NDS®
Put water in its place

Halfmoon Fire Station
Halfmoon, NY

Case Study

Channel Drains

FILCOTEN CHANNEL DRAINS BLAZE TRAILS WITH HIGH-CAPACITY DRAINAGE FOR FIRE HOUSE

In November 2020, LeChase Construction broke ground on a new fire station for the town of Halfmoon in New York state. The 18,000 sq. foot facility, which was complete in 2022, houses offices, a gear room and training space. During the planning and development phase, it was necessary to incorporate a robust water management system to surround the building's exterior. It needed to not only meet the appropriate regulatory codes but accommodate the unique demands of a fire station as set by the state of New York fire marshal.

NDS SOLUTION RISES TO TOP FOR EXTERIOR SURFACE WATER CAPTURE

Most important for the design team was implementing a drainage system that could capture large amounts of storm-water runoff as sheet flow from this new fire house. The solution would need to be able to capture stormwater around the perimeter of the building as well as any flow from inside the garage bays.

NDS Filcoten channel drains quickly surfaced as a more ideal solution than what was initially specified due to the product's high-performance channel characteristics and ability to withstand extreme conditions.

PRODUCT CHARACTERSTICS AND NDS DESIGN SUPPORT A HOT COMBO

As the only product of its kind manufactured from high performance concrete (HPC), Filcoten has the benefit of monolithic adhesion to the surrounding concrete – which was appealing to the specifier – because it prevents water intrusion and outperforms products made with polymer concrete.

PROJECT SUMMARY

PROJECT TYPE
Capture & Convey

PROPERTY
Municipal Building

STAKEHOLDERS
LeChase Construction

NDS PRODUCTS USED
320 linear ft. of Filcoten 4" channels
172 linear ft. of Filcoten 12" channels
HD load rated ductile iron grates (DIN Class E)

Filcoten is extensively tested to exceed the DIN load rating and the HPC it's made from is fire-proof, making it ideal for the rigors of a fire station.

As a value-add, the NDS DesignWorx team of drainage specialists and civil engineers provided ongoing design support, generating a layout for the drains along with a comprehensive parts list for installation – helping simplify the overall process.

In April 2021, more than 320 linear ft. of Filcoten 4" channels were installed inside the facility and 172 linear ft. of Filcoten 12" channels were installed around the station's exterior. Installation took place on time and within budget, and NDS Filcoten has proven itself durable for sheet-flow drainage at the fire station.

NDS DesignWorx Services Utilized:

1. Product specification
2. Drainage calculation
3. Plan evaluation
4. CAD file creation
5. Submittal drawing preparation

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