



FEMA

Mitigation Project Gets an 'A' Plus

Harris County, TX – The prediction of rain was not welcomed at Klein High School prior to 2003. Due to the expansion of the campus and the rapid development of the surrounding areas, storm drains were heavily taxed. Heavy rain often flooded some of the school’s buildings. After sandbagging for several years, Klein Independent School District (ISD) sought a better solution.

“We used to have these cute little Home Depot type plastic storage units right outside entry doors, and we had a good stock of sandbags,” said Donald Blue, Director of Capital Projects for Klein ISD. “Every time we got a good rain, we’d put a little sandbag down around the doors. Students had to step over them, and of course we couldn’t put handicap accessible ramps over the sandbags.”

Klein ISD retained an engineering firm to perform a study and make recommendations. A stormwater drainage project was proposed.

The Drainage Project was initiated in April 2003 and completed in January 2006 at a cost of \$970,113. Klein ISD received a \$727,580 grant from the Federal Emergency Management Agency (FEMA) through its Hazard Mitigation Grant Program (HMGP).

Phase I of the project consisted of three parts. First, the removal and relocation of existing facilities at the practice field and excavating a stormwater detention pond located on the practice field. The detention pond is two feet deep, and the excavated dirt was used to create a berm around the practice field.

The second part was the installation of Tide Flex Check Valves (backflow) to the school’s existing storm sewer system to ensure that potential off campus stormwater cannot flow back through the system and flood the campus.

Last came the removal and replacement of approximately 400 square yards of asphalt pavement to install 400 linear feet of 12-inch gravity flow stormwater pipe from the gymnasium to an existing drainage ditch.

Phase II of the storm water drainage improvements was the installation of a 54-inch gravity pipe, buried 15 feet deep. Since the improvements, Klein ISD has not had any problems.



Harris County,
Texas



Quick Facts

Sector:

Public

Cost:

\$970,113.00 (Actual)

Primary Activity/Project:

Flood Control

Primary Funding:

Hazard Mitigation Grant Program (HMGP)