

CASE STUDY

HP Storm Conveys, Detains Development's Stormwater Houston, TX

ENGINEER

LJA Engineering, Houston, TX

INSTALLATION DATE

April 2017

CONTRACTOR

R Construction Co. Inc., Buffalo, TX

PRODUCTS

1,200' (366 m) of 48" (1200 mm) HP Storm

CHALLENGE

New townhome developments in Houston required a system that could both convey stormwater efficiently and temporarily store the water before releasing it into the city's stormwater pipe network.

SOLUTION

A common stormwater practice in Houston at the time was to oversize the required stormwater pipe so it could serve both as a conveyance system and as detention storage. This was achieved by installing a restrictor at the outfall to back water up in the oversized pipe. The large pipe would then transition into a smaller pipe, which would go to an even smaller diameter pipe to slow discharge and prevent the main stormwater system from being overwhelmed.

(Since Hurricane Harvey inundated the Houston area in August 2017, underground detention systems such as StormTech® and Aquabox have become widely used for these project types)

In this instance, representatives from Advanced Drainage Systems had been seeking opportunities to introduce HP Storm polypropylene pipe into residential developments. The townhome project proved to be an ideal fit, and LJA Engineering ultimately specified HP Storm.



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1,200' (366 m) 48" (1,200 mm) HP Storm pipe was selected as the primary mainline. HP Storm provided the joint performance needed for stormwater storage, delivered the required pipe stiffness and offered overall cost advantages for the development.

PRODUCT DESCRIPTIONS

HP Storm is a high-performance polypropylene pipe for gravity-flow storm drainage applications. HP Storm is the perfect choice with premium joint performance and increased pipe stiffness. HP Storm couples advanced polypropylene resin technology with a proven, dual-wall profile design for superior performance and durability. The smooth interior wall offers additional strength as well as superior flow. HP Storm has an extended bell that adds an additional factor of safety within each joint. This innovative product meets or exceeds typical standards for pipe stiffness and joint integrity and meets ASTM F2881 and AASHTO M330 for the respective diameters. HP Storm pipe is approved for use by the Army Corps of Engineers, FAA, and AREMA.



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