Soaking It In: Designing Flood-Resilient Communities

St. Bernard Neighborhood Campus

Stantec

City of New Orleans
Mayor LaToya Cantrell

St. Bernard Neighborhood Campus

GENTILLY Resilience DISTRICT

Agenda

1. Background
2. Project Goals
3. Public Engagement
4. Project Features
5. Summary

Background

Urban Stormwater Planning & the Gentilly Resilience District

- Urban Water Plan (2013)
- FEMA funded Hazard Mitigation Program Grant (HMGP) combination gray and green infrastructure projects
- Combining the City's Joint Infrastructure Recovery Request (JIRR) Capital Improvement Program funds
- $141 million National Disaster Resilience Competition (NDRC) funded by US Department of Housing and Urban Development (HUD) = funding for the Gentilly Resilience District

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Background

Existing Conditions

- Infrastructure needs addressing
- Pumping and low infiltration has led to high subsidence rates
- Community experiences frequent flooding
- Restore playground and park

Images Courtesy of ISeeChange

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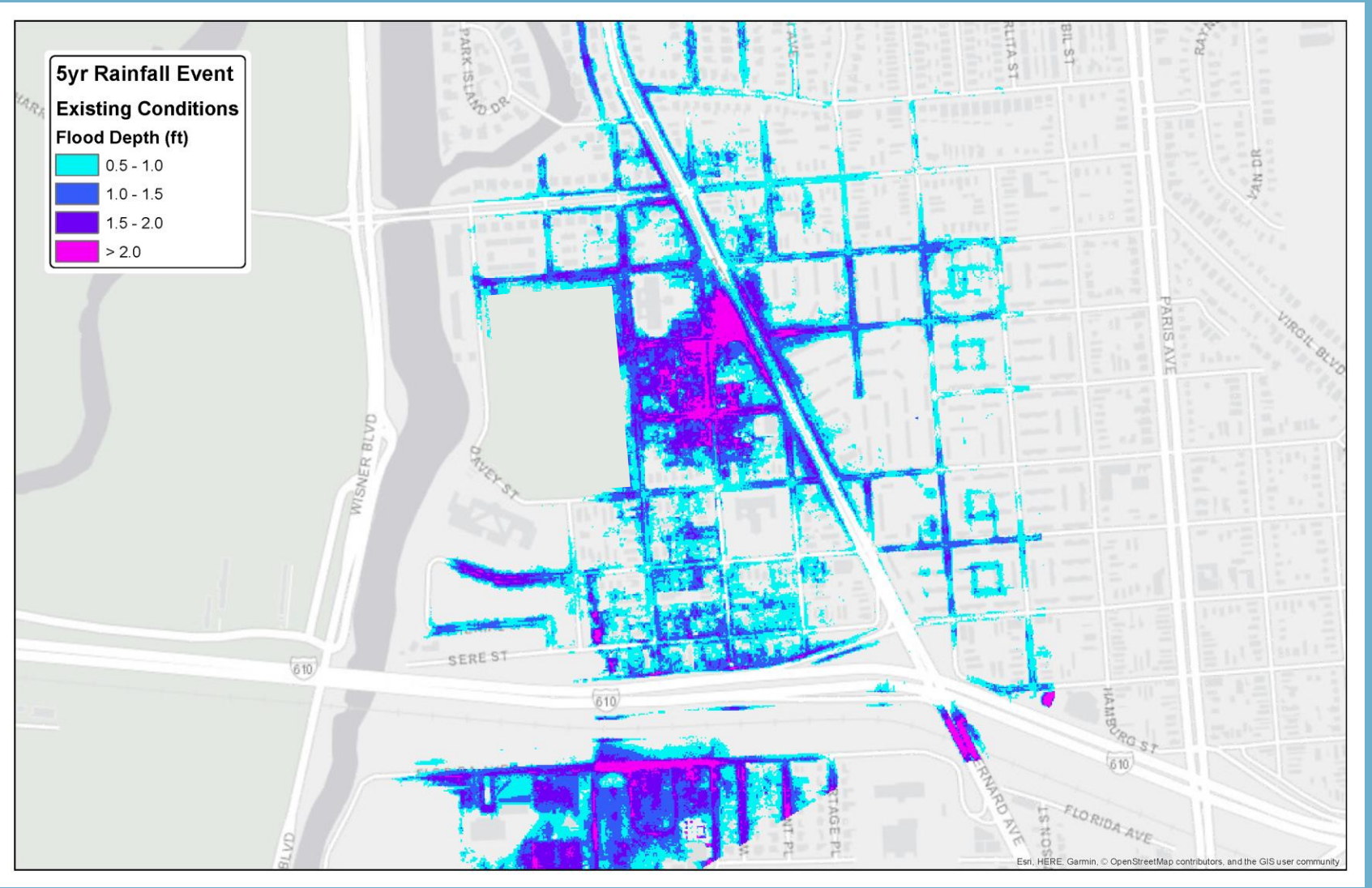
Background

Flooding (5-year Storm)



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Project Goals

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Urban Water

1. Address flooding
2. Promote infiltration and groundwater recharge

Ecology

1. Increase biodiversity
2. Plant more trees, shrubs & flowers

Infrastructure

1. Create complete street corridors

Economics

1. Drive economic growth through reinvestment
2. Reduce flood management risk

Recreation

1. Provide access to parks
2. Provide active and passive recreation

Public Health

1. Encourage people to exercise more

Urban Heat Mitigation

1. Create shade
2. Reduce and monitor heat island effect

Community

1. Create community destinations for neighborhood gatherings
2. Provide interactive educational opportunities

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Public Engagement

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Phase I

Willie Hall Playground

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Phase I

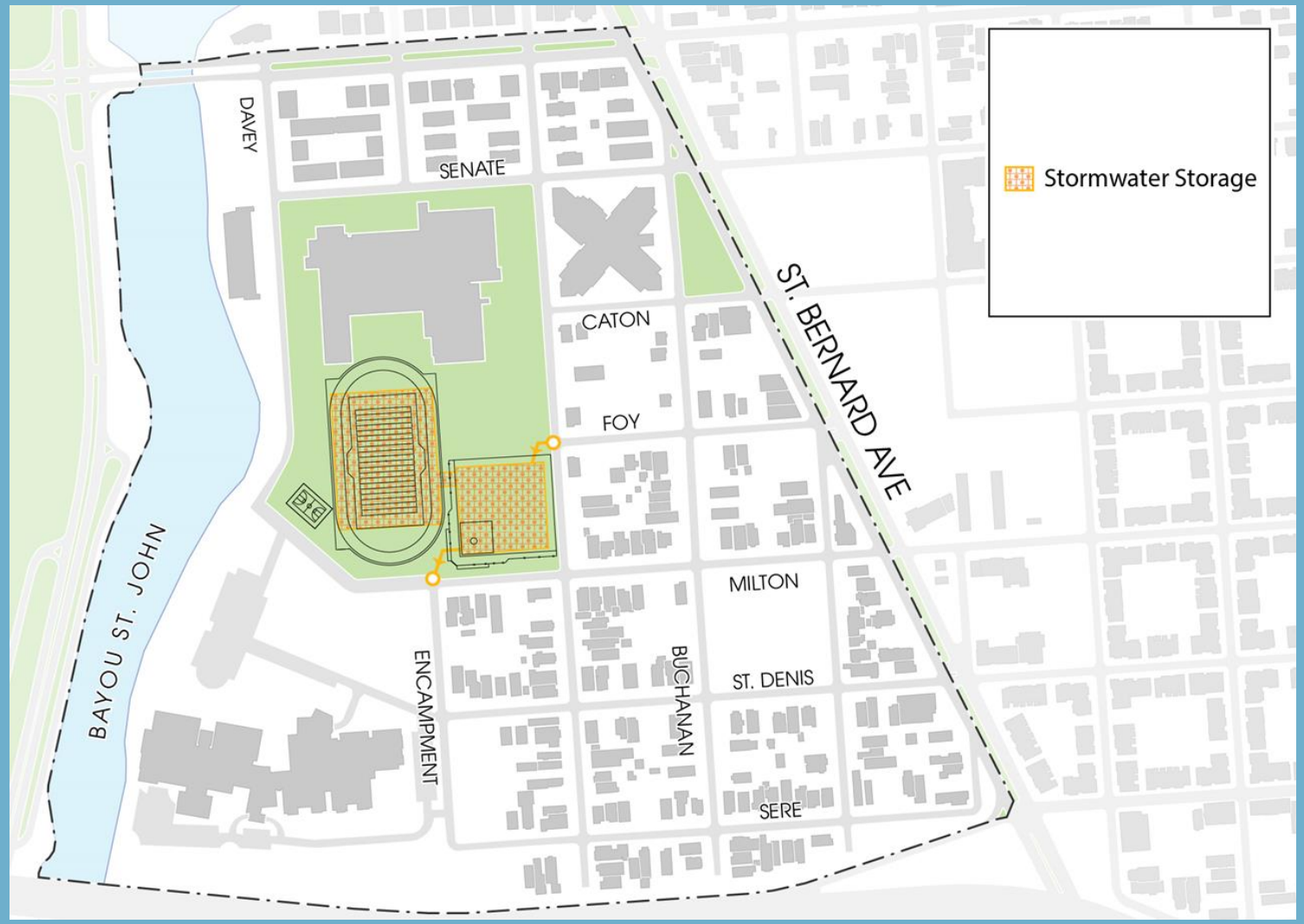
Willie Hall Playground and Stormwater Storage

Elements:

- Underground Stormwater Storage

Recreation

- Baseball Field
- Football Field
- Basketball Court
- Bleachers
- Track and Field
- Field Lighting



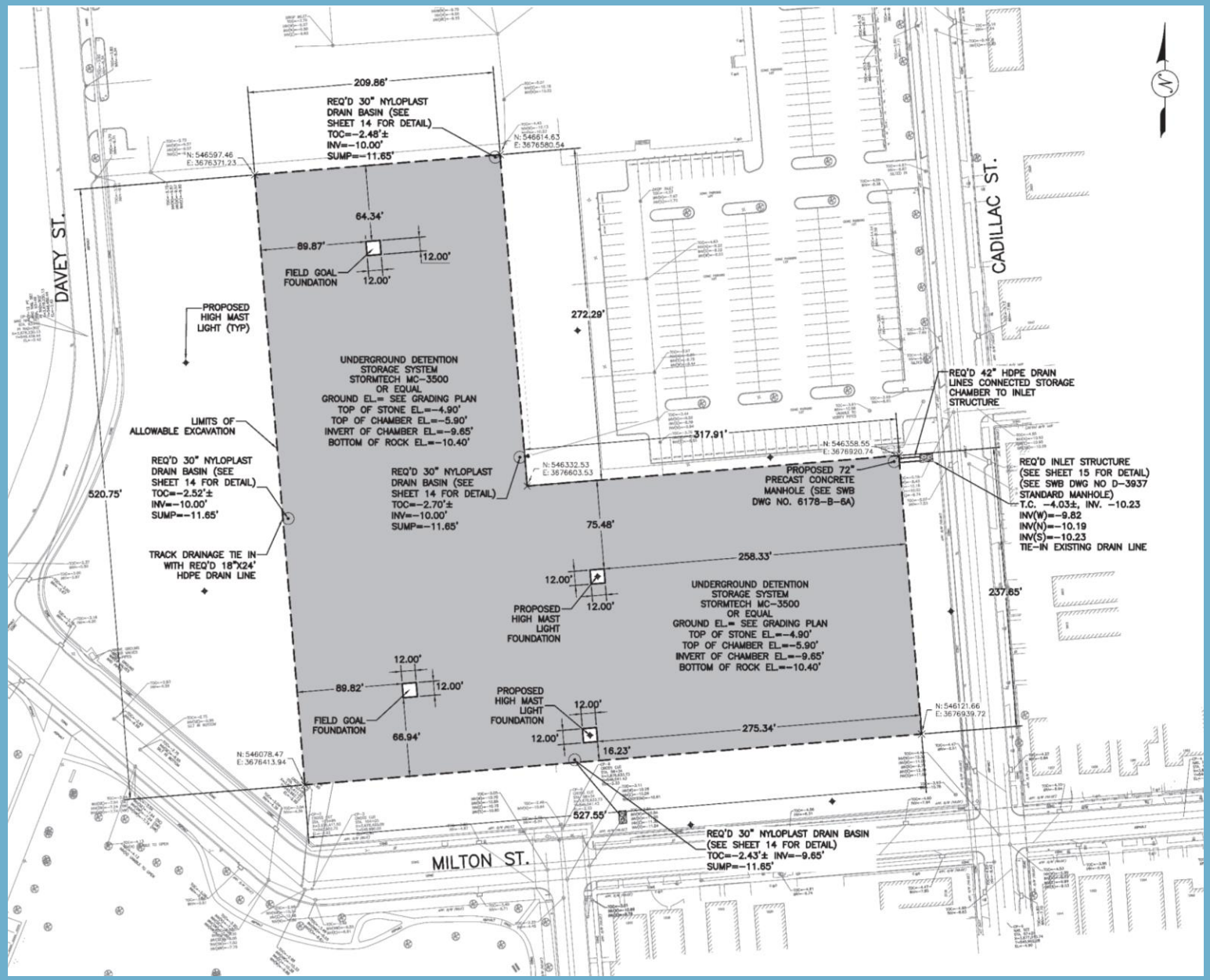
Phase I

Underground Stormwater Storage

4.2 Acres of underground stormwater detention basin

Increase storage to 5 million gallons of strategic stormwater storage (10 Olympic size pools)

Largest underground storage chamber system in the region



Phase I

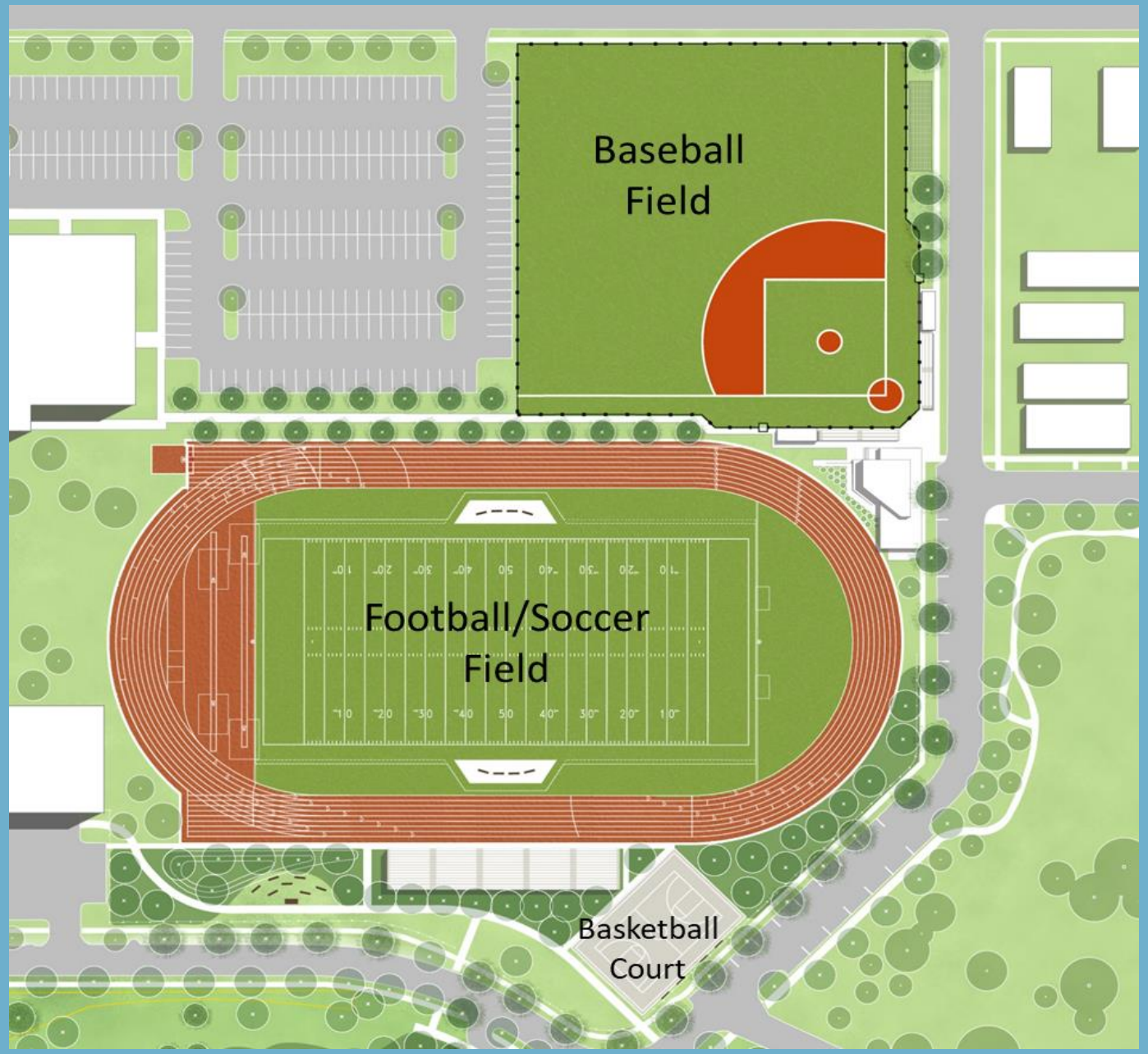
Willie Hall Playground

Athletic Fields

- Football/Soccer Field
- Baseball/Softball Field
- Basketball Court
- Sports and Area Lighting
- Bleachers

Additional Features

- Landscaping



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Phase II

Multi-Purpose Recreation Support Building

NORDC facility provides:

- Concessions counter
- public restrooms
- community kitchen,
- equipment storage
- small office and multi-use spaces for site facilitators and recreational instructors/coaches,

Design is similar in size and scope to NORDC facilities city-wide.

Phase III

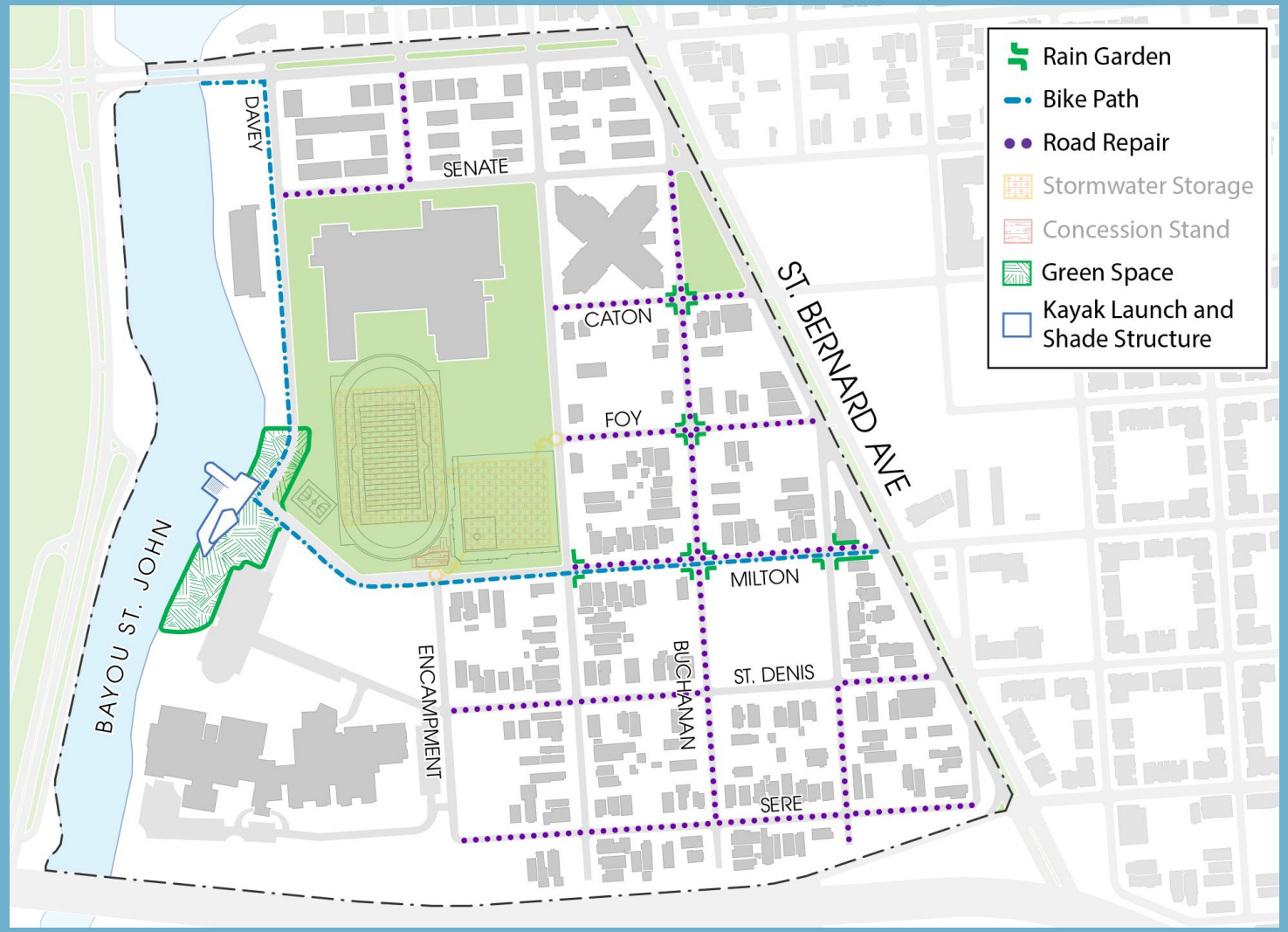
Park and Green Infrastructure

Neighborhood Improvements

- Rain Gardens
- Road Repairs
- Bike Path

Bayou St. John Park

- Playground
- Shade Structure
- Boardwalk
- Walking Trail
- Kayak/Canoe Launch



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Phase III

Rain Garden Bump Outs

- Improves water quality, promotes transpiration, and enhances the streetscape
- Provides shorter crossing distance for pedestrians, enhancing safety

Phase III

Park Improvements

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Phase III

Park Improvements

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In Summary

- Try to Maximize Federal Investment
- Figure out the right mix of solutions – Grey and Green
- Resiliency is more than just improving infrastructure
  - ✓ Facilities
  - ✓ Economic
  - ✓ Environmental
  - ✓ Social
- Not only keep the community engaged, but have them be part of the solution