

# Glen Burnie Town Center Placemaking

Final Report - May 2024





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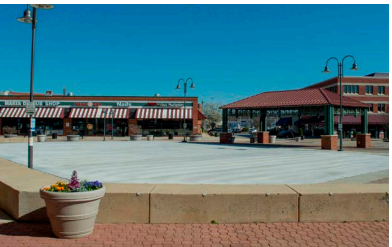
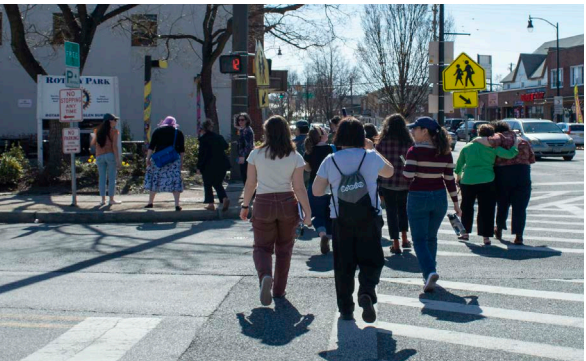
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Glen Burnie Town Center, March 2024  
Photos by Catherine Madsen





# Acknowledgements

## Glen Burnie Town Center

*We gratefully acknowledge all of those who participated in project design, site visits, guest lectures and reviews.*

### **Partnership for Action Learning in Sustainability (PALS)\***

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Kristina Perry Alexander, Resilience Associate

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Quanesha Richardson, Community Engagement Officer

### **Greenmount West Community Center Foundation**

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### **University of Maryland, Department of Plant Science and Landscape Architecture**

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Spencer Craig

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Erin Kremer

Kelly Rasmussen

Laura Sweeney

Evan Whalen

#### **Graduate Studio II Professor**

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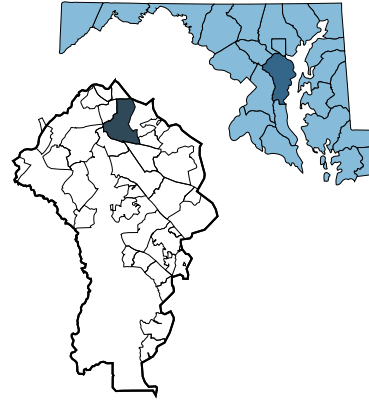
\*The 2023 Maryland legislature provided financial support for the Partnership for Action Learning in Sustainability (PALS) program. This money is/will be used to support projects in communities across the state with limited resources and Maryland NGOs doing work that has statewide impact. This project was funded with State funds. The PALS program and Resilience Authority of Annapolis and Anne Arundel County appreciate the support.

This report was prepared by Caitlin Garlow, MLA candidate and LARC 641 student, University of Maryland.



# Project Description

## Glen Burnie Town Center



Glen Burnie Town Center is located at the intersection of Baltimore-Annapolis Boulevard and Crain Highway, in Anne Arundel County, Maryland.

The Town Center is surrounded by a suburban neighborhood and in close proximity to the Baltimore & Annapolis Trail, a 13-mile paved biking and walking trail along a former railroad track.

Glen Burnie Town Center is a state and county priority for revitalization and redevelopment. The scope for this design project included the plaza, the parking garage, and the streetscape that connects the two.



### Challenges of the Site

#### The Plaza

The plaza is heavily hardscaped, hot, and lacking greenery. The main attraction is the ice skating rink in the winter, but otherwise, there is not much that draws people into the space and encourages them to stay. Vegetation is limited to street trees and container plants which require watering.

#### The Streetscape

The sidewalk between the parking garage and plaza feels exposed to the traffic along Baltimore-Annapolis Blvd. Street trees and vegetation are in poor condition, and visible litter contributes to a negative perception about the downtown area. Yet, changes are underway. New street lights were recently installed and a crosswalk at the midpoint of Baltimore-Annapolis Blvd is in the works.

#### The Parking Garage

The 550-spot parking garage is free, but underused. It can be difficult to find, due to lack of signage. There is also a perception that the garage is unsafe. The rooftop is not often used for parking, and thus has the potential to serve as a different type of amenity for the community.



# Project Description

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## Glen Burnie Town Center



### The Ask

*Make Glen Burnie Town Center a Destination for Members of the Community*

The students were asked to consider the following in their designs:

- Create a sense of “place” in Glen Burnie’s Town Center
- Increase use of the plaza, considering existing programming such as Christmas tree lighting, ice skating, concerts and farmer’s market, as well as potential new programming such as storytime with library, festivals, and more
- Encourage more business and foot traffic to retail stores and restaurants adjacent to the plaza
- Increase visibility and use of the parking structure, including the rooftop
- Modernize the streetscape to strengthen connectivity between the parking garage and the plaza
- Incorporate better signage and wayfinding throughout the Town Center
- Add more vegetation and increase shade
- Maintain ADA accessibility
- Contribute to the health and wellness of the community
- Estimate stormwater runoff and address it with design solutions
- Estimate environmental, social and economic benefits of any new designs



# Site Inventory

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## Glen Burnie Town Center

An inventory and analysis of the site's abiotic, biotic and cultural factors serve as the basis for the proposed designs.

### Climate

Isabel Cedenio

### Hydrology

Felix Hernandez

### Soils

Kelly Rasmussen

### Existing & Potential Vegetation

Lillian Austin

### History

Laura Sweeney

### Site Context

Spencer Craig

### Circulation

Evan Whalen

### Demographics

Erin Kremer

### Zoning & Land Use

Caitlin Garlow



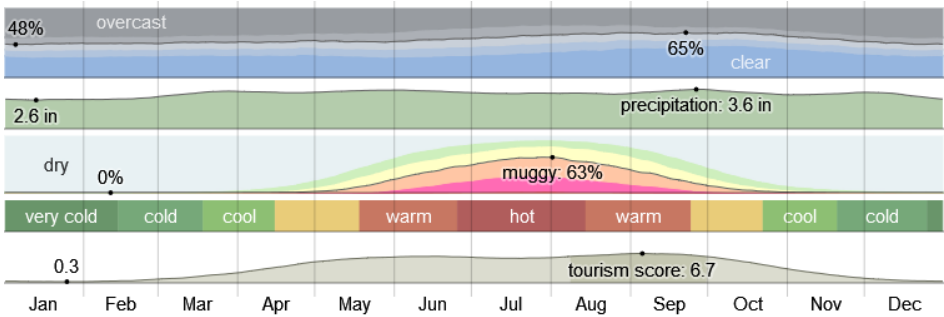
Site Visit to Glen Burnie Town Center, March 2024  
Photos by Catherine Madsen



Glen Burnie Town Center

CLIMATE

Summers: warm and humid  
Winters: very cold, snowy, and windy  
Over the course of the year, the temperature typically varies from 28°F to 87°F and is rarely below 15°F or above 95°F.



Glen Burnie weather by month

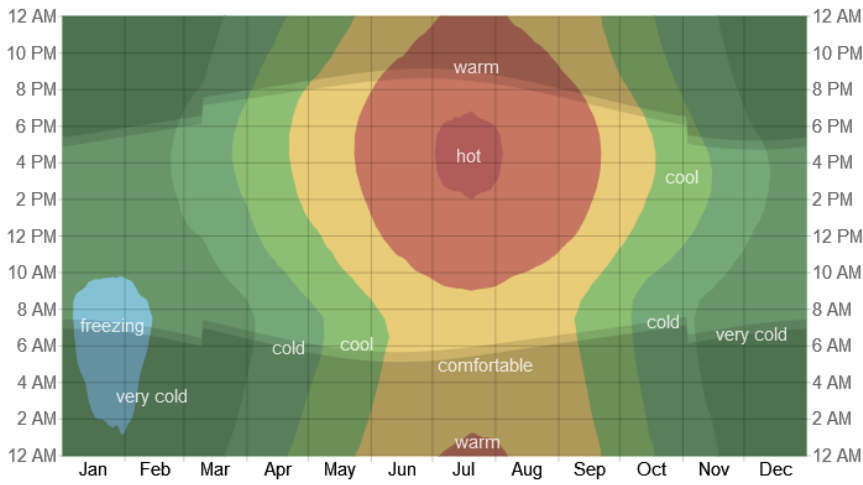
Hot season: (3.5 months) May 29 to September 15.  
Hottest month: July.  
Average high: 87°F  
Average low: 70°F

Cold season: (3.2 months) November 30 to March 5.  
Coldest month: January.  
Average low: 29°F  
Average high: 42°F

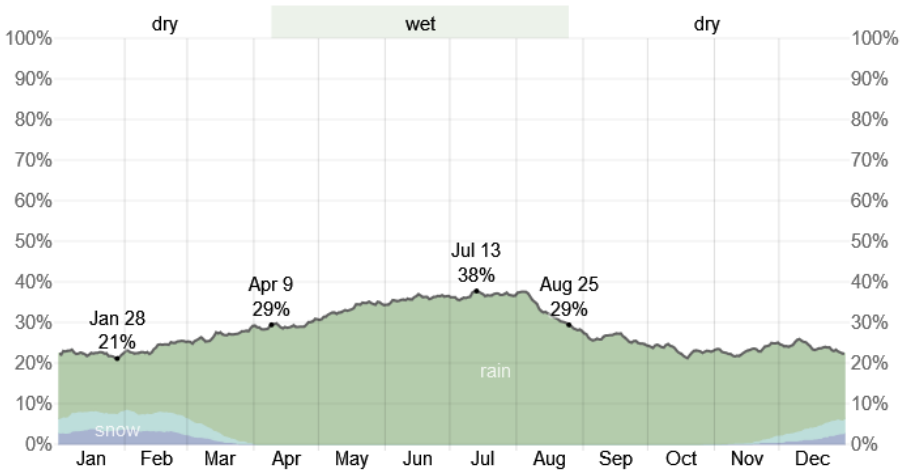
Glen Burnie Average Temperature

| Average | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| High    | 42°F | 45°F | 54°F | 65°F | 74°F | 83°F | 87°F | 85°F | 78°F | 67°F | 56°F | 47°F |
| Temp.   | 34°F | 37°F | 45°F | 55°F | 65°F | 74°F | 79°F | 76°F | 70°F | 58°F | 48°F | 39°F |
| Low     | 29°F | 30°F | 38°F | 47°F | 57°F | 66°F | 70°F | 69°F | 62°F | 50°F | 41°F | 33°F |

Glen Burnie Hourly Temperature

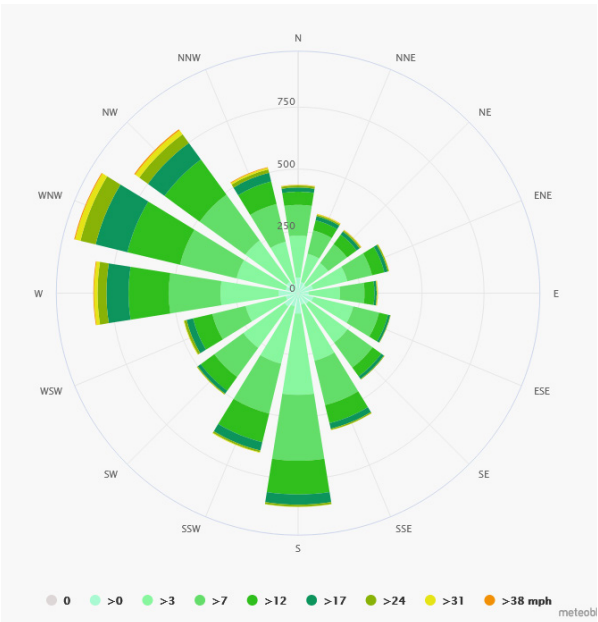


Rain precipitation average a year: 42 inches  
Snow Average per year: 14 inches  
Average 211 sunny days per year.

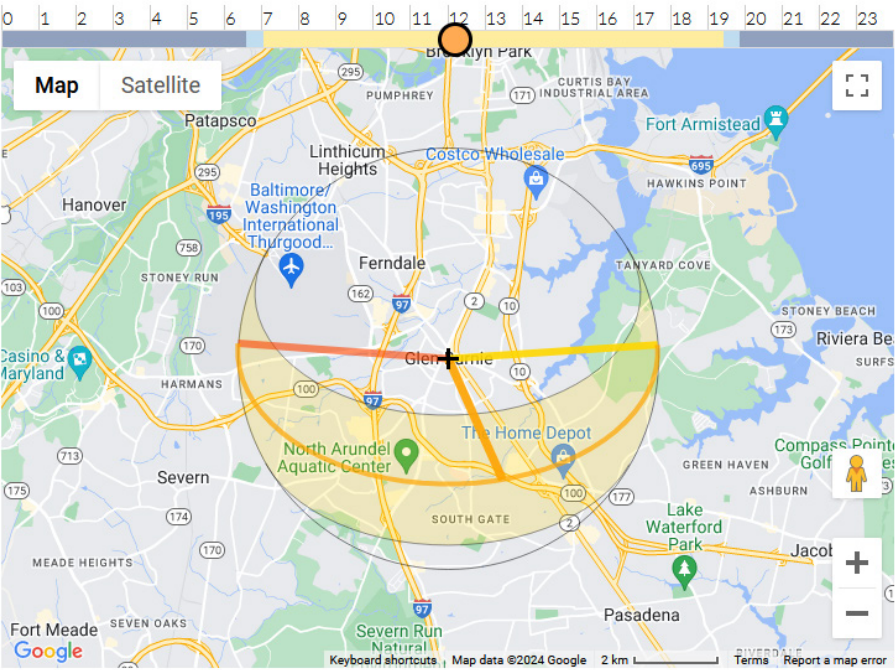


Average chance of precipitation

Glen Burnie Wind Rose



The wind rose shows how many hours per year the wind blows from the indicated direction. Example SW: Wind is blowing from South-West (SW) to North-East (NE).

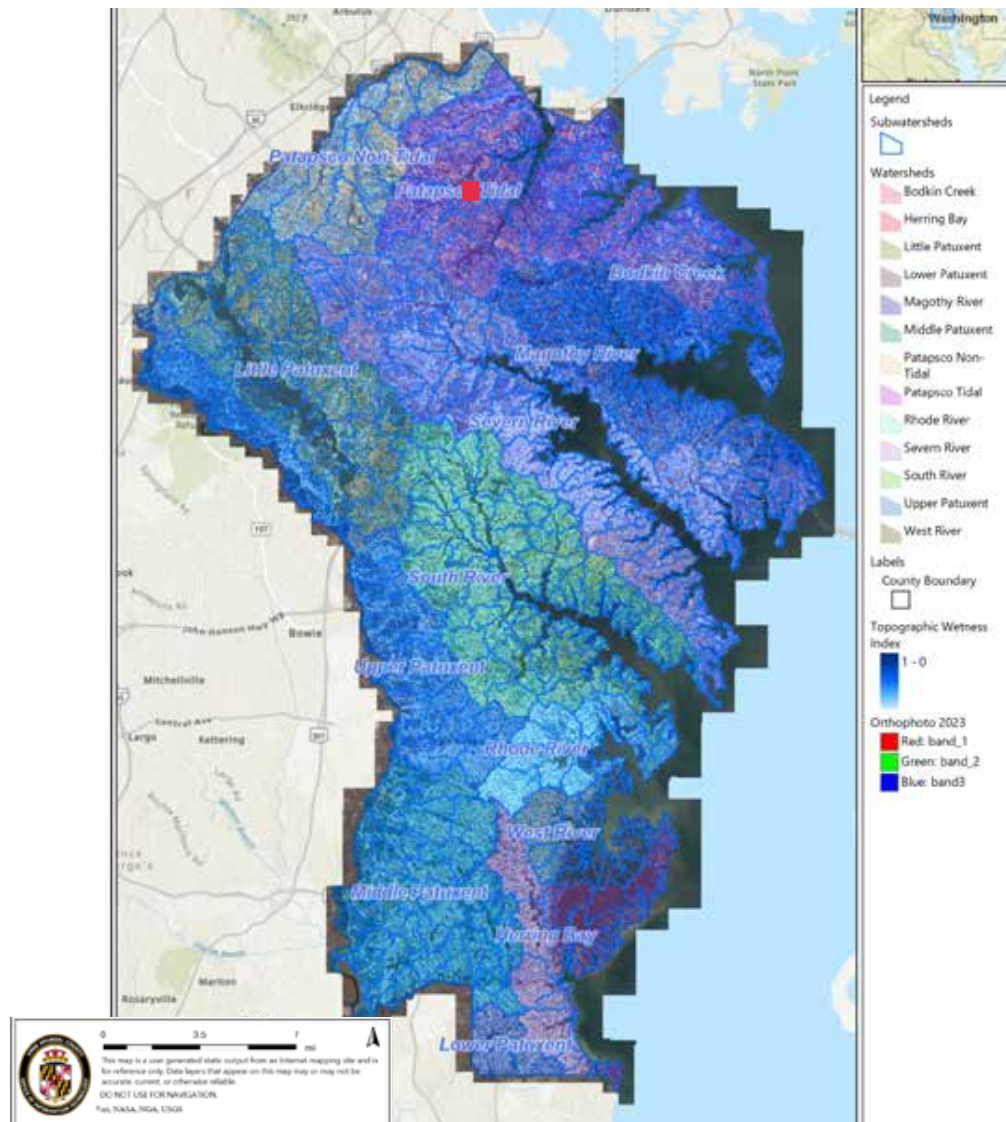


Glen Burnie sun Path

07:01 — Sunrise  
13:13 — Solar noon  
19:25 — Sunset

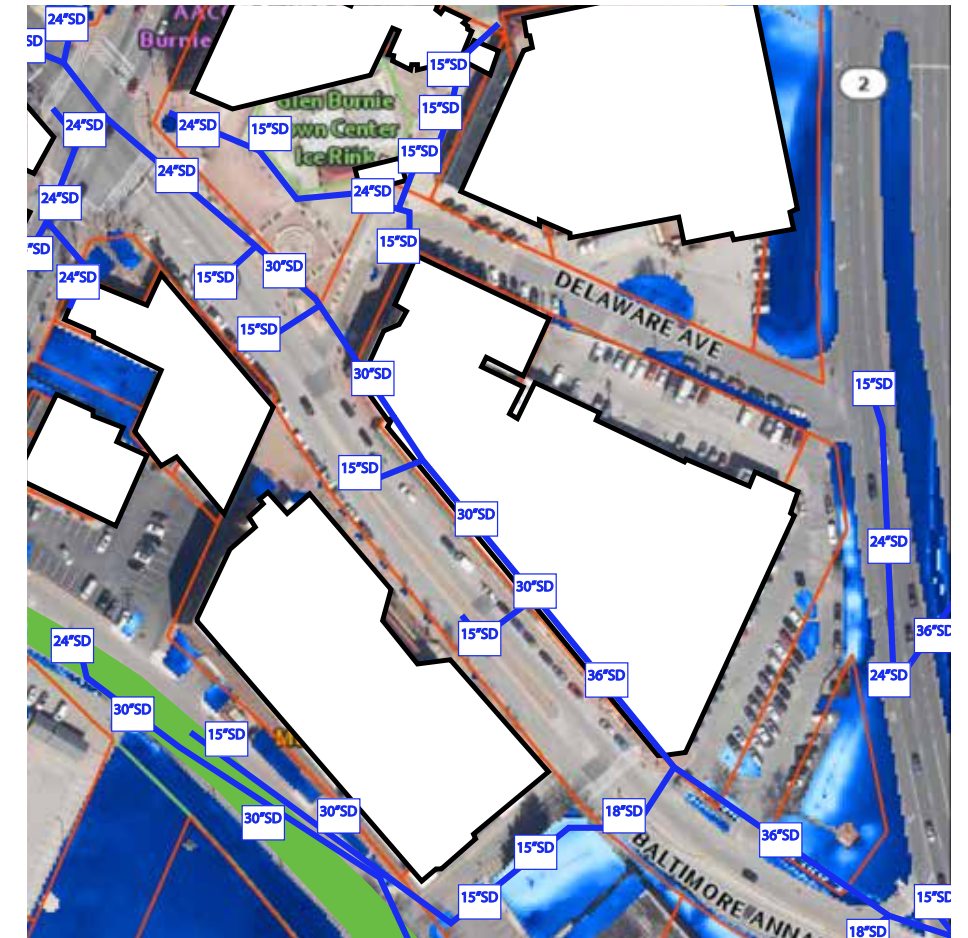
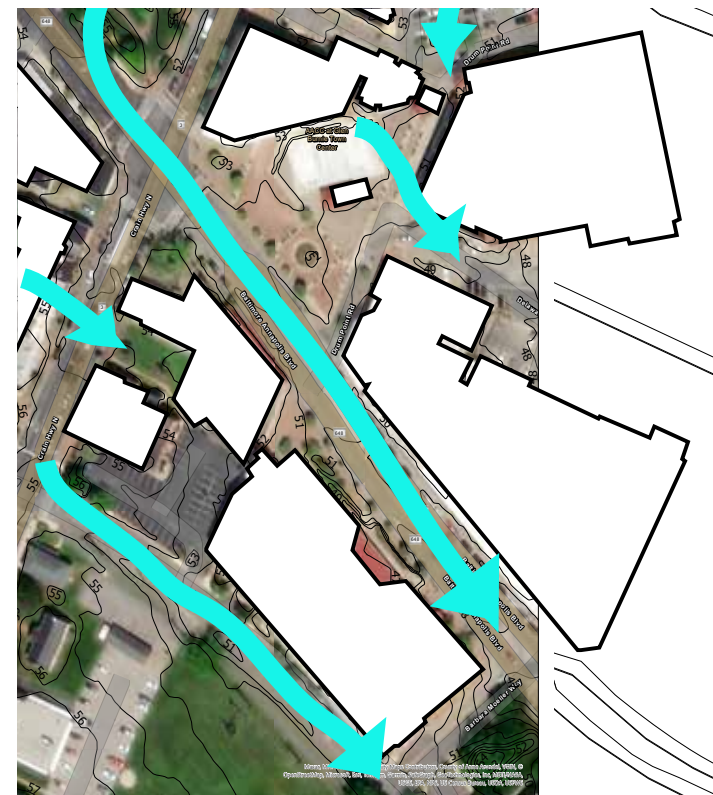
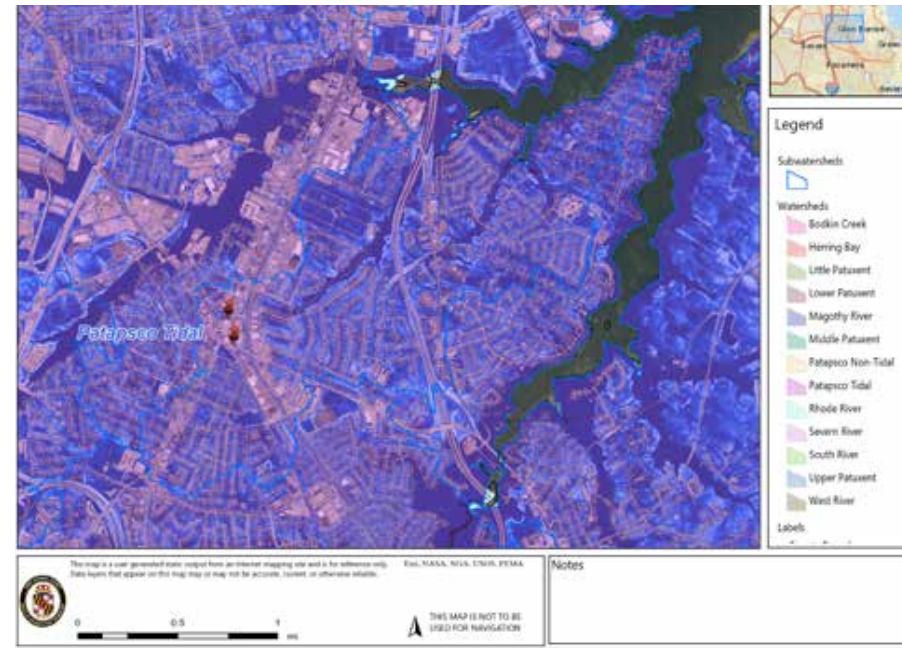


## Glen Burnie Town Center



Anne Arundel County is part of the Chesapeake Bay Watershed; our site is under the Patapsco Tidal Basin Subwatershed. The area prioritizes vehicular transportation in a region that has limited lanes to accommodate the high traffic area. Because of these constraints, we'll need to consider the first flush principle when thinking through the site design as well as self watering vegetation when thinking about plantings.

The runoff flows northeast across the Patapsco Tidal region.



The image above demonstrates the areas where water will be able to infiltrate the soil. Our site corridor has no current areas where water can infiltrate the ground.

The water first flows southwest but will eventually move north east along the street on the North - South axis. There are a total of 70 storm drains in this region with the drains centered around the main streets. The topography of this site is a valley of sorts with both east and west side of the street on the North - South Axis being the highest parts and then ultimately descending towards the northeast towards it's lower elevations.

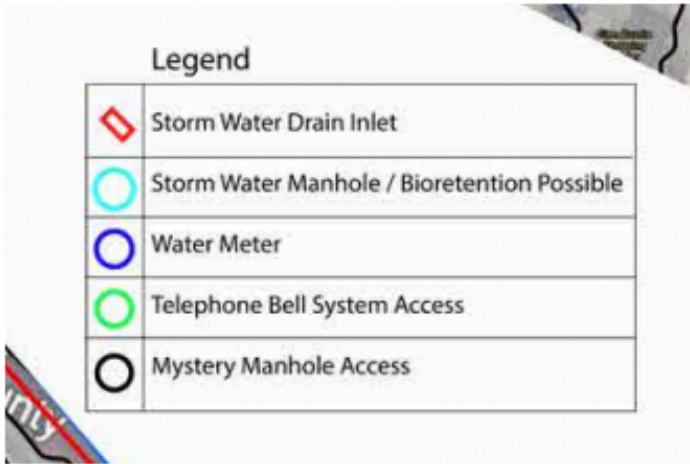
May is the rainiest month while October has the least amount of precipitation in Glen Burnie.



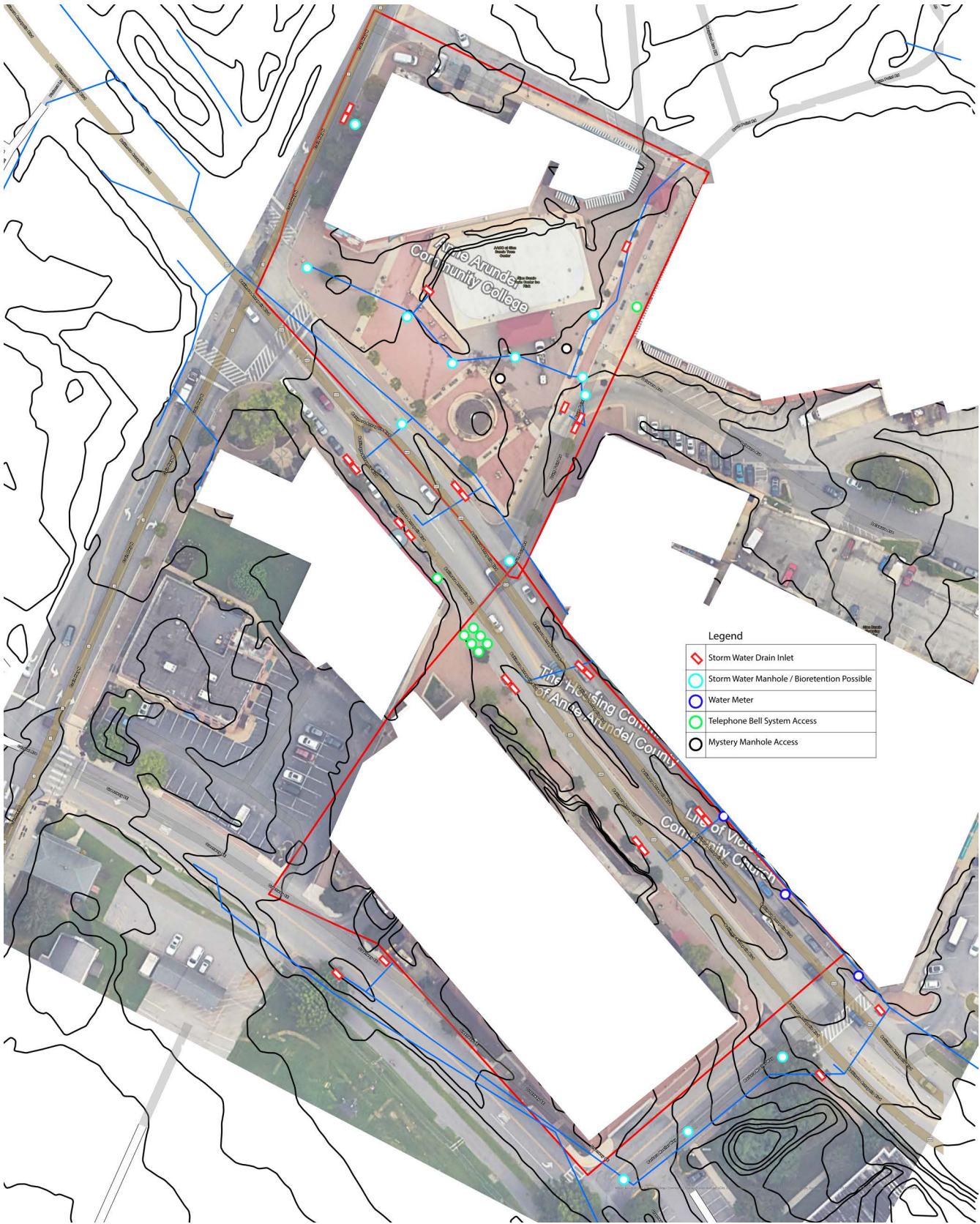
## Glen Burnie Town Center

### Glen Burnie Place Making Site Stormwater Infrastructure:

To the right, we have the sites manhole cover, drain inlets, water meters, telephone Bell systems access, and mystery manholes identified.



For the PlaceMaking Project at Glen Burnie the stormwater manholes within the plaza could instead be used as overflow storm water structures. This would transform the manholes to more functional drains throughout the site for bioretention cells or longer segments for water sequestration.





## Glen Burnie Town Center

Uz: Urban Land 100%

Land capability classification: 8

Soil Group: D

Dsoil has high runoff potential when wet and water movement is restricted. D soils are greater than 40 % clay, less than 50% sand, and have a clay texture. This soil has high shrink-swell potential.

<https://directives.sc.egov.usda.gov/22526.wba>

38' water table

Lower Patapsco Aquifer

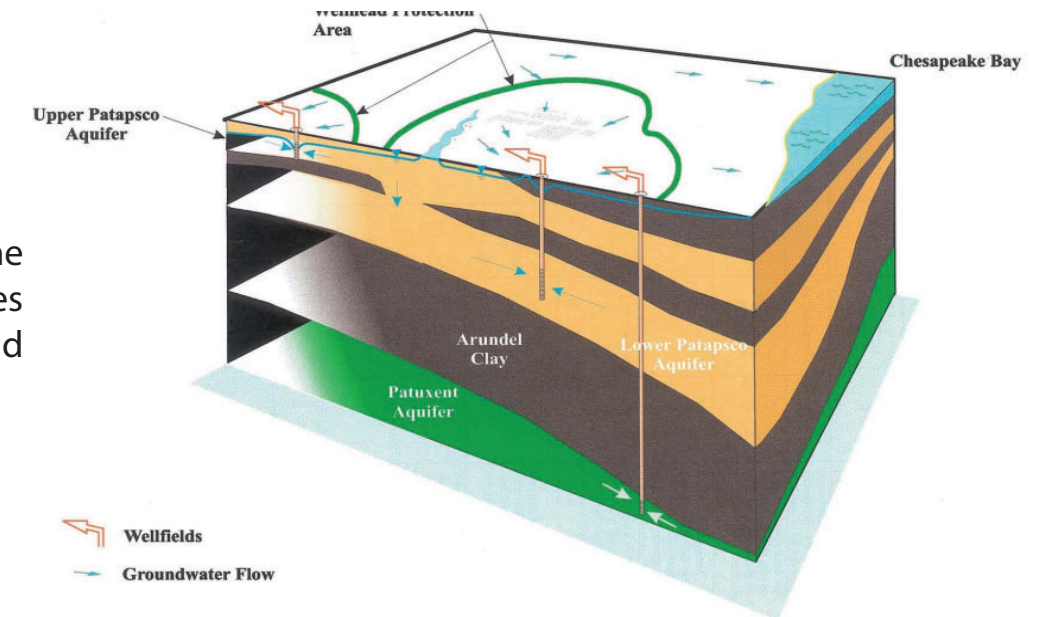
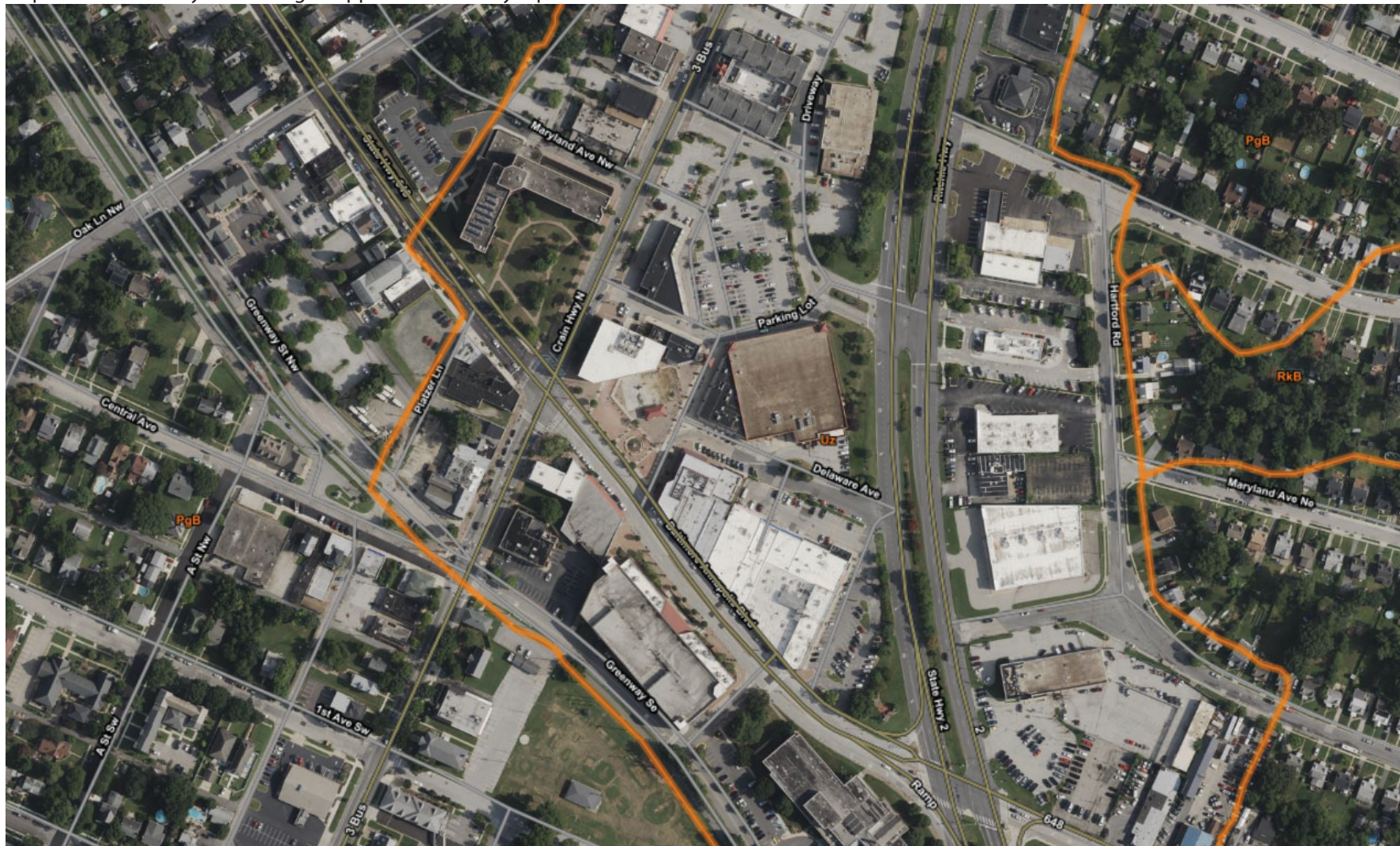
Location ID number 02060003

<http://www.mgs.md.gov/reports/AArpt2018.pdf>

The water table is an underground boundary between the soil surface and the area where groundwater saturates spaces between sediments and cracks in rock. Water pressure and atmospheric pressure are equal at this boundary.

<https://education.nationalgeographic.org/resource/water-table/>

<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>



[https://mde.maryland.gov/programs/water/water\\_supply/Source\\_Water\\_Assessment\\_Program/Documents/SWPP\\_Report\\_GlenBurnie\\_FINAL\\_2013.10.15%20\(2\).pdf](https://mde.maryland.gov/programs/water/water_supply/Source_Water_Assessment_Program/Documents/SWPP_Report_GlenBurnie_FINAL_2013.10.15%20(2).pdf)

At all facilities practicing stormwater infiltration the following design standards shall apply:

1. Stormwater management facilities including drainage swales, detention ponds, and retention ponds shall be designed in a manner to provide optimal protection of the ground water resources. Uses of grass swales, open shoulder roads and grass filter strips shall be considered as first options in plan development.
2. At least four feet of soil material is required between the top of bedrock surface or high water table (whichever is higher) and the bottom of any stormwater infiltration pond or system.
3. Stormwater infiltration shall be prohibited in areas receiving runoff from handling and mixing areas of hazardous materials.
4. At least 80% of the predevelopment recharge rate shall be preserved following development. The design shall be made to ensure that this rate can be maintained over the life of the facility.



# Site Inventory | Existing Vegetation

Lillian Austin 11

## Glen Burnie Town Center

### Annuals:

Ornamental cabbage  
Violas



### Perennials:

Liriope  
Yucca  
Daffodils



### Shrubs:

Nandina

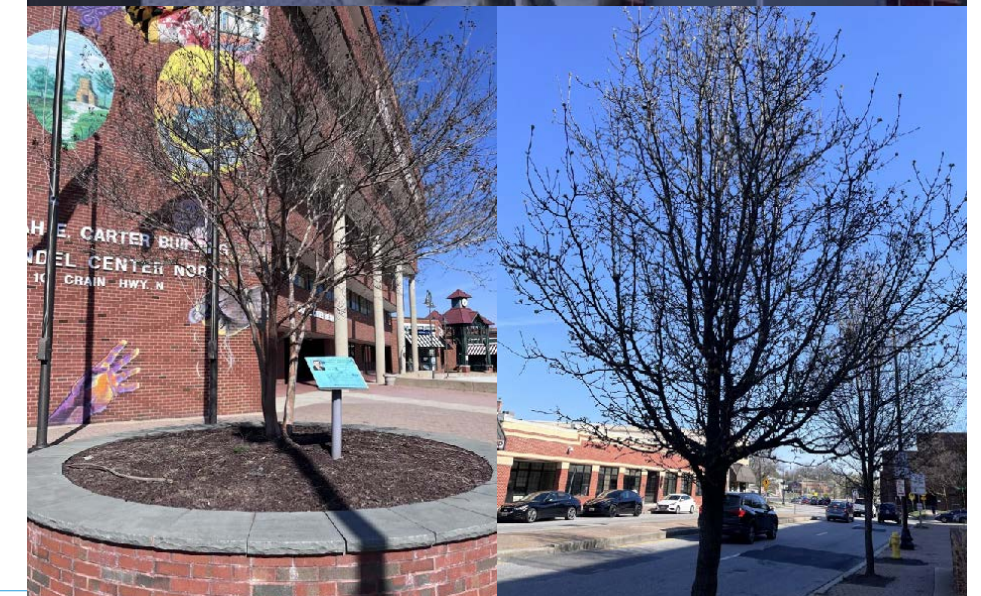


Ilex Glabra



### Trees:

Star Magnolia: Not producing many buds  
Bradford Pears: lining the street and healthy but invasive  
Crape Myrtle  
American Linden Trees (Behind Community College):  
Healthy





## Glen Burnie Town Center

### Perennials:

#### Sun:

Moss phlox *Phlox subulata*



Garden phlox *Phlox Paniculata* 'Jeana'

Purple coneflower *Echinacea purpurea*

Black Eyed Susan *Rudbeckia fulgida*



Blue flag iris *Iris versicolor*\*

Switchgrass *Panicum virgatum*

Prairie Dropseed *Sporobolus heterolepsis*

Soft Rush *Juncus Effusus*\*

#### Shade:

Creeping phlox *Phlox stolonifera*

Pennsylvania sedge *Carex pensylvanica*\*



### Shrubs:

Virginia sweetspire

*Itea virginica*



Winterberry Holly\*

*Ilex verticillata*



Inkberry Holly\*

*Ilex glabra*

Oakleaf hydrangea

*Hydrangea quiercifolia*



### Trees:

#### Ornamental:

Eastern Redbud *Cercis Canadensis*:



Serviceberry *Amelanchier canadensis*

Dogwood *Cornus Florida*

Sweetbay Magnolia *Magnolia virginiana*\*

Fringetree *Chionanthus virginicus*

#### Shade and Street Trees:

Sycamore *Platanus occidentalis*\*



Kentucky Coffee Tree *Gymnocladus dioicus*

Sweetgum *Liquidambar styraciflua*

Honey Locust *Gleditsia triacanthos*

Pin Oak *Quercus palustris*

Northern Red Oak *Quercus rubra*

American Linden *Tilia americana*

London Planetree *Platanus x acerfolia*

\*Denotes species that can be used in bioretention areas

Casey Trees. (2017, July 24). The Few, the Proud, the Best Street Trees. <https://caseytrees.org/2017/07/proud-10-best-street-trees/>

Recommended Native Plants for Maryland. University of Maryland Extension. (n.d.). <https://extension.umd.edu/resource/recommended-native-plants-maryland/>



## Glen Burnie Town Center

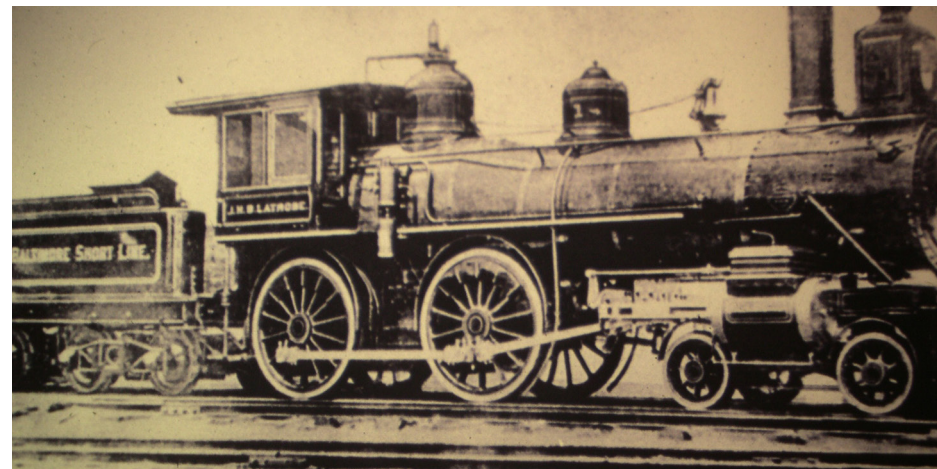
### EARLY HISTORY OF THE AREA:

- Indigenous inhabitants - Native Algonquin tribes
  - 1649 - First European settlement of Anne Arundel County
  - Early 18th century tobacco, corn and grains plantations, forests harvested for timber.
  - Early property owners and their descendants amassed large tracts of land
  - Iron ore and timber industries emerged in the early 18th century.
  - Mid-18th century, Curtis Creek Iron Furnace was formed and sold charcoal pig iron until 1851
  - 1772 sold to William Barker,
  - 1851 - sold to William Wilkens Glenn.
  - In 1854, Glenn founded the Curtis Creek Mining, Furnace and Manufacturing Company
  - Railroad-
    - 1868 - Baltimore & Potomac Railroad arrives
    - 1887 - Annapolis and Baltimore Short Line Railroad
    - 1908 Washington, Baltimore, & Annapolis Electric Railway
  - Area changed dramatically with railroad
- Photo: Curtis Creek Furnace



### FORMATION OF GLEN BURNIE:

- The Glenn family took advantage of changes brought by the railroad
- John Glenn Jr. and his cousin John M. Glenn set aside 3,000 acres of the 9,000 acre Curtis Creek Mining, Furnace and Manufacturing Company to create a suburban village, which would become Glen Burnie.
- Slow growth only a few buildings by 1894, along Crain Highway, included residences and industrial facilities.
- The oldest building in Glen Burnie owned by Samuel Sewell Tracey still there today Boulevard, S.E. and Second Avenue.
- important founders: William Frederick Kuethe, Dr. Thomas Brayshaw, Albert Hamlen, and the Woodfall family.



Photos: Annapolis and Baltimore Short Line Railroad  
Crain Highway from a vintage postcard



### EARLY 1900's TO PRESENT:

- 1908 - Albert Hamlen and others formed the Glen Burnie Improvement Association to finance Glen Burnie's first public amenities and the Volunteer Fire Company.
- Glen Burnie impacted by Baltimore's industrial growth and development in 19th and 20th centuries.
- Company growth brought employment opportunities
- Automobiles also brought growth with the
  - 1912- Construction of the Baltimore-Annapolis Boulevard
  - Main thoroughfare Light Street Road became Robert Crain Highway.
- Glen Burnie being located at the juncture of these two major roads causes traffic problems and lead to Governor Ritchie Highway in the 1930s, leading to end of Railroad
- 1940's - Subdivisions appear on the outskirts of the original town
- Ritchie Highway goes from scenic route to commercial strip contributing to the decline of downtown Glen Burnie
- By 1951 the town had expanded far past original 3,000-acre tract with over 1,000 new homes within a two-mile radius
- 1959 Harundale Mall is built and contributes to further decline of Glen Burnie downtown
- 1980's - Downtown revitalization which resulted Court-house, parking lot, and Anne Arundel Community College

Photo: Plaza after revitalization in the the 1980's



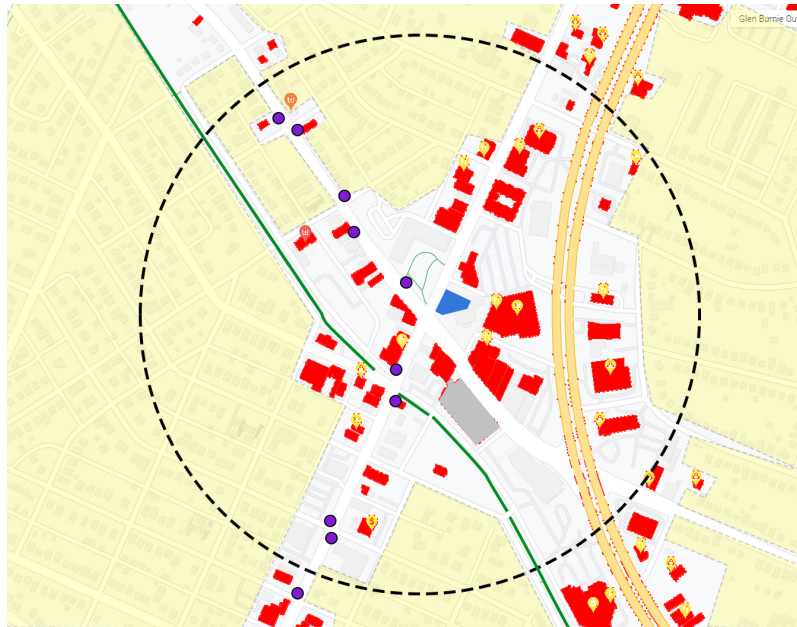


## Glen Burnie Town Center

101 Crain Highway North  
Glen Burnie, MD 21061

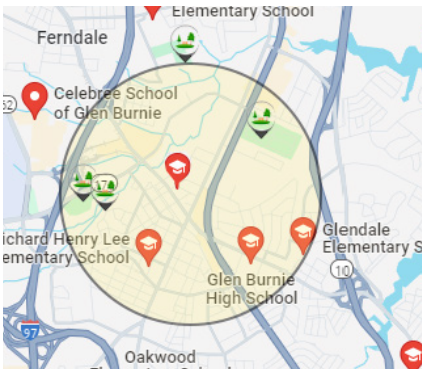
**Partnership:**  
Glen Burnie Town Center is one of three Town Centers within the county targeted for its potential and projected economic growth. In 2021, the Office of planning and Zoning collaborated with Glen Burnie Revitalization Implementation Task Force and Mahan Associates to conduct market research of the site for the Town Center Revitalization Plan (2022).

**Location:**  
The Town Center is situated along Baltimore-Annapolis Boulevard and between two major intersections; Crain Highway and Governor Ritchie Highway. Civic institutions such as Anne Arundel Community College and public amenities like the A&B Trail, BWI Airport, and Glen Burnie Station (Light Railway) are situated within a two mile radius from the Town Center. Additional retail, restaurants, and suburban housing and schools surround the area with anticipated construction of apartments and town homes.

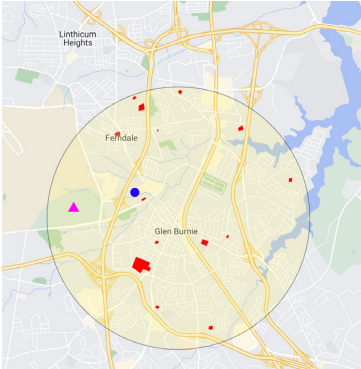


0.25 mile radius - 5 min walking distance

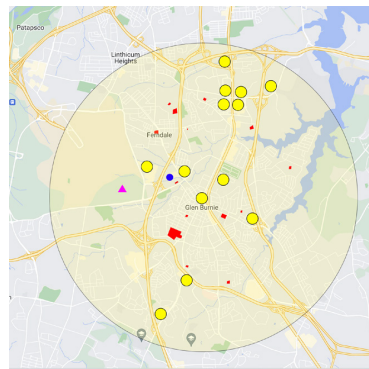
1 mile radius



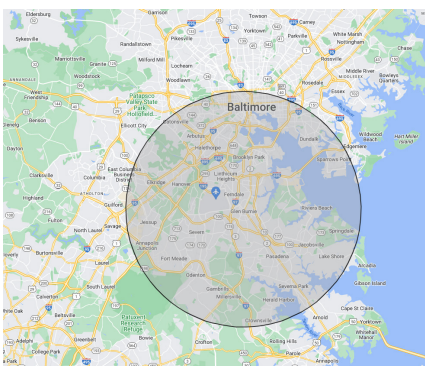
2 mile radius



3 mile radius



10 mile radius



46 public schools in Glen Burnie, 4 within a mile of the town center.



4 public parks



BWI Airport



Cromwell/Glen Burnie Light Rail Station



Main Shopping Centers

Baltimore Harbor within 10 miles - 30 minute commute



Anne Arundel Community College

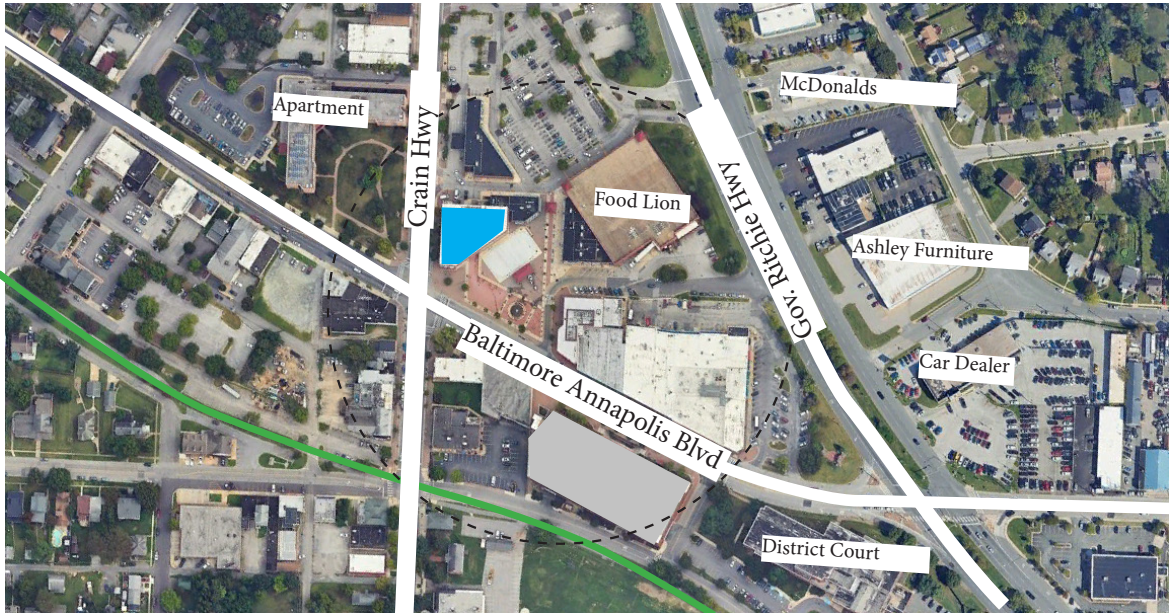
Baltimore-Annapolis Trail  
13.3 mile paved trail from Glen Burnie to Annapolis

Residential

Parking  
550 spaces

Commercial

Bus Stops



**LANDSCAPE ARCHITECTURE**  
Department of Plant Science and Landscape Architecture



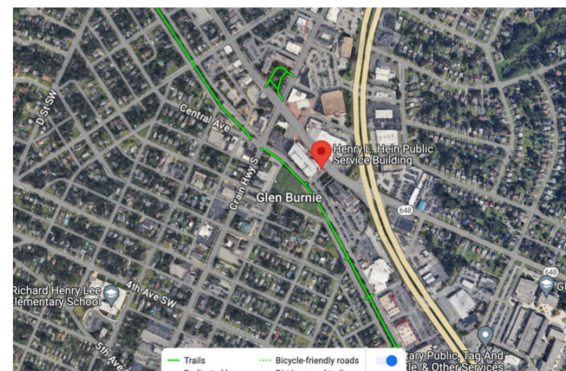
## Glen Burnie Town Center

### PLACEMAKING PROJECT SITE INVENTORY: Circulation

#### Henry L. Hein Public Service Building and Plaza

Traffic is moderate to fast through the site. There are opportunities to reprogram using principles of behavioral economics.

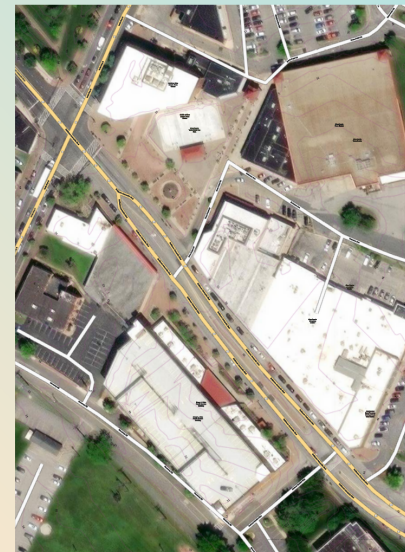
Richard Thaler introduced the Nudge principle, whereby users are presented with a choice architecture that incentivizes or disincentivizes behaviors.



Bike Patterns



Traffic Pattern / Google  
Image



Site Map



Parking Garage  
Terrain Map



Plaza  
Perspective



Traffic Pattern, South Approach



## Glen Burnie Town Center HOUSEHOLDS:

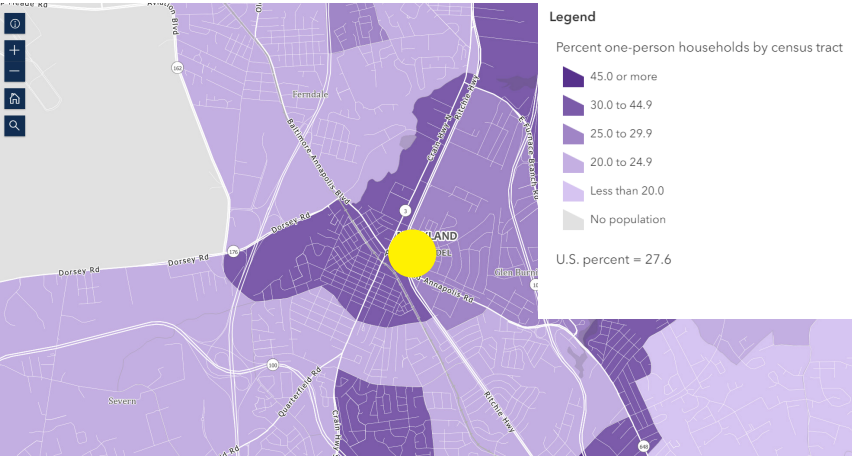


Figure 1 - Single Owner Homes

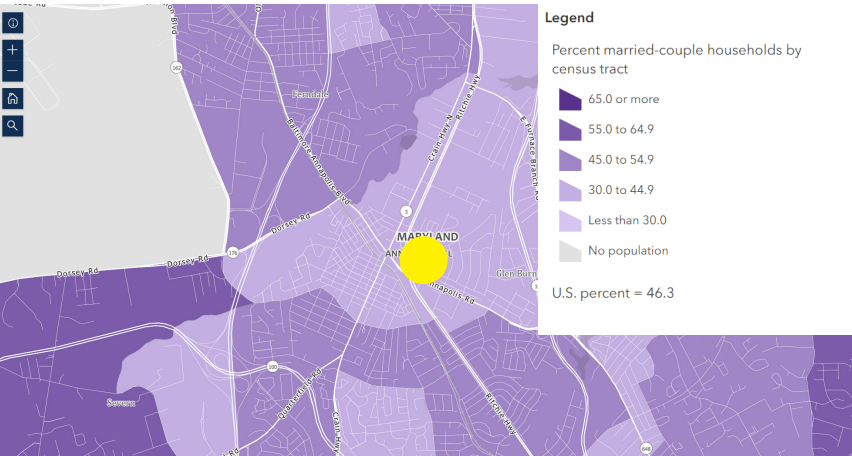


Figure 2 - Married Couple Homes

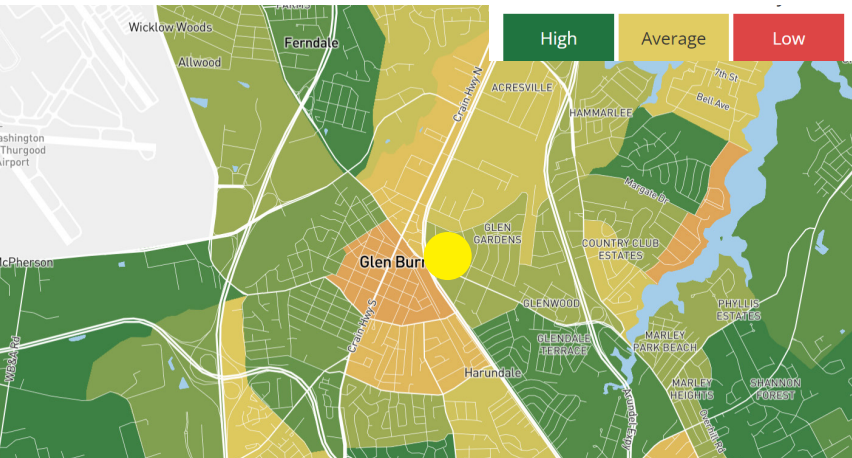


Figure 3 - Average Household Income

## GLEN BURNIE OVERVIEW:

- Population: 69, 739
- Median Age: 38.2
- Median Household Income: \$80,458
- Poverty Rate: 7.21%
- Median Property Value: \$276,000
- Avg Car Ownership: 2 cars per household

Figure 8 - Racial Breakdown

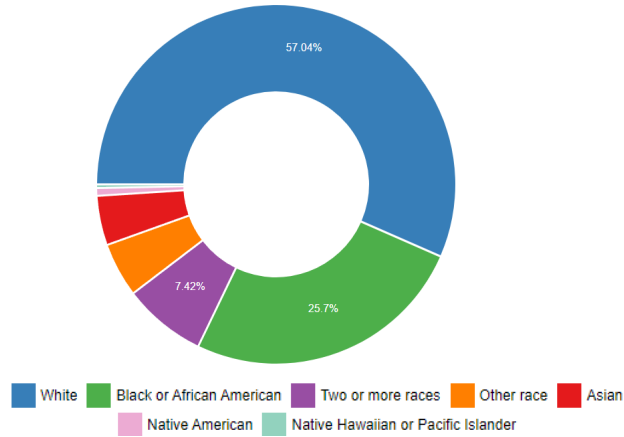
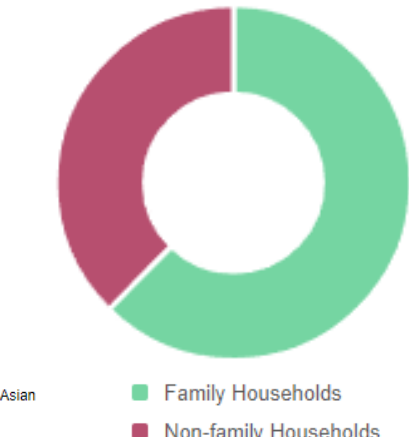


Figure 9 - Housing Breakdown



- The population density directly surrounding the site hovers around 3,000 people per square mile. (Fig. 4)
- There is a density of people over 65 slightly under the national average, meaning that the predominant group is younger families and singles. (Fig. 5)
- The predominant housing form of housing within Downtown Glen Burnie are Single Owner and Married Couple Homes (Fig 1 and 2).
- The average income surrounding the downtown district is fairly high, with a slightly lower household income directly surrounding the site. This is most likely due to a decrease in housing density near the site. (Fig. 3)
- The predominant races surrounding the site are Caucasian and African American, although there is fairly high diversity in the area. (Fig. 7)
- The predominant racial demographics in Glen Burnie are White (57.04%), African American (25.7%) and Two or More Races (7.42%)(Fig. 8)
- The households within Glen Burnie are 62.36% family households, but only 28.61% are households with children.(Fig. 9)

## PEOPLE:

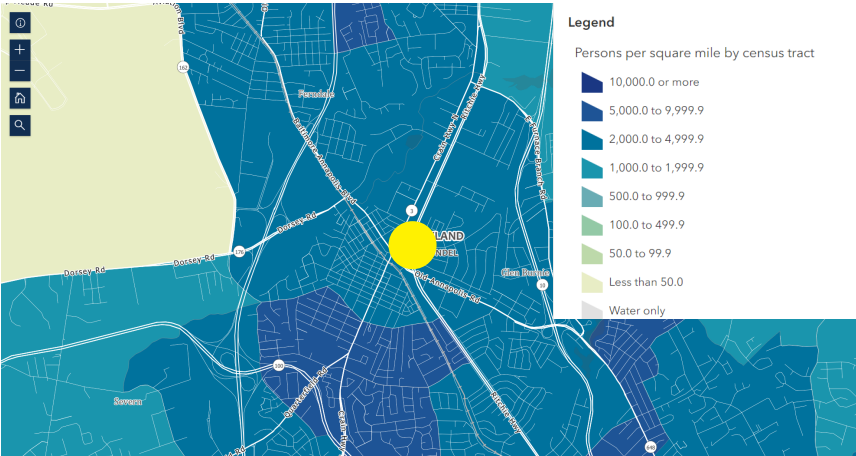


Figure 4 - Population Density

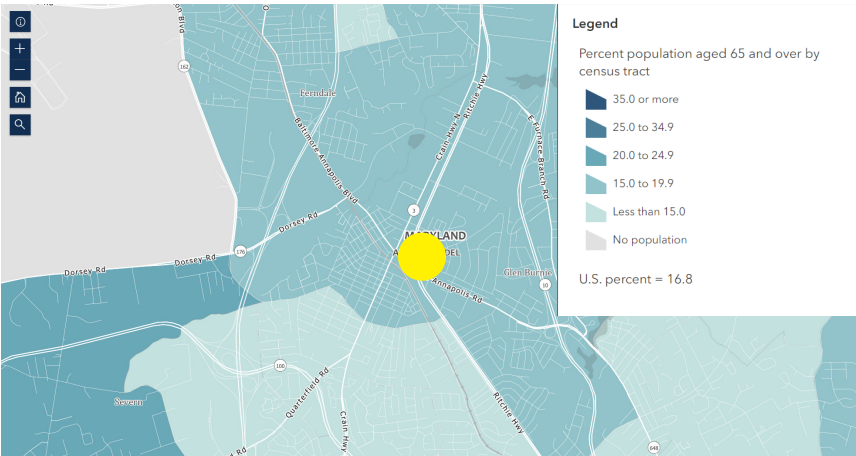


Figure 5 - People over 65

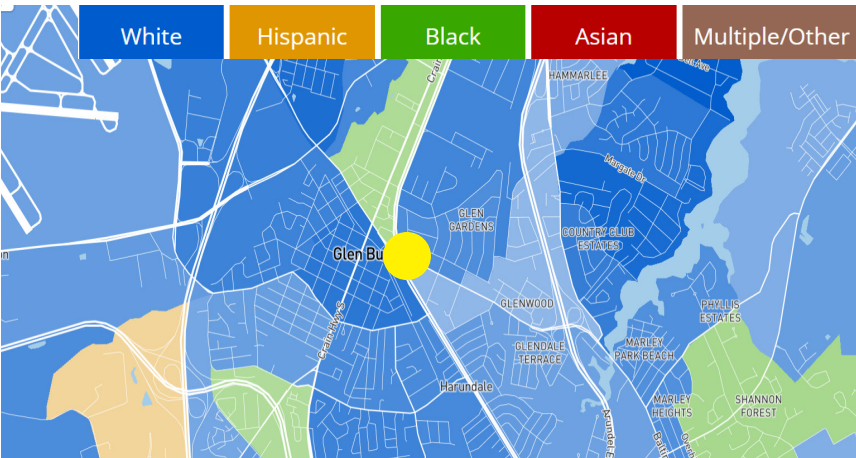
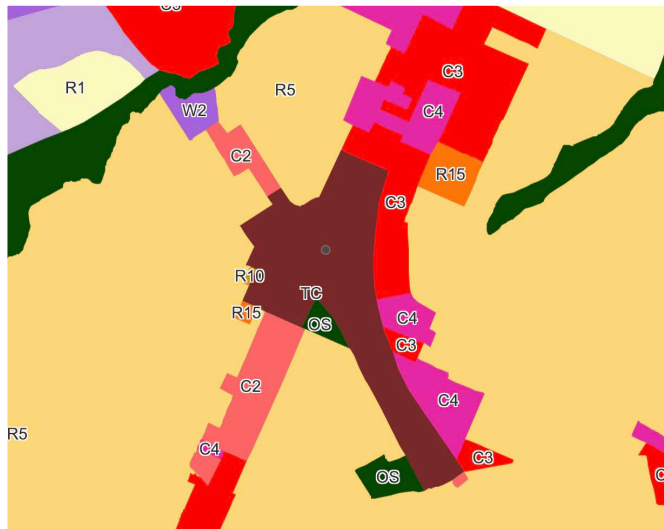


Figure 7 - Race

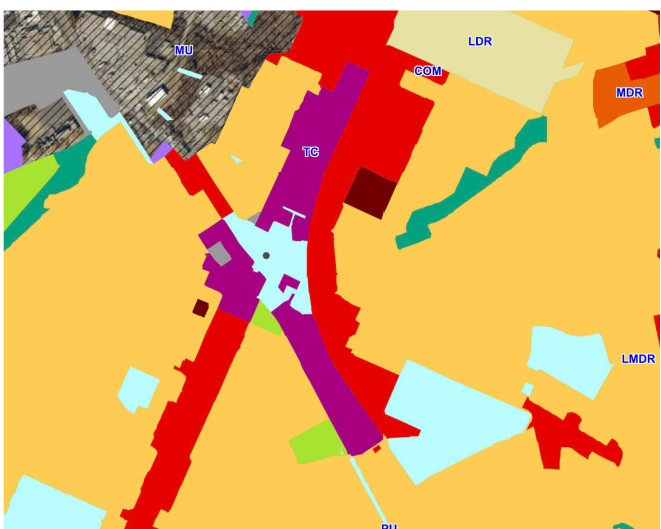


## Glen Burnie Town Center

Maps Source: Anne Arundel County, MD (2024, March). Land Use and Zoning Viewer.  
<https://maps.aacounty.org/>



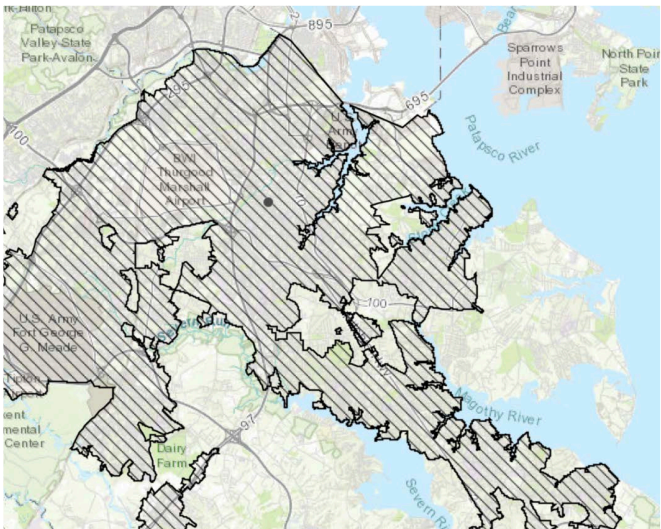
**Zoning**  
The site is located within the official Glen Burnie Town Center (TC) which is surrounded by both commercial (C2, C3, C4) and residential (R10, R15) and open space (OS) areas. TC areas are targeted for development, redevelopment and revitalization by Plan 2040.



**Planned Use 2040**  
As part of the 2040 Plan, the goal is for the site to be part of a large area of public use (blue), at the center of a larger Town Center (purple) that radiates and extends beyond the current boundaries.



**Development Policy Areas**  
The site falls within the development policy area of "Town Center" (or and is surrounded by an area that has a "Neighborhood Preservation" policy. Neighborhood Preservation zoning policy limits new development by emphasizing walkable/bikeable areas, parks and schools.



**Priority Funding Area**  
The site falls within a Priority Funding Area in the state of Maryland. Priority Funding Areas (PFAs) are designated by 1997 Maryland State Law as areas that should be prioritized for future growth in the state by way of investment in public infrastructure such as sewer, electricity, roads, and more.

### Local Plans



### Glen Burnie Town Center Revitalization Plan, 2023

"An urban design plan that describes and illustrates the potential revitalization of multiple blocks in the historic heart of Glen Burnie's Town Center, at the intersection of Baltimore Annapolis Boulevard and Crain Highway."

It is a framework that can guide local government and its partners in planning for the area over the next 10 years and beyond.

Initiated in 2021 by the Anne Arundel Office of Planning and Zoning, together with the Glen Burnie Revitalization Implementation Task Force and Mahan Rykiel Associates.

### Zoning Codes - Article 18



### Anne Arundel County Code, Article 18 (Zoning), 2005

In the Anne Arundel County Zoning Code, pay particular attention to Title 14, subtitle 6 (18-14-601 Glen Burnie Sustainable Community Overlay Area).

This subtitle provides extra flexibility for developers who want to develop around the Town Center, giving them additional flexibility if they exceed the County's codes and provide "Community Enhancements" (e.g., pocket parks, playgrounds, bicycle or pedestrian trail improvements, public meeting space, public art, etc.)

Also review Title 3, subtitle 9 (Town Center Districts) which includes building heights, setbacks and minimum open space areas.



# Case Studies

18

## Glen Burnie Town Center

Case studies of other public plazas, parking structures and street scapes informed the final designs.

### Uptown Normal Circle & Streetscape - Normal, IN

Lillian Austin

### Canal Park - Washington, DC

Isabel Cedenro

### Santa Monica Parking Structure - Santa Monica, CA

Spencer Craig

### Market Commons - Clarendon, VA

Caitlin Garlow

### Xuhui Runway Park - Xuhui, China

Felix Hernandez

### Argyle Shared Street - Chicago, IL

Erin Kremer

### Gold 1 Garage - Pittsburgh, PA

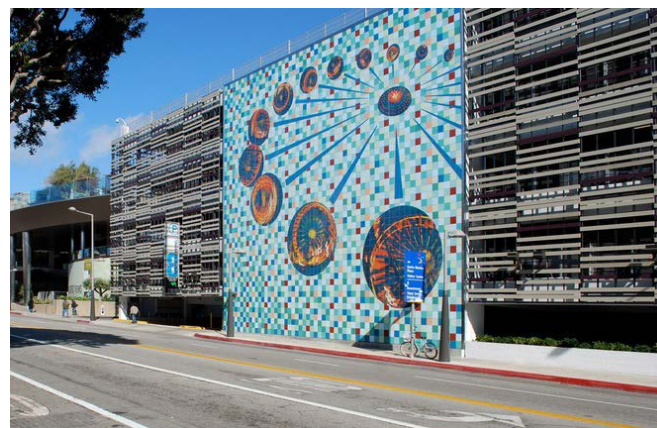
Kelly Rasmussen

### Wayne Ferguson Plaza - Lewisville, TX

Laura Sweeney

### Monon Plaza - Carmel, IN

Evan Whalen





# Case Studies | Uptown Normal Circle & Streetscape

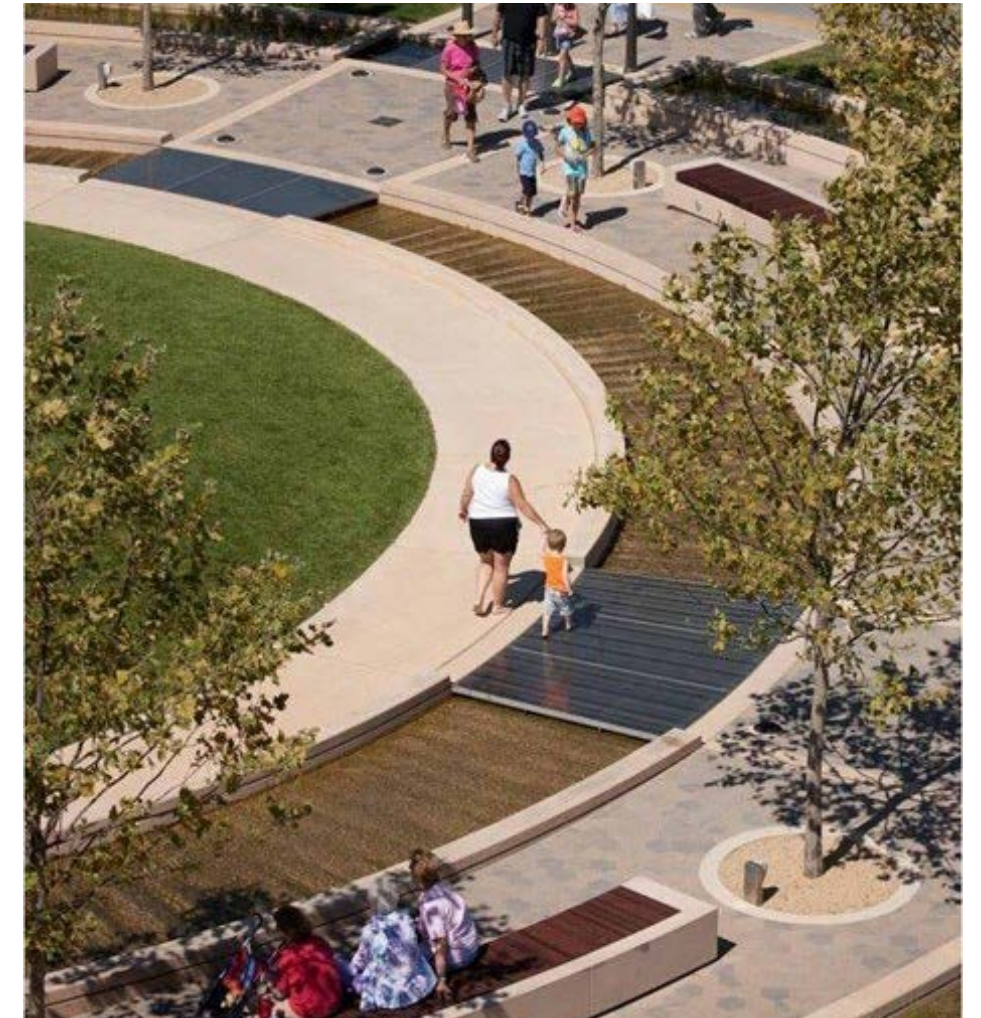
Lillian Austin 19

Normal, IN



Where: Uptown, Normal, IL

Designed by: Hoerr Schaudt Landscape Architects



Benefits:

- Saves the municipality on money spent for watering trees and plantings
- Reduces the pollution from storm water runoff
- Saves money on tree replacement due to a longer tree lifespan due to the new tree well
- Use of plants in the fountain reduces pollution in the water
- Increased the property value of the area



The revitalization of the Uptown area of Normal featured a redesign of the street scape involving new tree planting cells and native plantings and a new water filtering fountain that encourages visitors to dip their toes on warm days.



Ellis, Christopher D., Byoung-Suk Kweon, Sarah Alward, and Robin Burke. "Uptown Normal Circle and Streetscape." Landscape Performance Series. Landscape Architecture Foundation, 2011.



# Case Studies | Canal Park

## Washington, DC

Location: Washington D.C.  
Project Size: 3 acres  
Project type: Open space - Park  
Site Context: Urban  
Former Land Use: Brownfield

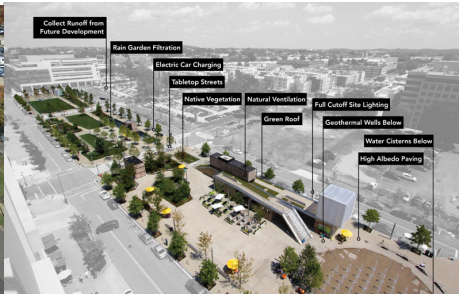
### Overview

Canal Park is a longitudinal park made of three blocks in southeast Washington, D.C., in a growing urban area. The park was founded by a mix of public and private sources. Before it became a park, the place used to be a parking lot for school buses and was also part of the old Washington Canal system. The park's design remembers this canal with a long garden and three buildings that look like floating boats from the canal. The biggest building has a restaurant and rentals for ice skating in the winter. The park was made with modern, eco-friendly ideas in mind, like a green roof on the restaurant that helps with heating and cooling. Rainwater is collected and cleaned by gardens and tree pits, then stored for the park's water features, ice rink, and watering plants. The park also collects rain from nearby buildings.



Old parking lot (before)

<https://www.landscapeperformance.org/case-study-briefs/canal-park>



Canal Park (after)

<https://land-collective.com/projects/washington-canal-park/>



Photo © OLIN / Sahar Coston-Hardy

### Canal Park Sustainable Features

- Shading with vegetation
- Native and adapted vegetation
- Street tabled to slow car movement
- Full Cut-Off Site Lighting
- Stormwater storage tank for irrigation use
- Vehicle battery charging
- Recycled content in precast and super-structure
- Operable windows for natural ventilation
- Green roof for high-performing envelope
- Rain garden for rainwater runoff storage and treatment (first flush)
- Light-colored landscape
- Recycling / compost collection
- Stormwater collected from site runoff / adjacent parcel



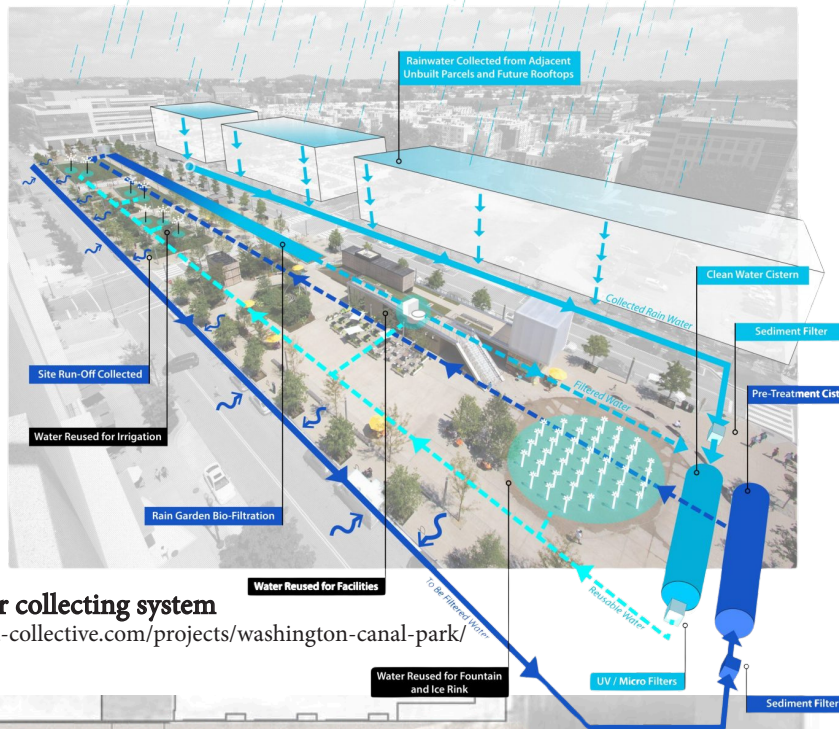
Photo © OLIN / Sahar Coston-Hardy



Photo © OLIN / Sahar Coston-Hardy

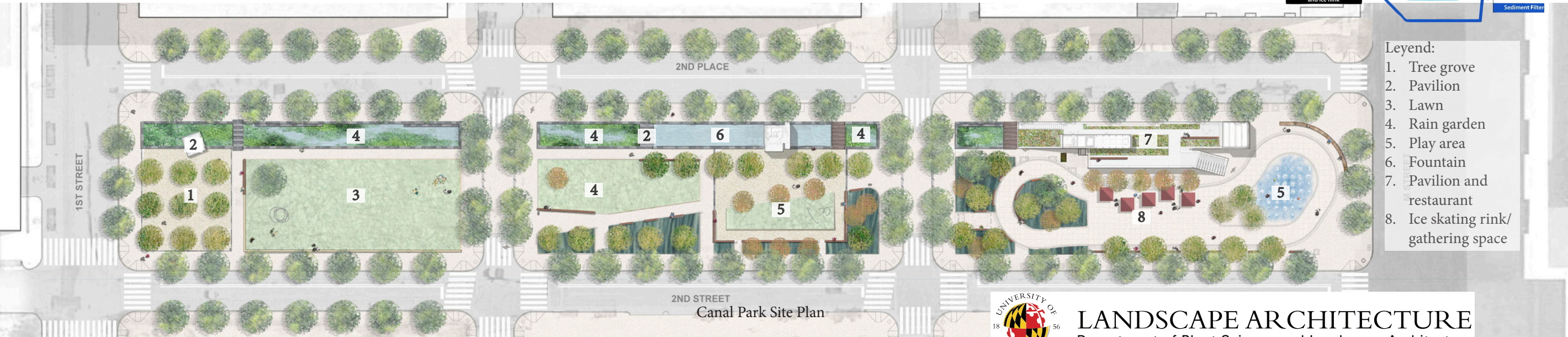
### Project Team

Client: WC Smith  
Landscape Architect: OLIN  
Architect: Studios Architecture  
Environmental Consultant: Environmental Consultants and Contractors, Inc.  
Environmental Design & Lighting Design: Atelier Ten  
Irrigation Design: Lynch & Associates, LTD  
Sculptor/Public Art: David Hess  
Ice Rink & Fountain Design Engineer: Bonestroo



### Rainwater collecting system

<https://land-collective.com/projects/washington-canal-park/>



### Legend:

1. Tree grove
2. Pavilion
3. Lawn
4. Rain garden
5. Play area
6. Fountain
7. Pavilion and restaurant
8. Ice skating rink/gathering space



# Case Studies | Santa Monica Parking Structure

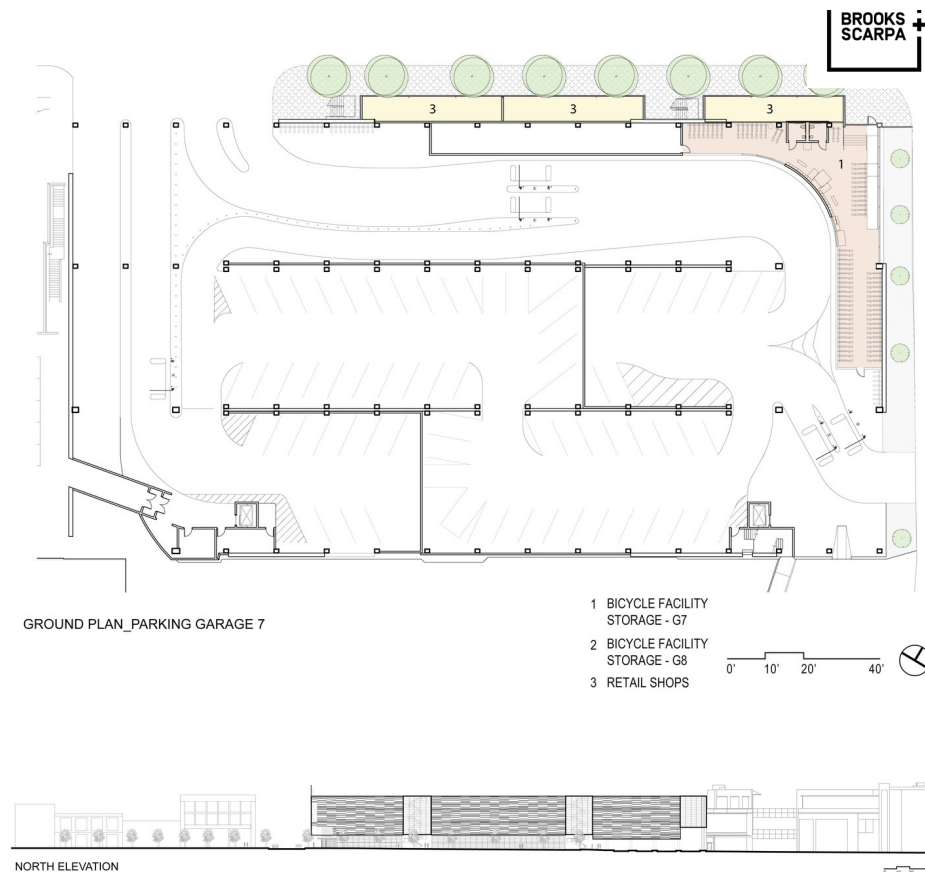
Spencer Craig 21

## Santa Monica, CA

Brooks & Scarpa redesigned garages at Santa Monica Place Mall. This design was inspired by a range of things including the quilt makers of Gee's Bend in Alabama as well as the manufacturers of industrial shipping pallets. The design acknowledges the history of surrounding architecture while promoting a walkable space that fits the foot traffic of the area.

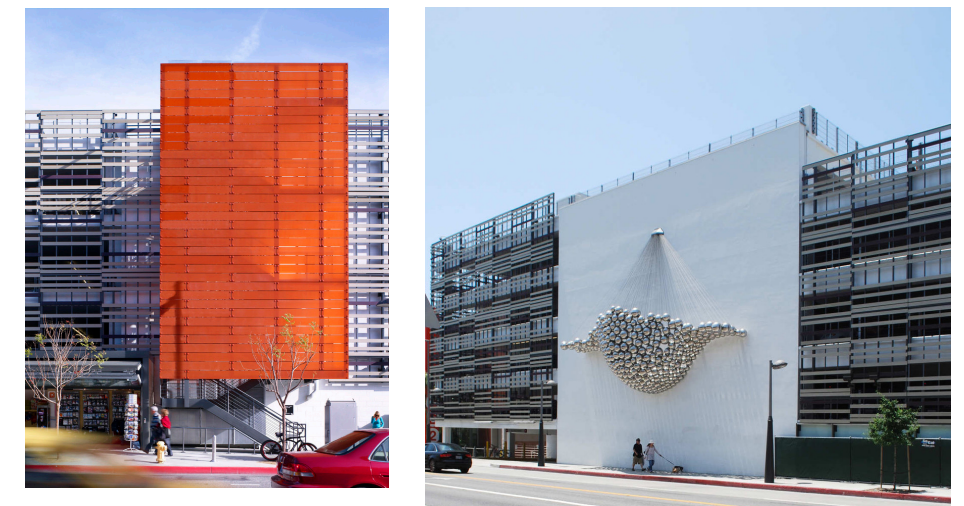
The Main feature of this structure is the repeated panels constructed from cement slats across the facade. This design acts functionally to provide privacy for parkers as well as visual interest that make this more of an integrated structure into the city rather than an isolated structure.

Construction of the parking garage was built with consideration to future installation of over 1000 solar panels. These would provide shade for parked vehicles and provide electric energy for the garage and surrounding buildings.



Clear and visible signage    Offset concrete pallets

The garage preserves the steel mesh signage created by Frank Gehry but redesigned for the aesthetics of the 21st century. Stairs walkways, walls, and colors were optimized to create interest visible from the street.





## Clarendon, VA

**Site Area** 18 acres

**Landscape Architect** Jacobs/Ryan Associates

**Land Uses** Residential, Retail, Entertainment, Office, Park and Open Space, Parking

### About Market Common

Market Common, in Clarendon, VA, is a mixed-use development providing stores and restaurants, office space, housing, public open space, and public parking.

### The Challenge

Clarendon has continually experience growth due to its location in a Metro corridor. This area was a thriving shopping district but was changing as more high-density residential living spaces were built. There was a desire for a "Town Center" and an existing lot that was just being used for surface parking.

### The Solution

The critical breakthrough was the idea of opening an inward-facing retail center to Clarendon Boulevard and placing outward-facing housing on the three sides that are on residential streets—leaving no blank facades and maximizing the street frontage of the commercial center.

### Parking Highlights

- This is a "park once" and shop approach
- A U-shaped drive surrounded by retail and restaurant space.
- A parking structure with 1,368 spaces
- Parallel parking—36 spaces—on the U-drive access gives a neighborhood feel to the stores along the interior street.

### Source

Case Study: The Market Common, Clarendon. (2016, June). Urban Land Institute. <https://casestudies.uli.org/wp-content/uploads/2016/06/The-Market-Common-Clarendon.pdf>



### Goals for Glen Burnie Town Center: Parking Garage Integration

"Explore short and long-term opportunities to make the public parking garage more inviting. In the short-term, provide more signage directing visitors to this resource and consider façade treatments to provide some visual relief from the dark façade.

In the longterm, explore opportunities to incorporate new mixed-use development adjacent to the garage and on the lower level facing Baltimore Annapolis Boulevard, with more windows and uses that engage the pedestrian along the frontage.

Additionally, explore the potential for an additional mid-block crossing of Baltimore Annapolis Boulevard to better align with natural desire lines that connect the garage with the Town Center Plaza." - Glen Burnie Town Center Revitalization Plan



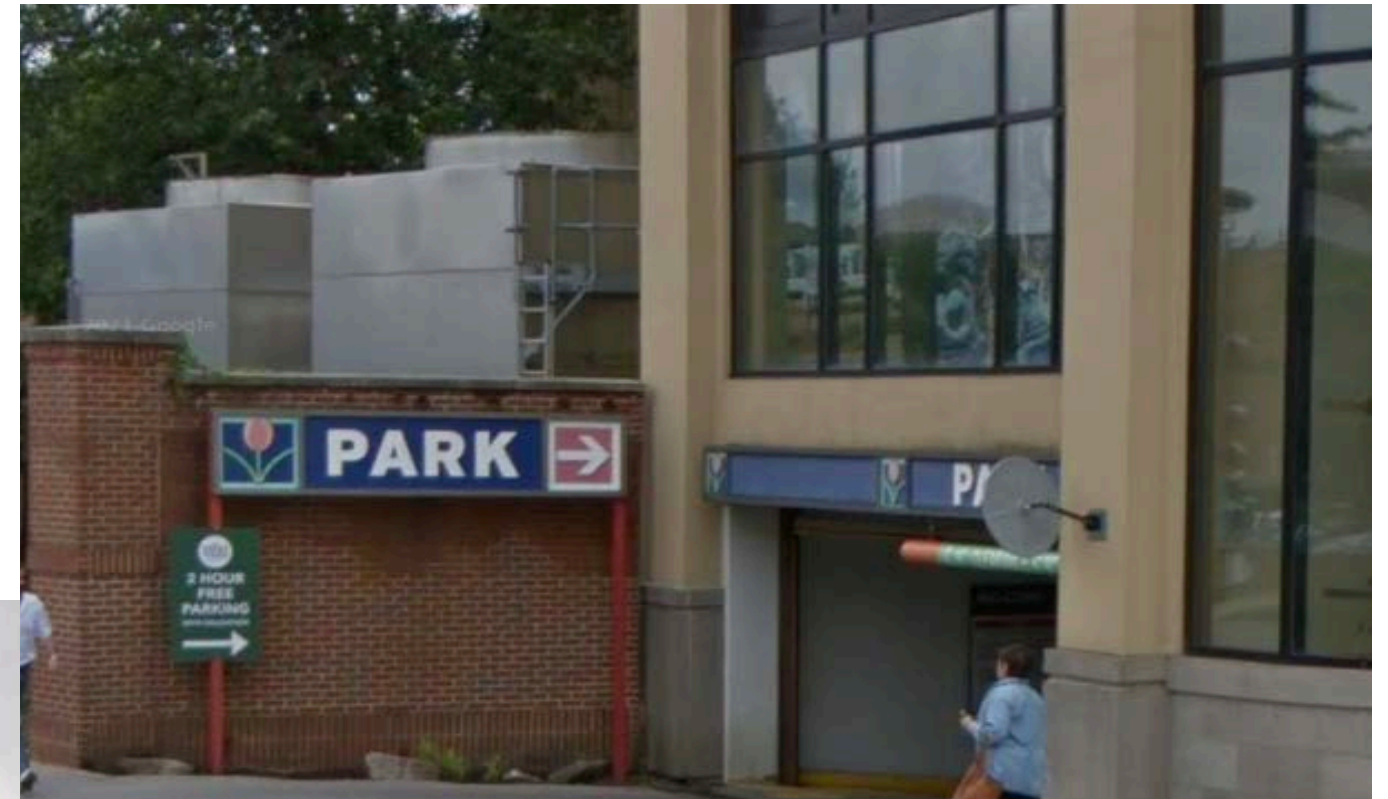
# Case Studies | Market Commons

Caitlin Garlow 23

Clarendon, VA



On street parking helps with traffic calming, and provides areas for tree and street crossing "bump outs"



Big signs with arrows oriented toward oncoming traffic



Large Public Parking sign visible from Street



# Case Studies | Xuhui Runway Park

Felix Hernandez 24

Xuhui, China



The Xuhui Riverfront Area is a mixed used district. The site includes a public street and a series of adjacent linear parks, circulation pathways, and vegetated landscapes recalling the sites past priorities.



The layout of the street, contributes to a compact urban runway that limits the number of vehicular travel lanes yet expands and promotes public transit, micromobility, and pedestrian circulation with multiple adjacent pathways facilitating navigation.

Sasaki's design lands on a previous airstrip runway in Xuhui, China. The original site was a formal industrial zone in the Xuhui Riverfront Area. The Longhua Airport operated for about 80 years was Shanghai's only civilian airport until 1949. The 2,001-yard long and 87 yard wide runway was built of concrete in 1948 and closed in 2011.

Xuhui Runway Park offers space for recreation, respite for visitors to enjoy the promenade and vistas away from the high-density redevelopment areas. The park serves as a model for the city's future focusing on uplifting the environmentally, socially, and economically sustainable lifestyle.



The program also integrates an abundance of wildlife with 100% of plant species native to the Yangtze River Delta, which includes both aquatic and terran typologies.

Citation: "Xuhui Runway Park." Sasaki, [www.sasaki.com/projects/xuhui-runway-park/](http://www.sasaki.com/projects/xuhui-runway-park/). Accessed 12 Mar. 2024.



# Case Studies | Argyle Shared Street

Erin Kremer

25

## Chicago, IL

LOCATION: Chicago, Illinois

DESIGNER: Site Design Group

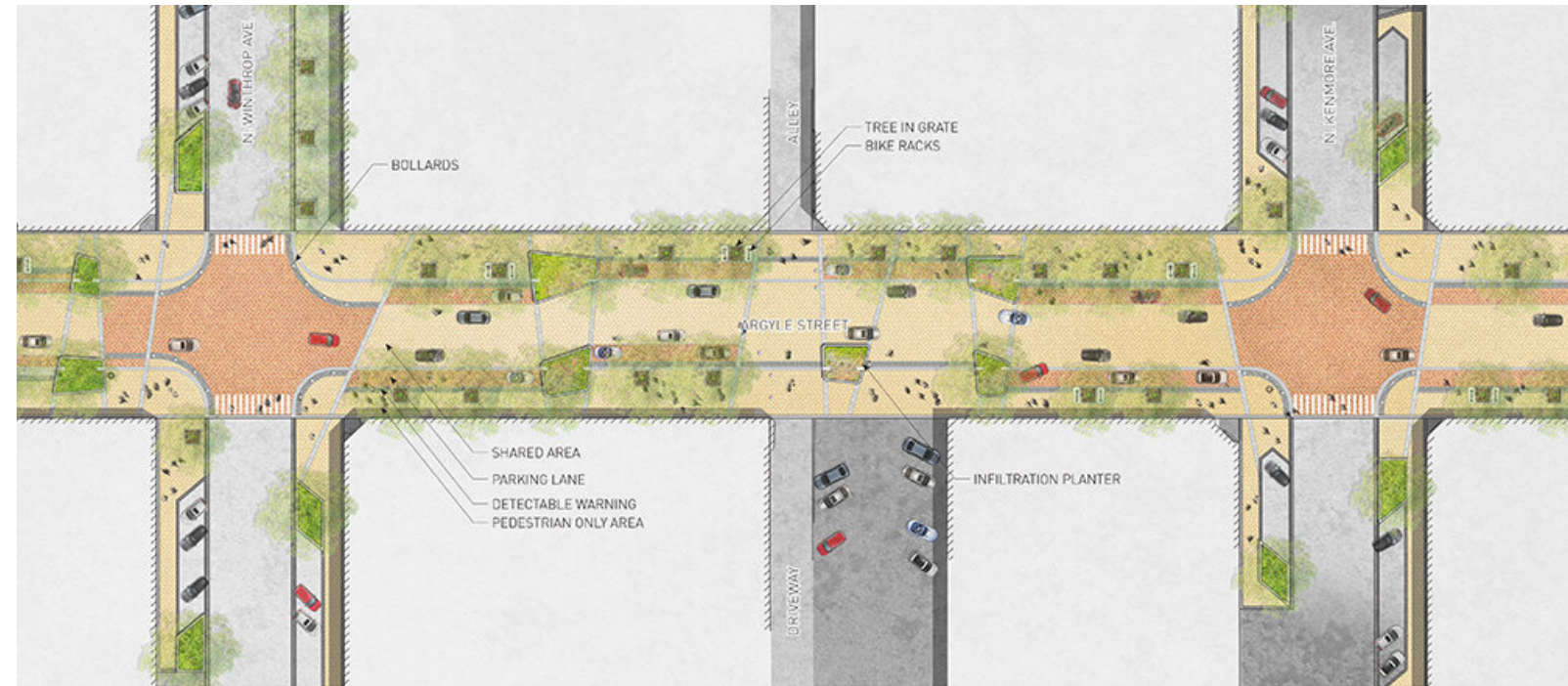
GOAL: The Argyle Shared Street was created to make a streetscape that was inviting and allowed for a plaza-like space while prioritizing pedestrians.



Before

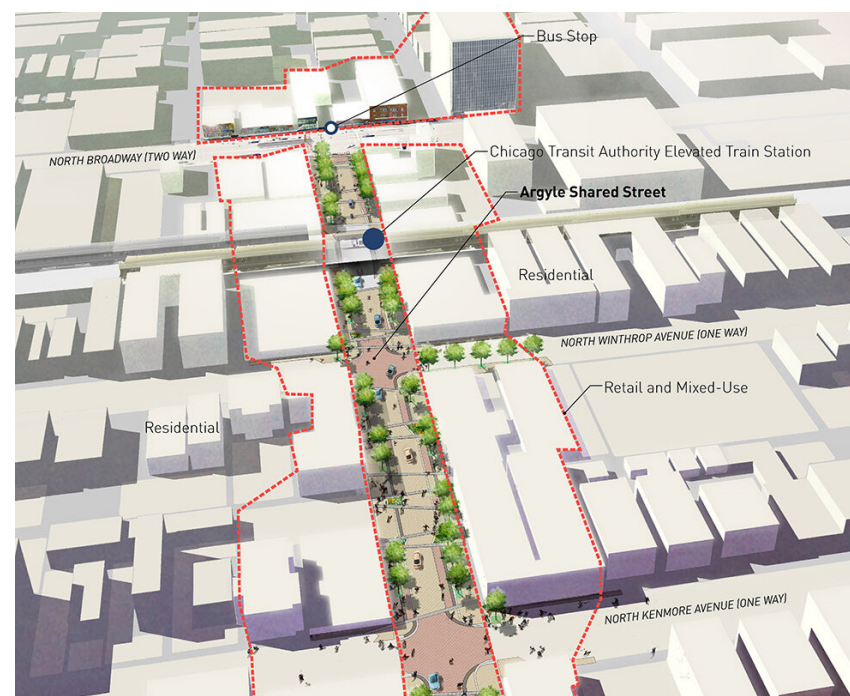


After



1 ARGYLE STREETSCAPE PLAN  
NOT TO SCALE

Plan



Perspective

### SUSTAINABLE FEATURES:

- "The sidewalks are composed of permeable pavers that drain stormwater beneath the subgrade, while the street space drains to the planter beds that serve as infiltration beds. Businesses often add their own plants to the planter beds."
- "The infiltration planters feature 700 native plants representing 10 different species"

### COMMUNITY FEATURES:

- "Street furnishings, signage, and 20 bike racks along the street serve as community identifiers of Argyle Street and Upton. They were designed with a similar color pattern and palette as the previously existing "Asia on Argyle" sign, recognizing the heritage of the neighborhood, which is often referred to as "Little Vietnam."



# Case Studies | Gold 1 Garage

Kelly Rasmussen 26

## Pittsburgh, PA

Architect: WTW Architects  
5.6 acres

The Gold 1 garage in Pittsburgh, PA is the first Parksmart Gold certified parking garage. Owned and operated by the Stadium Authority of the City of Pittsburgh, this heavily used parking garage is located between PNC park, the Heritage Trail System, and Heinz Field. Completed in 2017, the convenient location of the garage allows for six stories with 1,000 parking spaces, a bus stop, hospital shuttle, bike share kiosks, ride share pickup points, 100 bike parking spaces, and 10 electric vehicle charging stations.

Location: Heavily urbanized sports park in Pittsburgh out of the city center on the Ohio River next to a major highway.

Green Features: Rain gardens, bio-swales, and pervious pavers were used for stormwater management. Sensor controlled lighting that dims according to the amount of sunlight and conserves energy with movement detection.

Figure1: <https://parksmart.gbci.org/gold-1-garage>



Figure 2: Google Earth

Signage: Large "PARK" sign on all sides of the building that can be seen day and night. Colors assigned to each floor in the form of wall and light colors to brighten and direct.

Nature: Native and drought tolerant plants and vines are incorporated around the facility and on live walls to reduce noise, provide shading and cooling, and visually enhance the facade.

Inclusive Transportation: Separate bike and pedestrian paths from vehicles. Bike parking area has a air pump station. Indoor and covered bus stop, Uber/Lyft pickup points, and carpool parking.

Visual Element: Aluminum fins screen light and direct airflow through the parking garage.

Figure 3: <https://www.mckimcreed.com/portfolio-page/gold-1-parking-garage/>



Figure 4: <https://www.clisaelectric.com/project/stadium-authority-gold-lot-1>

Figure 5: <https://www.post-pazette.com/buisness/development/2018/12/25/Heinz-Field-parking-garage-green-GBCI.stadium-authority-water-lights-bike/stories/201812240001>





# Case Studies | Wayne Ferguson Plaza

Laura Sweeney 27

## Lewisville, TX

LOCATION: Lewisville, Texas

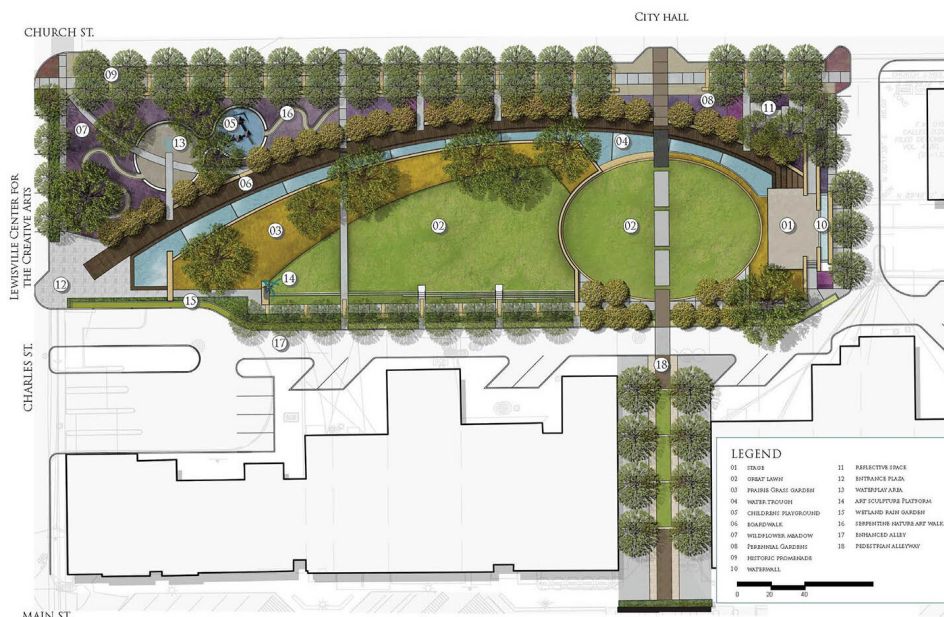
DESIGNER: Design Workshop

CLIENT: City of Lewisville

DESCRIPTION: Wayne Ferguson Plaza is located in historic downtown Lewisville, Texas. It serves as a central gathering place and provides open outdoor space for the community. There are a variety of spaces that cater to people of all ages, and the flexible space is great for events. The location of the plaza was formerly a parking lot and it now provides green space, lawns, and shade trees. There is also stormwater management in the form of rain gardens which utilize native grasses and wildflowers. The project connects areas of the downtown including Main Street commerce, City Hall, and the Lewisville Center for the Creative Arts. It now acts as one cohesive green space with its own streetscape.

SIZE: 1.5 acres

SITE PLAN:



Citation: Ozdil, Taner R., Riza Pradhan, Ali Khoshkar, and Ravija Munshi. "Wayne Ferguson Plaza." Landscape Performance Series. Landscape Architecture Foundation, 2017. <https://doi.org/10.31353/cs1270>



### SOCIAL BENEFITS:

- Improves perception of downtown Lewisville
- Creates a sense of identity
- Hosts popular events
- Promotes a safe and secure environment
- Improves quality of life
  - Provides a place for community
  - Provides a place to be outdoors
  - Provides a place to reduce mental stress.

- Encourages multigenerational interaction
- Promotes healthy living

### ENVIRONMENTAL BENEFITS:

- 113 newly-planted trees and rain gardens
  - Sequesters atmospheric carbon
  - Intercept stormwater runoff
  - Reduces the peak stormwater flow rate
  - Provides summertime shade

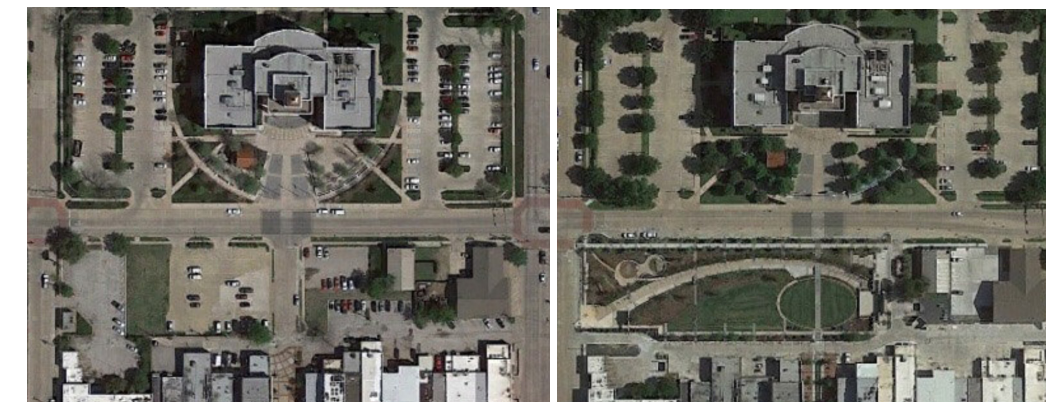
### ECONOMIC BENEFITS:

Contributed to an increase in the total assessed value of adjacent parcels on its block

CHALLENGE: A new commuter rail service coming to the east side of Lewisville made it necessary to revitalize the downtown. They already had a new City Hall, streetscape improvements on Main Street, and a new Center for the Creative Arts, but still needed an appealing all-season space to host community events and attract tourists. Transforming the parking lot site across the street from City Hall into a green gathering space was the solution. The year-round park accommodates all previously-existing seasonal events but consolidates them in the new community space and provides connection between downtown destinations.

### HIGHLIGHTS:

- A series of linear rain gardens provide stormwater management and visual beauty
- Wetland and rain gardens are planted with aquatic plants and native species of trees, shrubs, perennials, groundcovers, water plants, and bulbs recommended by the Lady Bird Johnson Wildflower Center
- Crushed gravel permeable pavement is used extensively
- Permanent seating areas are located under tree shade
- 75% of the materials used come from within 500 miles
- Used durable materials with minimum 30-year life, increasing longevity while minimizing costs
- LED fixtures for well-lit, safe space for nighttime activities
- Main Street businesses benefit from the plaza due to increased pedestrian traffic.





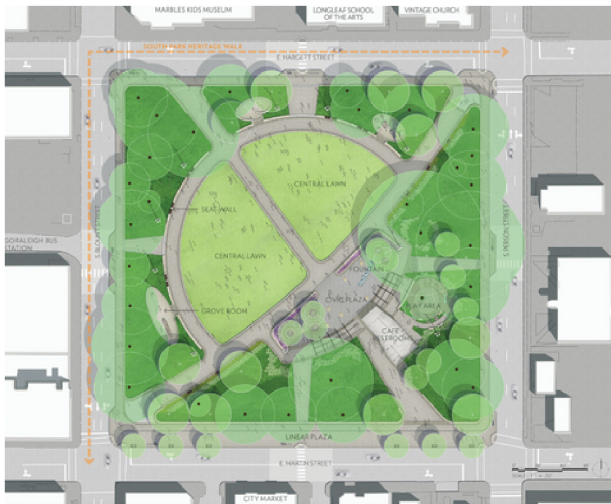
Carmel, IN

## Moore Square

Moore Square is a fantastic example of less is more. Pathway design is spare with generous width. The open lawn area is perfect for stargazing or relaxing with a book. The central commons boasts a cafe and fountain. This prominent area gives visitors a sense of place and assists in wayfinding.



Simple Circulation



Site Map



Central Commons, Cafe

## Monon Plaza, Indiana

At the heart of the Uptown Redevelopment Plan is a new roundabout and “town green” that incorporates stormwater management and public recreation into a vibrant gathering space. Runoff from two streets is captured, stored, and recycled through a water feature that makes stormwater management a visible public amenity. The roundabout further contributes to human health and safety by reducing traffic accidents. The streetscape features tree wells with uncompacted soils that add to stormwater storage and prolong tree life, increasing carbon sequestration. The circle and streetscape are a functional statement of the community’s commitment to sustainable urban redevelopment.



Multimodal Transport



Creative Furnishings



Green Infrastructure



Recreation Landscaping



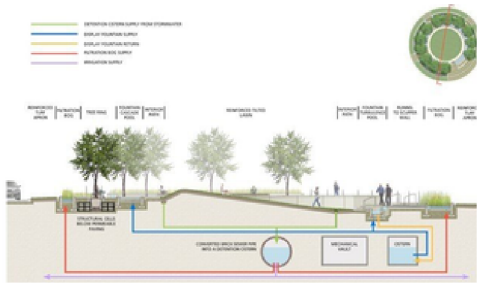
## Uptown Normal Circle and Streetscape



Silva Cell Installation



Silva Cell Installation



Subsurface Stormwater Features



## Glen Burnie Town Center

Teams presented initial designs, received feedback, and then incorporated those comments from the Glen Burnie team. Final presentation boards were prepared by each group.

### Sustainable Station

Lillian Austin  
Isabel Cedeno  
Kelly Rasmussen



### Spirit of Glen Burnie

Spencer Craig  
Felix Hernandez  
Evan Whalen

### A Hub for Climate & Community

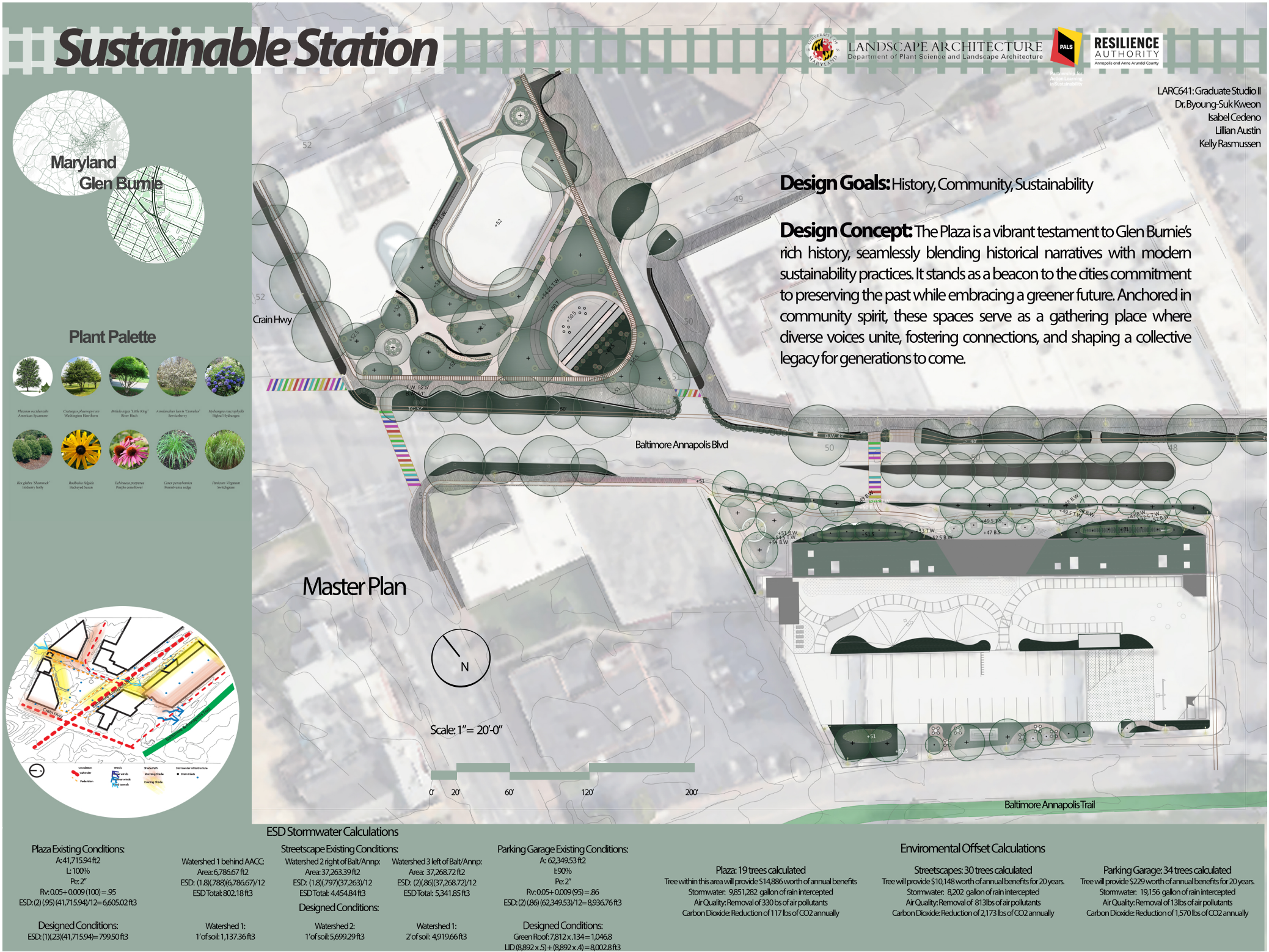
Caitlin Garlow  
Erin Kremer  
Laura Sweeney



Mid-point and final presentations, April/May 2024  
Photos by Catherine Madsen



Glen Burnie Town Center





Glen Burnie Town Center



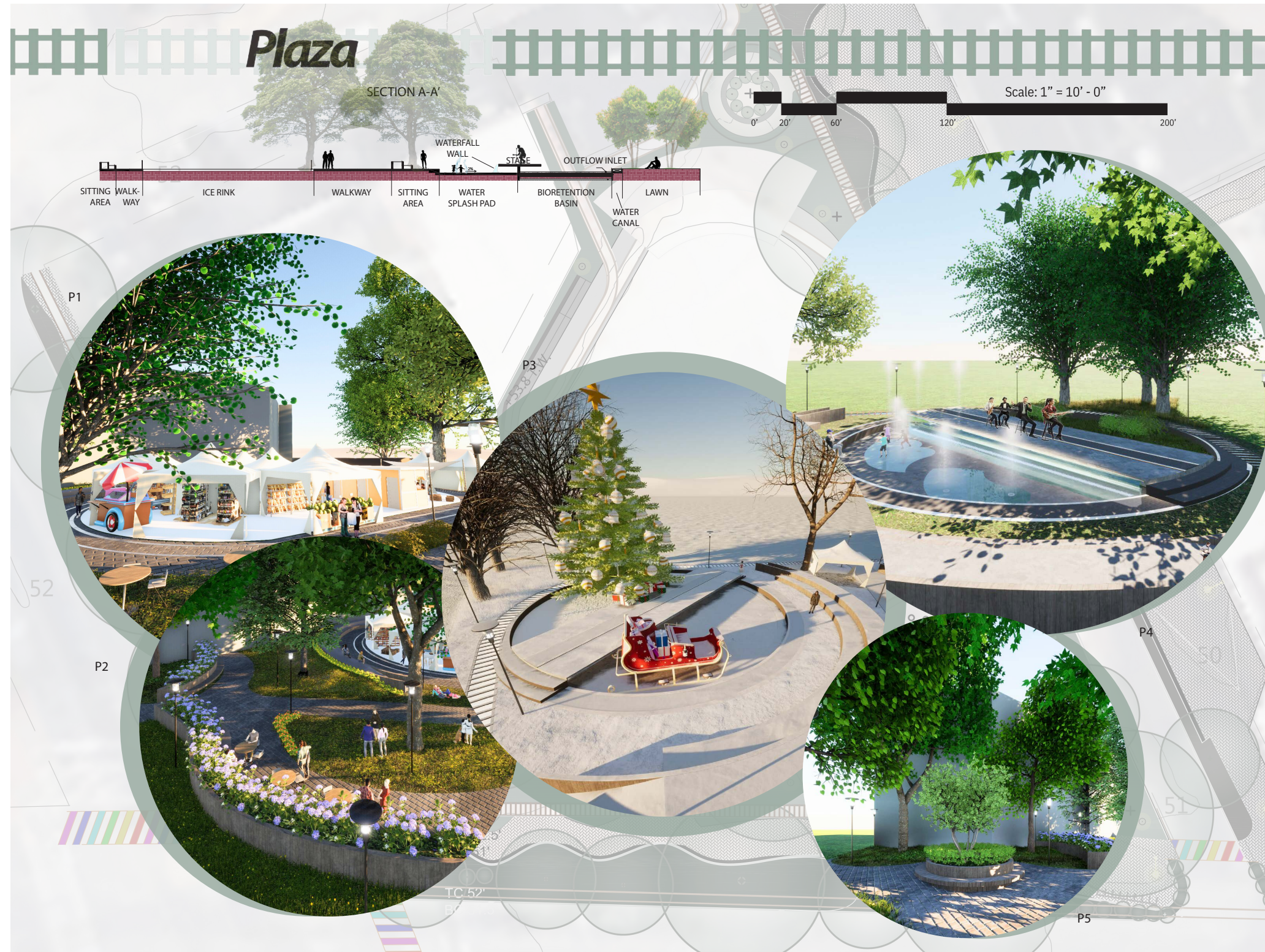


# Sustainable Station | Board 3 of 6

Lillian Austin, Isabel Cedeno, Kelly Rasmussen

32

Glen Burnie Town Center





Glen Burnie Town Center

# Streetscape

## Design Goals

The design goals of the streetscape prioritize pedestrian safety, community, and environmental benefits.

Pedestrian safety is ensured through well-defined crosswalks, separation of pedestrian and vehicular circulation, and ample lighting to improve visibility.

Community is fostered by creating inviting public spaces with seating areas, greenery, and signage that invites pedestrians to stop and enjoy their surroundings.

Environmental benefits are achieved by integrating sustainable materials, bioretention for stormwater management, and tree-lined streets that provide shade and improve air quality.

## Plant Palette



*Platanus occidentalis*  
American Sycamore



*Crataegus phaeopyrum*  
Washington Hawthorn



*Panicum Virgatum*  
Switchgrass



*Amelanchier laevis 'Candida'*  
Serviceberry



*Ilex glabra 'Shamrock'*  
Inkberry Holly



*Rudbeckia hirta*  
Black-eyed Susan



*Echinacea purpurea*  
Purple coneflower



*Carex pennsylvanica*  
Pennsylvanian sedge

## Crossing in the Shade

Crossing the street will be more comfortable with large canopy trees, vegetation, and increased signage.



## Stay a While

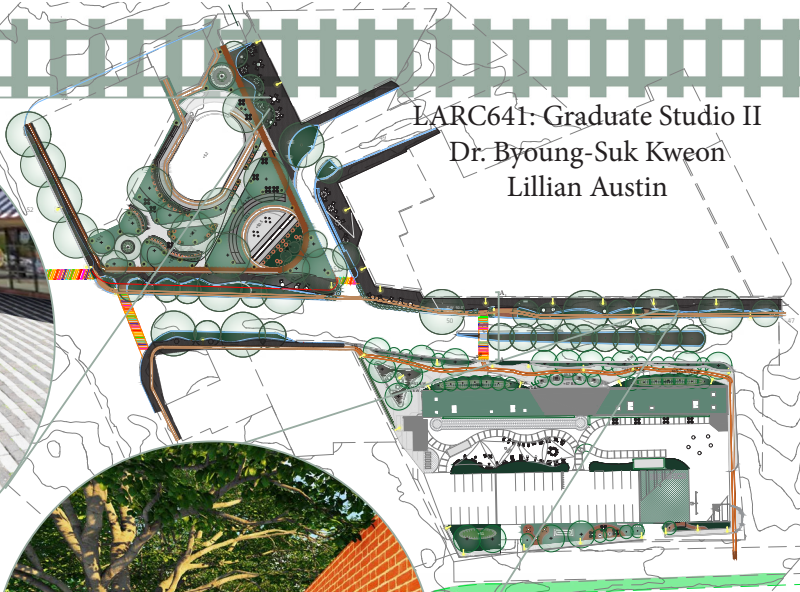
Adding tables and chairs nestled amongst new planting beds invites visitors to stay longer. Families will enjoy bringing their children to have a meal out of the house before enjoying the redesigned plaza or stopping in the many local stores.



## Light up the Night

Matching signage creates a unified district. Adding lighting to the signs ensures visibility for shopping after dark or walking back to parking after events.





LARC641: Graduate Studio II  
Dr. Byoung-Suk Kweon  
Lillian Austin



LUMION

RESILIENCE  
AUTHORITY  
Annapolis and Anne Arundel County

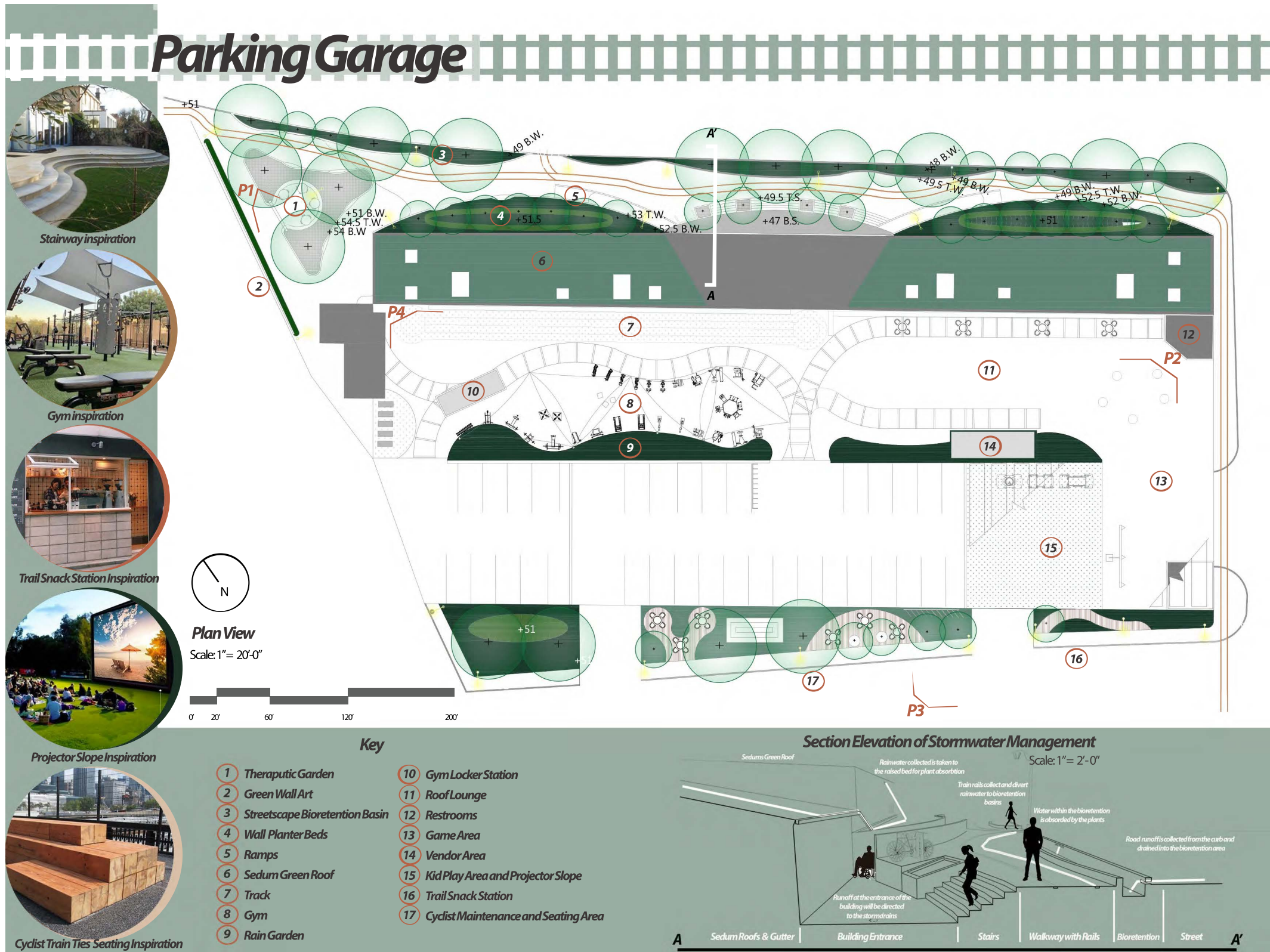
PALS  
Partnership for  
Action Learning  
in Sustainability

UNIVERSITY OF  
MARYLAND

Landscape Architecture  
DEPARTMENT OF PLANT SCIENCE AND LANDSCAPE ARCHITECTURE



## Glen Burnie Town Center



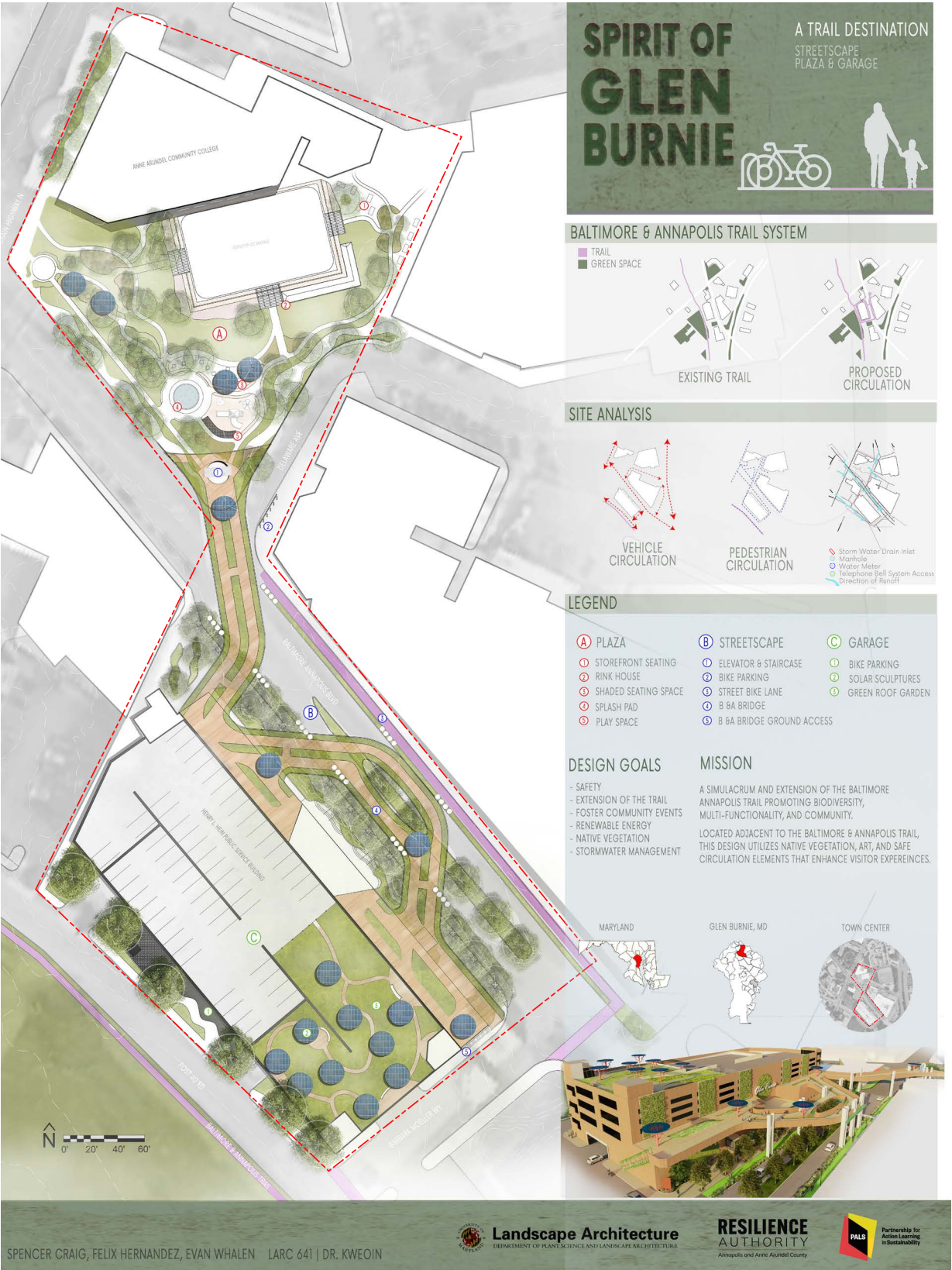


Glen Burnie Town Center





Glen Burnie Town Center





## Glen Burnie Town Center





## Glen Burnie Town Center





Glen Burnie Town Center





## Glen Burnie Town Center

Benefits:  
Environmental: B & A Bridge and Biking' Streetsway changes near 100% Impervious Surface (IS) to 66% IS. ESD Calculations for new Site Design are 12,310 ft<sup>3</sup>. With the Ground and Bridge vegetation we sequester a total of 25,696 ft<sup>3</sup> of rain water.

**SPRIT OF  
GLEN BURNIE**  
  
A TRAIL DESTINATION



Glen on the Bridge Seating Area

Social: With more areas to relax and enjoy the scenery, Glen Burnie becomes a the hub that puts you on the trail, invites you to take a break from it, or is the destination for the visitor.

Economic: With more pedestrian and micro-mobility circulation amenities local businesses get a boon in foot traffic. The slower vehicular traffic also means that folks will consider a last minute stop for longer.

North Bound Section & Elevation AA'



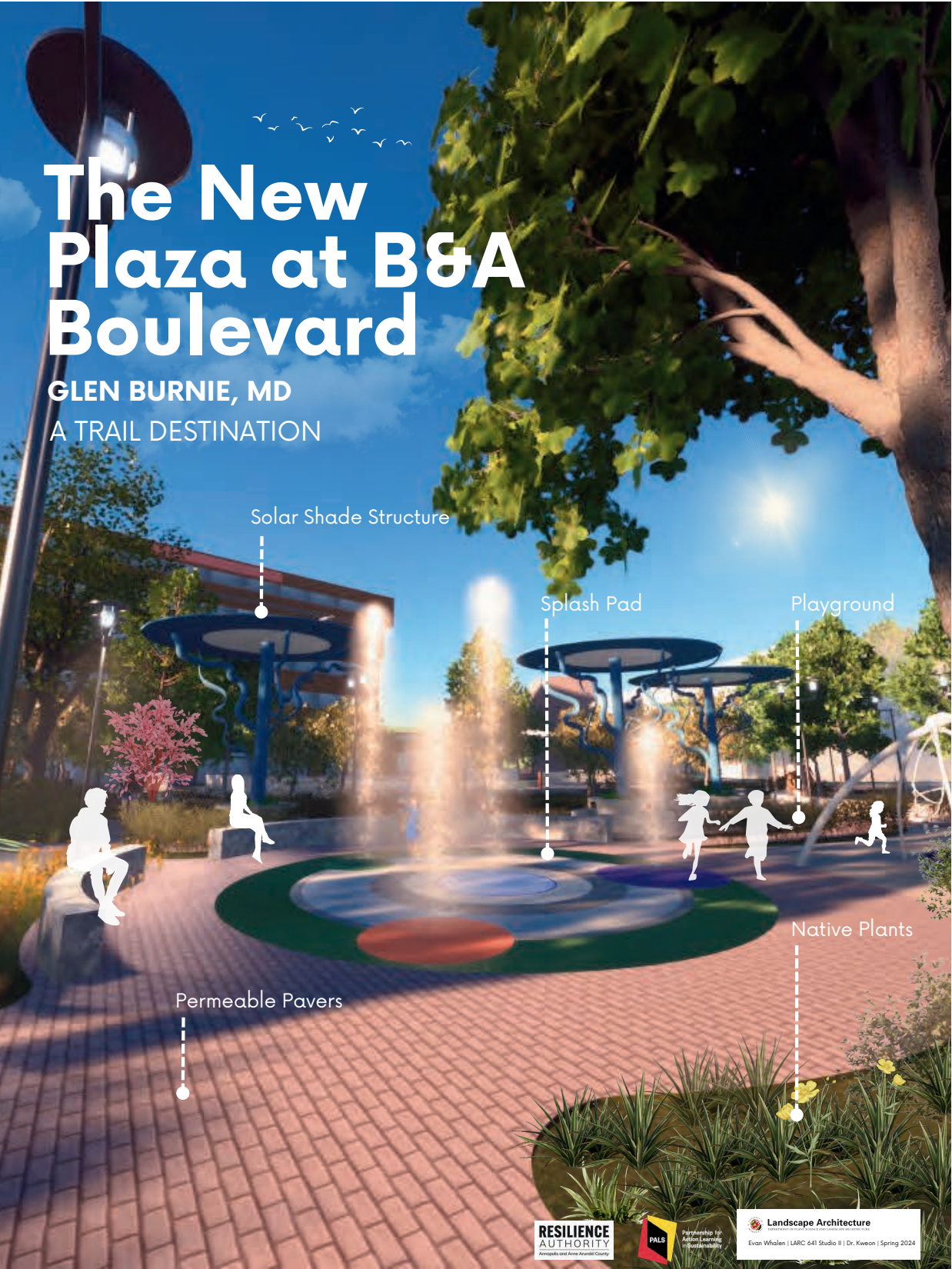
Elevator and Staircase to Bridge



Green Hallways



Glen Burnie Town Center





## Glen Burnie Town Center





The New Plaza at B&A Boulevard

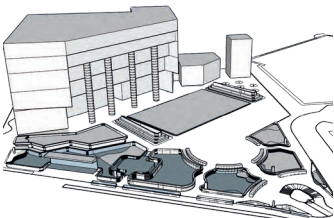
VISION

The plaza is a welcoming space that activates and engages visitors with new amenities. Here you'll find a new splash pad and play area for children, as well as an exercise area for those needing a rest from the office. Students can gather and relax and recharge under new sculptural planters as well. It must also provide eye-level interest to enhance wayfinding for the adjoining parking garage. This is a crucial step in revivifying the Glen Burnie Town Center.

DESIGN GOALS

- Re-program circulation
- Safety
- Encourage wellness and activity
- Enhance existing ice rink
- Capture stormwater
- Plant native plants
- Provide adequate signage for parking garage wayfinding

FIRST ITERATIONS

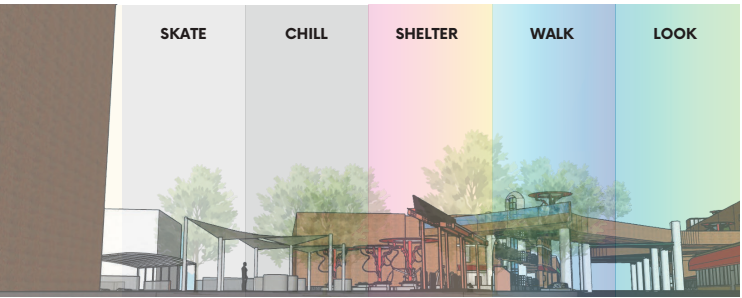


SECTION VIEW A-A'



**RAIN GARDENS**  
An ephemeral pond is planted with semi-aquatic plants into a bio-retentive soil mix. Beneath that layer is aggregate and large stones with a perforated stormwater pipe. This helps to slow runoff and remediate contaminated water.

SECTION VIEW B-B'



SCALE: 1"=10' 0 5 10 20'

INSPIRATION IMAGES





## Glen Burnie Town Center

### WALKABLE AT NIGHT

#### Creative Lighting Plan

Proper positioning of light fixtures can enhance the user experience in a variety of ways. Pedestrians feel safer as they move through the space at night. Creative lighting is attenuated to create an ambient and glowy effect, while adequately illuminating the nightscape.

Walkabout Perspective

Nightscape in Plan View

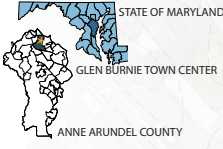
Girl Reading Under Ambient Light



Glen Burnie Town Center

A HUB FOR CLIMATE & COMMUNITY

**SITE CONTEXT**



**DESIGN GOALS**

**A VISION FOR GLEN BURNIE TOWN CENTER'S FUTURE**

- PREPARE FOR & ADDRESS CLIMATE CHANGE by mitigating urban heat island and reducing air and water pollution
- CREATE NEW AMENITY SPACES that can be accessed and enjoyed by all members of the community
- MAKE THE TOWN CENTER A DESTINATION with more walkable, sittable, green spaces that encourage connection, commerce and good health

**SITE ANALYSIS**

**CLIMATE: WIND & SUN**  
The site receives full sun nearly all day long. Winds approach from south and



**HYDROLOGY**  
Water flows from the NE to the SW of the site, with most absorbed by storm drains on Baltimore-Annapolis Blvd.



**SITE CIRCULATION**  
There are 4 points of pedestrian entry/exit to the Town Center plaza. There is significant vehicular traffic along Baltimore-Annapolis Blvd and Crain Hwy.



**ESD CALCULATION**

**76% OF 2" RAIN CAPTURED**

In a 2" rain there is 28,000 ft³ of runoff from the current site. With our proposed design, this drops to 18,100 ft³.

Parking Lot Solutions | 3"6" and 12" Green Roof Zones  
Proposed Design Captures | 2,536 ft³ (32%) of Stormwater

Streetscape Solutions | Bioretention, Trees, Planting Beds  
Proposed Design Captures | 8,512 ft³ (102%) of Stormwater

Plaza Solutions | Bioretention, Trees, Planting Beds, Lawn  
Proposed Design Captures | 2,708 ft³ (86%) of Stormwater

**LANDSCAPE BENEFITS**

18% | Reduction in impermeable space

39 | New native trees planted

3,555 lbs | Pounds of carbon captured by trees

14,644 | Sq feet of bioretention gardens

12,000 | Pounds of particulate matter removed from air by the green roof

140,000 | kWh produced by solar panel array in one year

**MASTER PLAN**



**LEGEND**

1. ICE SKATING RINK
2. PAVILION
3. INTERACTIVE WATER FEATURE
4. BIORETENTION
5. LAWN & NATURAL PLAY AREA
6. SEATING AREA
7. WAYFINDING SIGN
8. NATURALISTIC SIDEWALK
9. UPDATED ENTRYWAY
10. GREEN ROOF ZONES
11. SOLAR CANOPIES
12. WIND TURBINES

**RENEWABLE ENERGY WIND & SOLAR POWER**



**SEATING AREA MOVEABLE TABLES & CHAIRS**



**WATER FEATURE INTERACTIVE FOUNTAIN**



**EDUCATIONAL SIGNAGE WELCOME & INFORM**



**NATURALISTIC STREETSCAPE ROADSIDE BIORETENTION**



**GREEN ROOF EXTENSIVE & INTENSIVE ZONES**



SCALE: 1" = 20'-0"

PRESENTATION BY: ERIN KREMER, CAITLIN GARLOW & LAURA SWEENEY  
PROFESSOR: BYOUNG-SUK KWON  
COURSE: LARC 641 - STUDIO II

**RESILIENCE AUTHORITY**  
Annapolis and Anne Arundel County

**Landscape Architecture**  
DEPARTMENT OF PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

RESILIENCE AUTHORITY  
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Glen Burnie Town Center





## Glen Burnie Town Center

CLIMATE RESILIENT PARK & PLAZA

P3: NORTHEAST PLAZA ENTRANCE

View of entrance from Food Lion parking lot showing green roof bike shelter, moveable tables and chairs, outside of restaurants, shade trellises, planting bed, and bioretention

ADDITIONAL RECOMMENDATIONS

- Utilize ice skating rink in warmer months for long term programming such as pop-up beer garden, urban farming, or more seating with shade
- Consider converting adjacent parking lot (Delaware Ave.) to be part of the plaza with additional shade trees, bioretention and seating
- Organize a volunteer gardening club to maintain planting beds to increase community engagement and sense of ownership

DESIGN PROCESS: FUNCTIONAL DIAGRAM

Existing

Proposed

Planting

Landmark

Water

SECTION A-A1

SCALE: 1" = 8'-0"

Planting Bed with Bench

Interactive Fountain

Moveable Tables and Chairs

Natural Play Space and Low-Maintenance Clover Lawn

Shade and Event Pavilion and Patio

NATIVE PLANTS FOR BIORETENTION

*Platanus occidentalis*

American Sycamore

*Nyssa sylvatica*

Black Tupelo

*Cephalanthus occidentalis*

Buttonbush

*Ilex glabra*

Inkberry Holly

*Lobelia cardinalis*

Cardinal Flower

*Iris versicolor*

Northern Blue Flag

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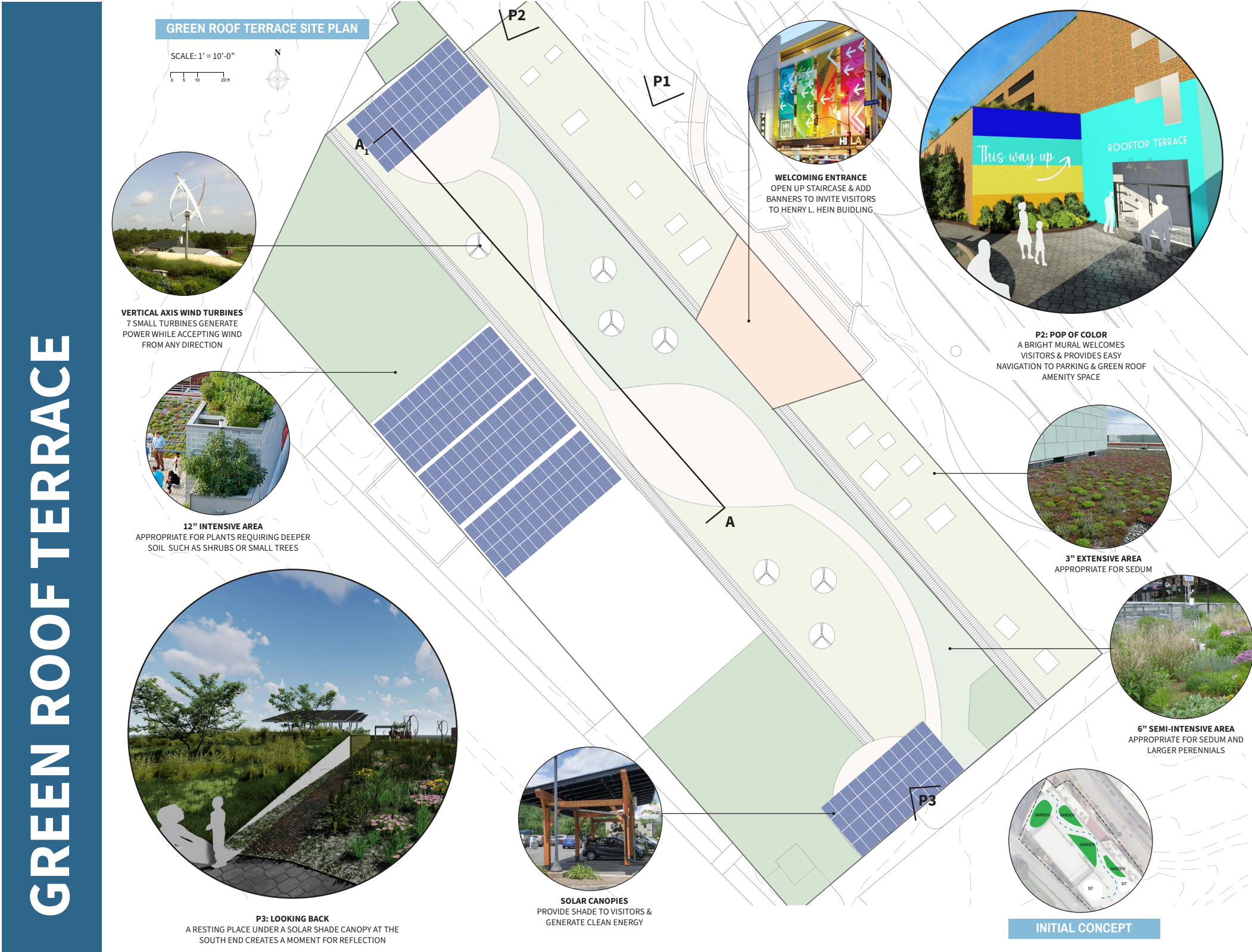
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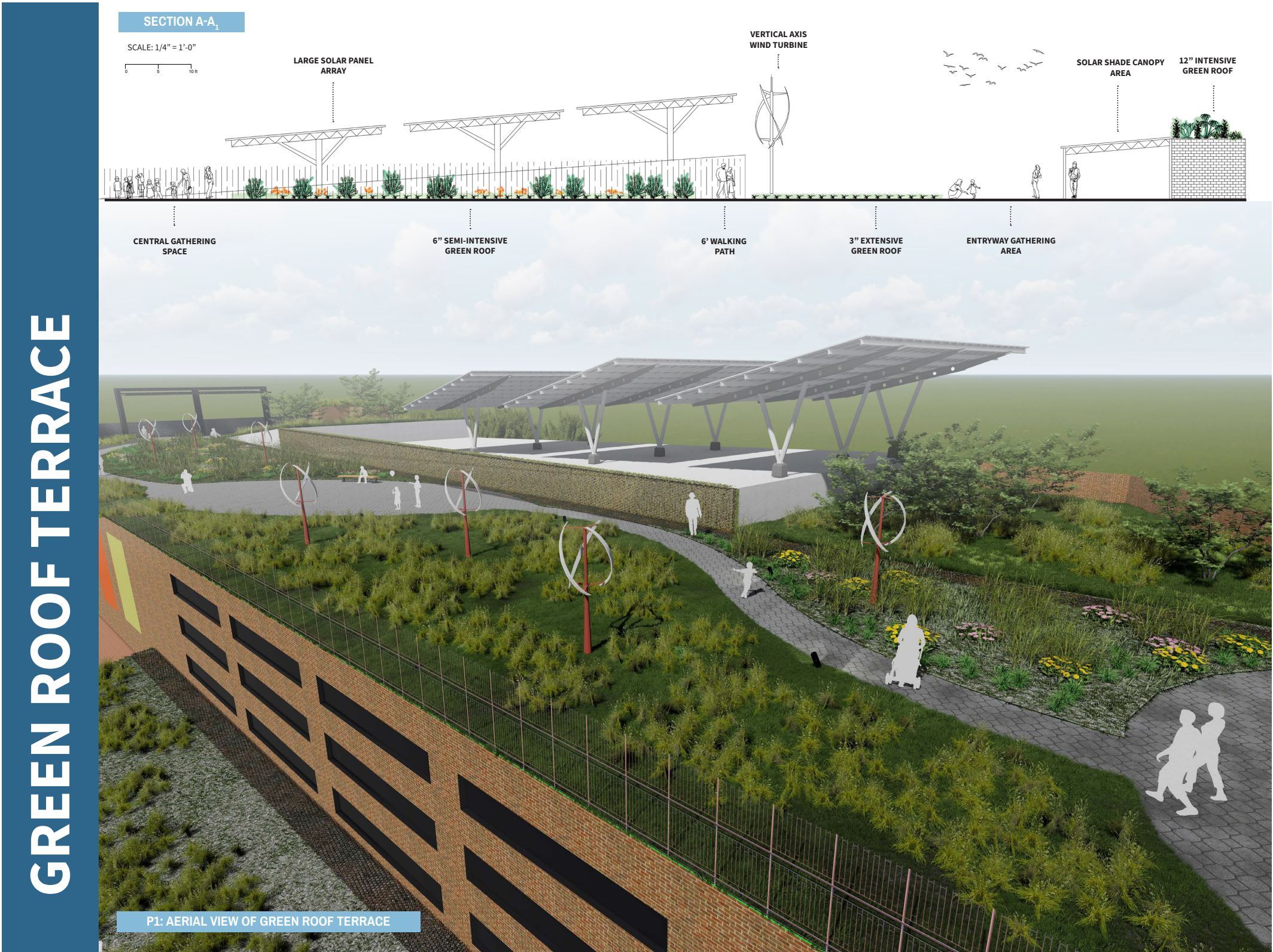


## Glen Burnie Town Center





Glen Burnie Town Center





Glen Burnie Town Center

SUSTAINABLE STREETSCAPE



P2. PLAZA CROSSING



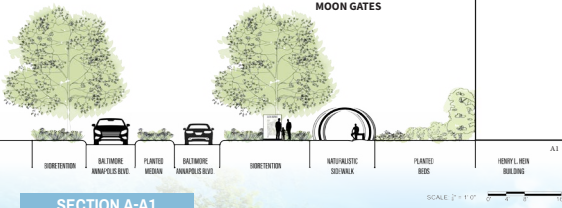
STORMWATER SOLUTIONS  
PLANTED BIORETENTION



WAVEINDING SIGNAGE  
MAP OF TOWN CENTER



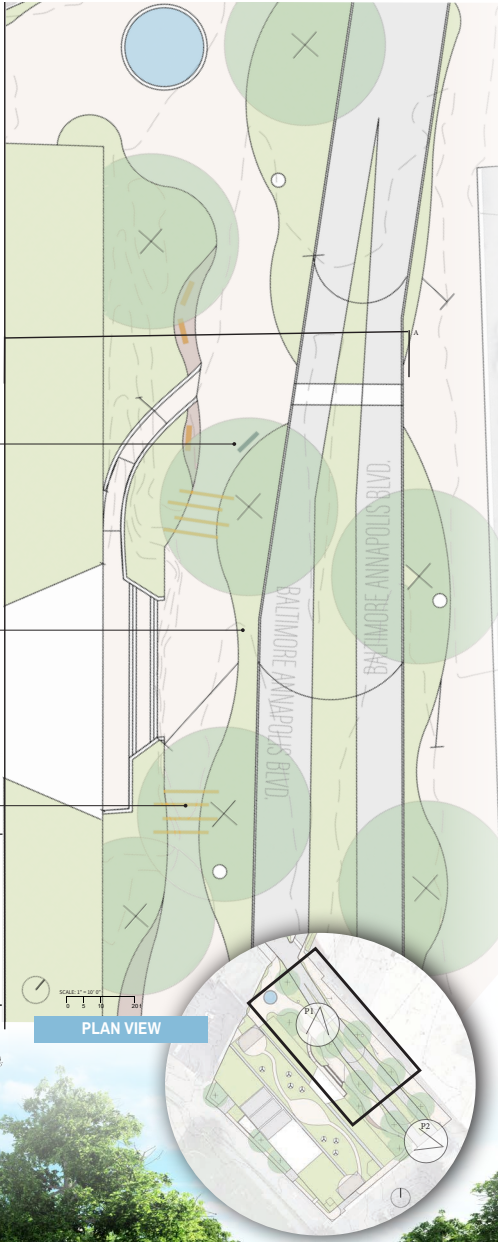
ART INSTALLATIONS  
MOON GATES



SECTION A-A1



P1. TRAIL WALK



PLAN VIEW

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