ADDRESSING NATURE DEFICIT DISORDER:
Prototyping Outdoor Learning Environments that Connect Schools, Communities, and Nature

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The Decline of Play and the Rise of Psychopathology in Children and Adolescent

- From 1980s to 2020s, our school time (including homework time and after school program) and screen time has increased a lot while outdoor free play time decreased significantly.
- In the same period, the physical and mental disorders have happened more frequently among children. Although we can’t prove the decline in play caused these psychological changes but correlation for sure.

Reasons and Advice

- Longer school days
  - Extend school recess time
  - After school program
  - Reduce some school homework

- Longer screen time
  - Parents control the time
  - More outdoor chances

- Parents’ concern about safety
  - Build community relationships
  - Security camera system
  - Sidewalk system

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The Gulfton Community is No.27 neighborhood in Southwest Houston. It is located between the 610 Loop and Beltway 8. Gulfton have a area of and the total population is 49,059, primarily house Hispanic and immigrant populations.

**Amenities of Area Parks and Public Spaces**

- **Anderson Park** (32.8 Acres)
- **Danny Jackson Family Bark** (7.7 Acres)
- **Pin Oak Park** (8.2 Acres)
- **Burnett Bayland Park** (32.8 Acres)
- **Bellaire-Zindler Park** (3.3 Acres)
- **Bayland Park** (69.8 Acres)

**Demographic Indicators and Weights**

- 40% = Children density
- 20% = Access to nature; % access to healthcare
- 40% = Crime Rate; %Low education; %Low income/(per capital); %Unemployment rate; %Single parent; %Linguistic isolation; %Move from abroad; %Without a vehicle

**Goals**

- Increases recreational opportunity
- Improves community livability
- Park with food access
- Provide public education opportunities
- Improve water quality by filtrating the run-off
- Reduces flooding
- Improves air quality
- Improve bio-diversity
- Enhance sidewalk quality
- Integrate pedestrian connections
- Clean up the existing obstructions

The Gulfton Community has substantial land and buildings inside the 100 and 500-year flood plains. These areas are concentrated in the southeast and southwest portions of the neighborhood.

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The Gulfton green infrastructure framework proposes the connections between open space and greenways throughout the neighborhood.
SITE ANALYSIS

Gulfton super neighborhood (No. 27)

Benavidez Elementary School
6262 Gulfton St, Houston

Our site is located in the north-west corner of the Gulfton neighborhood.

School attendance zone and land use

Benavidez Elementary School is a K-5 public school. It surrounds by a lot of apartment complexes, which means a lot of students can walk to school.

LEGEND

School Attendance Zone

Benavidez Elementary School
Public and Institutional
Industrial
Office
Commercial

The buildings are mainly used by a certain age of students.

The most of the outdoor room is lawn area.

The Site is flat. The elevation change is the detention ponds.

The school has two main entrances. One in the front, one for the backyard.

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