

Garbage – It's Everywhere and Everyone's Problem

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Municipalities and property owners will be interested in an alternative to the traditional stand-alone dumpster, the unsightly wooden enclosure or the (more recent) fully enclosed and roofed structure. Deep-collection for waste management is a garbage containment revolution that could drastically improve the way with which garbage is dealt.

In place of ugly containers hidden in the

industrial, institutional, residential applications and parks or public spaces.

The concept of the deep-collection system takes advantage of the laws of nature: earth temperature and gravity. With two thirds of the eight-foot container installed below grade, garbage is kept cool in the summer, virtually eliminating odor; the ground's insulating effect prevents freezing in the winter. The small surface area (relative to the depth of the container) and its cylindrical shape cause the garbage to naturally compact by gravity, increasing the capacity by 1.5 to 2.5 times the container's actual volume. Compaction leads to less frequent pick-ups. As the well is rotation-molded from a single piece of polyethylene plastic, it is entirely leak-proof, so soil and groundwater are

protectable, cardboard and even organics and cooking oil.

The City of Kitchener's initial interest in deep-collection started about 10 years ago in the multi-residential sector, where systems were installed in low rise apartment complexes. Since then, the systems have gained popularity, and now over 80% of site plan applications submitted to the city use deep-collection systems as their preferred choice for waste management. Kitchener planning staff was impressed with this unique solution and has supported this trend by utilizing the deep-collection system at city facilities, parks and recently installed 40 units along King Street

when the downtown area was revitalized. The aesthetic benefits of these units on the City's main street are many. No longer



back corner of a property, deep-collection systems can be prominently displayed in common areas and incorporated into site design. They can be used for many kinds of developments, including commercial,

protected from contamination.

The units are available in different sizes (in a variety of above-grade finishes to suite any development) for a variety of materials such as mixed waste, recy-

are businesses piling bags of garbage on King Street 7 days a week, but now with the deep-collection units, all waste is conveniently contained in the units. Garbage pick-up has also been reduced from 7 days

a week to 3-4 days a week.

With the increase in public events and festivals in the downtown, the deep-collection units have been able to meet the needs of the event goers without having to place numerous portable garbage cans on the street.

Deep collection units can be located virtually anywhere, resulting in greater flexibility of site plan layout. The space savings versus traditional garbage enclosures can allow for more amenity space or landscaped areas on a site. On small properties they can make it easier to meet regulatory requirements for setback and parking. With the increasing demand for in-fill development on older small properties the deep-collection system can make the difference between being able to redevelop or not.

Traditional dumpsters are limited in their placement by the way they are emptied, requiring a straight-on approach by a garbage truck, which typically results in additional paved surfaces. The deep-collection unit, on the other hand, uses a reusable lifting bag that's raised by a knuckle boom crane that can reach a wider variety of places. When emptying, the release mechanism on the bottom of the bag is opened, allow the garbage to fall neatly (and cleanly) into the truck and the emptied bag is returned to the unit.

As the units protrude only 90 cm above grade, they are user-friendly and easily accessible by persons with disabilities and children alike.

With evolving municipal garbage and recycling separation requirements, the number of containers required on site has increased. Unfortunately, existing garbage enclosures typically cannot accommodate additional containers resulting in their being placed outside of the original enclosure. In some cases these additional containers are being located in required parking spaces or being placed in landscaped areas, creating unattractive and potentially unsafe sites. Alternatively, additional deep-collection containers have a much smaller footprint and avoid the need for an enclosure, making source separation relatively easy.

With the City's focus on safety, from a Crime Prevention Through Environmental Design (CPTED) perspective, the deep-collection unit is an excellent alternative to traditional garbage enclosures. They can



be prominently displayed on a site serving as an activity generator, creating opportunities for natural surveillance, eliminating the risk of entrapment or ambush and naturally deterring graffiti because of their shape and exterior finish. The units are virtually fire and blast proof, making them an effective tool in the war against terrorism.

From a site design perspective, the deep-collection waste management system can be utilized for most types of development. It is an effective crime prevention tool, pro-

vides both environmental and economic benefits, can be easily installed on virtually any site and is aesthetically pleasing.

Lisa Thompson is a Planning Technician with the City of Kitchener and Brian Page has recently retired from the City of Kitchener as the Supervisor of Site Development.

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