"Only a spray-applied option such as E. Proformance was able to provide the required level of flexibility with minimal and predictable costs."

Steve Weiterman, EPRO Regional Manager, Ontario and Eastern Canada.

20,000 square feet of EPRO E.Proformance™ Used For Complex Below-Grade Conditions with Ontario Grocery Store Chain Site

A new 20,000 square-foot grocery store sought to expand its Eastern Ontario footprint and chose an area located in the former industrial area of Ashbridges Bay just east of downtown Toronto. Originally part of the Estuary of Ashbridges Bay, the area was used as a dumping ground for miscellaneous and unknown fill from the turn of the century until the early 1950's. From 1954 to 2001, a warehousing facility belonging to Brewers Retail was built and operated on the site. Upon closing and demolition, certain risks were identified related to unknown quantities and types of material that had been previously deposited on the site.

Phased environmental assessments were conducted by various consultants on the site for over a decade. In addition to identifying potential risks – including the need to further investigate and classify fills on site – investigations by the property owner's consultants identified elevated levels of methane within the soil that would require mitigation.

As part of a risk management plan, Titan Environmental, in partnership with Aims Environmental, were selected to provide an engineered design and installation of a gas vapor barrier and passive sub-slab venting system to mitigate risks of methane and other vapors from entering the building envelope.

E. Proformance Gas Vapor barrier was selected for use on this site. The E.Proformance barrier forms a very strong connection under the concrete floor slab, ensuring the barrier maintains its connection and position and does not sink or settle as soil subsides during settlement.

Along the north side of the building, e.spray is applied on top of e.base 205. Penetrations were reinforced with e.poly and e.roll, and allowed to cure before applying a bulk coat of e.spray to 60 mil.

Looking northeast from the southwest corner. The first half of the building was completed with a bulk coat of e.spray to 60 mil. The material will be allowed to cure and then smoke-tested before application of e.shield 205.

Protecting the site was a true team effort with all parties working together to ensure the job was completed in a timely and accurate fashion. The owner engaged Ottawa-based VLC Contractors as the general contractors and site managers as part of this design-build project.

"We looked at a few different options," says Kyle Kazda of VLC Contractors. "We had a lot of other concerns with the soil on this site and we needed a solution that would work, fit within our budget, and not require any redesign of other trade's work. The attention to quality control was impressive and the smoke test found every hole in the liner which were all repaired the same day. A lot of curve balls were thrown at these guys, and they worked with us through every one."

In total, 20,000 square feet of the system was applied, comprised of E.Base 205, E.Spray, and E.Shield 205. Not only did this system present the most economical option for this particular site, but it was also selected due to its reputation and long history of successfully mitigating methane soil gas.

"Many comments were made by both the owner's consultant and the GC on-site about the superiority of E. Performance to other solutions," says Weiterman. "Flexibility of the material for installation was key. Due to evolving conditions on site, they had to add additional structural details, but E.Spray pushed right through all the changes requiring no additional labor or material and only minimal design changes that did not impact the schedule."