

Provided By:



## WHAT ARE THE BASIC COMPONENTS OF AN SRW SYSTEM?

While no two segmental retaining walls are exactly alike, there are several features common to many segmental retaining wall systems; each contributing to the overall performance of the SRW system.

### FOUNDATION SOIL

The foundation soil supports the leveling pad and the reinforced soil zone (for reinforced SRW systems)

### LEVELING PAD

The leveling pad consists of crushed stone or unreinforced concrete, which distributes the weight of the SRW units over a wider area and provides a working surface during construction. The leveling pad typically extends a minimum of 6 in. (152 mm) from the toe (front) and heel (back) of the lowermost SRW unit and is at least 6 in. (152 mm) thick.

### SEGMENTAL RETAINING WALL UNITS

Segmental retaining wall (SRW) units are manufactured concrete masonry units used to provide structural stability, durability, and visual enhancement at the face of the wall. For reinforced SRW systems, the interface between SRW units also provides a connection point for the soil reinforcement.

### RETAINED SOIL

Retained soil is the soil behind the reinforced zone of reinforced segmental retaining walls or the soil behind the gravel fill for gravity segmental retaining walls. Retained soil often consists of locally available or common backfill material.

### GRAVEL FILL

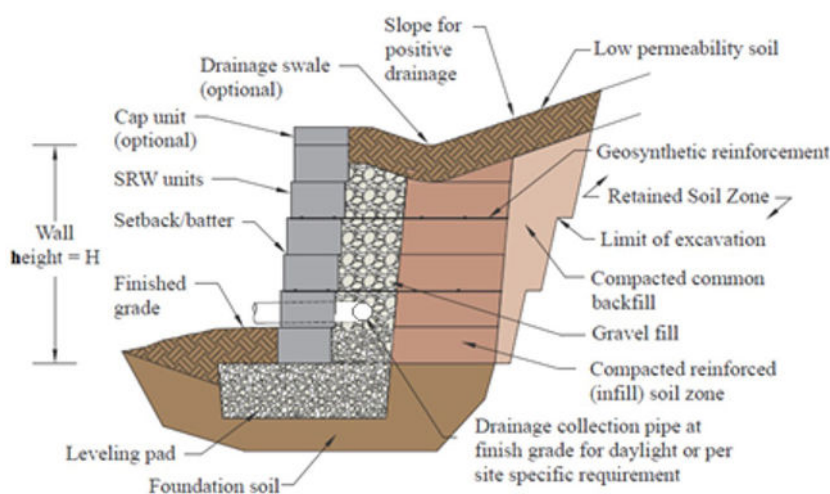
Gravel fill is a free-draining granular material placed behind the SRW units to facilitate the removal of incidental groundwater, and to facilitate compaction behind the SRW assembly. In units with open cores, gravel can be placed within the cores to increase the weight and shear capacity of the assembly. An optional geotextile filter can be installed between the gravel fill and the reinforced or retained soil to protect the gravel from clogging. The gravel fill extends a minimum of 12 in. (305 mm) behind the SRW units.

### REINFORCED SOIL

Reinforced soil is compacted fill used behind the SRW units that contains horizontal soil reinforcement. A variety of fill materials can be used.

### SOIL REINFORCEMENT

Soil reinforcement (geosynthetic reinforcement) consists of high tenacity geogrids or geotextiles manufactured for



Last Revised September 2, 2014

soil reinforcement applications. Soil reinforcement is placed in horizontal layers to unify the mass of the composite SRW structure (SRW units, reinforced soil, and soil reinforcement) thereby increasing the resistance of the system to the destabilizing forces generated by the soils and surcharge loads. A variety of soil reinforcement materials are available.

## **ABOUT CMHA**

The Concrete Masonry & Hardscapes Association (CMHA) represents a unification of the Interlocking Concrete Pavement Institute (ICPI) and National Concrete Masonry Association (NCMA). CMHA is a trade association representing US and Canadian producers and suppliers in the concrete masonry and hardscape industry, as well as contractors of interlocking concrete pavement and segmental retaining walls. CMHA is the authority for segmental concrete products and systems, which are the best value and preferred choice for resilient pavement, structures, and living spaces. CMHA is dedicated to the advancement of these building systems through research, promotion, education, and the development of manufacturing guides, design codes and resources, testing standards, and construction practices.

### **Disclaimer:**

The content of this CMHA FAQ is intended for use only as a guideline and is made available “as is.” It is not intended for use or reliance upon as an industry standard, certification or as a specification. CMHA and those companies disseminating the technical information contained in the FAQ make no promises, representations or warranties of any kind, expressed or implied, as to the accuracy or completeness of content contained in the FAQ and disclaim any liability for damages or injuries resulting from the use or reliance upon the content of FAQ. Professional assistance should be sought with respect to the design, specifications, and construction of each project.