COMMON QUESTIONS – SEGMENTAL RETAINING WALLS

1. What is a segmental retaining wall?

A Segmental Retaining Wall (SRW) consists of a series of interlocking segmental pieces that are stacked up to create your retaining wall - think of it as a large scale LEGO block wall. SRWs can be used for a number of applications including soil retention, erosion control and landscaping.

2. What is geogrid?

Geogrid is a high tensile polypropylene or polyester material that is typically used to stabilize the soil mass behind a wall. The number of grid layers and lengths are determined by the wall system being used and what is being retained behind the wall. For example, the installation of geo grid should be considered for a parking lot in which surcharge loading is present or a wall with a slope behind it, as the pressure may negatively affect the wall.

3. What is the difference between a gravity SRW and a reinforced SRW?

A wall that is able to resist the soil pressure behind it (i.e stay standing after the soil has been put back behind it), and any surcharge loading at the top of the wall (roadway, parking lot, building), by relying on its sheer weight is considered a gravity wall.

When geogrid is used in cooperation with the interlocking segmental pieces to reinforce the soil behind the wall, the wall design is referred to as being reinforced.

4. How tall can I build a segmental retaining wall?

The height of your wall depends on site conditions, the type of product used, the batter of the wall, and whether or not it is includes a geosynthetic reinforcing (reinforced wall).

Site conditions that need to be considered include soil types (gravel, sand, silt, clay, combination thereof), soil characteristics (grain size, grading), in-situ state of soils (very loose, loose, compact, dense), groundwater conditions, slope of ground above and below the proposed wall, presence of surcharge loads above the wall, and overall 'global' slope stability.

In terms of the type of product, the heavier and deeper (depth measured back from the front face) the unit, the higher the wall can likely be constructed without having to add reinforcing. For example, Wedgestone® should only be stacked 450 to 600 mm (18" to 24"), while Rosetta Outcropping walls can be built in excess of 2 metres (6') without geotextile reinforcing.

The batter or setback of the wall is the angle of the front face of the wall as compared to a vertical straight line starting at the toe of the slope. Walls that are straight faced (i.e have no batter or setback), cannot be built as high as walls that have a batter. With most of our retaining walls, you have the option of straight or setback construction. Because of the

additional support provided by the geogrid, a reinforced SRW can be built higher than a gravity SRW.

In short, it is always recommended that you talk to one of our sales representatives prior to constructing any retaining wall project.

5. Is a concrete footing required at the base of the wall?

No, a solid concrete footing is actually detrimental to a SRW system because it prevents the wall from being able to shift naturally (keep in mind, the ability to shift naturally rather than crack is an advantage of a SRW system).

A well compacted base of proper aggregate material is the best material for the retaining wall footing.

6. Is a drain required behind the wall?

When water builds up behind your retaining wall, a hydrostatic pressure results that can compromise the integrity of the wall. To prevent this from happening, it is always recommended that 300 mm (12") of good drainage material be placed behind the wall, and a perforated drain be placed at the back of the foundation, to provide a means for the water to drain away.

7. Should I seal my retaining wall front face?

If you want to seal the retaining wall to protect it from, say, deicing salts, it is important to use the proper type of sealer (i.e one that is capable of breathing). Using the wrong sealer will possibly trap water behind the sealer and cause water blushing (face turns white).

8. Can I build a fire pit using SRW units?

Although it is easy to create an attractive outside face to your fire pit using SRW units, it is important to line the inside of the fire pit with a fire rated brick, refractory or metal ring. Under direct high heat stress, a SRW will crack and possibly even explode.