
Scientific Research Consultants

Proposal

Project Site: North Ave & Rutland Ave

Site Proposal: Healing Urban Garden (HUG)



Date: 4/07/2024

For: Broadway East Community Association & CDC

Dr. Doris Minor-Terrell

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PROJECT OVERVIEW

Dear Dr. Minor-Terrell,

Scientific Research Consultants (SRC) is delighted to offer this proposal for the development of urban green spaces at the vacant lots at North Ave & Rutland Ave, Baltimore to enhance the quality of life and well-being of the Broadway East and Baltimore community as a whole. The existence of green and open spaces within urban communities is an important social determinant of health. After conducting a needs based assessment from a health equity perspective, we propose a series of **Healing Urban Gardens (HUGs)** within the Broadway East community with the pilot HUG concept at North Ave & Rutland Ave.

Our assessment supports the creation of a community botanical garden that will be a space of healing, gathering, community wellness and learning through the use of herbal and medicinal plants, providing positive steps towards optimal health and health equity.

SCOPE OF WORK

We recommend the following scope of work. Please review the Proposal fee table below and let us know if you have any questions or require revisions.

1. Concept idea development. Site assessment. Needs based assessment.
2. HUG impact analysis:
 - a. data collection before construction
 - b. data collection post construction
3. HUG writeups
 - a. signage and QR code writeups uses, benefits and precautions for herbs and medicinal plants
 - b. HUG website content write-ups
4. HUG educational workshops/seminars
5. Future HUG site grant application
6. HUG project liaison
7. HUG site artwork / mural coordination - 2

“HUG” CONCEPT DATA AND LITERATURE REVIEW

Green Space And Urban Health

Our cities should be healthy spaces, regardless of our zip code. However, the zip code we live in has a bigger impact on our health and affects our life expectancy more than our individual genetic code. We often relate chronic diseases to habits such as diet, lack of physical exercise, smoking, or heredity. However, the factor that most influences health is the environment in which we live and circumstances in which we are raised.

Where you live affects how you live. It impacts whether you have access to healthy food, places to exercise, health services when needed or green spaces to reduce stress. Your living location affects your personal and family's economic prosperity based on the availability of jobs, unemployment rates, education, and training opportunities. These social factors shape and determine health and longevity across your lifespan. Unfortunately, the Broadway East Community offers little opportunities for residents to achieve optimal health.

The Broadway East community is home to 3,376 residents, a decrease from a population of 4,931 in 2010. This is a disadvantaged community that has been marginalized, underserved, and overburdened by pollution and environmental hazards. Historical factors along with prolonged disinvestment has led to a decline in population and an increase in blight in this once vibrant community. Urban blight—defined as substandard housing, abandoned buildings, and vacant lots—is a major stressor for community residents and visitors.

The Broadway East community is home to an abundance of vacant lots. Vacant lots are abandoned parcels of urban land that signal blight, with overgrown invasive vegetation, trash dumping, and other illegal activities. Exposure to these lots is associated with negative health outcomes. The body's stress response is a reasonable biological pathway for understanding the impact of neighborhood blight on health. Although this response is protective in acute situations, permanent downstream inflammatory changes and dysregulation of cardiovascular, neurological, and endocrine systems accumulate over a lifetime for persons repeatedly exposed to stressors in their neighborhood surroundings. Basic structural improvements to blighted neighborhood environments, such as "greening" vacant lots, offers a promising and sustainable, yet underused, solution to such stressors in the Broadway East Community. There is inconclusive evidence on the effectiveness of some urban green space interventions (e.g. park-based interventions involving only a change to the built environment, urban greenways and trails, or pocket parks). This is partially affected by a limited number of intervention studies carried out, and inadequate evaluations that do not provide data on health or equity outcomes. The Broadway East Community only has a 7% tree canopy compared to 45% of "greenlined" areas in Baltimore. The importance of trees and green space on human health is well documented. The urban forest is a key type of green infrastructure that is critical to the health of

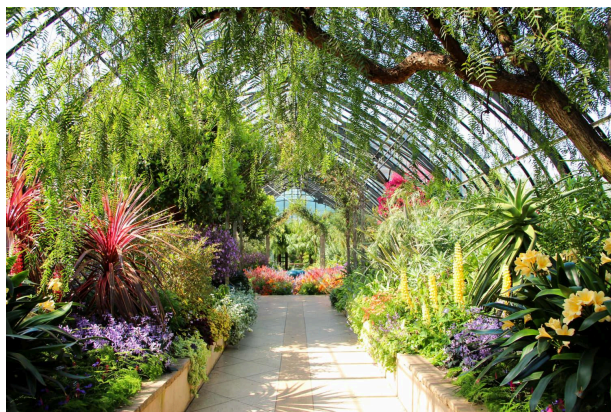
the Baltimore City urban ecology. Exposure to greenness is associated with reduced cardiovascular disease, reduced respiratory disease and lower mortality rates. Unfortunately, the people of the Broadway east community are living sicker and dying younger. The community has one of the worst health profiles with the number one, two and three causes of death being cardiovascular disease, cancer, and stroke respectively. This confluence of facts makes increasing and maintaining green space in the Broadway East community of utmost importance.

Healing Urban Gardens (HUG's)

The existence of green and open spaces within communities is an important social determinant of health. We propose a series of HUGs within the Broadway East community. These HUG's will have a botanical garden theme with wide and gently graded accessible entrances and paths, in-ground, raised and vertical planting beds and containers, trees, and a sensory-oriented plant selection focused on color, texture, and fragrance. Each HUG will be a space of digital access and specifically curated with an assortment of trees and plants that provide the typical benefits of trees and greenness. However, in addition, each plant will be tagged with a QR code that when scanned provides information about that plant and the potential health benefits. These HUGs will be a lush, inviting space evoking warmth and comfort similar to a human hug. It should feel like a space of healing, community wellness, learning, and overall a beacon of hope for people living in a severely distressed community.

The United Nations Sustainable Development Goal target 11.7, states: "By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities"

-United Nations Environment Program



-color and botanical theme inspiration



-vertical planting inspiration



-height and welcoming theme inspiration



-wellness activities

Health Promotion & Wellbeing Activities

"Nature is another name for health."

-Thoreau

Green spaces are important for physical and mental health. They create environments that support active lifestyles and improve access to exercise opportunities. They also improve cardiovascular health by mitigating risk factors such as high cholesterol levels, hypertension and obesity. Green spaces provide a variety of ecosystem services by improving air quality, serving as a biophile, regulating temperature and attenuating impacts of severe weather, all of which impact our health. These benefits can be experienced by people that are both physically in green spaces and communities that live alongside them (e.g., air quality and temperature regulation).

HUGs design will stimulate visitors' senses. Using sight, touch, smells, and sounds- residents and visitors will be immersed in a subconscious healing journey.

- Stimulating the Senses— Trees, flowers, and shrubs provide visual stimulation and whose form, color, and texture change from season to season. Including birdhouses and plants that supply nectar and food attracts butterflies, birds, and insects. Planting herbs such as rosemary, lemon verbena, lavender, and chocolate mint evoke positive scents.
- Water — Water elements in the design can improve users sensory experience and therapeutic qualities of the space. It also evokes a feeling of relaxation. We propose a rock bubbler, waterfall or water fountain.
- Natural Light & LED lights— Sunshine triggers chemicals that regulate moods and promote sleep. It also helps the body produce vitamin D, which is essential for strong bones. LED cafe lights provide evening lighting in addition to discreetly placed lights to

create beautiful shadows and draw attention to colors and textures in the garden.

- Using sounds— Wind chimes and sound healing instruments ie. singing bowls etc.
- Providing Rest and Relaxation—The garden will contain seating in a variety of locations that provide a quiet place where visitors can rest, relax, and enjoy the beauty of nature.



-seating, shade and community gathering inspiration

Health Outcomes

Green spaces are a crucial aspect of urban cities. They protect against many of the harmful impacts of rapid urbanization on health. Green space, complemented by other outdoor public areas such as playgrounds, and seating areas, alongside walkable neighborhoods are specific indicators to prevent disease and promote wellbeing. These communal spaces are vital to positive human development, well-being and mental health. Regular use of green spaces is also correlated to lower blood pressure and cholesterol – an important factor as the leading cause of death in the U.S. is heart disease. Social connection is another benefit as outdoor areas increase interaction between neighbors and decrease loneliness.

Research shows gardens and green spaces in hospitals and other healthcare facilities improve health outcomes in patients. In one study, it is proven that spending time in the garden walking, contemplating, or engaging in gardening activities could result in a decreased dosage of antipsychotics in dementia affected patients, in mood improvement and increased calmness. Spending time outdoors in a garden or gardening has beneficial implications in a patient's state of mind. These gardens provide a place of refuge and promote healing in patients, families, and staff. The same can be applied to an urban setting hence this proposal for the creation of a series of healing urban gardens in the Broadway East Community with North Ave and Rutland Ave serving as a pilot site. Any environment can promote healing, but gardens are particularly able to do so because humans are hard-wired to find nature captivating and soothing. HUGS will inspire visitors to explore the array of plants on display and begin enjoying the benefits of gardening/healing at home.

We propose conducting an impact analysis by collecting data and after HUG installation. The pandemic underscored the critical role that well-designed and maintained therapeutic spaces can play in human health, and one way to ensure the effectiveness of these spaces is by conducting post construction evaluations within a 1- 3 block radius. The evaluation results will provide data points for future grant applications. In addition, it will inform future HUG sites, potentially providing information that may not have been considered even during the participatory design process.

Sample Proposed Health and Wellness events

Root cause health & wellness workshop - root causes of physical and mental health issues
 Edible plants workshop
 Grow your own Herbal tea workshop
 Cooking demonstrations
 Sound healing
 Yoga
 Educational seminars
 Tai chi/ boxing
 Gardening
 Art murals
 Book library

HERBAL AND MEDICINAL PLANTS

"Let food be thy medicine and medicine be thy food."

Sample Edible Native Plants & Education

- ❖ **Wintergreen** (*Gaultheria procumbens*) is a source of the flavor wintergreen. The leaves can be used for tea, but are best when fresh. The leaves and berries can both be eaten fresh.
- ❖ **New Jersey Tea** (*Ceanothus americanus*) It's a great caffeine free substitute for black tea. The leaves should be harvested when the plant is in full bloom and then dried in a cool shaded area. The root of the plant can be used medicinally to treat digestive and respiratory problems, and may have antibacterial properties.



- ❖ **Anise Scented Goldenrod** (*Solidago odora*) The leaves of this goldenrod can be used to make a tea. You can steep the leaves fresh or dried.
- ❖ **Sumac** (*Rhus copallina*, *vernix*, *glabra*) Produces a fruit which looks like a cone of small red, hairy berries. These berries are edible and can be used as a spice or made into a drink which is sometimes referred to as wild lemonade.
- ❖ **Virginia Spiderwort** (*Tradescantia virginiana*) The leaves are popular in salads and soups, the flowers are often used as a colorful garnish or candied, and the stalks can be cooked like asparagus.

Sample Wild Spring Edibles:

- ❖ Nettle, *Urtica dioica*
- ❖ Peppergrass, *Lepidium virginicum*
- ❖ Onion grass, *Allium vineale*
- ❖ Garlic mustard, *Alliaria petiolata*
- ❖ Violet, *Viola* spp.
- ❖ Dandelion, *Taraxacum officinale*

Sample Common Medicinal Herbs

- ❖ **Chamomile** (Flower) Chamomile is often used in the U.S. to help with anxiety and relaxation. In Europe, it's used to heal wounds and reduce inflammation and swelling. You can drink chamomile tea. Or you can use it as a compress. Chamomile for the skin may be used to treat skin rash from radiation treatments. Chamomile in a capsule may be used to ease vomiting from chemotherapy.
- ❖ **Echinacea** (Leaf, stalk, root) Echinacea is most often used to treat or prevent colds, flu, and infections, and for wound healing. Some studies do show some benefit of echinacea to help with upper respiratory infections.
- ❖ **Lavender** Great for inhalation therapy to treat headaches or exhaustion. Lavender oil in salves soothes skin issues like fungal infections (candidiasis), wounds, eczema and acne.
- ❖ **Feverfew** (Leaf) Feverfew has been used to treat fevers. Some research has shown that feverfew can prevent migraines. It is also used to treat arthritis.
- ❖ **Garlic** (Cloves, root) Garlic is used in cooking. And it has proven health benefits. Garlic has been shown to fight germs, protect your heart, and reduce inflammation. It may help lower cholesterol and blood pressure.
- ❖ **Ginger** (Root) Ginger is most known for easing nausea and motion sickness. Research suggests it may help the nausea from pregnancy and chemotherapy. Ginger is in research for use in surgery and as an anticancer agent. It has strong anti-inflammatory effects. It is also a strong antioxidant.
- ❖ **Ginkgo** (Leaf) Ginkgo leaf extract is used for asthma, bronchitis, fatigue, and tinnitus. It is used to improve memory and to help prevent dementia.
- ❖ **Ginseng** (Root) Ginseng is thought to boost energy, sex drive, and balance the body.
- ❖ **Goldenseal** (Root, rhizome) Goldenseal can help with diarrhea. It can help with eye and skin irritation. It can act as an antiseptic. Use it carefully. Too much can cause irritation of the skin, mouth, and stomach. Always follow a healthcare provider's instructions. Goldenseal can be poisonous in high doses*
- ❖ **Milk thistle** (Fruit) Milk thistle is used for liver problems and high cholesterol.
- ❖ **Saint John's wort** (Flower, leaf) Saint John's wort can help with mild to moderate depression.



-Sample art

NEXT STEPS:

1. Please review the scope of work and proposal fees and let us know if you have any questions or require revisions
2. Execute agreement

Thank you for the opportunity to work with you.

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