land as a point of contrast in the urban experience,” (Sophie Parker). Parker's art blends plants, ecology, and design, using a variety of natural materials, like flowers, moss, and foliage, to create immersive

installations. Her work explores the relationship between humans and nature, often incorporating seasonal and foraged plants to highlight cycles of growth and decay. Sophie Parker's work transforms urban environments into living, breathing works of art.

Diana Scherer



Scherer, Diana. *Exercises in Root System Domestication*. 2015-ongoing. <https://dianascherer.nl/>
 Scherer, Diana. *Soil, seed, roots*. <https://dianascherer.nl/>



Scherer, Diana. <https://dianascherer.nl/>

Diana Scherer is a Dutch artist who is known for creating art based around plants and their growth patterns. Diana creates patterns and shapes found in the botanical world, resulting in poetic pieces (Diana Scherer). She does this by using plant roots as a medium, manipulating the growth of the plant beneath the soil surface (Diana Scherer). Diana's work explores the relationship between humans and the natural world, highlighting the hidden beauty and intelligence of plants. She blends nature with human creativity by focusing on the unseen aspects of plants.

Azuma Makoto



Makoto, Azuma. Frozen Flowers. 2023. Hokkaido, Japan https://azumamakoto.com/project/rjvp_2ge1644/



Makoto, Azuma. 2018. Botanical Sculpture: Sterlitzia x 9,000 IKERU KUN. Hyakuna Beach, Japan. <https://azumamakoto.com/project/0weijpz7sf/>



Makoto, Azuma. Botanical Sculpture: Drought and Seed. 2018. Jujuy, Argentina. <https://azumamakoto.com/project/98o9c6ahhv/>

Japanese floral artist, Azuma Makoto developed a creative studio, AMKK, that is dedicated to creating experimental floral and botanical creations. The company “aims to increase the existential value of flowers by finding out the most mysterious figure only

owned by flowers and plants and converting it to artistic expression (Azuma Makoto). Azuma is renowned for his innovative use of plants in art. He creates floral installations and sculptures that push the boundaries of traditional botanical design. Azuma's work explores the beauty of nature, capturing moments in time where plants are both fragile and resilient. His work challenges perceptions of plants as static objects, showcasing their dynamic qualities.

Anne ten Donkelaar



Donkelaar, Anne ten. Flowerconstruction #148. 2011. <https://anneten.nl/works/13-flower-constructions>

Donkelaar, Anne ten. Underwater Ballet. <https://anneten.nl/works/29-underwater-ballet>

Donkelaar, Anne ten. Flower Pigments. <https://anneten.nl/works/27-flower-pigments>

Anne ten Donkelaar is an artist from the Netherlands. Anne states “A damaged butterfly, a broken twig, a bumblebee, some strangely grown weeds: I find all these unique discoveries in my path and then take them home to my studio,” showing how she finds beauty in things some people may pass by (Anne ten Donkelaar). She creates delicate works that combine botanical elements with artistic expression. Her work focuses on the beauty and fragility of nature. Anne turns the natural world into something whimsical and scientific. Anne's work highlights overlooked details by preserving and recontextualizing plants. Her work allows viewers to appreciate the beauty of nature and the connection between the organic world and artistic creation.

Agnes Denes



Denes, Agnes. *Model for A forest for New York*. Commissioned by The Shed. http://www.agnesdenesstudio.com/works_0-forestmodel.html



Denes, Agnes. *Wheatfield-A Confrontation: Battery Park Landfill, Downtown Manhattan*. 1982.

<http://www.agnesdenesstudio.com/works7.html>

Denes, Agnes. *Tree Mountain- A Living Time Capsule*. 1992-1996. Ylojarvi, Finland. <http://www.agnesdenesstudio.com/works4.html>

Agnes Denes is a Hungarian American artist who blends environmental activism, science, and philosophy with art. She is known for her large-scale ecological projects, using nature as the subject and medium. Agnes explores themes of environmental loss, sustainability, and the relationship between humanity and the organic world. Her work challenges viewers to consider their connection to the planet and the future of the planet.

Lois Weinberger



Weinberger, Lois. *Salle Principale*. 2024. Paris. <https://www.loisweinberger.net/en/exhibitions/salle-principale-2/>
 Weinberger, Lois. *Mobil Garden, Sculpture Milwaukee*. 2023-2024. <https://www.loisweinberger.net/en/exhibitions/sculpture-milwaukee-2/>

Lois Weinberger, an artist from Austria, creates pieces that investigate the relationship between natural and man-made spaces (Lois Weinberger). Lois is best known for his innovative use of plants and natural materials to address themes of ecology, landscape, and human impact on the environment. His art challenges the boundaries between cultivated and wild spaces, drawing attention to the neglected aspects of our surroundings, making the viewer rethink the way we interact with nature in modern life.

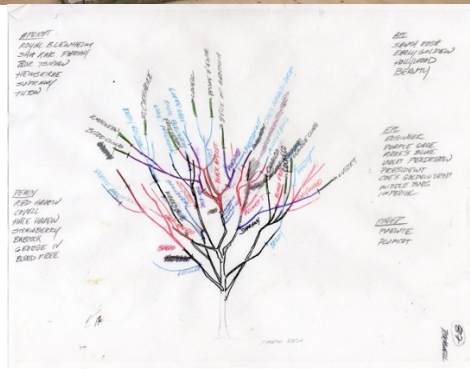
Juanli Carrion



Carrion, Juanli. *Outer Seed Shadow*. 2012-2017. Mnahattan. <https://www.juanlicarrion.com/work/outer-seed-shadow>

Juanli Carrion is a Spanish artist whose work addresses social and environmental justice. A major part of Juanli's work is the use of community, since he often collaborates with residents when he creates his projects. He is known for his large-scale environmental art, using plants and natural materials to create installations that engage with the surrounding landscape (Juanli Carrion). Juanli integrates plants into the urban environment to question the relationship between humans and the natural world. His work challenges viewers to reflect on the role of nature in urban settings and how it can be incorporated into everyday life (Juanli Carrion). His work highlights nature's resilience and adaptability, while challenging traditional uses of space.

Sam Van Aken



Van Aken, Sam. *The Tree of 40 Fruit*. 2008. Syracuse's campus. <https://www.samvanaken.com/tree-of-40-fruit-2>

Sam Van Aken is an artist from Pennsylvania that “works beyond traditional modes of art making, crossing artistic genres and disciplines to develop new perspectives” (Sam Van Aken). He is best known for his project, *The Tree of 40 Fruit* (above), which he grafted different varieties of tree fruit together to create a single tree that bears multiple types of fruit (Sam Van Aken). Sam’s work explores themes of genetic modification, agricultural history, and the relationship between humans, nature, and food. The hybrid trees encourage a conversation about biodiversity, sustainability, and ways in which art and nature can intersect.

Connecting the artists

While all these artists are unique, they all share a common theme of using living art to engage communities, highlight the importance of nature, and promote sustainability. These artists explore the hidden beauty of nature and challenge urban landscapes by introducing unique designs to the space, sometimes including food production. These plant-based sculptures. And urban installations encourage people to appreciate nature in unexpected places, fostering a deep connection to the environment.

Plant life in public art projects creates spaces where communities can interact with nature, often in urban or neglected areas. Some of these artists bring attention to food insecurity by incorporating sustainable agricultural practices into their work, inviting viewers to reflect on the role of food in urban environments. Together, they use art to connect communities, promote environmental awareness, and spark conversations about food security, urging a more thoughtful approach to how we relate to the world around us.



Piece by Sophie Parker that heavily inspired the living art installation for this project.

Parker, Sophie. WIFE NYC, www.wifeny.com/botanicals-1/tcg0xmkeojh41usypwbznabodjzqpc. Accessed 3 Mar, 2025.

Case Study Summary

Community gardens, like Brooklyn Grange's Sunset Park Farm and Viridian Landscape Studio's Farm for the City, are crucial in enhancing physical and mental well-being, fostering social connections, and encouraging creativity. These urban green spaces provide access to fresh, nutritious food, reducing food insecurity while promoting healthier lifestyles. Additionally, they serve as sanctuaries from urban stress, helping to lower anxiety and foster a sense of purpose through hands-on interaction with nature.

Community gardens strengthen social ties and build more resilient, vibrant communities by bringing people together through gardening, education, and cultural events. As cities continue to expand, integrating green spaces into urban landscapes is essential for improving public health and environmental sustainability.

Inspired by these successful models, a community garden in Cincinnati's Central Business District is designed, transforming an urban space into a hub for sustainability, education, and connection. To further emphasize the importance of green spaces, a living art installation featuring a watering can with plants pouring out of it is incorporated into the design to symbolize growth and renewal. Drawing from the work of artists like Sophie Parker, Azuma Makoto, Agnes Denes, and Anne ten Donkelaar, the installation blends art and nature, engaging the community in a creative and meaningful way. By incorporating

living art into the space, the project not only provides fresh food and environmental benefits but also inspires conversations about sustainability, urban ecology, and the role of nature in everyday life.



Image of living art piece by Ivan Gorbachev. Inspiration for the art created for this project.

Gorbachev, Ivan. Pinterest, uploaded by Dalia Bortolotti.

www.pinterest.com/pin/8162843068467378/. Accessed 3 Mar. 2025

Historical Context

Community gardens have been a part of American history since the 19th century, serving as spaces for education, food production, and community building. While these gardens existed before 1917, the start of World War I highlighted their importance. The war created an urgent need for food, transforming community gardens from educational spaces into an essential resource (Smithsonian Gardens). The U.S. government encouraged citizens to become “soldiers of the soil” to boost produce exports and support the war effort (Smithsonian Gardens). As a result, 3.5 million “war gardens” were established across the country (Smithsonian Gardens).



Woman working in a war garden, 1918. Location unknown.

Library of Congress. Woman working in a war garden. Library of Congress.

<https://communityofgardens.si.edu/exhibits/show/historycommunitygardens/wartimegardens> Accessed 6 Feb. 2025.

Community gardens remained significant after the war. According to the Smithsonian, “in many cities, African American residents used gardening contests to strengthen community ties and improve their neighborhoods”, which was often neglected due to racial discrimination (Smithsonian Gardens). The Great Depression of the 1920s and 1930s further emphasized the necessity of these gardens. Many people relied on these

gardens for essential nutrients due to widespread economic hardship. The government and local organizations provided support, leading to the creation of “Thrift Gardens,” which were specifically designed to help those in need (Smithsonian Gardens).



Pamphlet with images of Detroit's Thrift Gardens, 1931.

Burton Historical Collection, Detroit Public Library. Pamphlet with images of Detroit's Thrift Gardens. Community of Gardens, Smithsonian Institution. <https://communityofgardens.si.edu/exhibits/show/historycommunitygardens/thriftgardens>. Accessed 6 Feb. 2025.

During World War II, the needs for community gardens resurfaced, much like it had during World War I. While the government had supported Thrift Gardens, they were hesitant to support community gardens during this time, believing large-scale agriculture would be more efficient (Smithsonian Gardens). However, they ultimately recognized the health, recreational, and morale-boosting benefits of gardening, leading to the establishment of the Victory Garden Program (Smithsonian Gardens). This initiative aimed to increase fruit and vegetable production, promote proper food storage and preservation, reduce household costs, provide urban gardening opportunities, and maintain national morale (Megan E. Springate). By 1944, nearly 20 million families had Victory Gardens, which produced 40% of the vegetables grown in the United States (Smithsonian Gardens).



Top image: Poster to boost community engagement in Victory Gardens. Bottom Image: Harry Nelson giving his daughter and friends pointers on working in the garden.

Left image citation: Office of War Information. Plant a Victory Garden: Our Food Is Fighting: A Garden Will Make Your Rations Go Further. 1943, Collection of Northwestern University Libraries, Government & Geographic Information Collection (ark:/81985/n2d50hx9g). National Park Service, <https://www.nps.gov/articles/000/victory-gardens-on-the-world-war-ii-home-front.htm> Accessed 6 Feb. 20205

Right image citation: Rosener, Ann. Guiding Hand Behind Many West Coast Victory Gardens. March 1943, Collection of the Library of Congress, <https://lcn.loc.gov/201769713> National Park Service, <https://www.nps.gov/articles/000/victory-gardens-on-the-world-war-ii-home-front.htm>. Accessed 6 Feb. 2025.

Following World War II, the rise of industrial agriculture led to a decline in community gardens. Nonetheless, grassroots organizations and citizens revived the movement in the 1960s and 1970s to restore urban communities (Smithsonian Gardens). Throughout history, community gardens have provided stability and resilience in times of

war, economic hardships, natural disasters, and even global pandemics. Marguerite Green, executive director of Sprout NOLA, a New Orleans nonprofit supporting community gardens, emphasized their importance in times of crisis, stating that their purpose is to care for and support community members (Robert Gottlieb). Community gardens continue to serve as vital spaces that promote food security, strengthen social bonds, and reconnect people with nature, ensuring their relevance for generations to come.



Image of current-day community garden. Aspen Farms Community Garden in Philadelphia.

Garden Club of America Collection. Aspen Farms Community Garden. Archives of American Gardens, Smithsonian Institution.

Community of Gardens, Smithsonian Institution.

<https://communityofgardens.si.edu/exhibits/show/historycommunitygardens/gardenmovement>. Accessed 6 Feb. 2025.

Project Goals

After reviewing the previous research and case studies, this project aims to address food insecurity, foster community engagement, and promote mental and physical well-being through an urban garden and living art installation. By growing heritage crops and staple produce requested by residents, the garden provides fresh food in a designated food desert. It also serves as an educational space, offering workshops on sustainable gardening and urban farming to empower residents with essential skills.



Image of German Johnson Tomato, a heritage crop for Cincinnati, brought by German immigrants, who played a significant role in Cincinnati's history.

"Image of German Johnson Tomato." Seeds 'n Such, www.seedsnsuch.com/products/german-johnson-pink-tomato-seeds-1. Accessed 3 Mar, 2025

Beyond food production, the garden functions as a social and cultural hub, hosting events like harvest festivals, art workshops, and cooking demonstrations to unite the community. The workshops and classes encourage self-sufficiency and empower residents to grow food independently. Access to green spaces has been shown to improve mental and physical health, and this project creates a welcoming, restorative space within the urban environment. A key feature is the living art installations. A large watering can with plants growing from it is incorporated into the space and symbolizes growth, movement, and the nurturing power of nature. Using a combination of flowering plants, foliage, and edible crops, this installation is a visual landmark and an interactive educational tool.



Image showing a gardening class. Example of a class held at the urban garden.

"Image from 'Top 6 Kids' Farm Fascinating Features'." Oxbow Farm & Conservation Center, www.oxbow.org/blog/top-6-kids-farm-fascinating-features/. Accessed 3 Mar, 2025.

To ensure sustainability and accessibility, all garden elements are designed to be long-lasting and inclusive, with ADA-compliant pathways and seating. Maintenance is seasonal, with a team of workers and volunteers managing operations in peak months and a smaller staff maintaining the space in the off-season. By integrating food production, education, and art, this project transforms an underutilized urban lot into a thriving space that fosters resilience, connection, and sustainability for Cincinnati residents.

Programmatic Requirements

1. Site Overview & Dimensions

- Total Area: 8,400 square feet
- Dimensions: 140 ft x 140 ft x 60 ft x 60 ft
- Location: 6th and Elm Street, Central Business District, Cincinnati
- Primary Purpose: A multifunctional community garden designed for education, creativity, and addressing food insecurity through urban agriculture, public engagement, and interactive programming.

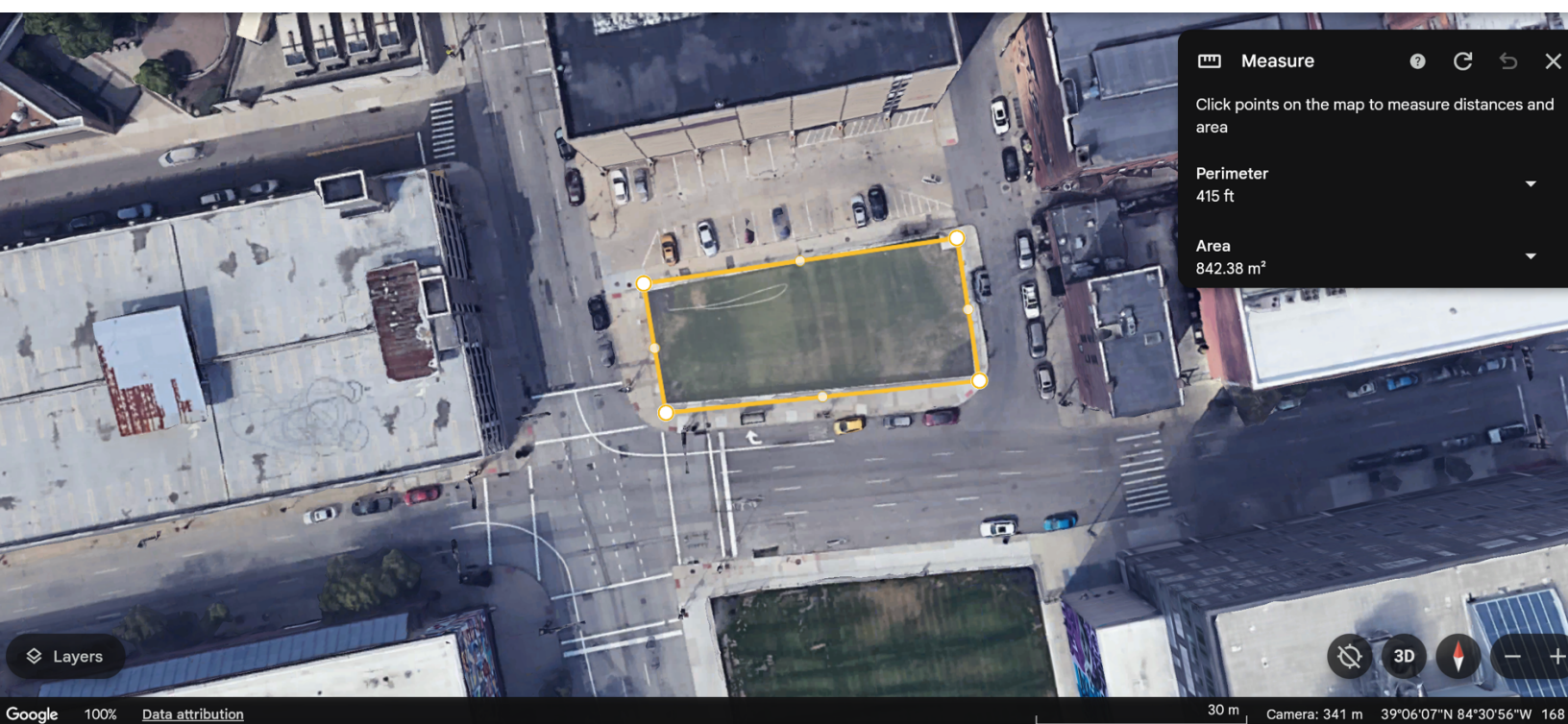


Image of site on map. The yellow outline shows the size of the space.

Google Maps, 4 Mar. 2025. www.google.com/maps. Accessed 4 Mar, 2025.

2. Hours of Operation

General Public Access:

- Spring & Summer: 7:00 AM - 8:00 PM
- Fall & Winter: 8:00 AM – 6:00 PM
- Hours will be adjusted based on seasonal daylight changes.

Worker & Volunteer Shifts:

- Morning Shift (6:00 AM – 10:00 AM): Watering, general maintenance, and crop care.
- Midday Shift (12:00 PM – 3:00 PM): Community programs, educational workshops, and public engagement.
- Evening Shift (5:00 PM - 8:00 PM): Cleanup, final gardening tasks, and preparation for the next day.
- Flexible Schedule: Tasks may shift depending on events, weather conditions, and specific gardening needs.

3. Key Spatial Elements and Usage

- Central Feature: A shell-shaped amphitheater designed for educational workshops, guest speakers, and community events. The shell design pays homage to the historic role of Cincinnati's riverfront and ties to the city's history of trade and industry.
- Raised garden beds for seasonal crops and edible plants.
- Vertical growing walls to maximize space.
- Greenhouse structure for year-round food production.



Example of a small greenhouse that is located on site.

Canopia by Palram Balance 16-ft L x 10-ft W x 8.4-ft H Silver Frame/Clear Panels Greenhouse Kit. Lowe's, www.lowes.com/pd/Canopia-by-Palram-Balance-16-ft-L-x-10-ft-W-x-8-4-ft-H-Silver-Clear-Greenhouse/5014471463. Accessed 4 Mar. 2025.

- **Public Interaction Spaces:** Seating areas with shade, open-air community tables for discussions and shared meals.
- Designated space for interactive art installations related to urban agriculture.
- **Support & Storage Areas:** Tool sheds for garden maintenance equipment. Rainwater collection and composting stations for sustainability.
- **Pathways & Accessibility:** ADA-compliant pathways ensure accessibility for visitors. Lighting is installed to allow safe evening access.

4. Environmental & Technical Considerations

- **Soil & Irrigation:** Raised beds use nutrient-rich soil to accommodate urban farming. Drip irrigation systems are implemented for water efficiency. A water pump is located on-site.



Image of drip irrigation system.

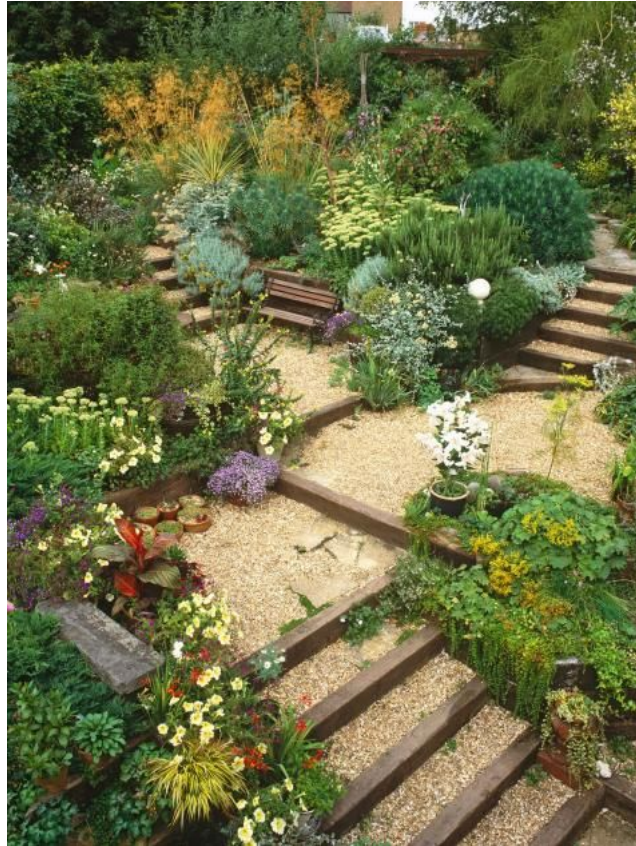
"Cost-Benefit Analysis of Installing a Drip Irrigation System." DripWorks, 22 Apr. 2024,

www.dripworks.com/blog/costbenefit-analysis-of-installing-a-drip-irrigation-system, Accessed 4 Mar. 2025.

- **Materials & Sustainability:** Reclaimed wood, permeable pavers, and recycled materials for structures. A mixture of heritage crops, native plants, and non-native plants is used to increase biodiversity.
- **Climate Considerations:** Windbreaks and shade elements are implemented into the design to protect delicate plants. A small greenhouse is on-site for year-round production.

- **Lighting:** Soft, warm-toned LED lighting for an evening ambiance. Solar-powered lights along pathways to minimize energy consumption. Fairy lights are placed throughout the design to create a welcoming, enchanting space.

5. Psychological & Sensory Experience



Example of a garden using the same color pallet.

"Design." HGTV, www.hgtv.com/outdoors/landscaping-and-hardscaping/design. Accessed 4 Mar. 2025.

- **Color Palette:** Natural greens, earthy browns, and pops of vibrant floral colors evoke a sense of calm and inspiration.
- **Sensory Elements:** Fragrant plants, rustling foliage, and the sound of water create a peaceful escape from the city.
- **Community Engagement:** The space fosters social connections through hands-on gardening, art, and workshops.

6. Budget & Cost Considerations (Estimated)

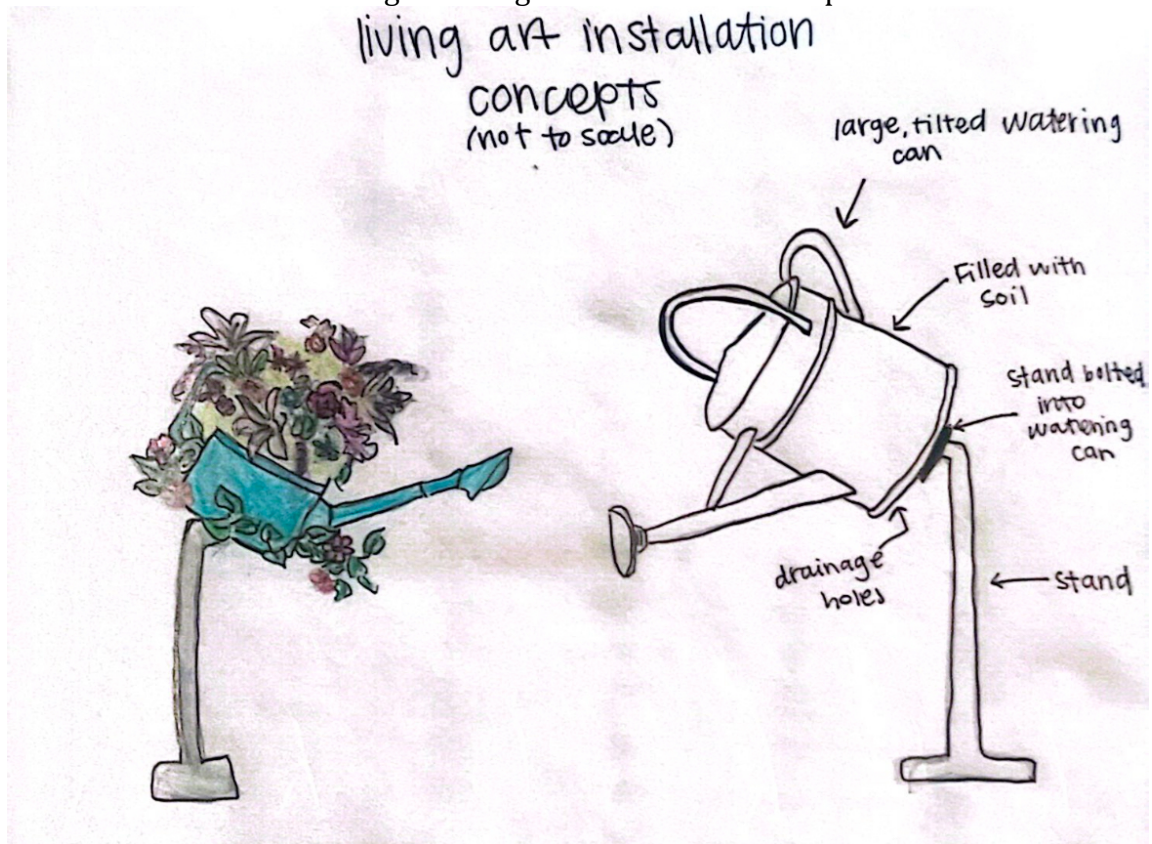
- Garden Beds & Plants: \$15,000
- Irrigation System: \$8,000
- Amphitheater Structure: \$10,000
- Seating & Public Spaces: \$10,000
- Lighting & Accessibility Features: \$7,000
- Miscellaneous (Tools, Signage, Art Installations, etc.): \$5,000
- Total Estimated Budget: \$70,000

7. Relationship to Surrounding Spaces

- The garden serves as a green oasis within the urban landscape, providing a connection to nature in a high-density area. It collaborates with nearby businesses, schools, and community centers for educational collaborations and events. The amphitheater serves as a focal point for discussions on sustainability, urban farming, and creative expression.

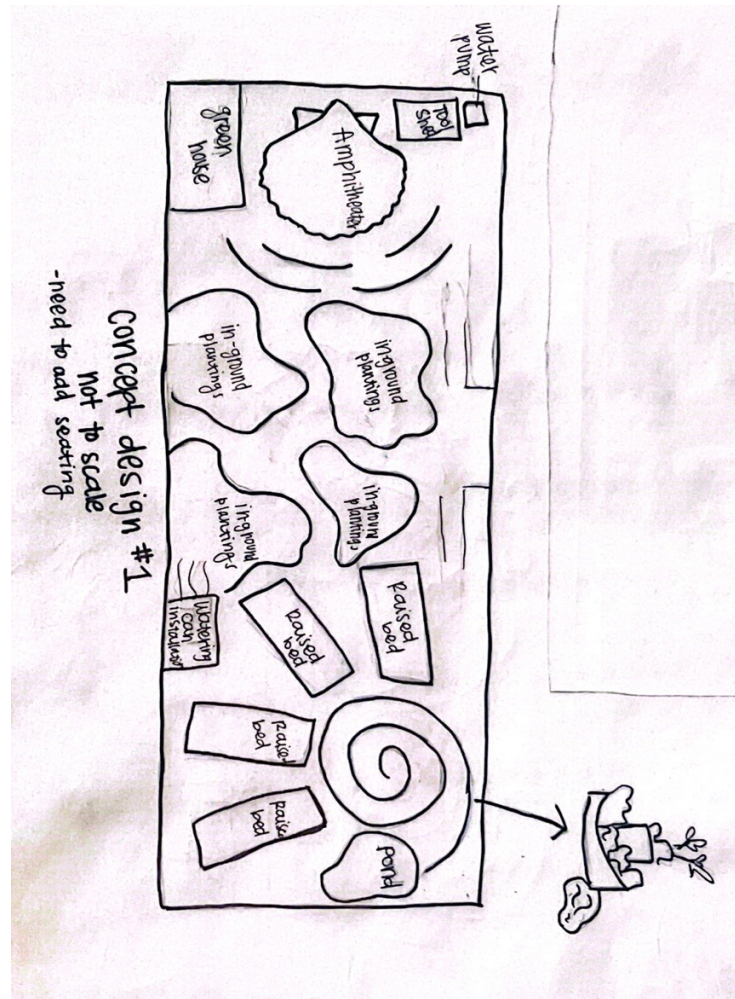
Final Product Design/Solution

Drawings of living art installation concepts.

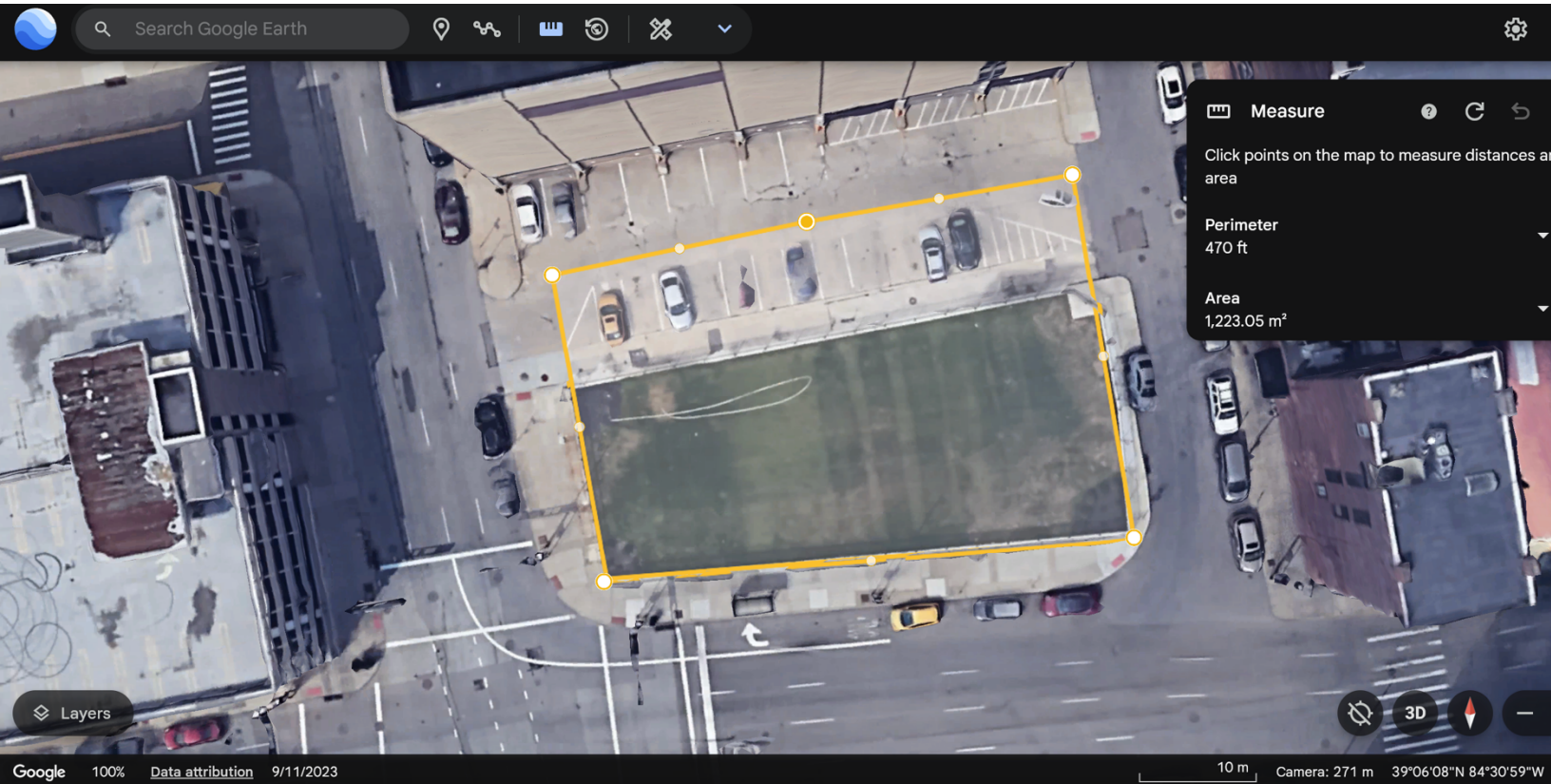


The watering can art installation symbolizes continuous growth, nourishment, and the essential role of green spaces in urban environments. Designed to appear as if plants are cascading from inside the watering can, the installation embodies the interconnectedness of nature and community. It serves as both a visual centerpiece and an interactive element, inspiring visitors to reflect on sustainability, creativity, and the power of collective cultivation. Placed within the garden, this piece reinforces the theme of renewal and the impact of small actions in fostering a flourishing cityscape.

Concept Design #1 (Not to Scale)



The community garden is designed as a vibrant urban oasis that fosters education, creativity, and sustainability. Anchored by a shell-shaped amphitheater, the space invites community gatherings, workshops, and discussions on urban agriculture. A dynamic art installation symbolizes growth and renewal, while raised garden beds, a greenhouse, and a water feature create an ecosystem for fresh produce. A dedicated tool shed ensures efficient maintenance and supports volunteers and gardeners. The space merges functionality with beauty, offering a sanctuary for learning, connection, and environmental stewardship in the heart of the city.

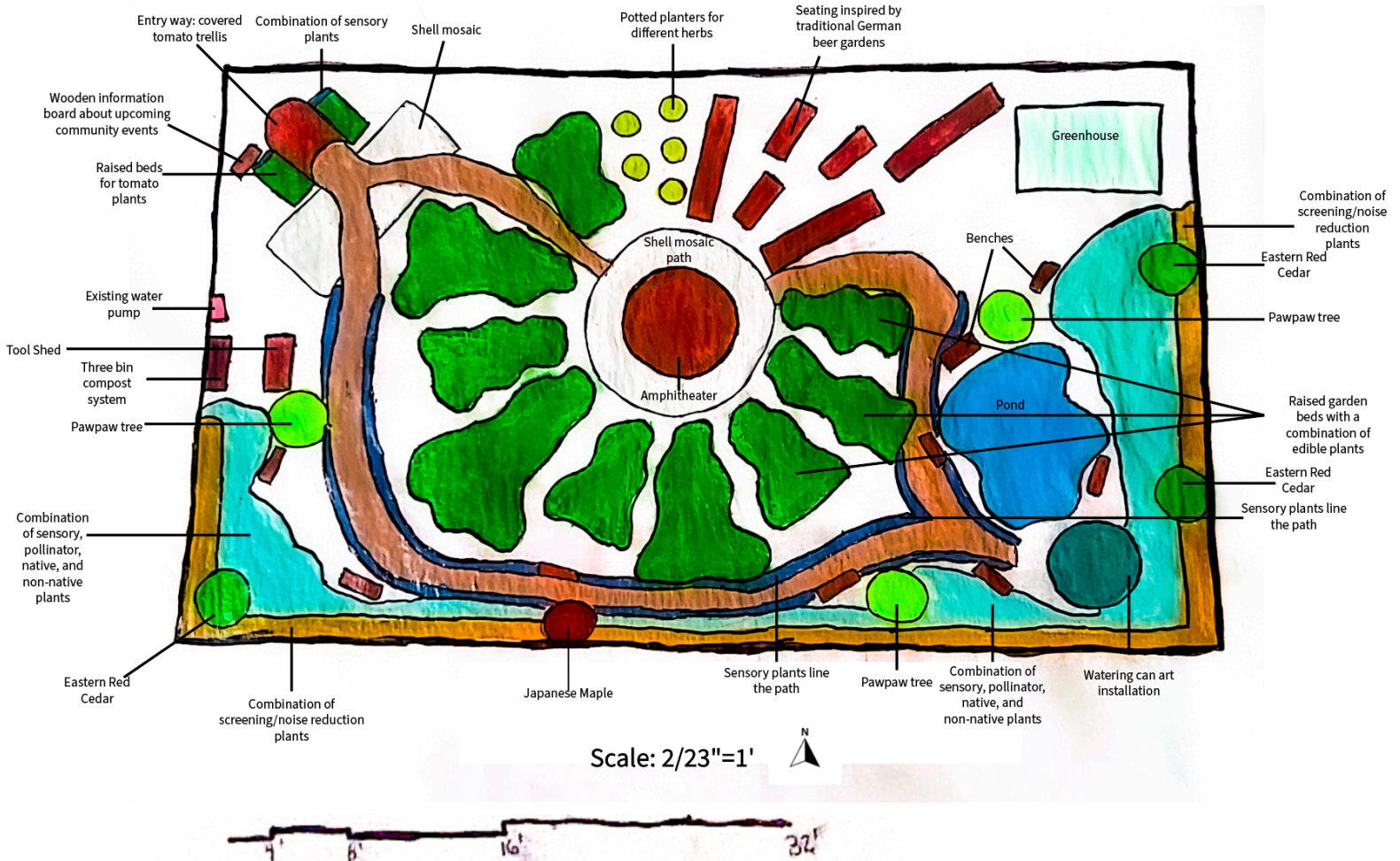


Satellite Image of 6th & Elm Street. Google Earth. Edited by Avery Tanner. Google. Accessed 10 Mar. 2025.

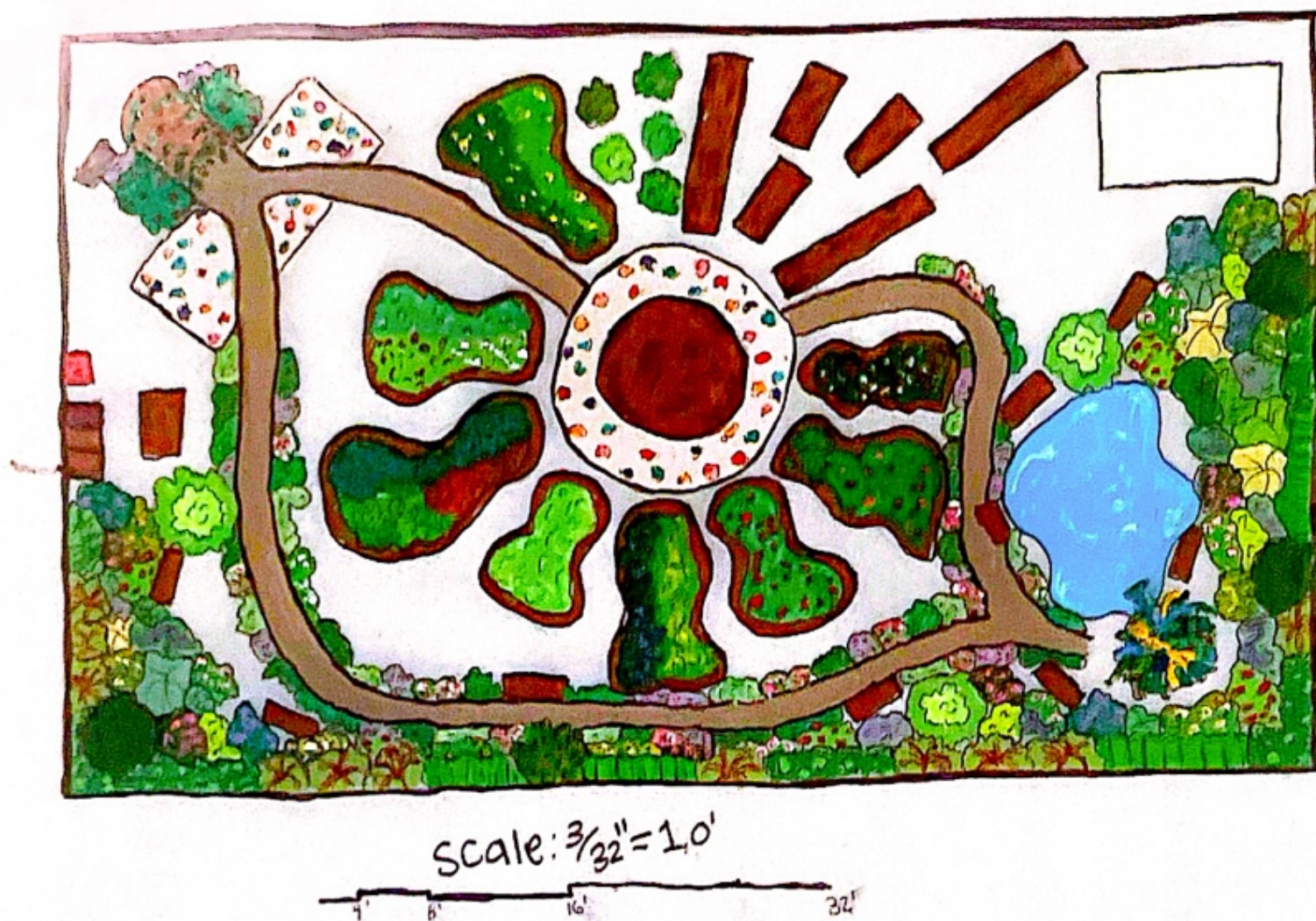
https://earth.google.com/web/search/500+elm+street/@39.10228695,-84.51630414,41.41355293a,9.99248598d,34.99999992y,0.00000181h,0.17556755t,0r/data=CiwiJgokCYw7YRWYVao-EZQ8YRWYVaq-GQAAgBuZ7Lo-IQAAEBOZ7Lq-QgIIAToDCgEwQgIIAEoNCP_wEQAA

After the initial concept design, it became clear that the space was not large enough to accommodate all the intended elements. To address this, the design was expanded into the parking lot, incorporating the first row of parking spots while still preserving space for bike racks and delivery addresses. The total area now measures 470 square feet, with dimensions of 85 ft x 143 ft x 143 ft x 85 ft.

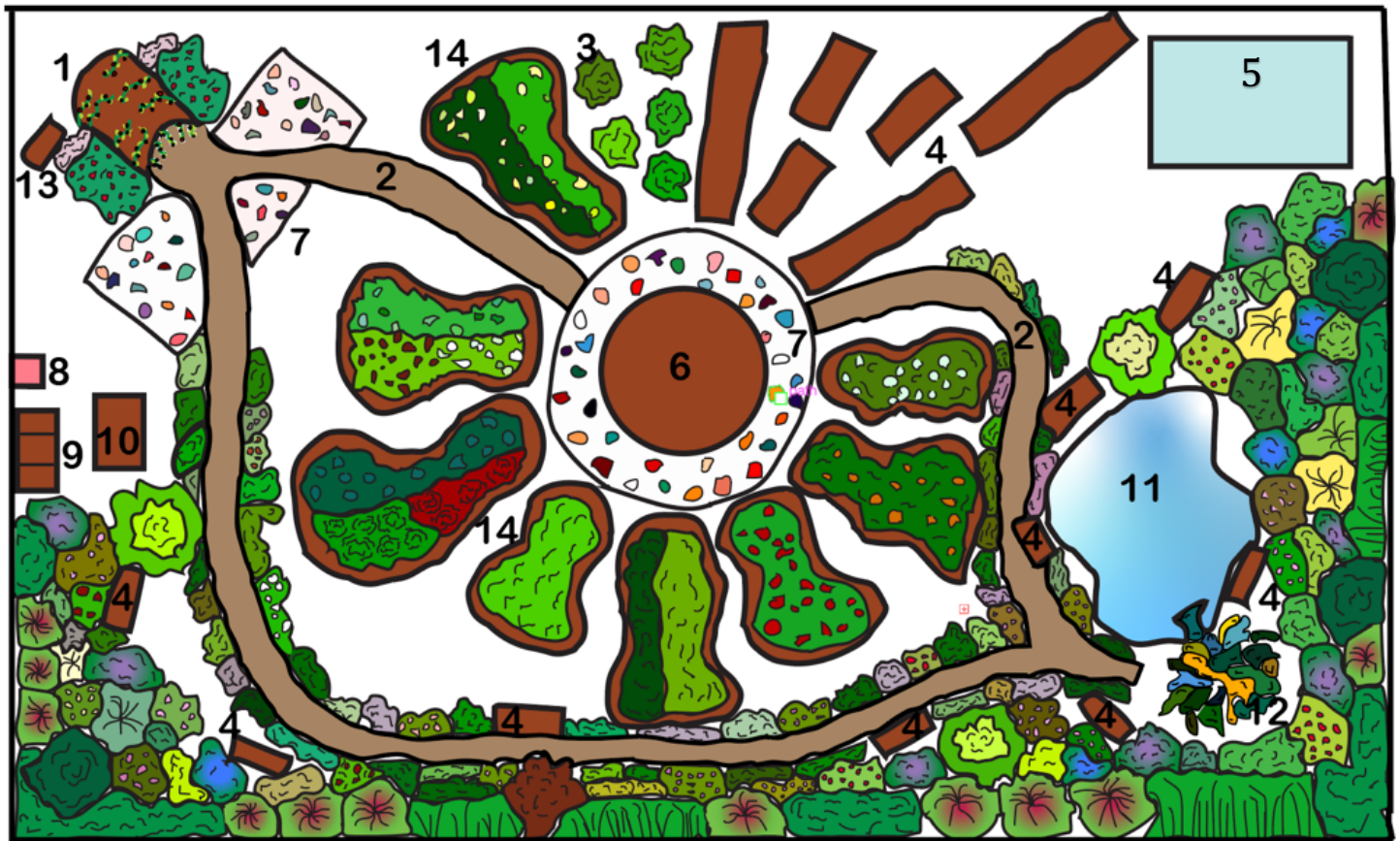
Concept Design



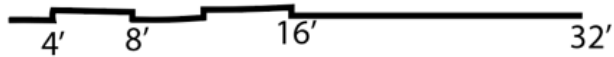
Master Plan



Digital Master Plan



Scale: 3/32"=1.0'



Key:

- 1: Entryway/covered tomato trellis
- 2: ADA-compliant pathway
- 3: Potted planters for herbs
- 4: Seating
- 5: Greenhouse
- 6: Amphitheater
- 7: Shell mosaic pathway
- 8: Water pump
- 9: Three system compost

- 10: Toolshed
- 11: Pond
- 12: Living art installation
- 13: Information Board
- 14: Raised Beds

Plant List

Edible Crops (Productive & Heritage Crops)

Photo	Name	Estimated Quantity	Notes
 "Basil." Encyclopedia Britannica, https://www.britannica.com/plant/basil. Accessed Mar. 28, 2025.	Basil <i>Ocimum basilicum</i>	6-8 small groupings	Herb
 Blue Lake Provider "Bean, Bush Blue Lake." Seeds for Generations, https://seedsforgenerations.com/product/bean-bush-blue-lake/. Accessed Mar. 28, 2025. "Organic Provider Green Bean Seeds." Everwilde Farms, https://www.everwilde.com/store/Organic-Provider-Green-Bean-Seeds.html, Accessed 28 Mar. 2025.	Bush Beans Blue Lake <i>Phaseolus vulgaris</i> 'Blue Lake' Bush Beans Provider <i>Phaseolus vulgaris</i> 'Provider'	12-16 plants	Low-maintenance and nitrogen-fixing. Blue Lake Bush Beans are a heritage crop to Cincinnati and a staple in Ohio farming history.



Boston pickling

"**Boston Pickling Improved Cucumber Seeds.**" Swallowtail Garden Seeds, <https://www.swallowtailgardenseeds.com/vegetables/cucumbers/boston-pickling-improved-cucumber-seeds.html>. Accessed 28 Mar. 2025.



Marketmore 76

"**Marketmore 76 Cucumber (Slicing).**" MySeeds.co, <https://www.myseeds.co/products/marketmore-76-cucumber-slicing-cucumis-sativus?variant=39883301028033>, Accessed 28 Mar. 2025.

Boston Pickling Cucumbers

Cucumis sativus
'Boston Pickling'

Marketmore 76 Cucumber

Cucumis sativus
'Marketmore 76'

4-6 plants trellised

High yield for fresh eating and pickling.

Boston Pickling Cucumbers are a heritage crop and used in traditional Midwestern pickling.



"**Garlic (Allium sativum).**" Gardener's Path, <https://gardenerspath.com/garlic-allium-sativum/>, Accessed 28 Mar. 2025.

Garlic

Allium sativum

15-20 bulbs

Hardy, space-efficient, essential crops



Catawba

"**Vitis labrusca 'Catawba' Grape Vine (3G).**" Wilson Bros Gardens, <https://www.wilsonbrosgardens.com/vitis-labrusca-catawba-grape-vine-3g.html>. Accessed 28 Mar. 2025.

Catawba Grapevines

Vitis labrusca
'Catawba'

Concord Grapevines

Vitis labrusca
'Concord'

2-3 plants trellised

Catawba Grape is a historic grape used in Ohio's early wine industry and is grown along the Ohio River

Concord grapes are also used in Ohio winemaking history.



Concord

"Grape (*Vitis labrusca*).\" Useful Plants, <https://www.usefulplants.org/grape-vitis-labrusca/>. Accessed 28 Mar. 2025.



Cascade

"Cascade Hops.\" Gertens, <https://www.gertens.com/cascade-hops>. Accessed 28 Mar. 2025.



Nugget

"Nugget Hops.\" Gertens, https://plants.gertens.com/12070009/Plant/7120/Nugget_Hops/. Accessed 28 Mar. 2025.

Cascade Hops

Humulus lupulus
'Cascade'

Nugget Hops

Humulus lupulus
'Nugget'

2-3 plants on
a vertical
structure

A nod to
Cincinnati's
German brewing
heritage, and great
for vertical space.



"How to Grow Kale." The Spruce, <https://www.thespruce.com/growing-kale-1403516>. Accessed 28 Mar. 2025.

Kale
Brassica oleracea
'Lacinato'

6-8 plants

Hardy, nutrient-dense greens



Buttercrunch



Romaine

"Buttercrunch Lettuce." Wolf Hill Garden Center, https://plants.wolfhillgardencenter.com/12150025/Plant/29088/Buttercrunch_Lettuce/. Accessed 28 Mar. 2025.

"Outredgeous Romaine Lettuce." Mountain Valley Growers, <https://mountainvalleygrowers.com/organic-plants/greens-lettuce-outredgeous-romaine/>. Accessed 28 Mar. 2025.

Buttercrunch
Lettuce
Lactuca sativa
'Buttercrunch'

Red Romaine
Lettuce
Lactuca sativa
'Red Romaine'

8-12 sq ft
(planted in
cycles)

Fast growing,
multi-harvest



"Growing Mint." Bonnie Plants, <https://bonnieplants.com/blogs/how-to-grow/growing-mint>. Accessed 28 Mar. 2025.

Mint
Mentha spp.

6-8 small
groupings

Herb



"Okra Clemson Spineless." Green Acres Nursery & Supply, <https://idiggreenacres.com/products/okra-clemson-spineless>. Accessed 28 Mar. 2025.

Okra 'Clemson
Spineless'
*Abelmoschus
esculentus*
'Clemson
Spineless'

4-6 plants

Ties into Black
food heritage

 Red Creole Walla Walla "Onion Red Creole." Sow True Seed, https://sowtrueseed.com/products/onion-red-creole. Accessed 28 Mar. 2025. "Walla Walla Onion." Seed Savers Exchange, https://shop.seedsavers.org/walla-walla-onion. Accessed 28 Mar. 2025.	Red Creole Onion <i>Allium cepa</i> 'Red Creole' Walla Walla Onion <i>Allium cepa</i> 'Walla Walla'	15-20 bulbs (planted in cycles)	Hardy, space-efficient, essential crops. Red Creole Onion is known for thriving in Midwest climates.
 Corno di Toro King of the North "Corno di Toro (<i>Capsicum annuum</i>)." Farm Direct Seed, https://farmdirectseed.com/products/corno-di-toro-capsicum-annuum. Accessed 28 Mar. 2025. "Pepper King of the North (Sweet Bell)." Giving Ground Seeds, https://givinggroundseeds.com/products/pepper-king-of-the-north-sweet-bell. Accessed 28 Mar. 2025.	Corno di Toro Pepper <i>Capsicum annuum</i> 'Corno di Toro' King of the North Sweet Bell Pepper <i>Capsicum annuum</i> 'King of the North'	6-8 plants	Productive and flavorful
 "Rosemary Plant Care." The Bouqs Co., https://bouqs.com/blog/rosemary-plant-care/. Accessed 28 Mar. 2025.	Rosemary <i>Salvia rosmarinus</i>	6-8 small groupings	Herb



"Ozark Beauty Everbearing Strawberry." Dutch Bulbs,

<https://www.dutchbulbs.com/product/Ozark-Beauty-Everbearing-Strawberry>. Accessed 28 Mar. 2025.

Ozark Beauty
Strawberry

*Fragaria x
ananassa* 'Ozark
Beauty'

10-15 plants

Perennial, spreads
easy, provides
edible ground
cover.



"How to Grow Thyme." The Spruce, <https://www.thespruce.com/how-to-grow-thyme-1402630>. Accessed 28 Mar. 2025.

Thyme

Thymus vulgaris

6-8 small
groupings

Herb



German Johnson



Brandywine



Mortgage Lifter

"German Johnson Heirloom Certified Tomato Seed." Sweet Corn Organic Nursery, <https://www.sweetcornorganicnursery.com/products/german-johnson-heirloom-certified-tomato-seed>. Accessed 28 Mar. 2025.

"Red Potato Leaf Brandywine Tomato (*Solanum lycopersicum*)." Annie's Heirloom Seeds, <https://www.anniesheirloomseeds.com/red-potato-leaf-brandywine-tomato-solanum-lycopersicum/>. Accessed 28 Mar. 2025.

"Mortgage Lifter Tomato (*Solanum lycopersicum*)." Annie's Heirloom Seeds, <https://www.anniesheirloomseeds.com/mortgage-lifter-tomato-solanum-lycopersicum/>. Accessed 28 Mar. 2025.

German Johnson
Tomato

*Solanum
lycopersicum*
'German
Johnson'

Brandywine
Tomato

*Solanum
lycopersicum*
'Brandywine'

Mortgage Lifter
Tomato

*Solanum
Lycopersicum*
'Mortgage Lifter'

6-8 plants
(staked or
trellised)

Heritage
Cincinnati
tomatoes.

German Johnson
Tomato was
brought by
German
immigrants and
are widely grown
in Ohio.

Brandywine
Tomatoes are a
historically
significant
heirloom variety
with ties to the
Midwest.

Mortgage Lifter
are popular to
grow in the
Midwest.

Pollinator Plants (Attract Bees, Butterflies, & Beneficial Insects)

Photo	Name (Common & Latin)	Estimated Quantity	Notes
 "<i>Agastache foeniculum</i>." Gardenia, https://www.gardenia.net/plant/agastache-foeniculum. Accessed 28 Mar. 2025.	Anise Hyssop <i>Agastache foeniculum</i>	3-5 plants	Fragrant, good for bees and tea-making.
 "<i>Wild Scarlet Bee Balm (Monarda didyma)</i>." American Meadows, https://www.americanmeadows.com/product/perennials/wild-scarlet-bee-balm-monarda-didyma. Accessed 28 Mar. 2025.	Bee Balm <i>Monarda didyma</i>	4-6 plants	Great for pollinators, fragrant foliage.
 "<i>Rudbeckia Hirta (Black-eyed Susan) Seeds</i>." Select Seeds, https://www.selectseeds.com/products/rudbeckia-hirta-black-eyed-susan-seeds. Accessed 28 Mar. 2025.	Black-eyed Susan <i>Rudbeckia hirta</i>	5-6 plants	Long bloom-time, bright golden color.
 "<i>Echinacea purpurea 'Pow Wow Wild Berry'</i>." High Country Gardens,	Purple Coneflower <i>Echinacea purpurea</i>	6-8 plants	Native, medicinal, attracts butterflies.

<https://www.highcountrygardens.com/product/perennial-plants/echinacea-purpurea-pow-wow-wild-berry>. Accessed 28 Mar. 2025.



Autumn Beauty



Lemon Queen

"Annie's Heirloom Seeds." Annie's Heirloom Seeds, <https://www.anniesheirloomseeds.com/>. Accessed 28 Mar. 2025.

"Sunflower Lemon Queen." Applewood Seed Company, <https://www.applewoodseed.com/product/sunflower-lemon-queen/>. Accessed 28 Mar. 2025.

Autumn Beauty
Sunflower

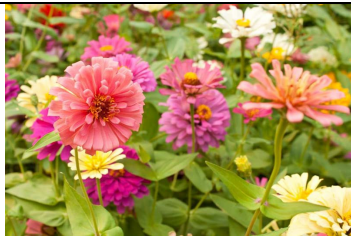
Helianthus annuus
'Autumn Beauty'

Lemon Queen
Sunflower

Helianthus annuus
'Lemon Queen'

4-6 plants

Adds height, seeds are a food source for humans and animals.



"Zinnia elegans (Common Zinnia)." Gardenia, <https://www.gardenia.net/genus/zinnia-elegans-common-zinnia>. Accessed 28 Mar. 2025.

Zinnias

Zinnia elegans

6-10 plants

Easy to grow, long-blooming, bold colors.

Native Plants (Low-Maintenance & Support Local Wildlife)

Photo	Name (Common & Latin)	Estimated Quantity	Notes
 "Schizachyrium scoparium." Missouri Wildflowers Nursery, https://mowildflowers.net/schizachyrium-scoparium/. Accessed 28 Mar. 2025.	Little Bluestem <i>Schizachyrium scoparium</i>	4-6 plants	Ornamental native grass with reddish fall color.
 "Asimina triloba 'Tollgate' Pawpaw Fruit Tree." MrMaple, https://mrmaple.com/products/buy-asimina-triloba-tollgate-pawpaw-fruit-tree. Accessed 28 Mar. 2025.	Pawpaw Tree <i>Asimina triloba</i>	1-2 small trees	Ohio's native fruit, shade-tolerant, banana-like flavored fruit.
 "Lindera benzoin." Midwest Groundcovers, https://www.midwestgroundcovers.com/plant/lindera-benzoin/. Accessed 28 Mar. 2025.	Spicebush <i>Lindera benzoin</i>	1-2 small shrubs	Supports butterflies and has fragrant leaves.

 <i>"Monarda fistulosa (Bee Balm)."</i> Long Island Natives, https://www.longislandnatives.com/product/monarda-fistulosa-bee-balm/. Accessed 28 Mar. 2025.	Wild Bergamot <i>Monarda fistulosa</i>	3-4 plants	In the Mint family, great for pollinators.
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Non-Native Plants (Aesthetic & Functional)

Photo	Name (Common & Latin)	Estimated Quantity	Notes
 <i>"Japanese Maple 'Bloodgood'."</i> Needham's Nursery, https://needhamsnursery.com/products/japanese-maple-bloodgood. Accessed 28 Mar. 2025.	Japanese Maple <i>Acer palmatum</i>	1 small tree	Adds structure and color contrast.
 <i>"English Lavender (Lavandula angustifolia) Seeds."</i> Seed Corner, https://seedcorner.com/english-lavender-lavandula-angustifolia-seeds/. Accessed 28 Mar. 2025.	Lavender <i>Lavandula angustifolia</i>	3-6 plants	Drought-tolerant, attracts pollinators, calming scent.

 "Miscanthus sinensis 'Malepartus'." Sarah Raven, https://www.sarahraven.com/products/miscanthus-sinensis-malepartus. Accessed 28 Mar. 2025.	Maiden Grass <i>Miscanthus sinensis</i>	3-5 plants	Softens hardscapes, reduces noise.
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 "Panicum virgatum 'Shenandoah'." High Country Gardens, https://www.highcountrygardens.com/product/perennial-plants/panicum-virgatum-shenandoah. Accessed 28 Mar. 2025.	Switchgrass <i>Panicum virgatum</i>	3-5 plants	Softens hardscapes, reduces noise.
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Noise-Reducing Plants (Absorb Sounds & Provide a Sense of Enclosure)

Photo	Name (Common & Latin)	Estimated Quantity	Notes
 "Fargesia." Bamboo Sourcing, https://bamboosourcing.com/product-category/genus/fargesia/. Accessed 28 Mar. 2025.	Bamboo (Clumping Variety) <i>Fargesia</i> spp.	1-2 small clumps	Clumping variety is not invasive. Absorbs sound and adds vertical greenery.

 <i>"Buxus sempervirens 'Suffruticosa'."</i> Boething Treeland Farms, https://www.boethingtreeland.com/plants/buxus-sempervirens-suffruticosa/, Accessed 28 Mar. 2025.	Boxwood <i>Buxus sempervirens</i>	5-6 plants	Dense hedges help with absorbing sound.
 <i>"Juniperus virginiana 'Brodie'."</i> Taylor's Nursery, https://www.taylornursery.com/plant-name/juniperus-virginiana-Brodie, Accessed 28 Mar. 2025.	Eastern Red Cedar <i>Juniperus virginiana</i>	1-2 small trees	Evergreen that blocks noise and wind.
 <i>"Panicum virgatum 'Shenandoah'."</i> High Country Gardens, https://www.highcountrygardens.com/product/perennial-plants/panicum-virgatum-shenandoah, Accessed 28 Mar. 2025.	Switchgrass <i>Panicum virgatum</i>	3-5 plants	Softens hardscapes, reduces noise.

Sensory Plants (Touch, Smell, & Interactive Elements)

Photo	Name (Common & Latin)	Estimated Quantity	Notes
 "<i>Mentha piperita</i> 'Chocolate' (Chocolate Mint)." Sedan Floral, https://www.sedanfloral.com/Plant-Name/Herb-Mint-Mentha-piperita-Chocolate. Accessed 28 Mar. 2025.	Chocolate Mint <i>Mentha x piperita</i> 'Chocolate'	3-4 plants	Smells like chocolate, used in teas.
 "<i>Stachys</i> 'Big Ears'." Rare Roots, https://www.rareroots.com/products/stachys-big-ears. Accessed 28 Mar. 2025.	Lamb's Ear <i>Stachys byzantina</i>	4-6 plants	Soft, velvety leaves.
 "<i>Melissa officinalis</i>." Gardenia, https://www.gardenia.net/plant/melissa-officinalis. Accessed 28 Mar. 2025.	Lemon Balm <i>Melissa officinalis</i>	3-4 plants	Citrus-scented, calming properties.
 "<i>Thymus serpyllum</i> (Creeping Thyme)." Gardenia, https://www.gardenia.net/plant/thymus-serpyllum-creeping-thyme. Accessed 28 Mar. 2025.	Ornamental Thyme <i>Thymus serpyllum</i>	4-6 patches for ground cover	Fragrant



"Antirrhinum majus 'Potomac Appleblossom'."
 White Flower Farm,
<https://www.whiteflowerfarm.com/antirrhinum-majus-potomac-appleblossom>. Accessed 28 Mar.
 2025.

Snapdragons

Antirrhinum majus

6-8 plants

Edible

Summary of Estimated Quantities:

- **Edible crops:** About 180 plants, 100 bulbs.
- **Pollinator Plants:** About 50 plants.
- **Native Plants:** About 20 plants.
- **Non-Native Plants:** About 25 plants.
- **Noise Reducing Plants:** About 26 plants, 4 trees.
- **Sensory Plants:** About 40 plants.
- **Total Estimated Plants:** 441 plants, 100 bulbs, 8 trees, 2 vines.

Garden Arrangement:

1. **Boarders & Noise Reduction:** Tall grasses, evergreens, and hedges are planted along the space's edges to help reduce noise pollution.
2. **Vertical Elements:** Trellises are used for hops, grapes, beans, cucumbers, and tomatoes to maximize space.
3. **Edible Garden:** High-yielding crops are placed in accessible raised garden beds, and less popular produce is scattered throughout the garden.
4. **Pollinator and Sensory Areas:** Fragrant plants are grouped near pathways and seating.
5. **Seasonal Variety:** Perennials and annuals are mixed for year-round interest.
6. **Cincinnati-Inspired Design:** The beds are arranged in a spiral-sun shape, signifying how the sun is essential for life on Earth, making it a symbol of energy, growth, and nourishment. Walkways have crushed whole shells in them, tying back to the Ohio River history. Long tables are placed in the site modeled after traditional German beer gardens, offering a communal and inviting atmosphere.



Example of traditional German Beer Garden Seating

"Beer Gardens in Bavaria, or How to Beer Garden Like a Local." Tempest in a Tankard,

<https://tempestinatankard.com/2022/07/31/beer-gardens-in-bavaria-or-how-to-beer-garden-like-a-local/>, Accessed 28 Mar. 2025.

Basic Maintenance Plan

Daily Maintenance

Watering: Check soil moisture before watering to avoid over-watering. Watering in the morning or in the evening to reduce evaporation. The drip irrigation system runs as needed.

General Monitoring: Look for signs of pests, diseases, or nutrient deficiencies (yellowing leaves, stunted growth, holes in the leaves, etc.). Ensure paths are always clear and remove any debris or weeds.

Harvesting: Pick ripe fruits, vegetables, and herbs to encourage continuous production.

Weekly Maintenance

Weeding: Hand-pull weeds and use mulch to suppress weeds in garden beds and around pathways.

Pruning & Deadheading: Trim back overgrown plants to maintain shape. Deadhead spent flowers to encourage new blooms.

Pest & Disease Control: Inspect plants for aphids, caterpillars, fungal spots, etc. Use natural pest control methods, like companion planting or neem oil. Remove any diseased leaves or plants to prevent spread.

Composting & Soil Health: Add organic matter (compost, manure) to improve soil fertility. Turn the compost pile to speed up decomposition.



Example of what the compost area looks like on-site.

"How to Compost Kitchen Scraps if You Rent or Live in an Apartment." Domain, <https://www.domain.com.au/advice/how-to-compost-kitchen-scraps-if-you-rent-or-live-in-an-apartment-792563/>, Accessed 30 Mar. 2025.

Monthly Maintenance

Fertilizing: Apply organic fertilizers like compost tea or slow-release granules based on plant needs. Heavy feeders, like tomatoes and cucumbers, may need extra nutrients.

Structural & Irrigation Check: Check beds, trellises, and vertical gardens for damage. Check the irrigation system for leaks or clogs.

Mulching: Refresh mulch around plants to retain moisture, suppress weeds, and regulate soil temperature.

Pollinator support: maintain habitats for bees, butterflies, and beneficial insects.

Seasonal Maintenance

Spring (March-May)

Prepare beds by adding compost and aerating soil. Start planting cool-season crops (lettuce, kale, onion) early in the season. Plant warm-season crops after the last frost. Set up trellises and vertical supports.

Summer (June-August)

Maintain consistent watering during hot months. Watch for signs of heat stress. Harvest frequently to encourage production.

Fall (September-November)

Remove dead plants and debris to prevent disease buildup. Plant cover crops or apply mulch for winter soil protection. Sow fall crops (garlic, kale, collards).

Winter (December-February)

Prune dormant trees, vines, and perennials. Maintain compost. Plan for next season's crops and order plants.



Example of a garden using cover crops.

"Cover Crops for Beginners." Alameda Backyard Growers, <https://alamedabackyardgrowers.org/cover-crops-for-beginners/>. Accessed 28 Mar. 2025.

Living Art Installation & Build Process



A 2-gallon stainless steel watering can is used as a planter to create the living art installation. Five drainage holes were drilled into the bottom of the watering can using the drill bit in the third photo. The drill bit in the first photo was too weak to drill through the stainless steel.

All images by Avery Tanner, April 13, 2025.



Next, drainage rocks are added. The stones used in this piece were found in a typical backyard.

Image by Avery Tanner, April 15, 2025



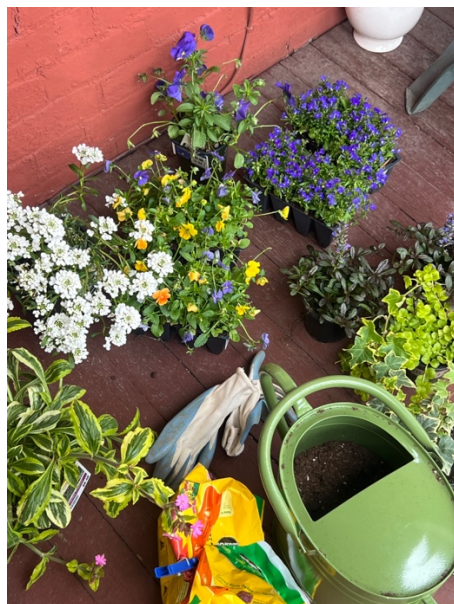
3-D mesh drainage disks are added on top of the rocks to ensure proper drainage and prevent root rot. The disks are cut to size.

Images by Avery Tanner, April 15, 2025.



Soil is then added on top of the drainage material. Mirical Grow potting mix was used here.

Image by Avery Tanner, April 15, 2025



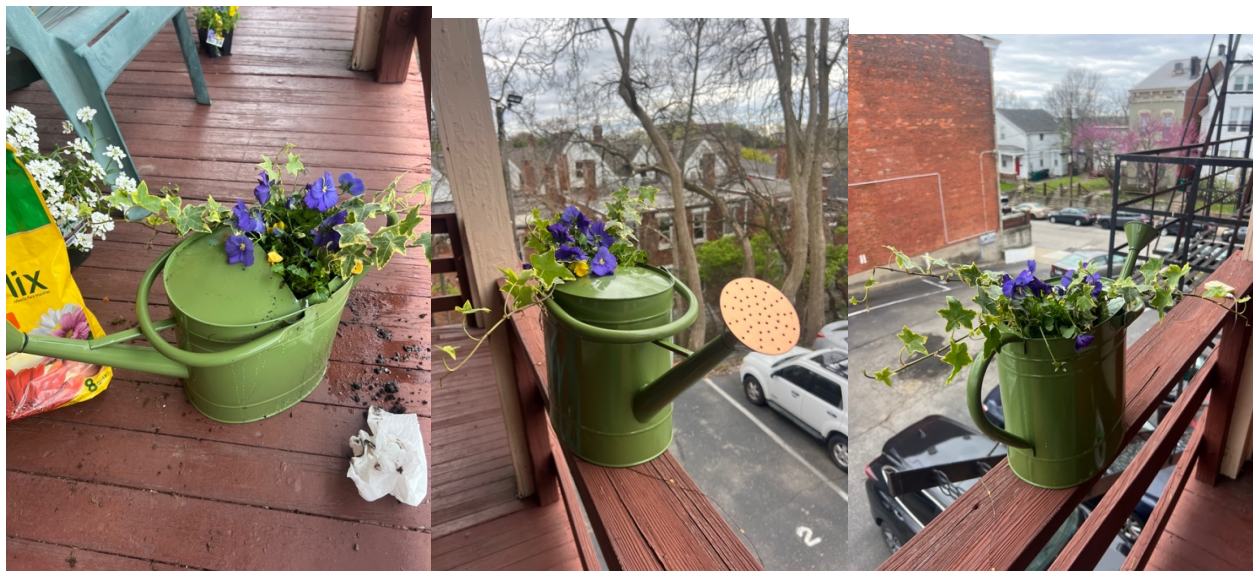
Selection of plants chosen for the build. The plants are from Lowes. Only four of these plants were used (see plant list below).

Image by Avery Tanner, April 15, 2025



The next step is to repot the desired plants. To do this, carefully remove the plant from the original pot, remove almost all of the soil while keeping the roots attached, and repot them into the new planter.

Image by Avery Tanner, April 15, 2025



Final art installation design.

Image by Avery Tanner, April 15, 2025



This installation created for this project is a scaled-down representation of the full concept.

While the model captures the overall form, plant palette, and design intent, the actual installation in the community garden would be significantly larger to allow for structural support, increased planting volume, and greater visual impact within the space. This smaller version illustrates the concept rather than the final dimensions.

Old horticulture books are used instead of a traditional stand to tilt the watering can. In the full-scale version of the installation, a proper stand would be used for support, but for this smaller model, the books offer a meaningful and creative solution. While the choice was partially driven by budget, it also adds a layer of meaning to the piece. The books represent the foundation of knowledge, growth, and learning that supports both horticulture and community gardening. By using them as a base, the installation visually connects education with the act of nurturing, symbolizing how knowledge can quite literally support growth.

Plant List for Living Art Installation

Photo	Name	Type	Purpose
 Patz, Aviva. "How to Grow English Ivy Indoors, a Low-Maintenance, Elegant Vining Plant." Martha Stewart, 17 June 2024, https://www.marthastewart.com/english-ivy-8661994. Accessed 16 Apr. 2025.	English Ivy <i>Hedera helix</i>	Trailing foliage plant	Adds cascading greenery, structure, and texture.
 Annie's Heirloom Seeds. Johnny Jump Up Viola (Viola tricolor). Annie's Heirloom Seeds, https://www.anniesheirloomseeds.com/johnny-jump-up-viola-viola-tricolor/. Accessed 16 Apr. 2025.	Johnny Jump-Up (Yellow/Purple Variety) <i>Viola tricolor</i>	Edible Flower	Adds vibrant color, soft form, and seasonal bloom.
 Lucas Greenhouses. Viola cornuta 'Sorbet Harvest Mix'. Lucas Greenhouses, https://www.lucasgreenhouses.com/plant/Viola-cornuta-Sorbet-Harvest-Mix. Accessed 16 Apr. 2025.	Johnny Jum-Up (Orange Variety) <i>Viola cornuta</i>	Edible Flower	Brings warmth and brightness to the color palette.
 Proven Winners. Laguna® Dark Blue – Lobelia erinus. Proven Winners, https://www.provenwinners.com/plants/lobelia/laguna-dark-blue-lobelia-erinus. Accessed 16 Apr. 2025.	Edging Lobelia <i>Lobelia erinus</i>	Annual Flower	Adds cool-toned blooms and soft spill over edges for a glowing effect.

Inspiration Images



Sun-inspired garden bed layout inspiration. Inspiration was also pulled from The Farm for the City's design. The designers used a Nautilus shell shape to symbolize pulling people from the city into the garden to learn and build community and sending them to the town to share what they have learned. The sun-shaped design uses this same hidden message.

Leen, Mark. "Image Title or Description (if available)." Pinterest, <https://www.pinterest.com/pin/710372541261451765/>. Accessed 2 Apr. 2025.

"Exterior House Colors." Bored Panda, <https://www.boredpanda.com/exterior-house-colors/>. Accessed 2 Apr. 2025.



Inspiration for covered tomato trellis entryway.

"The Complete Guide to Growing Tomatoes on an Arch Trellis." Gardenary, <https://www.gardenary.com/blog/the-complete-guide-to-growing-tomatoes-on-an-arch-trellis>. Accessed 2 Apr. 2025.



Inspiration for community bulletin board located at the entry of the site.

"Community Bulletin Board." Liberty Village Toronto, www.libertyvillagetoronto.com/wp-content/uploads/2012/07/Community-Bulletin-Board.jpg. Accessed 2 Apr. 2025.



Inspiration for shell-mosaic ground cover/art.

"Seashell Art Mosaic, or How to Use All Those Shells You Collected This Summer." Cottage in the Oaks, <https://www.cottageintheoaks.com/seashell-art-mosaic-or-how-to-use-all-those-shells-you-collected-this-summer/>. Accessed 2 Apr. 2025.

Hamilton, Lynn Stewart. Pinterest, <https://www.pinterest.com/pin/10907224091666341/>. Accessed 2 Apr. 2025.

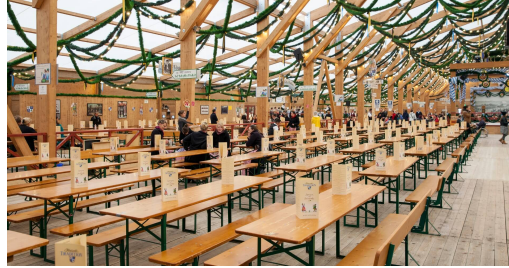
Breyer-Johnson, Colt. Pinterest, <https://www.pinterest.com/pin/6755468185420773/>. Accessed 2 Apr. 2025.



Inspiration for 8 x 4-foot tool shed.

Betsi. Pinterest, <https://www.pinterest.com/pin/281543725280853/>. Accessed 2 Apr. 2025.

"8' x 4' Spacesaver Storage Shed - Single Door." Eartheasy, <https://eartheasy.com/8-x-4-spacesaver-storage-shed-single-door/>. Accessed 2 Apr. 2025.



Inspiration for traditional German beer garden seating. In the design, the tables are of varying sizes 20 x 4 feet and 8 x 4 feet.

"Shop All Table Sets." RUKU1952, <https://www.ruku1952.us/shop-all-table-sets/>. Accessed 2 Apr. 2025.



Example of a 12 x 20 ft greenhouse.

"Rhino Premium 12x20 Colored." Rhino Greenhouses, <https://www.rhinogreenhouses.com/products/rhino-premium-12x20-colored>. Accessed 2 Apr. 2025.



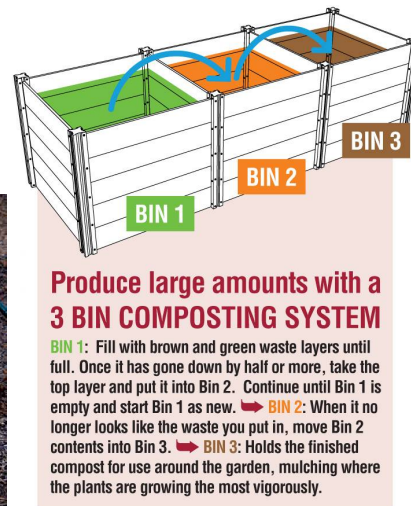
Example of amphitheater stage. In the design, the stage is taller and 16 feet.

"What Is Theatre in the Round?" Backstage, 21 Aug. 2019, www.backstage.com/magazine/article/what-is-theatre-in-the-round-75791/. Accessed 2 Apr. 2025.



Inspiration for living art installation. No artist found.

"Flowers Pouring Out of Watering Can." Pinterest, www.pinterest.com/pin/35192466013461/. Accessed 2 Mar. 2025



Example of a three-bin compost system. Infographic explaining how the system works.

"3-Bin Compost System." Help Me Compost, www.helpmecompost.com/home-composting/methods/3-bin-compost-system/. Accessed 2 Apr. 2025.

"How to Build a Compost Bin – Tutorial." Homestead and Chill, www.homesteadandchill.com/how-to-build-a-compost-bin-tutorial/. Accessed 2 Apr. 2025.



Example of sensory plants along the pathway. Example of wood for ADA-compliant pathway.

"Designing a Stylish Pollinator Garden." Fine Gardening, www.finegardening.com/article/designing-a-stylish-pollinator-garden. Accessed 2 Apr. 2025.

Spurghom Pathway Flooring Decorative Boardwalk. Amazon, www.amazon.com/Spurghom-Pathway-Flooring-Decorative-Boardwalk/dp/B0BYNLNR9N?th=1. Accessed 2 Apr. 2025.



Example of the pond in the site. The pond in the site is 20 ft x 24 ft, which is about the size of a school bus.

"How to Make a Natural Pond in Your Backyard." Treehugger, www.treehugger.com/how-to-make-a-natural-pond-in-your-backyard-5190507. Accessed 2 Apr. 2025.



Example of how heavily planted areas in the garden look. Behind the raised beds is heavily planted of pollinator, sensory, native, and non-native plants.

Biggies Garden View Weather Proof Scene for Window Wells or Wall Mural. The Home Depot, www.homedepot.com/pep/Biggies-Garden-View-Weather-Proof-Scene-for-Window-Wells-or-Wall-Mural-100-in-x-60-in-BG-WW-GDN-100/317110847. Accessed 2 Apr. 2025.

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Annie E. Casey Foundation. "Communities With Limited Food Access in the United States." *The Annie E. Casey Foundation*, 8 Nov. 2023, <https://www.aecf.org/blog/communities-with-limited-food-access-in-the-united-states>.

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Azuma Makoto. *About Us*. www.azumamakoto.com/aboutus/. Accessed 6 Feb. 2025.

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"Benefits of Plants & Plant Arrangement Installations." *Biome Idaho*, <https://www.biomeidaho.com/benefits-of-plants>. Accessed 24 Feb. 2025.

"Brooklyn Grange." *Brooklyn Grange*, www.brooklyngrangefarm.com. Accessed 7 Feb. 2025.

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"Education Resources." *Grown from the Past: A Short History of Community Gardening in the United States*, *Community of Gardens*, Smithsonian Institution, communityofgardens.si.edu/exhibits/show/historycommunitygardens/education-resources. Accessed 6 Feb. 2025.

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