

World Block Knob Style Block & SRW7 Geogrid Placement Tables

Sample designs, **27 degree** friction angle soil

These charts are applicable for site soils when the friction angle is 27 degrees or higher and the moist unit weight is 120 lbs. per cubic foot. That is typical for inorganic clays of low to medium plasticity. Site soils are assumed for the reinforced soil (infill), retained soil, and foundation soil.

Site Configuration: Flat at top and bottom of wall, no surcharge

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/6' 0"	2nd/6' 6"					
7' 6"	8' 0"	4	3	1st/5' 6"	2nd/6' 6"	3rd/8' 0"				
9' 6"	10' 0"	5	4	1st/6' 6"	2nd/6' 6"	3rd/8' 0"	4th/9' 6"			
11' 0"	12' 0"	6	5	1st/8' 0"	2nd/8' 0"	3rd/8' 0"	4th/9' 6"	5th/11' 0"		

Site Configuration: Flat at top and bottom of wall, 100 psf surcharge (Light Traffic) starts 1' back of wall

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/6' 0"	2nd/7' 0"					
7' 6"	8' 0"	4	3	1st/6' 0"	2nd/6' 6"	3rd/8' 6"				
9' 6"	10' 0"	5	4	1st/6' 6"	2nd/6' 6"	3rd/8' 0"	4th/10' 0"			
11' 0"	12' 0"	6	5	1st/8' 0"	2nd/8' 0"	3rd/8' 0"	4th/9' 6"	5th/11' 0"		

Site Configuration: Flat at bottom of wall, 4 horizontal to 1 vertical slope at top of wall

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/6' 0"	2nd/7' 0"					
7' 6"	8' 0"	4	3	1st/6' 0"	2nd/7' 0"	3rd/8' 6"				
9' 6"	10' 0"	5	4	1st/7' 0"	2nd/7' 0"	3rd/8' 6"	4th/10' 6"			
11' 0"	12' 0"	6	5	SRW9 1st/8' 0"	2nd/8' 0"	3rd/9' 0"	4th/10' 6"	5th/12' 0"		

Site Configuration: Flat at bottom of wall, 3 horizontal to 1 vertical slope at top of wall

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/6' 6"	2nd/7' 0"					
7' 6"	8' 0"	4	3	1st/6' 6"	2nd/7' 6"	3rd/9' 0"				
9' 6"	10' 0"	5	4	1st/8' 6"	2nd/8' 6"	3rd/9' 0"	4th/11' 0"			
11' 0"	12' 0"	6	5	SRW9 1st/10' 6"	2nd/10' 6"	3rd/10' 6"	4th/11' 0"	5th/13' 0"		

1) Sample designs are to be used for preliminary design only when actual soil, site geometry and surcharge conditions are conservatively represented by the assumptions of the tables in all situations. A surcharge of 100 pounds represents light residential traffic. An example of light residential traffic is a driveway with car traffic only. For heavier surcharges request a site specific preliminary design. A licensed engineer using actual design conditions for the proposed site should perform the final design for construction.

2) Sample designs have been prepared exclusively for the use of SRW7 series geogrid, except for the bottom layer on the 11' 0" exposed height walls with a 3/1 and a 4/1 slope at the top of wall, which will use SRW9 series geogrid.

3) MINIMUM FACTORS OF SAFETY: 1.5 for internal reinforcement pullout and tensile overstress, 1.5 for external sliding, 2.0 for external overturning and bearing capacity. NO provision or analysis is included for global stability.

4) Sample designs require adequate drainage provisions for both the reinforced wall fill and retained backfill.

5) Geogrid must be one continuous piece from the face of the retaining wall block to the back of the reinforced soil mass. No splicing of geogrid. Geogrid must butt together at the edges but must not be overlapped. Geogrid must be pulled taught before backfill is placed. Geogrid strength is in the roll direction. Do not place/roll out geogrid parallel to the wall facing. Geogrid must be placed/rolled out perpendicular to the wall facing.

6) Follow the installation instructions that are supplied with the retaining wall system that you are purchasing. (Which should include; foundation preparation, block alignment, block corefill, drainage rock placement, backfill placement, geogrid placement, & compaction).

7) See your local building department for permitting requirements.

8) If your site does not fit the above site configurations, call SRW Products at (800) 752-9326 for a free site specific preliminary design.

World Block Knob Style Block & SRW7 Geogrid Placement Tables

Sample designs, **30 degree** friction angle soil

These charts are applicable for site soils when the friction angle is 30 degrees or higher and the moist unit weight is 125 lbs. per cubic foot. That is typical for silty sands. Site soils are assumed for the reinforced soil (infill), retained soil, and foundation soil.

Site Configuration: Flat at top and bottom of wall, no surcharge

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/5' 0"	2nd/6' 0"					
7' 6"	8' 0"	4	3	1st/5' 6"	2nd/6' 0"	3rd/7' 6"				
9' 6"	10' 0"	5	4	1st/6' 6"	2nd/6' 6"	3rd/7' 6"	4th/8' 6"			
11' 0"	12' 0"	6	5	1st/8' 0"	2nd/8' 0"	3rd/8' 0"	4th/8' 6"	5th/10' 0"		

Site Configuration: Flat at top and bottom of wall, 100 psf surcharge (Light Traffic) starts 1' back of wall

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/5' 6"	2nd/6' 6"					
7' 6"	8' 0"	4	3	1st/5' 6"	2nd/6' 0"	3rd/8' 0"				
9' 6"	10' 0"	5	4	1st/6' 6"	2nd/6' 6"	3rd/7' 6"	4th/9' 6"			
11' 0"	12' 0"	6	5	1st/ 8' 0"	2nd/8' 0"	3rd/8' 0"	4th/9' 0"	5th/10' 6"		

Site Configuration: Flat at bottom of wall, 4 horizontal to 1 vertical slope at top of wall

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/5' 6"	2nd/6' 6"					
7' 6"	8' 0"	4	3	3rd/5' 6"	2nd/6' 6"	3rd/8' 0"				
9' 6"	10' 0"	5	4	1st/6' 6"	2nd/6' 6"	3rd/8' 0"	4th/9' 6"			
11' 0"	12' 0"	6	5	1st/8' 0"	2nd/8' 0"	3rd/8' 0"	4th/9' 6"	5th/11' 0"		

Site Configuration: Flat at bottom of wall, 2.5 horizontal to 1 vertical slope at top of wall

Exposed Height	Total Height	Number of Block Courses	Number geogrid layers	Block course that geogrid is placed on top of and length of geogrid. (Block course/geogrid length)						
3' 6"	4' 0"	2	0							
5' 6"	6' 0"	3	2	1st/6' 0"	2nd/7' 0"					
7' 6"	8' 0"	4	3	1st/6' 0"	2nd/7' 0"	3rd/9' 0"				
9' 6"	10' 0"	5	4	1st/7' 0"	2nd/7' 0"	3rd/9' 0"	4th/10' 6"			
11' 0"	12' 0"	6	5	SRW9 1st/8' 6"	2nd/8' 6"	3rd/9' 0"	4th/10' 6"	5th/12' 6"		

1) Sample designs are to be used for preliminary design only when actual soil, site geometry and surcharge conditions are conservatively represented by the assumptions of the tables in all situations. A surcharge of 100 pounds represents light residential traffic. An example of light residential traffic is a driveway with car traffic only. For heavier surcharges request a site specific preliminary design. A licensed engineer using actual design conditions for the proposed site should perform the final design for construction.

2) Sample designs have been prepared exclusively for the use of SRW7 series geogrid, except for the bottom layer on the 11' 0" exposed height wall with a 2.5/1 slope at the top of wall, which will use SRW9 series geogrid.

3) MINIMUM FACTORS OF SAFETY: 1.5 for internal reinforcement pullout and tensile overstress, 1.5 for external sliding, 2.0 for external overturning and bearing capacity. NO provision or analysis is included for global stability.

4) Sample designs require adequate drainage provisions for both the reinforced wall fill and retained backfill.

5) Geogrid must be one continuous piece from the face of the retaining wall block to the back of the reinforced soil mass. No splicing of geogrid. Geogrid must butt together at the edges but must not be overlapped. Geogrid must be pulled taught before backfill is placed. Geogrid strength is in the roll direction. Do not place/roll out geogrid parallel to the wall facing. Geogrid must be placed/rolled out perpendicular to the wall facing.

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