ATTACHMENT ONE
Project Information

Project Sponsor:	City of Pompano Beach
Project Name:	Stormwater Management – Avondale Stormwater Improvements
Project Number:	06240

Based on the City's Stormwater Master Plan, the Avondale Neighborhood was identified as priority drainage basin in need of stormwater system improvements based on the historical flooding problems observed by City staff, the flooding complaints received from residents, and the results from the existing conditions stormwater model. The Avondale Neighborhood is bound by I-95 to the west, SW 3rd Street to the south, Dixie Highway to the east and Atlantic Boulevard to the north. The Avondale Neighborhood typically experiences significant flooding throughout the area during heavy rainfall events. Based on the results of the existing conditions stormwater model along with the observations by City staff, the flooding problem area is centered on SW 4th Avenue along with the adjacent intersecting roadways where most of the critical flooding occurs. The flooding problems within the Avondale Neighborhood are created primarily by the topography within the study area along with variations in the water levels within SFWMD G16 Canal. In general, the surrounding roadways which form the perimeter around the neighborhood have at a relatively higher ground surface elevation compared to the majority of the internal neighborhood roadways. This ground surface topography allows stormwater runoff to flow into the neighborhood from these perimeter roadways and also tends to trap any stormwater runoff within the neighborhood. The ground surface elevation within the public right-of-way areas typically range between 3.5 feet and 5.5 feet NAVD, which is relatively low when compared to the groundwater elevation and tailwater elevation at the existing drainage outfalls into the SFWMD G16 Canal. The canal levels within the SFWMD G16 Canal can also become elevated during and after significant rainfall events which limits the discharge capacity of these existing stormwater outfalls. Each of these factors leads to the past flooding problems which have been observed within the Avondale Neighborhood.

The existing drainage system within the Avondale Neighborhood consists of gravity pipes collecting stormwater runoff from the public right of way areas to eventually discharge to the SFWMD G16 Canal via three positive outfalls. The primary system is a network of interconnected drainage pipe ranging from 15-inches to 36-inches in diameter which collects stormwater runoff from the central and western portions of the study area for eventual discharge into the SFWMD G16 Canal via 36-inch outfall pipe. There are also two small independent systems with smaller outfalls into the SFWMD G16 Canal, which serve the northeast portion of the study area. Although there are existing stormwater facilities within the Avondale Neighborhood, it does not provide an adequate level of service to the right-of-way areas within the study area. In order to alleviate the existing flooding problems within the Avondale Neighborhood, stormwater improvements will need to be implemented to enhance the performance of the existing stormwater management system within the study area.

The primary purpose of the Avondale Stormwater Improvement Project is to reduce the flooding depth and duration within the neighborhood during significant storm events. Based on our analysis of the various system improvement alternatives during the Stormwater Master Plan, the implementation of a stormwater pumping system into the SFWMD G16 Canal would be the most effective option for reducing the peak flood stage and reducing the flood duration within the Avondale Neighborhood by increasing the discharge rate via the existing outfalls when the canal levels are elevated. Any stormwater improvements within the Avondale neighborhood will likely encounter limitations due to the regulatory requirements on the stormwater discharges via the system outfalls. Since this neighborhood discharges into the SFWMD G-16 Canal, which is currently listed as an impaired water body by the Florida Department of

Environmental Protection, the level of water quality improvements is critical to enable the potential implementation of a new stormwater improvements within the Avondale neighborhood.
The most effective stormwater improvements within the Avondale Neighborhood would include the implementation of the following system improvement together:

- Stormwater Pump Station (Old Pompano Canal)
- Pipe Interconnection
- Backflow Prevention
- Swale Regrading
- Exfiltration Trench

The document “Bid/Contract Documents Avondale Storm Water Improvements” will be the construction contract documents when the bid is awarded.