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Superstore sound barrier doubles as retaining wall in London, Ontario

The Real Atlantic Superstore (Choice Properties REIT) needed to replace an existing concrete sound barrier wall that had deteriorated from freeze-thaw cycles. The original wall also acted as a bit of a retaining wall and, not having been designed for that, was leaning quite badly.



Project at a glance:

Name: Real Canadian Superstore

Location: London, Ontario

Owner: Choice Properties

Engineer: IRC

Contractor: Royal Fence

Product: Tuf-Barrier (Reflective)

Sector: Commercial

Application: Sound Barrier for Commercial Development

Dimensions: Length 75 m, Height 2.45 m

Installation Time: One week

The consultant specified lightweight PVC AIL Sound Walls for the replacement sound barrier wall and we developed some specialized concrete panels at the base to provide the required soil-retaining properties.

Overcoming grade change and soil quality challenges

The wall wasn't originally specified to be part retaining wall in the bid package. A post-bid grade change led us to ask for further grade information so that we could determine the requirements for a retaining wall portion at the base.

Coupled with this, the project grew more complex due to poor foundation soils at the site. The AIL Sound Walls Engineering Team had to take special care to make certain that the wall was designed to retain the soil, install properly in the poor soils and still withstand the wind force.

Because the PVC panels are not strong enough to retain the soil, we designed special concrete base panels to integrate into our steel post system and had them produced by our partners at MSE Precast. Also, because of the poor soil quality, extra-deep, direct-bury footings were used.

The installation was completed at a quick rate once the soil issues were resolved. One end of the new sound barrier connected to an existing concrete wall, which required alignment and orientation to be very precise.

The client and specifying engineer told us they were pleased with the outcome.



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