City of Warren Stephens Road Detention Basin
Project Highlights

The Stephens Road Detention Basin is the last phase of the City's Sanitary Sewer Overflow (SSO) Program. The SSO program included installation of several miles of relief sewers (2012 thru 2015), improvements to the City's 9 Mile Road Pump Station and construction of a new Stephens Road Detention Basin. Combined costs for the aforementioned phases of the City's SSO Program are approximately 95 million dollars.

The Stephens Detention Basin was sized and designed to handle wet weather flows from the 9 Mile Sanitary Sewer Service Area. Flows to the Stephens Basin are conveyed via a new 48" diameter force main, construction of which was completed in 2021.

Photo by: Photoelement Photography

Below are a few interesting facts and highlights for the Stephens Detention Basin project:

- Construction Commenced: Spring of 2021
- Construction Cost: $37,500,000
- Basin Dimensions: 900 feet long x 210 feet wide, depth varying from 20-25 feet; recessed into the ground to fit in with surrounding neighborhood
- Capacity: 22 million gallons
- Excavation: 164,000 cubic yards (or 4,428,000 cubic feet)
- Reinforcing Steel Installed: 4,584 tons (or 9,368,000 pounds)
- Concrete Installed: 40,000 cubic yards (or 162,000,000 pounds)
- Basin Walls: 2 feet thick
- Roof: Can be driven on for ease of maintenance
- Eight (8) Flushing Lanes: The self flushing system utilizes stored diluted wastewater from wet weather events to clean sediment build up
- Two (2) Tipping Buckets: Used for flushing deposit accumulation near the discharge part of the basin
- Odor Control: Includes Odor Control Unit to prevent odor nuisance to the nearby residents
- Basin Operation: Can be operated remotely from the City's Waste Water Treatment Plant
- Basin Draining: Will drain via gravity, no pumps needed to drain the basin after the wet weather event