

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.

2013 Capital Improvement Projects

Buckles Court Traffic Signal – This project installed a new traffic signal at the intersection of Buckles Court and Techcenter Drive.

TIZ Fiber Extension - Phase 2 - This project extended the existing fiber optic infrastructure within the City's Office, Commerce, and Technology District. The project included both aerial fiber and underground conduit extensions.

Farmwood Pl Street Infiltration



Buckles Court Traffic Signal



Farmwood Pl Street Infiltration Pilot Project



Farmwood Place Pilot Street Infiltration – This project reconstructed the cul-de-sac on Farmwood Place with a layer of porous backfill capable of detaining a high volume of water. The asphalt pavement was replaced and porous pavers were used around the perimeter in place of the existing concrete gutter to allow water to enter the detention layer. The pilot project was constructed in an effort to decrease peak flows and water temperatures, and to increase water quality, thereby improving the overall health of the adjacent watershed. The effectiveness of the pilot infiltration project will be measured in 2014.



Triangle East Sanitary Sewer Extension



Detroit Street Rebuild

Detroit Street Rebuild (Haymarket Pl, Marquis Ct, and Wittenberg St) – Since the late 1980’s, the City has been rebuilding Detroit style streets to eliminate the problems caused by the 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. Decades ago, an attempt was made to add an asphalt layer to the top of the street to keep from having to rebuild the entire street, but the asphalt surface caused curb drain outlets to be partially blocked and created other undesirable drainage conditions.

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.

Triangle East Sanitary Sewer Extension – This project extended the City’s sanitary sewer system to six properties on East Johnstown Road as part of an ongoing effort to eliminate unsewered areas within the City’s corporate limits.

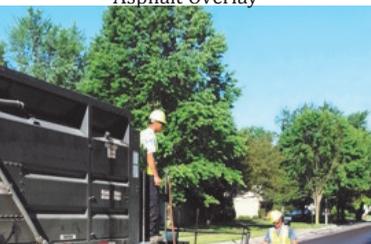
Safe Routes to School (STRS), Phase 1 - The purpose of this project is to create safe travel routes from neighborhoods to school buildings or to other existing routes. Phase 1 included the Beecher Road sidewalk extension (Academy Ridge development to Hamilton Road) and Shull Avenue/Heil Drive sidewalk extensions (on Shull Avenue from Town Street to Heil Drive and on Heil Drive from Shull Avenue to Laura Drive). A small portion of the waterline along Shull Avenue from Carpenter Road to Heil Drive was also replaced.

Safe Routes to School was largely funded by ODOT grants obtained by the City.



SRTS - Shull Avenue Sidewalk

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 a crack seal, microsurface, and are ultimately resurfaced throughout their life cycle.

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 2013.

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