



# Design of a Lakeland, College Park Pollinator Park/Gazebo

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## Project Scope

The Lakeland Pollinator Gazebo Project proposes a memorial space in the historic Lakeland neighborhood of College Park, Maryland, reflecting the community's history and future. A 6,036 square foot lot on Pierce Avenue, once used for vehicle restoration, will be transformed into a pollinator pocket park with a gazebo. The space will serve as a **community gathering area** and **memorialize the impacts of 1970s Urban Renewal** while honoring Lakeland residents.

## Community Involvement



UPES Visit

We partnered with **University Park Elementary School (UPES)** and the **Center for Young Children (CYC)** to engage local students in the design process. Students created drawings inspired by nature and the Lakeland community, which were then transformed into tiles for the garden. These tiles incorporate **youth perspectives** into the space and help create a lasting, **community-centered design**.

## Prototype & Design Development

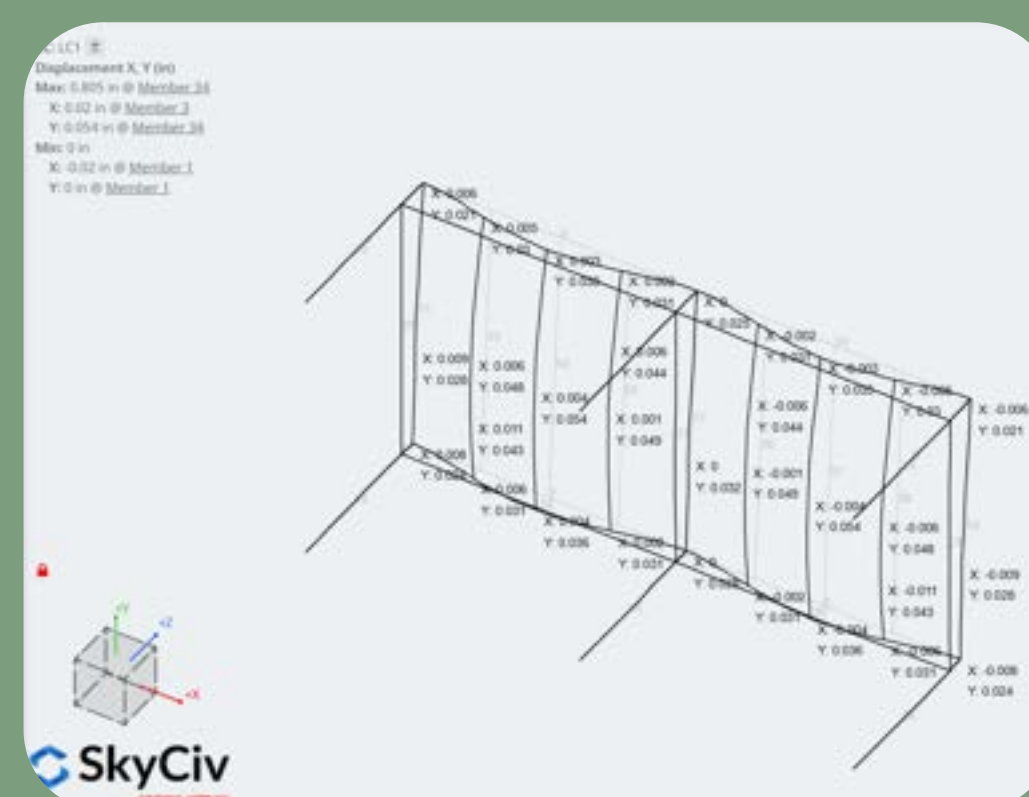
Evaluation Matrix

Category	Weight	Steel Design	Timber Design	Steel Weighted	Timber Weighted
Accessibility	25	5	5	125	125
Cultural	30	5	5	150	150
Sustainability	25	3	4	75	100
Cost	10	4	3	40	30
Maintenance	10	5	2	50	20
<b>Total</b>	<b>100</b>	<b>22</b>	<b>19</b>	<b>440</b>	<b>425</b>

We modeled two gazebo designs and selected steel over timber based on evaluation matrix results.

## Structural Analysis

- Structural analysis performed using SkyCiv
- Loads applied using LRFD (1.2D + 1.6L)
- Maximum deflection occurs at midspan
- Design satisfies strength and serviceability requirements



3D Frame Analysis Results

**26%**

Material Savings  
Estimated 1,771 lbs!

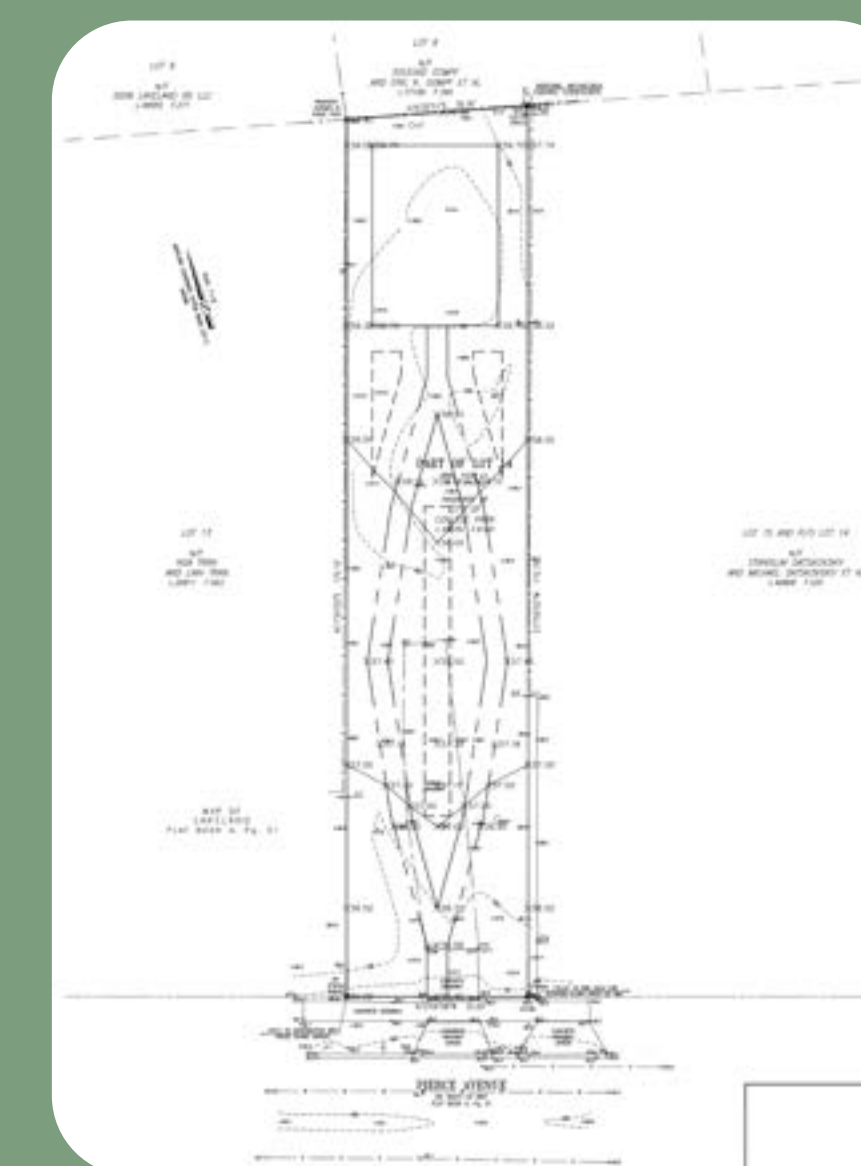
## Cost Estimate

Final Cost Estimate

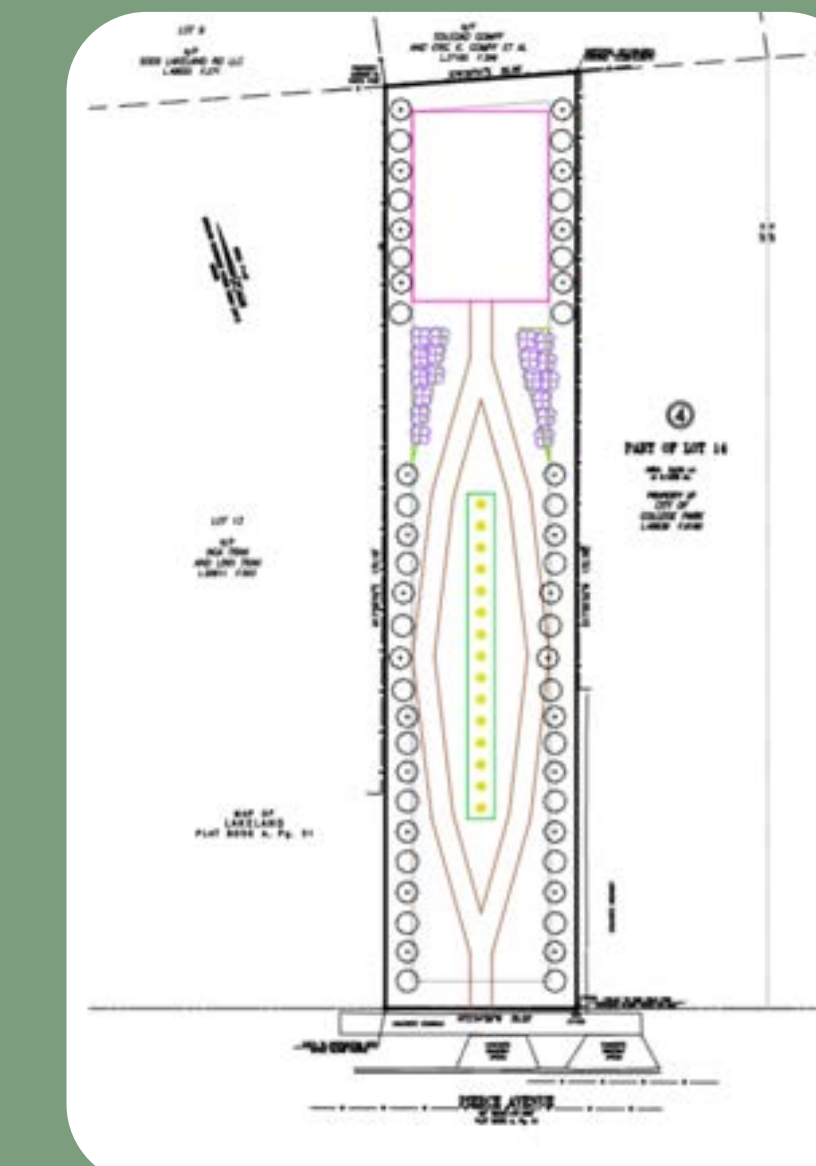
Section	Items	Cost
Structure	Concrete slab, HSS columns, HSS joists, W-beams, Clip-angle connections, and Polycarbonate panels	\$17,649
Plants	Black-eyed Susan, Mapleleaf Viburnum, Moss Phlox, and Smooth Hydrangea	\$3,129
Lighting	Solar LED lighting	\$385
Demolition	Driveway	\$480
Grading	-	\$21,067
Felling	Existing trees	\$7,000
Pathway	Concrete Pavers	\$6,446

**Total (with 15% contingency) = \$64,579**

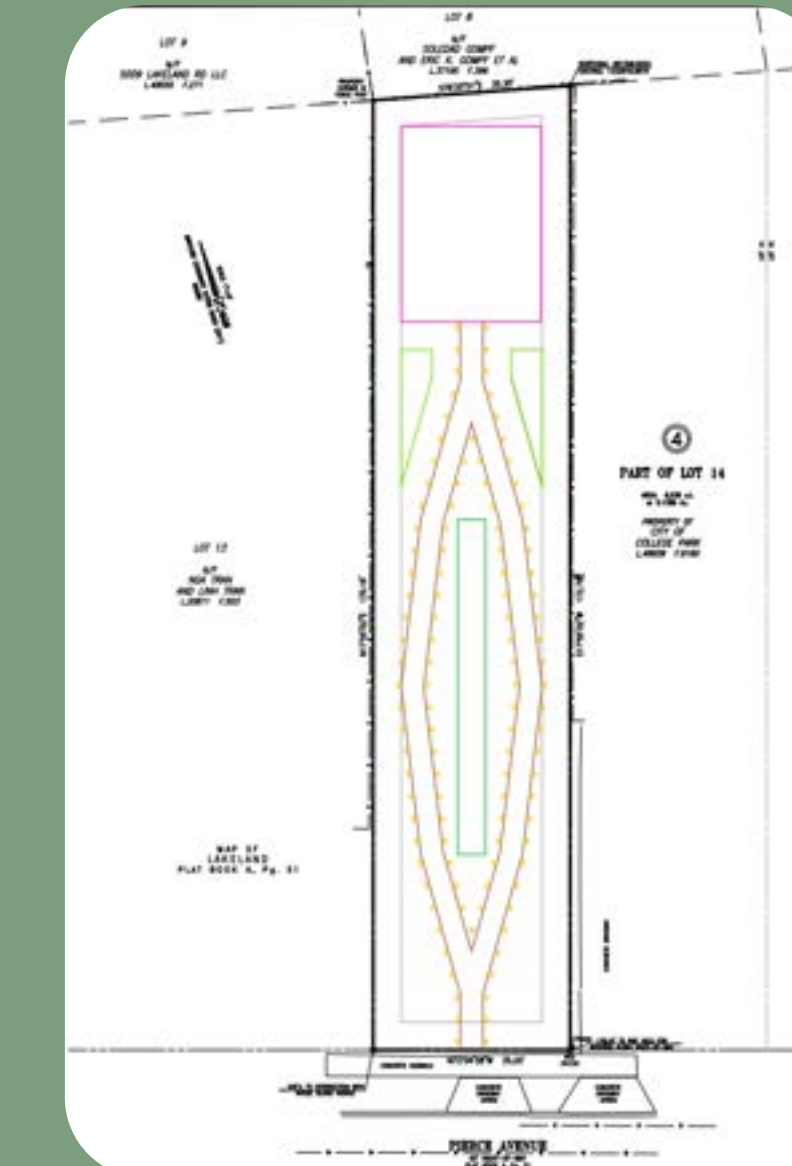
## Landscape & Site Engineering Plans



**Grading Plan**  
ADA compliant grading  
Proper site drainage  
Max site slope 1.8%



**Planting Plan**  
Native Plants  
Low maintenance  
Ecological Sustainability



**Lighting Plan**  
Solar powered LED lighting  
Low brightness (4 lumens)  
Minimize light pollution

## Geotechnical Analysis

Used nearby borelog data  
• SPT = 2-10-13 (At the same elevation with site)

Assumed  $\phi = 30^\circ$  for Granular Soil

Site observation  
• SPT = 7-4-3 blows (20mm)  
• Moist sandy soil at ~1 ft depth

**Recommendation**  
• Verify soil during construction  
• Ensure properly compacted dense sand at foundation level



Site Visit

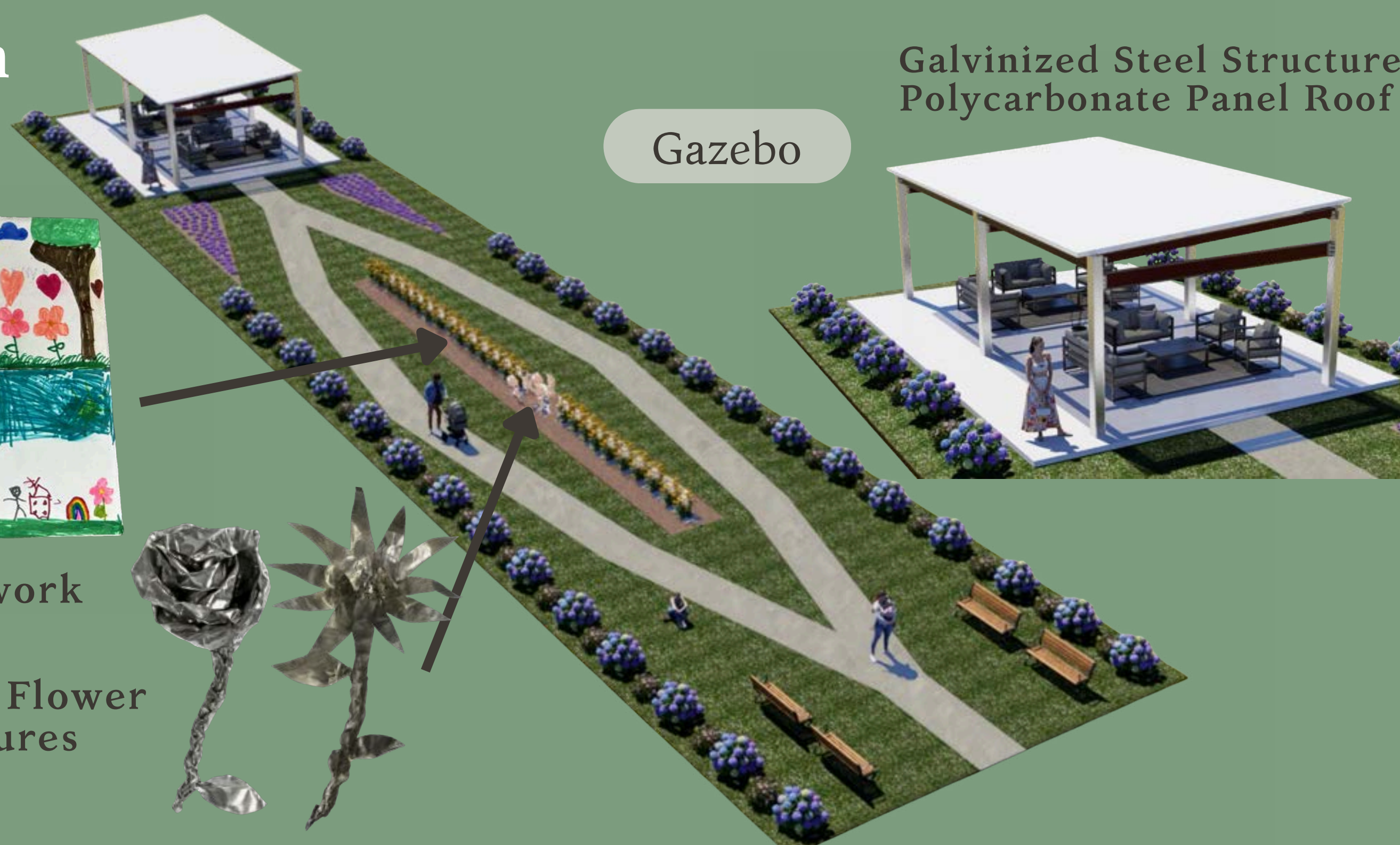
## Final Design

Garden



Student Tile Artwork

Memorial Flower Sculptures



Galvanized Steel Structure  
Polycarbonate Panel Roof

Gazebo

## Memorial Design Elements

We collaborated with the **Young Black Creative (YBC)** to design a series of flower sculptures for the garden. Our final design includes **ten sculptures**, each honoring ten households displaced during the 1970s Urban Renewal. Together, these elements create a meaningful visual tribute to the Lakeland community's history, supported by signage explaining their significance.

**59.4%** of community members surveyed said they'd most like to see a sculptural memorial element

Thank you to Dr. Bella, Dr. Niemeier, and the City of College Park for their guidance and support.