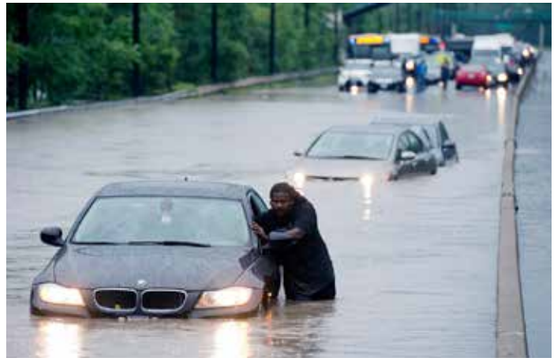

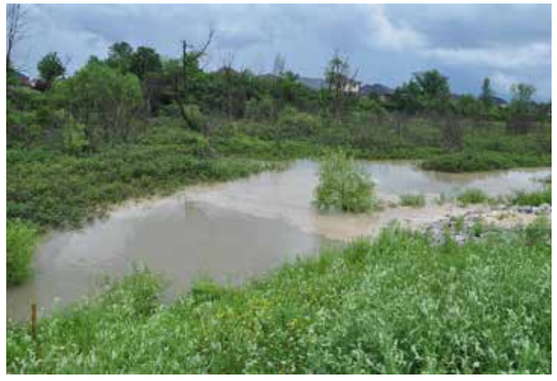

Why do we need LID in the Thames watershed?

In a natural environment, stormwater soaks into the ground, evaporates, or flows across the ground as runoff until it reaches a waterway. Development brings with it hard or impervious surfaces such as rooftops, parking lots, roads and driveways, which water cannot soak through. Rain water is drained away from buildings, and properties tend to be graded and landscapes designed to direct rain and snowmelt away. All of these factors cause more surface runoff during storms and snowmelt in urban areas, and the water runs off faster and more frequently, sometimes causing flooding.

Stormwater can also affect water quality. When water flows down city streets, it picks up pollutants and carries them into the storm drain system, which takes them directly into our creeks, the Thames River and, eventually, to Lake Erie.

For More Information

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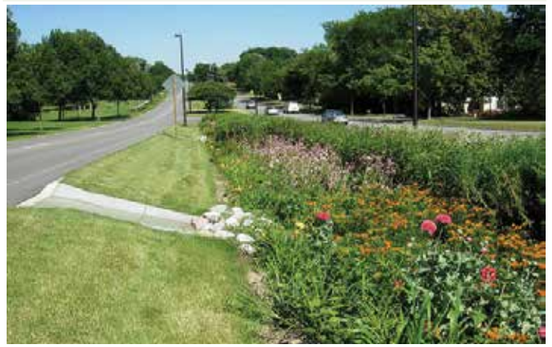
Low Impact Development (LID) in Ingersoll

The Enclave AT Victoria Hills

What is Low Impact Development (LID)?

Low Impact Development, or LID, is a stormwater management approach that uses Best Management Practices (BMPs) - small, simple designs and landscape features at the lot level to infiltrate, filter, store, evaporate and detain runoff close to its source. These BMPs can be used in new development, urban retrofits and redevelopment projects, on lawns, streets, sidewalks, medians, roofs and in parking lots.



Examples of LID BMPs include:

- Rain garden - small depression planted with native flowers, grasses and shrubs, designed to temporarily hold and soak in rain water from a roof, driveway or open area
- Bioswale - wide, shallow channel planted with grass or other vegetation, that stormwater runoff flows through
- Downspout redirect – extension or bend in the gutter to redirect rain water to a grassy or permeable area
- Rain barrel – tank attached to the end of the downspout to collect rain water from the roof
- Porous or pervious pavement – concrete or asphalt that allows rain to infiltrate to the soil

The goal of LID is to reduce the rate and amount of water running off of a property. Less water goes into watercourses from storm sewers, helping to minimize flooding and stream bank erosion, and reducing the impact on water quality.

LID in Ingersoll

Warren Sinclair Homes, the developer of "The Enclave at Victoria Hills," is working with the Upper Thames River Conservation Authority (UTRCA), Dillon Consulting and the Town of Ingersoll to implement LID BMPs, namely rain gardens and bioswales, on their site.

Before this site was developed, it drained towards Ingersoll Street. With development, the drainage pattern has been altered so that runoff now flows to the perimeter of the site and then either clockwise or counter-clockwise around the edge.

The runoff will move through a series of bioswales and rain gardens, towards two large rain gardens along Ingersoll Street. Water will be retained in the rain gardens before infiltrating into the soil. A perforated drain under the rain gardens will move stormwater that has been filtered by the plants and soil onto the next rain garden.

At the two largest rain gardens along Ingersoll Street, any water in the underdrain will flow at a controlled rate into the municipal stormwater system.

Measuring Success

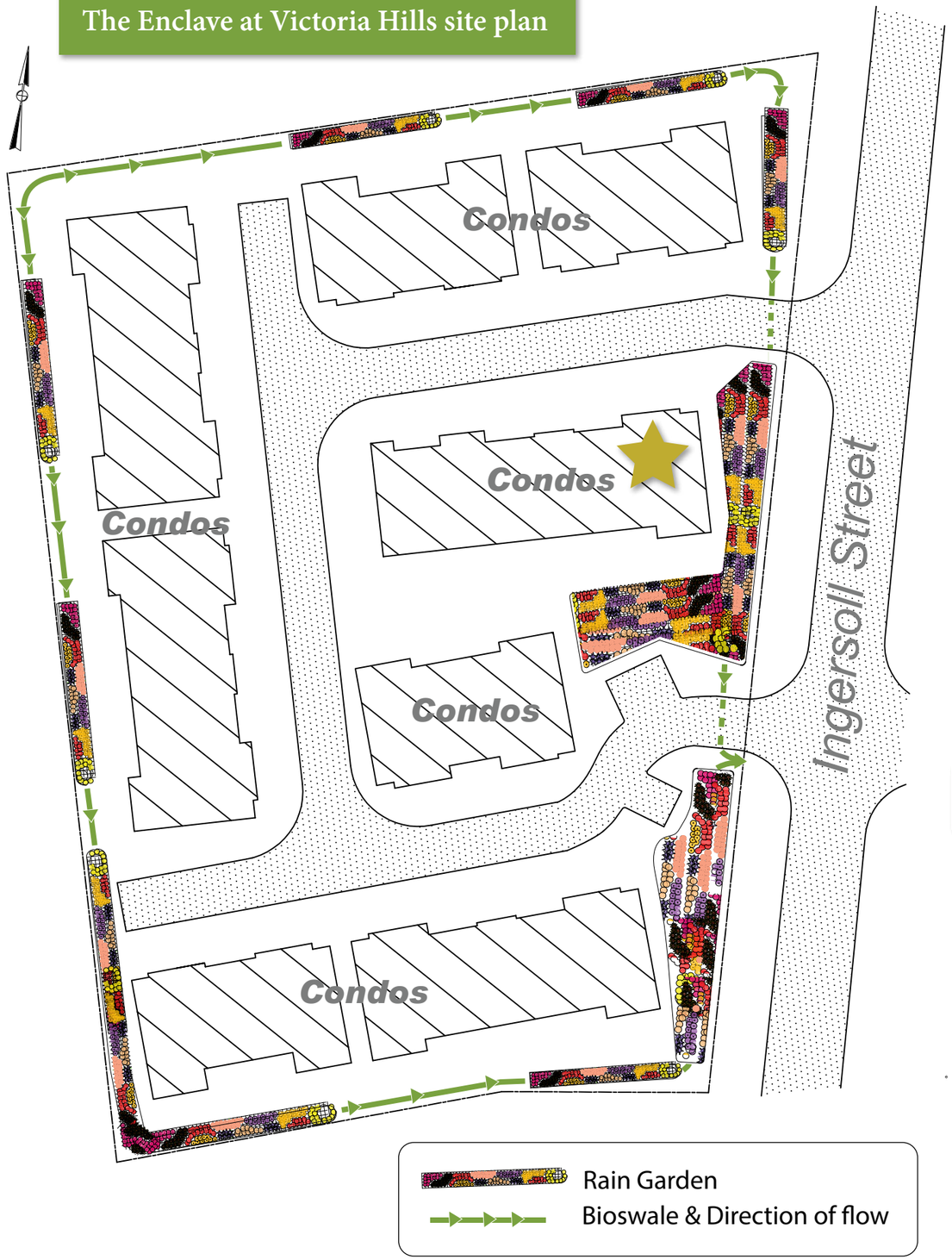
Engineers have calculated the amount of water expected to run off of this site both before and after development. Thanks to the LID features that are being constructed, the flows leaving this site after development will be the same as or less than they were before development. There will not be any additional flows entering the municipal stormwater system.

LID Design & Maintenance

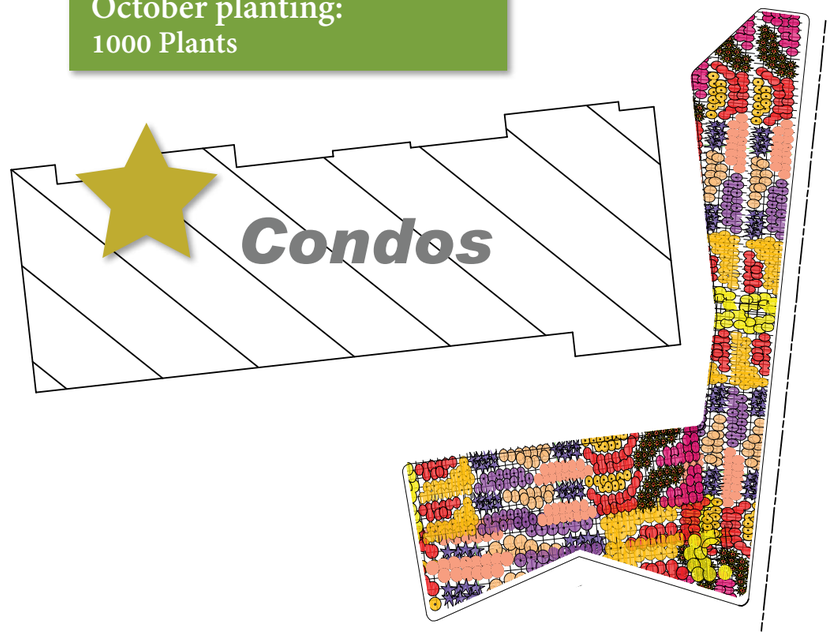
LID features must be carefully placed, designed, constructed and maintained to function properly. Every aspect of a LID is carefully thought out, including what rocks, soils and vegetation to use.

Installing a LID is painstaking work. For example, when planting the vegetation, it is important not to compact the soil as this will inhibit infiltration. The UTRCA and Warren Sinclair Homes will provide the property owners at The Enclave with information on maintaining the LID features, to ensure the BMPs continue their important function for many years to come.

The Enclave at Victoria Hills site plan



October planting: 1000 Plants



Rain garden cross-section