

A decorative border at the top of the page featuring various tropical plants including monstera leaves, ferns, and pink flowers. The background is a light green with a large, semi-transparent orange circle on the left side.

Landscape Redesign

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A decorative border at the bottom of the page featuring various tropical plants including monstera leaves, ferns, and pink flowers.

Partner:

Brooke Sammons- Landscape Architect ii with Purdue Grounds

Goal:

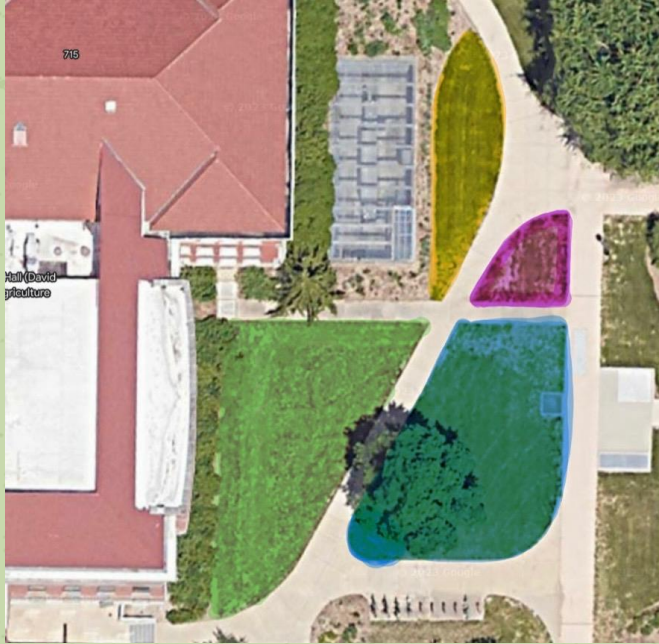
Bring flora, helpful pollinators, and natural color back to campus. Design new beds to showcase native plants and landscape architecture to those who experience the Purdue campus while easing the maintenance by Purdue Grounds on the space.

Deliverables:

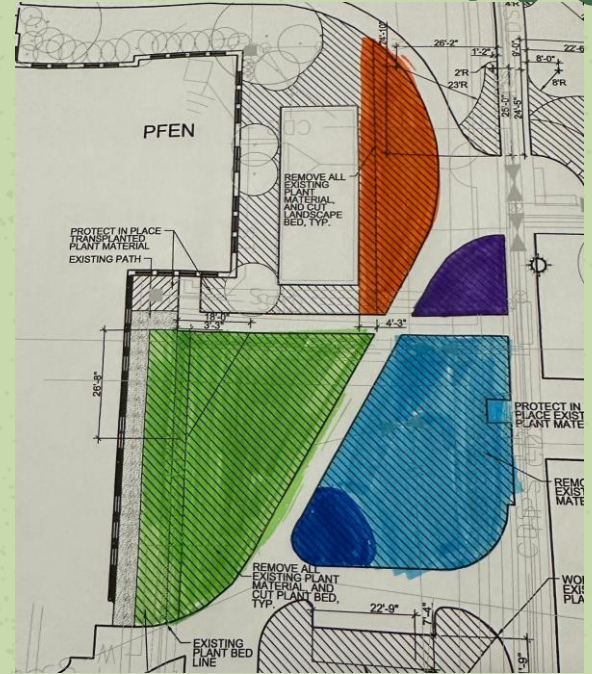
- Background research on native plants and public perceptions of nature preserves
- Maintenance upkeep plans
- Blueprints/maps for design
- Plant and flower inventories for each bed
- Electronic layouts of proposed designs



Map Designs



- Existing Veg
- mulch
- Purple love grass
- Little arrow blue stem
- Marsh puppy fountain
- Starstruck blue star
- Native Baby's breath
- Raspberry tufflet cone flower
- Garden parade bee balm



Maintenance Plan



Dark Blue Area

Fulling mulched area surrounding the tree, signage will be added to this area, potential room for a seating addition

Purple Area

Full Area: Filled with Starstruck Blue Star

Plant Specific Info:

Starstruck Blue Star



Non-blooming Image:



Blooming Image:

Blooming Time: May-June

Full Sun

Average Mature Height: 1.75 feet

#1 pot 10"-12"

At Planting: Water soil thoroughly before and after planting, mulch immediately after planting

Watering: Moderately drought tolerant but benefits from occasional watering.

Fertilizer: Needs little fertilizer, but benefits from a single springtime or fall topdressing, (about 1 inch deep) of organic compost or well rotted leaves.

Alternatively, a springtime application of a slow release fertilizer with a 3-1-2 ratio

(such as a 15- 5-10) can be applied at a rate of about 10 pounds per 1000 square feet.

Pruning: Can last all winter long, during early April before it begins to grow again, it should be pruned or mowed back to ground level.

Light Blue Area

Total Area Care:

Random Mix of Raspberry Truffle Coneflower, Grand Parade Bee Balm, Native Baby's Breath

Blooming time: June-August

At Planting: Water soil thoroughly before and after planting, mulch immediately after planting

Full Sun

Watering: Drought tolerant, occasional watering in the summer months

Plant Specific Info:

Grand Parade Bee Balm



#1 pot Image:



Blooming Image:

Blooming time: June-August

Full Sun

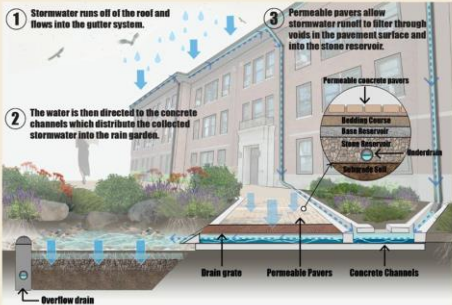
Average Mature Height: 14 inches

#1 pot 10"-16"

Example Signs

PURDUE
UNIVERSITY

RAIN GARDEN



HORTICULTURE PERMEABLE PAVERS AND RAIN GARDEN

The Horticulture building's combination of systems - rain gardens combined with permeable pavers - demonstrate a holistic approach to stormwater management. Both rely on infiltration into the soil below to reduce negative impacts from stormwater. With a mix of native plants, the rain garden does a great job filtering contaminants, and it mimics natural hydrology by infiltrating, evaporating and transpiring stormwater runoff. Rain gardens also serve as a vibrant habitat for local animals and insects.



Permeable pavers



Rain garden vegetation



Concrete channels & drain grate



Rain garden channel

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RAIN GARDEN



HONORS COLLEGE RAIN GARDEN

Purdue's rain gardens, shallow impressions in the ground filled with beautiful native plants, help improve water quality in the nearby Wabash River and Harrison Pond. Rain garden plants capture 30% more water than a typical lawn and act as a filter, helping to remove fertilizers, pesticides, oils, and other contaminants coming from our roofs, lawns, driveways, or parking lots. This practice mimics natural hydrology by infiltrating, evaporating and transpiring stormwater runoff. Rain gardens also serve as a vibrant habitat for local animals and insects.



Redtop



Joe



Joe



Joe

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BIOINFILTRATION



MSEE PLAZA BIOINFILTRATION PLANTERS

Bioinfiltration planters are particularly well suited to urban environments where roadways, sidewalks, and bicycle infrastructure compete for limited space. They feature recessed planters beds with water-loving grasses, one or two trees, an overflow drain, and they are bound by a curb. A key design element are the locations of the curb cuts that allow stormwater flowing off the sidewalks, bicycle lanes, and plazas to enter into the planter. As with other stormwater BMPs, the bioinfiltration planter filters contaminants and significantly reduces the flow of stormwater into the municipal system.



Joe



Joe



Joe



Joe

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RAIN GARDEN



HALL FOR DISCOVERY AND LEARNING RESEARCH RAIN GARDEN

Purdue's rain gardens, shallow impressions in the ground filled with beautiful native plants, help improve water quality in the nearby Wabash River and Harrison Pond. Rain garden plants capture 30% more water than a typical lawn and act as a filter, helping to remove fertilizers, pesticides, oils, and other contaminants from roofs, lawns, driveways, or parking lots. This practice mimics natural hydrology by infiltrating, evaporating and transpiring stormwater runoff. Rain gardens also serve as a vibrant habitat.



Joe



Joe



Joe



Joe



Signs

Grasses In The Garden

Hush Puppy Fountain Grass

Hush Puppy Fountain grass, also known as Pennisetum alopecuroides is type of grass that can be found in most of United States except for the northern central region. It blooms from August to September, and can grow up to two feet.



Where Can It Be Found?



Purple Love Grass

Purple Love Grass, also known as Eragrostis pectinacea, can be found across central and eastern North America. The grass blooms from the months of August to September. This plant is very drought resistant and usually only requires watering on the hottest days of the year.



Where Can It Be Found?



Little Arrow Little Bluestem



Little Arrow Little Bluestem, also known as Schizachyrium scoparium, blooms from August until September. The grass can be found in most of southern Canada, and a majority of United States.

Where Can It Be Found?



Function of Native Grasses

Indiana is home to a number of grasses. Grasses are often times not included in natural spaces. However, they come with a number of environmental benefits which make them more suited for natural spaces compared to other types of plants. Native grasses drought resistant due to their deep roots, and they reduce erosion and flooding, increase rainwater infiltration, and filter pollutants from groundwater.



Raspberry Truffle Coneflower

Raspberry Truffle Coneflower, also known as Echinacea Purpurea, blooms from June to August. The flowers attract a wide range of bees and many species of butterflies. The plant is native region extends from central to southeastern United States as well as parts of Canada.

Where Can It Be Found?



Grand Parade Bee Balm

Grand Parade Bee Balm, also known as Monarda Didyma, blooms from Midsummer to fall, and it's most common Pollinators are humming birds. The flower is native to the Midwest, eastern, and northwestern regions of the United States.

Where Can It Be Found?



Native Baby's Breath

Native Baby's Breath, also known as Euphorbia Corollata, blooms from early summer to early fall. Common pollinators include bees and butterflies, and the flower can be found in the midwest, southern, and eastern/northeastern United States.

Where Can It Be Found?



Flowers In The Garden

Starstruck Blue Star

Purple Love Grass, also known as Eragrostis pectinacea, can be found across central and eastern North America. The grass blooms from the months of August to September. This plant is very drought resistant and usually only requires watering on the hottest days of the year.

Where Can It Be Found?



Function of Native Flowers

All the flowers contained within this garden are native to Indiana. Native flowers play a key role in the function of the environment. Native plants have evolved over time to thrive in specific geographic regions and support the local ecosystem. They help maintain biodiversity by providing food and habitat for native wildlife, pollinators, and beneficial insects. Native plants also help to control erosion, filter water, and improve soil health. By incorporating native plants into gardens and other natural spaces, we can restore and maintain a healthy and functioning ecosystem.



Background

- ❖ The ease of Purdue grounds maintenance
- ❖ Native plants
- ❖ Aesthetics
- ❖ Student Integration
- ❖ Budget Constraints
- ❖ Landscape Comparability
- ❖ Research

