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## Legend
- Pipe
- Pump
- Check Valve
- Concrete
- Wetland
- Roadway
- Mitigation Area

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**Paradise Creek Flood Mitigation**

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Paradise Creek Flood Mitigation

Self-Closing Flood Barrier Plan

Sheet: 3
Scale: 1”=30’
Prepared by: EB
NOTES:
- Ground is at 4’ elevation.
- Flood barrier is 100 ft across and made of polyurethane (PUR) foam core with a 0.125” thick C-Flex fiberglass outer layer.
- Flood barrier can contain 4’ of water before it begins acting as a weir with water spilling over.
- Tank and pipes are made of high-density polyethylene (PE-HD). Pipes have a 6” inside diameter with 0.566” wall thickness.
- Tank starts filling when water reaches 4.5’ elevation.
- Pump discharge pipe has 2” diameter. Sensors on the pump and the discharge pipe will control pump activation and deactivation based on water level above ground and in the tank. Pump discharges water at 4.5’ elevation.
- Concrete wall on either side of the gate stabilizes the gate as it raises and helps to contain water in the wetland. The concrete wall has a flap valve, which allows runoff water to pass through the flood barrier into the wetland.
1. Water Begins Filling Tank
   Water Level rises to 0.5’ (Elevation = 4.5’). Water starts flowing into tank through surface pipe.

2. Flood Barrier Is Partially Raised
   Tank fills with water as water level continues to rise. When water level in the tank rises to 6’, water will flow into the concrete basin and begin raising the flood barrier.

3. Flood Barrier Is Fully Raised
   When flood barrier is fully raised, it will block up to 4’ of water. Water level will gradually recede. The pump will discharge water from the tank, and flood barrier will automatically lower.

Paradise Creek Flood Mitigation
Self-Closing Flood Barrier Graphic

Sheet: 5
Scale: 1”=2.5’
Date: 4/15/20
Prepared by: EB
Notes:
- Detention basin will contain water to reduce flooding on 18th Street and Roosevelt Avenue.
- Detention basin has a surface area of 97,365 square feet.
- Water enters detention basin through inlet pipe during heavy rain and exits through pump discharge pipe after rain event.
Notes:
- Detention basin slopes down toward the pump at a 5% slope.
- Basin is made of concrete. Basin is covered by netting to ensure avian species or any other wildlife will not be able to access the standing water in the basin.
- Basin can hold up to 4.45 million cubic feet of water to account for rain events up to a 100-year flood.
- Inlet and discharge pipes are at an elevation of 3’. Ground level is at an elevation of approximately 12’.
- There are 3 pumps in the detention basin, indicated by the pump symbol.
- Sensors will activate and deactivate the 3 pumps to discharge water that is in the detention basin after rain event is over.
- Basin is irregularly shaped to maximize available area.
- Basin will require 53’ of excavation down to an elevation of 41’ below sea level.
Self-Closing Flood Barrier

San Diego Freeway

Pump Discharge Pipe

Water Inlet Pipes

Paradise Creek

Paradise Creek Wetland
Sheet 11. Detention Basin Proposed Site
Sheet 12. Detention Basin Aerial View

Detention Basin
A = 97,365 sf