CASE STUDY

Plastic Pipe Saves Money in Metro Air Park Development

Sacramento County, CA

OWNER County of Sacramento, CA

ENGINEERS

Wood Rodgers, Sacramento, CA Baker Williams, Citrus Heights, CA CBG Engineering, Roseville, CA

CONTRACTORS

Cook Engineering, Inc., Rancho Cordova, CA **Teichert Construction**, Sacramento, CA

INSTALLATION DATE

2020-2024

PRODUCTS

2,500' (762 m) of 12" (300 mm) N-12 100' (30 m) of 15" (375 mm) N-12 4,420' (1,347 m) of 18" (450 mm) N-12 4,140' (1,262 m) of 24" (600 mm) N-12 2,740' (835 m) of 36" (900 mm) N-12 240' (73 m) of 42" (1050 mm) N-12 40' (12 m) of 48" (1200 mm) N-12 720' (220 m) of 60" (1500 mm) N-12 7,280' (2,219 m) of 12" (300 mm) HP Storm 5,180' (1,579 m) of 15" (375 mm) HP Storm 7,760' (2,365 m) of 18" (450 mm) HP Storm 10,420' (3,176 m) of 24" (600 mm) HP Storm 1,480' (451 m) of 30" (750 mm) HP Storm 1,800' (549 m) of 36" (900 mm) HP Storm 940' (287 m) of 42" (1050 mm) HP Storm

DESCRIPTION

Metro Air Park is a major commercial distribution hub that spans 1,900 acres (769 hectares) and is adjacent to residential development and the Sacramento International Airport.

The project was unique as the area is in a flood plain and was approved after the United States Army Corps of Engineers levee improvements were already underway. The storm drainage is beneficial to the area's economy and sustainability. The stormwater flows to Reclamation District 1000 and provides excess stormwater runoff to local farmers.



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Advanced Drainage Systems' N-12 and HP pipe saved contractors, developers and the county hundreds of thousands of dollars in material, labor and installation time. Sacramento County agreed to ADS pipe over RCP as the county becomes more open to industry feedback and with future expansion planned for the airport and surrounding commercial area.

Over 49,760' (15,167 m) or 9.5 miles (15.1 km) of ADS N-12 and HP Storm pipe, between the diameters of 12"-60" (300-1500 mm) was utilized on the project.

N-12 dual wall pipe has a corrugated exterior and smooth interior walls for exceptional strength and hydraulics. The inert HDPE material is resistant to the effects of chemicals, abrasions and hot soils. N-12 is available in 4"-60" (100-1500 mm) diameters and in 20' (6 m) lengths. The 12"-60" (300-1500 mm) pipe used on this project meets AASHTO M294. The inline bell design, which meets AASHTO M294 or ASTM F2306, allows for pipe ends to be pushed together for easy installation. The joint requires only a lubricant during installation which leads to faster installation times.

HP Storm polypropylene pipe provides superior pipe stiffness, longer bells and spigots and a premium joint performance for a longer service life. The smooth interior wall offers additional strength and high flow capacity. HP Storm pipe, available in diameters from 12"-60" (300-1500 mm) meets or exceeds the standards specified in ASTM F2881 and AASHTO M330 and the extended bell and spigot meets ASTM D3212. Polypropylene is resistant to the effects of chemicals, abrasion, hot soils and effluent.



