



DIVISION OVERVIEW

The purpose of the Engineering Division is to perform design functions in the matter of construction, maintenance, and capital improvement projects undertaken by the City. Capital improvements include new construction projects or major replacements/repairs. The Engineering Division reviews project designs, monitors construction, and approves inspections. Other tasks include watershed studies, property easement acquisitions, right of way development, grant application processing, and plan review.

2014 Capital Improvement Projects

Carpenter / Shepard Signal Upgrade – This project added pedestrian signal heads to the existing traffic signal at the intersection of Shepard St. and Carpenter Rd. It provided enhanced safety for pedestrians and students walking to Jefferson Elementary School.

Crosswalk Upgrades - This project began in 2014 and will be completed in 2015. These upgrades address concerns with existing pedestrian crossings near: Havens Corners Rd. at Southwind Dr., Town St. at Mill St. and Sycamore Mill Dr. at Clotts Rd.

Crosswalk Upgrades



Sycamore Run Stream Restoration



Sycamore Run Stream Restoration - This project restored a section of Sycamore Run through construction activities aimed at reconnecting the channel to its existing wooded floodplain. The environmental health of the stream corridor was greatly improved by creating an instream habitat and construction of grade control structures. Native riparian plant species were planted with additional wetland plantings in the spring of 2015.



Taylor Road Booster Station



Detroit Street Rebuild (Avonwick Pl. and Jennie Dr.) – Since the late 1980’s, the City has been rebuilding Detroit-style streets to eliminate problems caused by the original design.

Detroit-style streets consist of all concrete pavement, where the curb and street are poured as one unit, with no asphalt pavement on top. This style of street was originally installed decades ago and, because there is no asphalt surface, the entire street must be rebuilt when it deteriorates. Attempts were made to add an asphalt layer to the top of the street to keep from having to rebuild it, but the asphalt surface caused curb drain outlets to be partially blocked and created other undesirable drainage conditions.



Detroit Street Rebuild

Detroit style streets are now being rebuilt to current street standards which include a concrete base, asphalt surface, and separate curb and gutter. The City currently has approximately 12 miles of Detroit style streets remaining, or approximately 8% of the entire roadway network.

Larry Ln. and Price Rd. Sewer Extensions – The Larry Lane project extended the City’s sanitary sewer system to 2 unsewered properties on East Johnstown Rd. Phase I of the Price Rd. project extended service to one property. Phase II, slated for construction in 2016 will provide service to 22 additional properties and eliminate 1 electric sewer lift station. These projects are part of an ongoing effort to eliminate unsewered areas within the City’s corporate limits.

Price Rd. Ph. I Sewer Extension



Taylor Rd. Booster Station - Construction started in late 2014 to begin building a new booster station to replace the existing station on Taylor Rd. at Helmbright Dr. This project will increase water service capacity to the City’s Industrial Zone which houses the vast majority of our largest water users. Construction will be completed in early 2015.



Asphalt Overlay



Asphalt Overlay – The purpose of asphalt overlay is to prolong the life of City streets. The City uses a street rating system that is based on a scale of 1-100, with 100 being the best. It rates on four categories: Extent of cracking, concrete condition, crack seal condition, and pavement defects (i.e. potholes). Although all four categories contribute to the overall rating, the pavement defects category is the most heavily weighted, as it relates directly to ride quality and maintenance costs. Paving projects are targeted for streets where the majority of the pavement is within rating range of 75 or below. The goal is to maintain all 134 centerline miles at or above the rating of 75.



Crack seal and microsurface are additional, yet temporary, maintenance applications used to extend the life of asphalt pavements. When the paving surface has reached the end of its useful life, the asphalt is removed and replaced (also known as overlay, resurfaced, or paved). All residential streets receive crack sealing, microsurfacing, and ultimately, resurfacing throughout their life cycles.

Curb ramps are replaced to meet current ADA standards on all streets that are resurfaced. Additional ramps will be constructed when necessary.

NOTE: See Streets Division section for a complete list of streets repaired in 2014.

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