CASE STUDY

First Supply Chooses Duraslot XL as Warehouse Linear Drain Solution

West Salem, WI

OWNER
First Supply, Madison, WI

INSTALLATION DATE
Summer 2024

PRODUCTS
155’ (47 m) of 24” (600 mm) Duraslot® XL
420’ (128 m) of 36” (900 mm) Duraslot XL
260’ (79 m) of 10” (250 mm) N-12® watertight
420’ (128 m) of 36” (900 mm) N-12 watertight
560’ (170 m) of 12” (300 mm) N-12 soil tight
460’ (140 m) of 24” (600 mm) N-12 soil tight
8 18” (450 mm) Nyloplast® basins
3 24” (600 mm) Nyloplast 2’x3’ curb basins
2 36” (900 mm) Nyloplast domed basins
2 30” (750 mm) Nyloplast domed basins
1 24” (600 mm) Nyloplast domed basin
9 FlexStorm® inlet filters

CHALLENGE

First Supply is a distributor of Advanced Drainage Systems’ products and made a significant investment in building its first warehouse in central Wisconsin. The owner wanted to use as many ADS products for the warehouse’s stormwater management system as possible, which was needed to keep water off the loading dock and to eliminate hazards for trucks.

SOLUTIONS

To remove the water, First Supply was able to use ADS’ Duraslot XL, N-12 HDPE pipe, FlexStorm inlet filters and Nyloplast basins and grates.

ADS representatives worked closely with First Supply to add Duraslot XL trench drain pipe on the project to collect sheet flow. ADS reps showed how Duraslot XL could be braced during installation.

The concrete backfill was designed with a low-strength, high-workability concrete lift followed by structural concrete for the top lift. This engineered, non-homogenous backfill cut costs

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and reduced labor for the contractor. Metal bands and wood braces were used to hold the system in place during installation, secured to the metal cap that comes standard with all Duraslot XL orders. The cap keeps concrete out of the slot and forms the perfect fitment for the grates once the concrete is cured.

Nyloplast basins were used throughout the parking lot on the runs of the Duraslot XL. The pre-sloped parking lot helps the stormwater to flow to the middle of the lot. Once the stormwater reaches the end of the run, it conveys through 36” (900 mm) N-12 pipe into the municipal storm sewer system.

Nyloplast basins with domed grates were placed behind curbs in stormwater collections areas to capture the stormwater. The 10” and 12” (250 and 300 mm) N-12 pipe was utilized to convey the stormwater for site conveyance.

First Supply wanted to utilize the ADS products for the stormwater management because of the products’ longevity, ease of installation and significant cost savings.

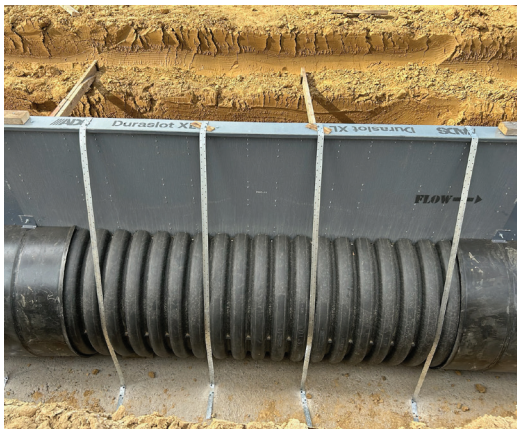
PRODUCT DESCRIPTIONS

Duraslot XL trench drains provide superior hydraulic efficiency and flow capacity, while being engineered to handle heavy structural loads. The pipe is available in 6”-36” (150-900 mm) with 5” (125 mm) wide grates in either standard or pedestrian styles. Standard and variable slot height can be manufactured specifically for your project’s needs.

N-12 dual wall pipe, made using high-density polyethylene (HDPE), has a corrugated exterior and smooth interior wall that provide 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 inline bell design allows for pipe ends to be pushed together for easy installation. N-12 ASTM pipe meets the requirements of ASTM F2648, while the fittings conform to ASTM F2306.

Nyloplast drain basins and curb inlets were custom built for the project as they are for each application. The products are more durable and corrosion resistant than precast basins and combine a rugged PVC structure with ductile iron grates. The basins can be easily adjusted in the field to meet the final grade. The structures are shipped with rubber gaskets to ensure a watertight connection.

Flexstorm inlet filters can be either a permanent or temporary solution to stormwater pretreatment before it enters the storm sewer. The inlet filters prevent siltation and pollution of rivers, lakes and ponds. The Flexstorm frames are configured to fit any storm drainage structure and are customized for the application. The replaceable geotextile sediment bags are designed for construction or post-construction applications. The units install in seconds and are easily maintained with a Universal Removal Tool, so no machinery is required.



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