



Birnamwood Drive Expansion



Project Description

The Birnamwood Drive Extension is a four-lane roadway just under a mile long located in North Harris County. The project was completed to provide more convenient access to Pundt Park and to relieve congestion on the park's one access road, Spring Creek Drive. Knudson LP was asked by Harris County Public Infrastructure Department to join the project team for the design of Birnamwood Drive Extension, as the county's first roadway to implement low-impact development (LID) principles. These principles, which became the Harris County standard for roadway design, included a median bioswale running between the roadway lanes, instead of a traditional raised median. The vegetated bioswale replaced the typical storm sewer and provides on-site detention, eliminating the need to build off-site detention facilities. The bioswale has hardy native grasses planted on its gently sloped sides which filter rainfall that soaks into the soil and recharges the groundwater. The native plants placed in the bioswale were selected so that they require one or two cutting cycles a year, reducing mowing costs by half. The filtration system deters silt build-up in the rain tanks, so there is less maintenance than traditional storm sewers and detention basins which require expensive and time-consuming cleaning of trash, plant debris and sediment. Another LID principle that was utilized was the use of two underground rainwater storage tanks that collect storm water and slowly release it at two outfall locations.

Client:

Klotz Associates / Harris County

Complete

Services:

Streetscapes / LID / Bioswales

Principal In Charge:

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Project Reference

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