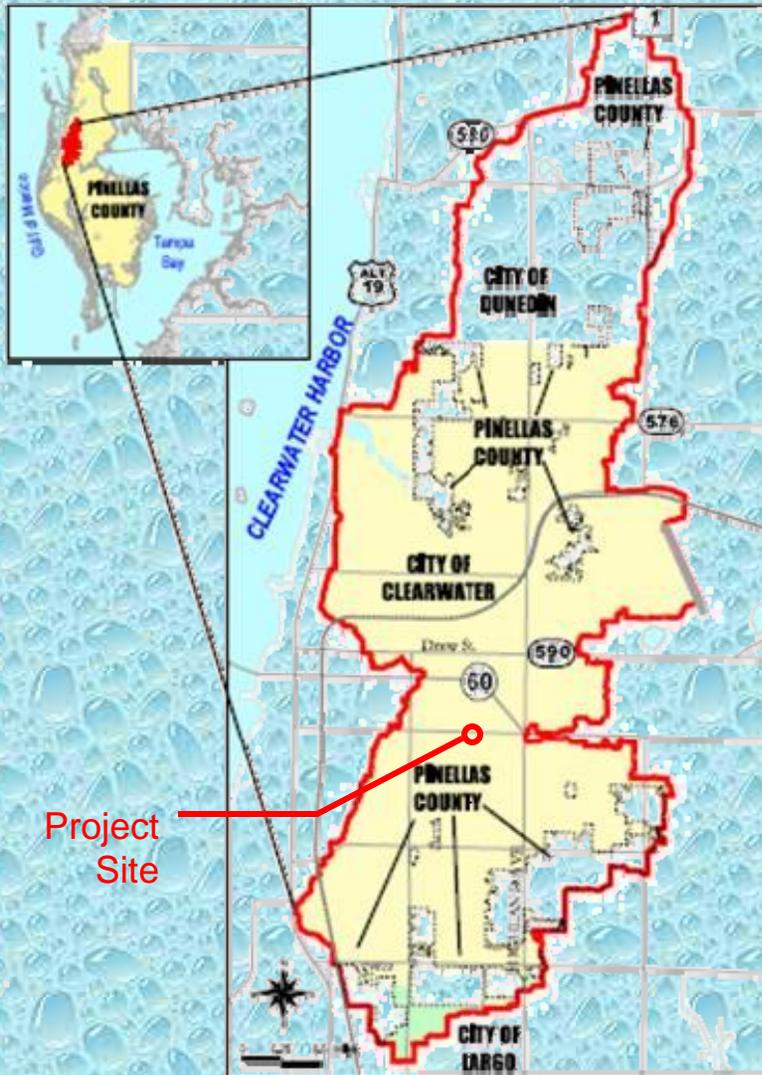


A photograph of a bridge over a creek. The bridge has a concrete railing and a metal pole. The creek is surrounded by trees and vegetation. The sky is overcast. The title text is overlaid in the center of the image.

***Stevenson Creek Watershed
Plan and Project
Implementation
1999-2007***

Stevenson Creek Watershed Management Plan (WMP)

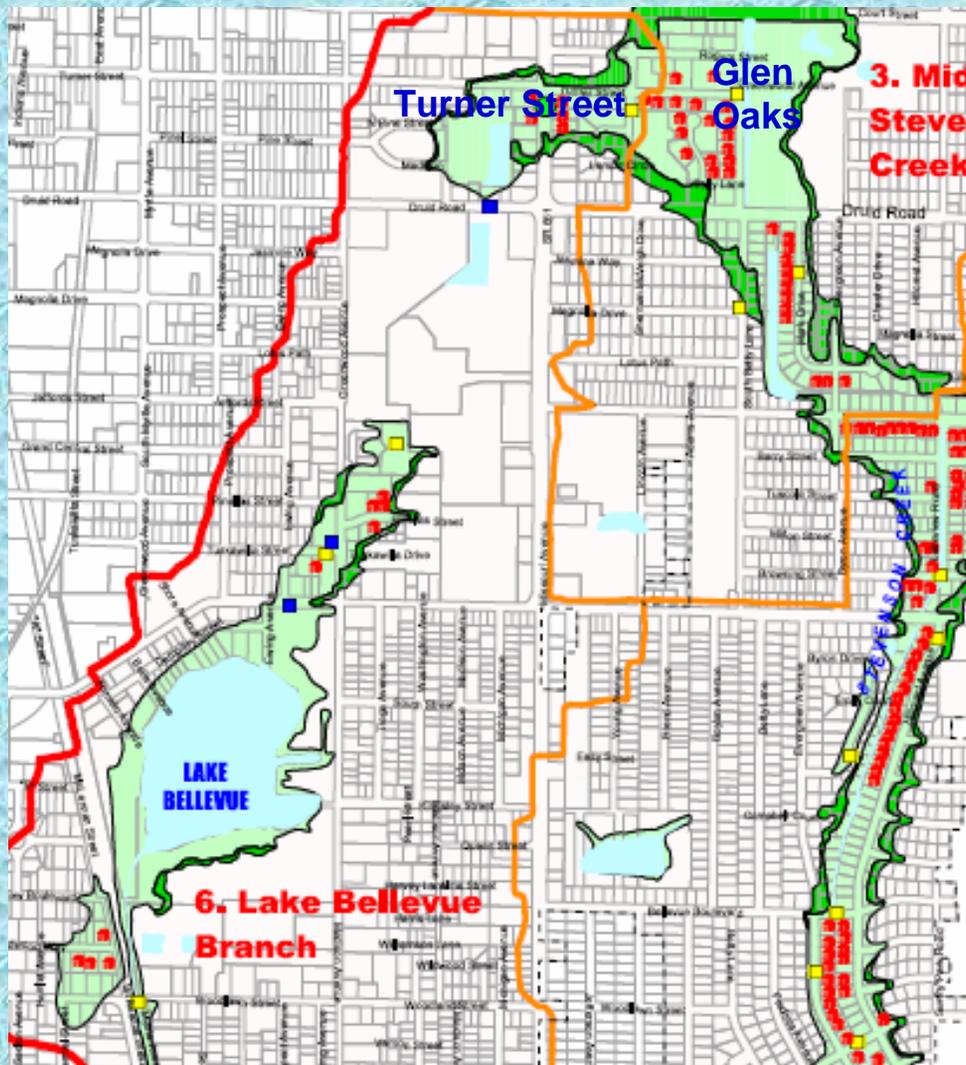


- The Watershed Management Plan was completed in 2001 with cooperative funding from the SWFWMD and the City of Clearwater.
- Largest and most urbanized watershed within the City of Clearwater
- Drains 6,286 acres in west central Pinellas County.
- 90% of watershed developed prior to BMP regulation

Stevenson Creek Proposed Improvements Projects

- The WMP analyzed existing conditions, identified areas with flooding and water quality issues, and proposed projects to improve these issues.
- These projects were prioritized based on feasibility and cost benefit along with many other factors.
- The WMP identified 28 projects within the watershed with a total estimated cost of \$28,000,000 in 2001 dollars.
- Glen Oaks was the #1 ranked project in the WMP and was completed in 2006.
- Two additional projects are possible to implement with Glen Oaks complete and are in the Lake Bellevue branch of Stevenson Creek
- These projects are the Lake Bellevue Stormwater Improvements and the Turner Street Connector

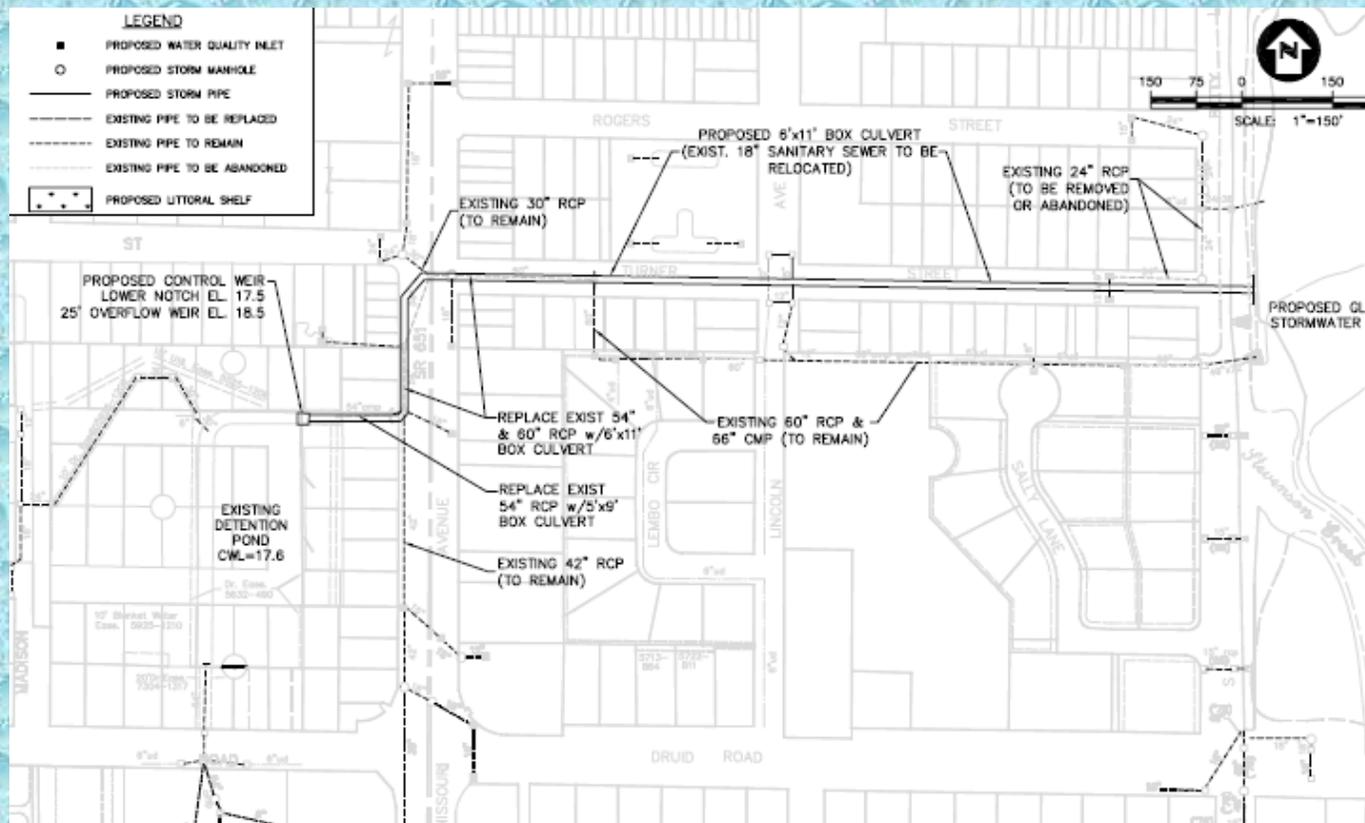
Lake Bellevue Branch Projects



- The Glen Oaks and the Lake Bellevue project will provide Stormwater attenuation and water quality benefits.
- The Turner Street Connector project will provide additional conveyance between the two projects and alleviate flooding.

Turner Street Connector

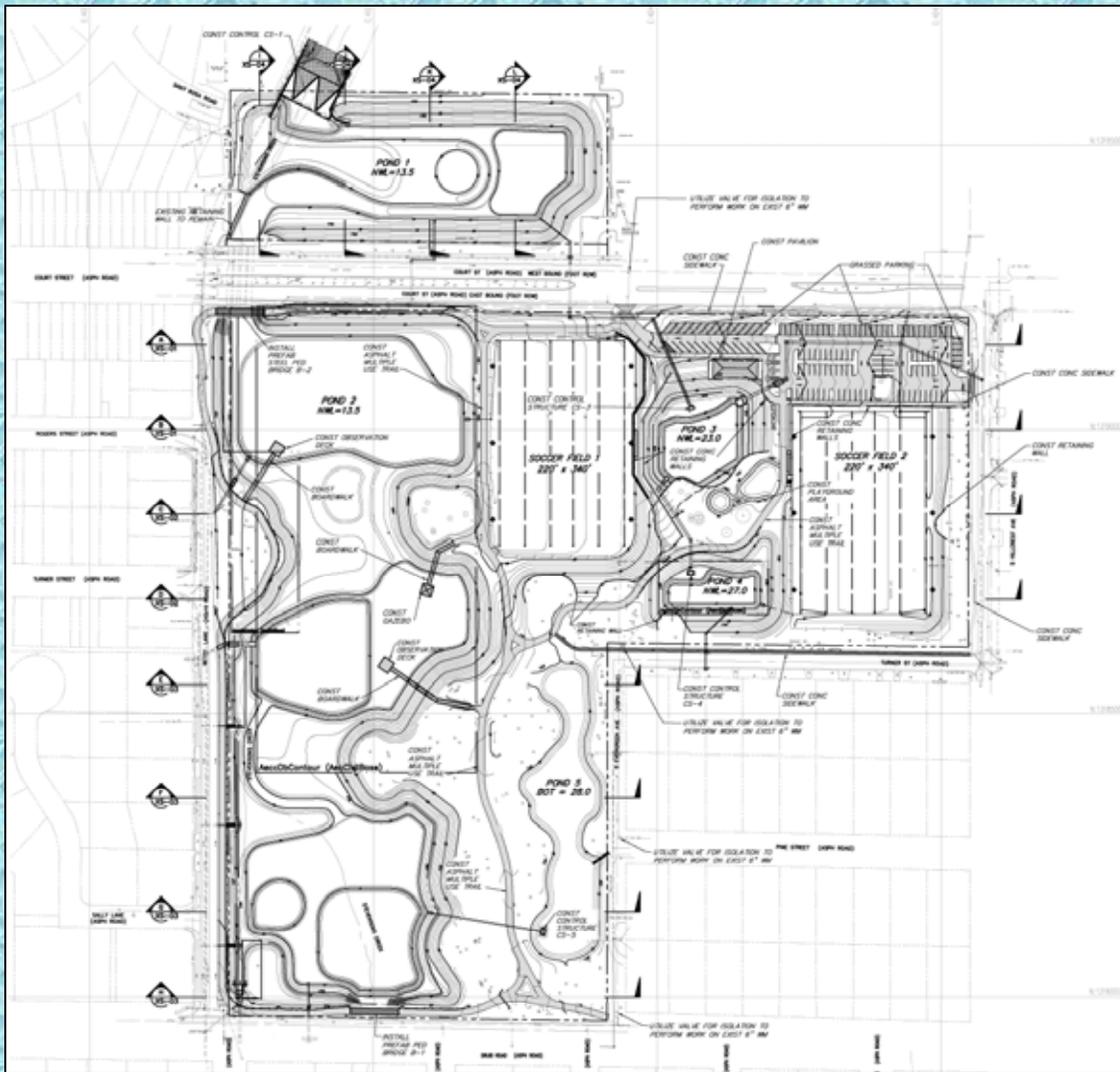
- The conceptual design shown is from the WMP.
- The City is hiring an Engineer of Record to complete the design and permitting of this project.
- The project will remove five structures from the 100 year floodplain and reduce flooding on one arterial road, one collector road and two residential streets.



Glen Oaks Project Details

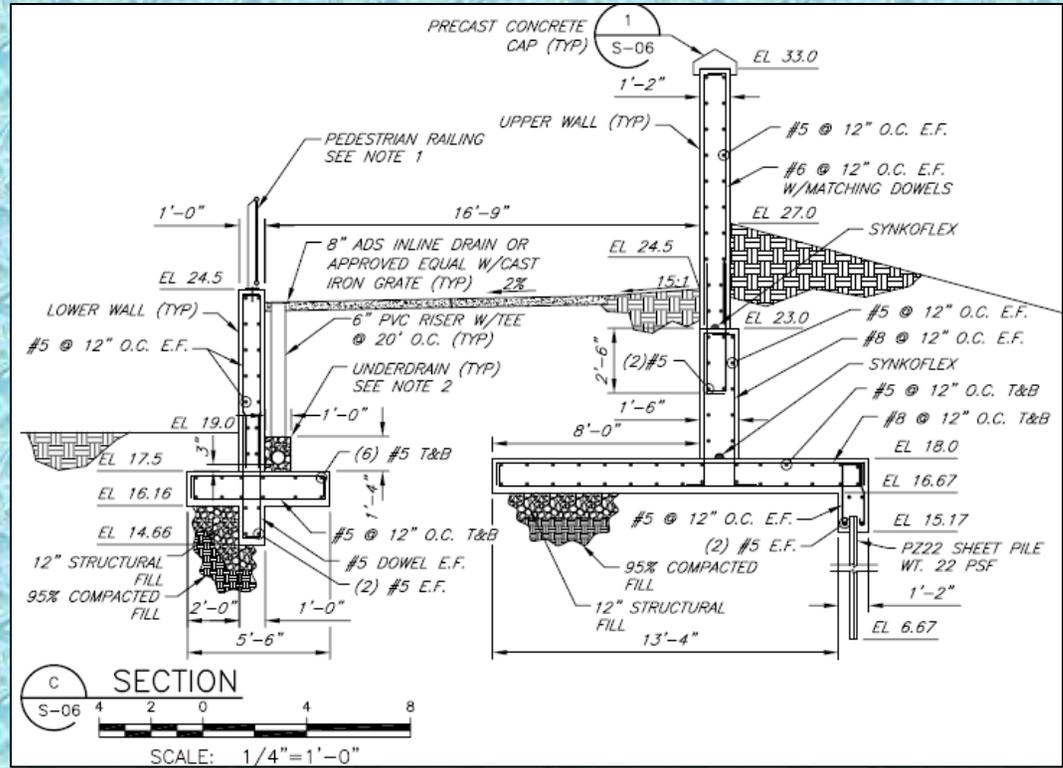
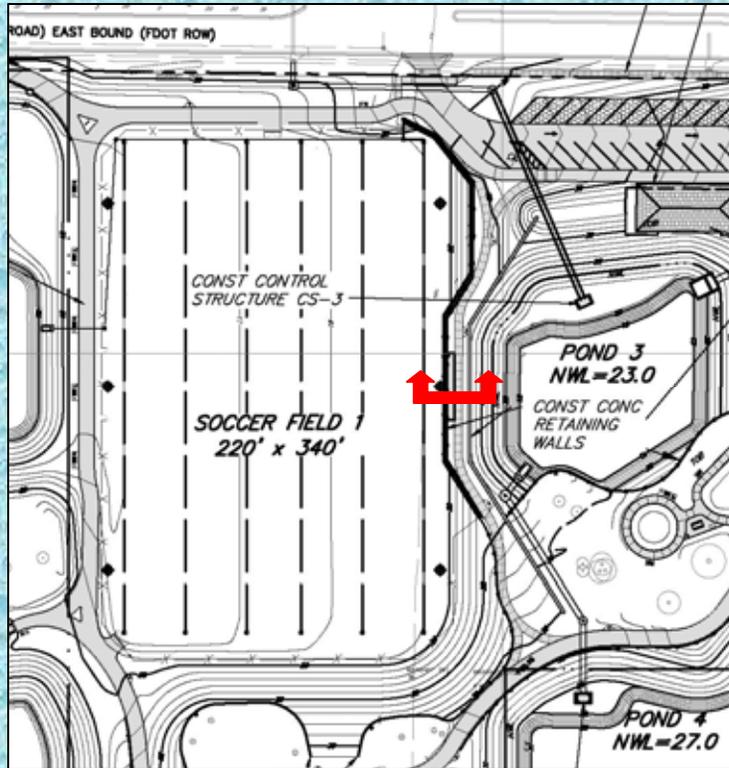
- 31.54-acre City-owned site
- five stormwater management areas totaling approximately 21 acres
- provide flood protection from a 100-year design storm for 33 nearby structures (78 dwelling units)
- provide water quality treatment for 1,193 acres of a highly urbanized tributary drainage area
- create approximately 4.30 acres of vegetated wetland habitat
- Annual Pollutant Removal
 - 27,700 pounds of suspended solids (TSS)
 - 735 pounds of total nitrogen (TN)
 - 328 pounds of total phosphorous (TP)

Glen Oaks Plan View



- 2,070 acre contributing area
- Two in-stream detention facilities
- Two wet detention water management areas.
- 1 dry-detention area
- Seven Three-Chamber Baffle Boxes
- 4.3 acres of created and restored wetlands

Floodwall Design



Floodwall Construction



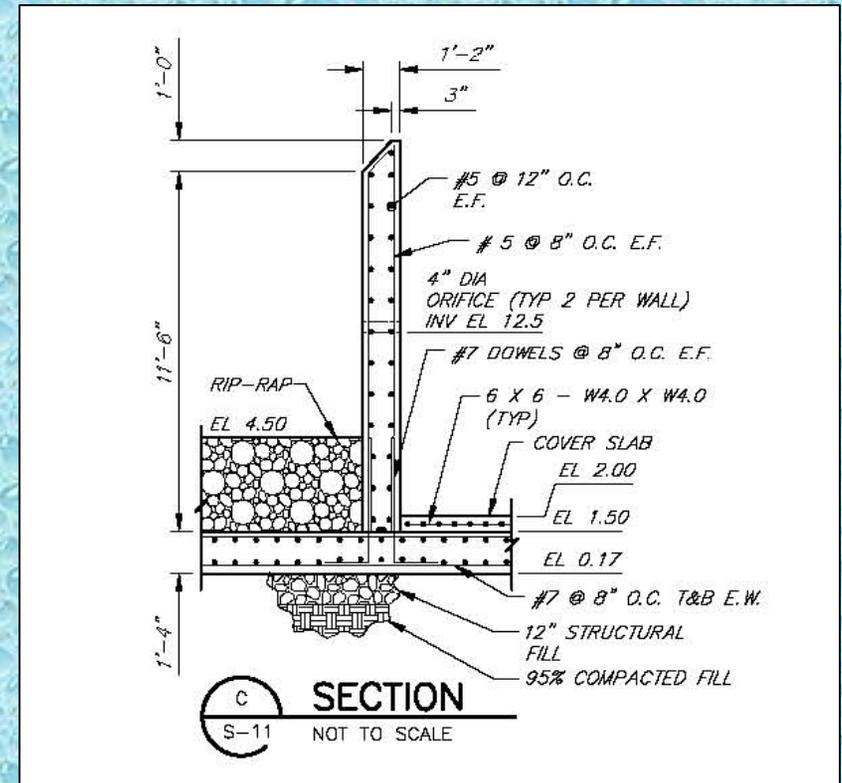
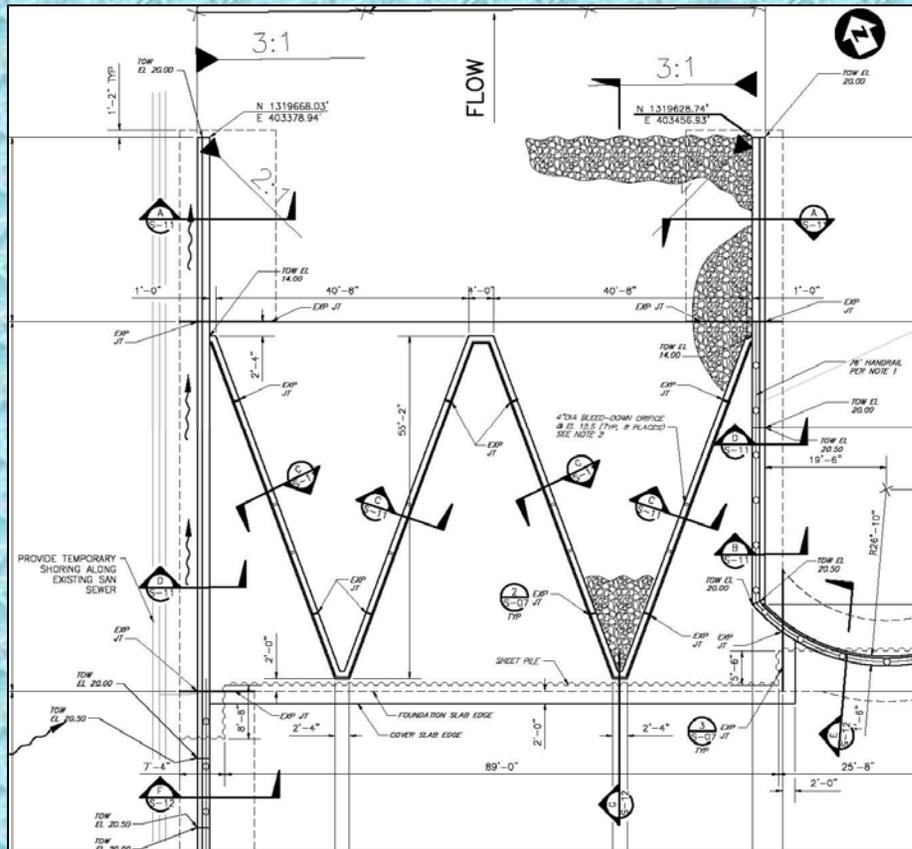
Floodwall Construction



Floodwall Construction



Labyrinth Weir Design



Reference: Falvey, H.T., "Hydraulic Design of Labyrinth Spillways", 2003

Labyrinth Weir Construction



Labyrinth Weir Construction



3-Chamber Baffle Box Design

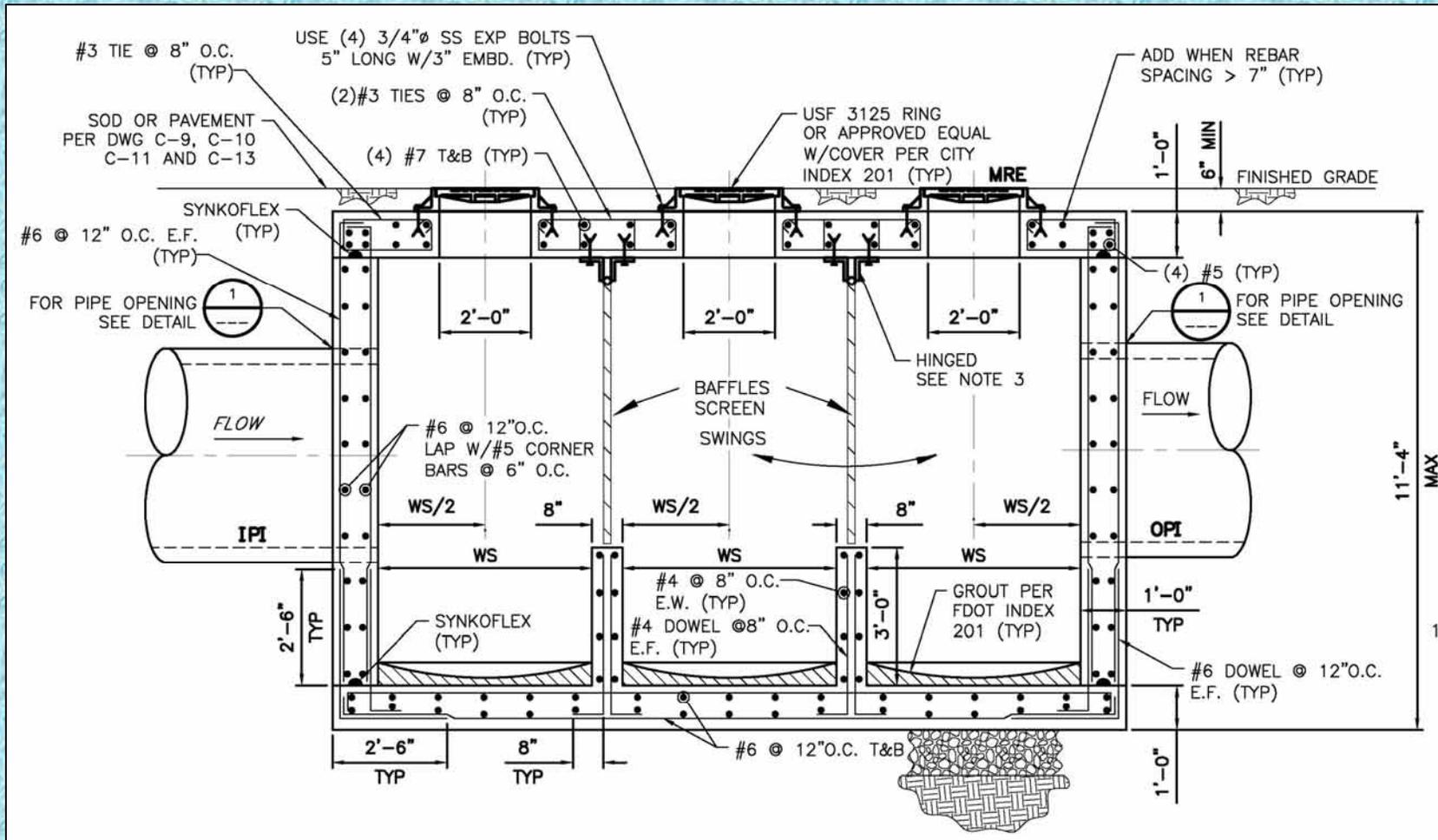
CRITERIA

- Length - 10 to 15 feet
- Width - 2 feet greater than largest inflow pipe
- Preferred L:W ratio- 3:1
- Weir Height - 3 feet
- Weir Invert - Equal to lowest inflow pipe invert
- Pipe cover - per FDOT Standard Index 205.
- Misc Items-screens, manhole covers, etc. per City of Clearwater standards.

REFERENCES

- EPA Stormwater Technology Fact Sheet-Water Quality Inlets
- EPA Stormwater Technology Fact Sheet-Baffle Boxes
- Sedimentation Control Using Two Baffle Boxes in Series- Gordon England, P.E., John Royal
- Baffle Boxes and Inlet Devices for Stormwater BMP's- Gordon England, P.E.
- Physical Modeling of a Stormwater Sediment Removal Box- Ashok Pandit, Ph.D., P.E., Ganesh Gopatakrishnan

3-Chamber Baffle Box Design



Recreational Features



- 360 LF of Boardwalk
- 1 Mile of Paved Multi-Use Trail
- 2 Observation Decks
- 1 Gazebo
- Pedestrian Bridges
- 2 Lighted Soccer Fields
- Pavilion/trailhead
- Playground
- Misc Park Amenities

Glen Oaks Project Complete



Stevenson Creek Estuary Restoration

- USACOE and the City of Clearwater have been working on the project for 7 years under the 206 aquatic restoration program.
- The project has a conceptual permit from FDEP and the plans are at 90%.
- The project is funded and expected to go out to bid in 07.



Estuary Restoration Benefits



- The project will remove 115,000 cubic yards of sand and organic muck and increase the tidal volume.
- Exotic vegetation will be removed and native plants will replace them
- 3.2 Acre mangrove shelf will provide habitat and water quality benefits



- ***Cooperative Funding Partners***

***The Southwest Florida Water Management District
Florida Department of Environmental Protection
United States Army Corp of Engineers***

Q & A