

HCFCFCD PROJECT ID# K500-27-00-E001

HCFCFCD Unit K500-27-00

Bond ID F-88
Precinct 1



9900 Northwest Freeway
Houston, TX 77092
713-684-4000

Location

The project is located in north central Harris County, Texas, within the Cypress Creek Watershed and in the Westador subdivision between FM 1960 and Cypress Creek and just west of IH-45. The Stormwater Detention Basin (SWDB) is located near the north edge of the subdivision along the south banks of Cypress Creek. The proposed SWDB is part of the Cypress Creek Watershed Major Tributaries Regional Drainage Plan Update. The proposed SWDB is located on 23 acres consisting of two parcels owned by HCFCFCD and Westador MUD. Unit Number K141-00-00 separates the parcels but will be diverted into the proposed SWDB to provide a water source for the wet bottom pool.

Purpose

The purpose of the project is to provide flood damage reduction in the Cypress Creek Watershed and specifically in the vicinity of Westador MUD. This is accomplished by excavating the maximum volume of dirt on the available 23 acres, maintaining buffer space from Cypress Creek, and avoiding impacts to existing utilities such as power a line easement and cell tower site.

The project was evaluated in three phases to determine the highest return on investment. The combination of Phase 1 and 2 yielded the most cost-effective solution.

Evaluation

The study is intended to provide a recommendation for the design and construction of a SWDB in accordance with HCFCD permitting requirements and criteria. Supporting studies and surveys consisted of:

- Boundary, topographic and tree survey
- Geotechnical study and recommendations
- Environmental Assessment Phase I,
- Cultural Resources Study
- Threatened and Endangered Species Report
- Waters of the US Report
- Utility Research
- Drainage Study (5, 10, 50, 100, 500 AEP)

Recommendation

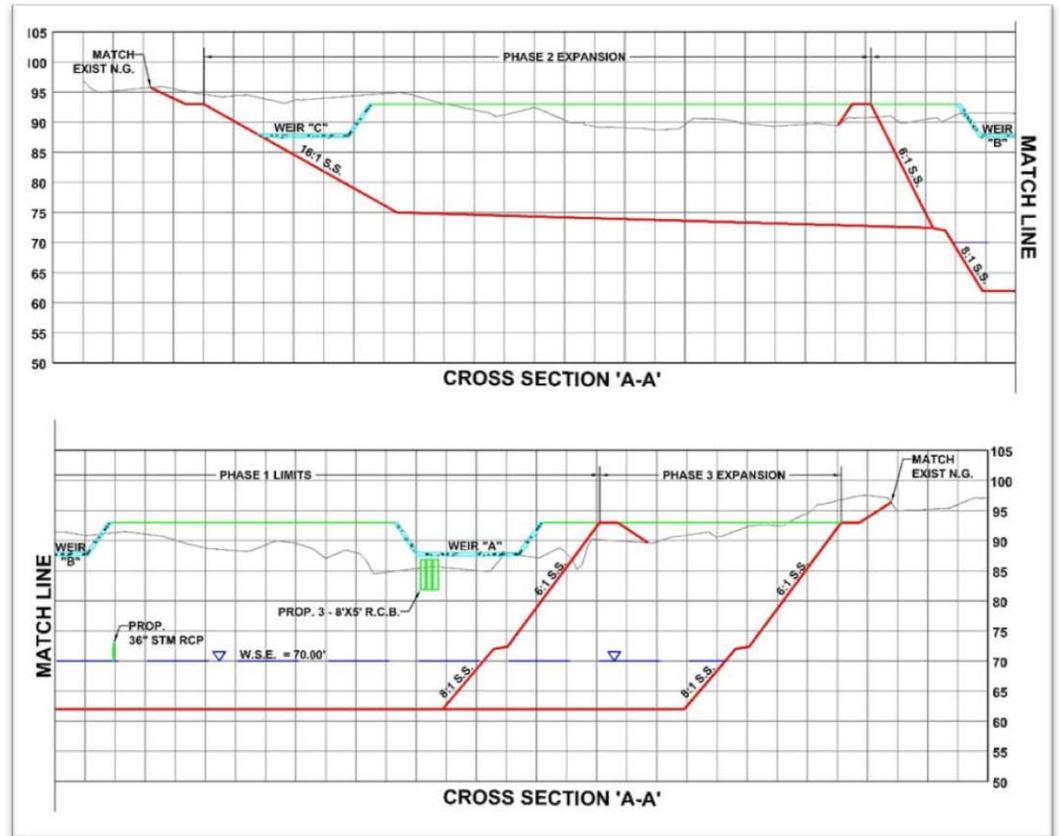
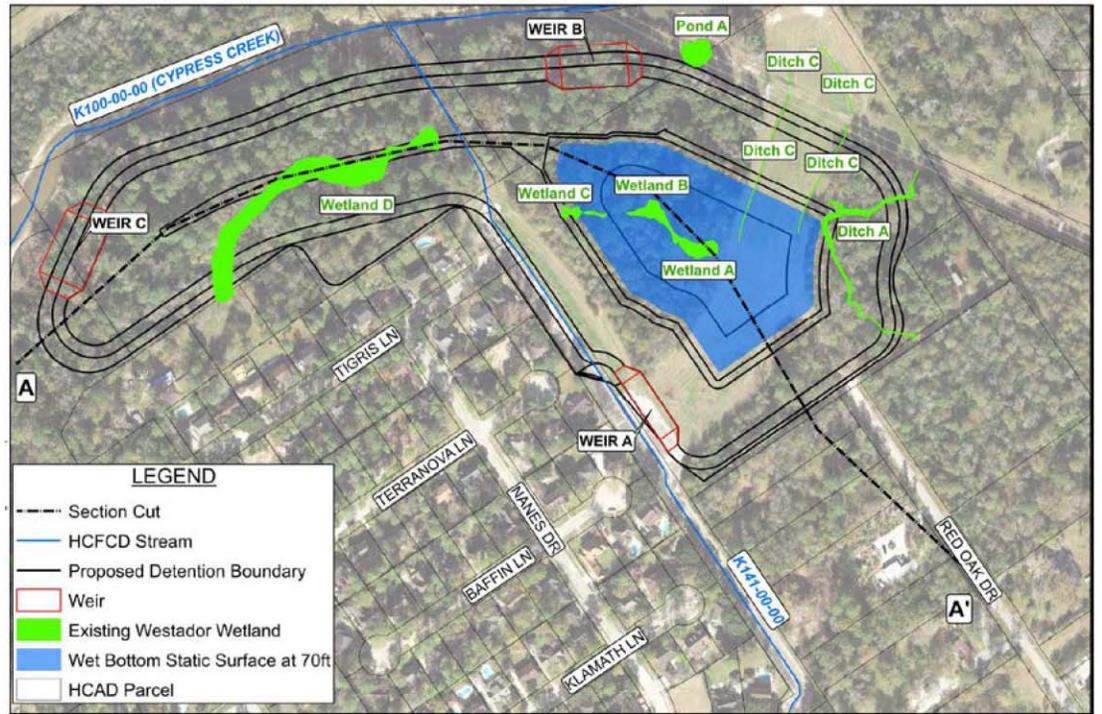
Based on the evaluation of the performance metrics, assumptions and constraints, Phase 1 and 2 is recommended. Key features of the recommended plan are:

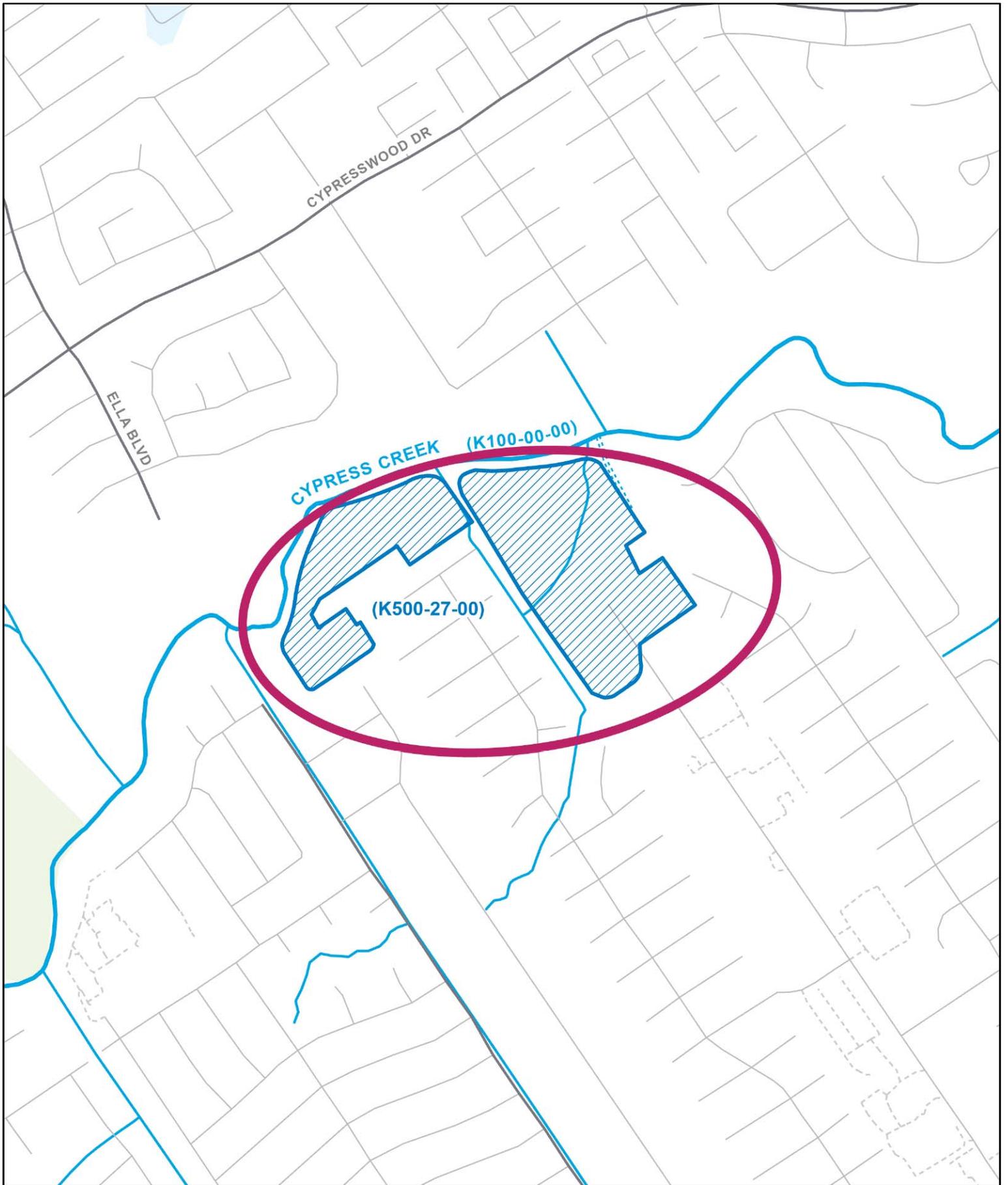
- Partial wet bottom basin with fresh water source from K141-00-00.
- Two weir connections to Cypress Creek.
- 80-foot buffer strip between Cypress Creek and the SWDB.
- 30-foot maintenance berm.
- 6:1 Side slopes above the wet pool.
- Access from two subdivision streets.

Benefits

Recommended Phase 1 and 2 provides 200.95 ac-ft of storage and will remove the 100-year floodplain from 80 structures for a construction cost of \$12,600,000.

Exhibits





Unit No: K500-27-00
Watershed: Cypress Creek
Precinct: 1

- Project Boundary
- Harris County Precincts**
- 1 - Rodney Ellis
- 2 - Adrian Garcia
- 3 - Tom S. Ramsey, P.E.
- 4 - R. Jack Cagle

