



OUTCROPPING

FEATURES

- Beautiful weathered stone textures and natural color blends
- Consistent dimensions equals fast installation
- Quality materials equals long term durability
- Freestanding units have five-sided surface texture to allow for freestanding (two-sided) installations
- Corner blocks help make a 90° corner with five-sided surface texture and can be installed with alternating faces exposed to maintain a more random look
- Galvanized steel hooks are available and required for reinforced walls.

FOR PRELIMINARY WALL SECTIONS
SCAN HERE



Notes:

*Colors & product availability vary by region.

**Outcropping pallets are sold in full pallet quantities only, individual sizes cannot be requested. Actual weight and color may vary.

CORNER PALLET: 6 in (152 mm)

Weight: ±2,015 lb (±914 kg) (inc. pallet)
Coverage: 11 sq ft (1.02 sq m)
Units Per Pallet: 4

Product depth nominally
27 in (686 mm)



UNIT: CORNER 6 in (152 mm)
Weight: ±480 lb (±218 kg)

CORNER PALLET: 12 in (305 mm)

Weight: ±3,600 lb (±1,633 kg) (inc. pallet)
Coverage: 19.5 sq ft (1.81 sq m)
Units Per Pallet: 3

Product depth nominally
30 in (762 mm)



UNIT: CORNER 12 in (305 mm)
Weight: ±1,170 lb (±531 kg)

CORNER NOTES

- Two 6 in (152 mm) high corner blocks are typically stacked on top of each other and placed on top of a 12 in (305 mm) block.
- In a few areas, you may need to trim a small part of the corner blocks near the back of the wall to avoid interference with the shear heels on adjacent blocks.

OUTCROPPING

RETAINING PALLET: A

Weight: ±4,000 lb (±1,814 kg) (inc. pallet)
 Coverage : 18 sq ft (1.67 sq m)
 Units Per Pallet: 4 (1 of each)



UNIT: 42 x 12 in (1068 x 305 mm)
 Weight: ±750 lb (±340 kg)



UNIT: 48 x 12 in (1219 x 305 mm)
 Weight: ±900 lb (±408 kg)



UNIT: 60 x 12 in (1524 x 305 mm)
 Weight: ±1,100 lb (±499 kg)



UNIT: 66 x 12 in (1676 x 305 mm)
 Weight: ±1,150 lb (±522 kg)

Product depth nominally from 18 in (457 mm) – 24 in (610 mm) for Retaining Wall units.

RETAINING PALLET: B

Weight: ±4,000 lb (±1,814 kg) (inc. pallet)
 Coverage : 18 sq ft (1.67 sq m)
 Units Per Pallet: 6 (1 of each)



UNIT: 24 x 6 in (610 x 152 mm)
 Weight: ±250 lb (±113 kg)



UNIT: 36 x 6 in (914 x 152 mm)
 Weight: 320± lb (±145 kg)



UNIT: 48 x 6 in (1219 x 152 mm)
 Weight: ±450 lb (±204 kg)



UNIT: 36 x 12 in (914 x 305 mm)
 Weight: ±620 lb (±281 kg)



UNIT: 54 x 12 in (1372 x 305 mm)
 Weight: 950± lb (±430 kg)



UNIT: 72 x 12 in (1829 x 305 mm)
 Weight: ±1,300 lb (±589 kg)

Product depth nominally from 18 in (457 mm) – 24 in (610 mm) for Retaining Wall units.

RETAINING PALLET: C

Weight: ±4,000 lb (±1,814 kg) (inc. pallet)
 Coverage : 18 sq ft (1.67 sq m)
 Units Per Pallet: 4 (1 of each)



UNIT: 24 x 6 in (610 x 152 mm)
 Weight: ±250 lb (±113 kg)



UNIT: 36 x 6 in (914 x 152 mm)
 Weight: ±320 lb (±145 kg)



UNIT: 60 x 18 in (1524 x 457 mm)
 Weight: ±1,600 lb (±726 kg)



UNIT: 48 x 24 in (1219 x 610 mm)
 Weight: ±1,800 lb (±816 kg)

Product depth nominally from 18 in (457 mm) – 24 in (610 mm) for Retaining Wall units.

FREESTANDING PALLET: D

Weight: ±3,150 lb (±1,429 kg) (inc. pallet)
 Coverage: 11 sq ft (1.02 sq m)
 Units Per Pallet: 3 (1 of each)



UNIT: 48 x 12 in (1210 x 305 mm)
 Weight: ±1,080 lb (±490 kg)



UNIT: 48 x 6 in (1210 x 152 mm)
 Weight: ±460 lb (±209 kg)



UNIT: 60 x 12 in (1524 x 305 mm)
 Weight: ±1,540 lb (±699 kg)

Product depth nominally 30 in (762 mm) for Freestanding Wall units.

FREESTANDING PALLET: E

Weight: ±3,450 lb (±1,565 kg) (inc. pallet)
 Coverage: 10.5 sq ft (0.97 sq m)
 Units Per Pallet: 3 (1 of each)



UNIT: 18 x 12 in (914 x 305 mm)
 Weight: ±880 lb (±400 kg)



UNIT: 18 x 6 in (914 x 152 mm)
 Weight: ±440 lb (±200 kg)



UNIT: 72 x 12 in (1829 x 305 mm)
 Weight: ±2,080 lb (±943 kg)

Product depth nominally 30 in (762 mm) for Freestanding Wall units.

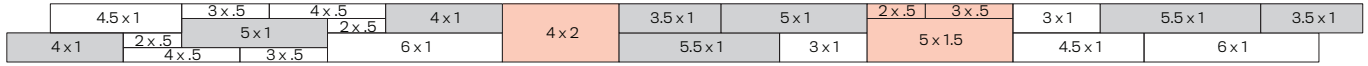
OUTCROPPING

RETAINING WALL PATTERNS, 90 sq ft (27 sq m)

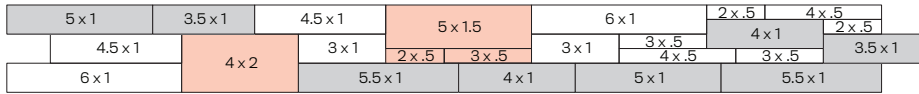
(2 PALLET A, 2 PALLET B AND 1 PALLET C)

Please note that the length dimensions shown for Outcropping blocks are rounded for reference. The actual length of the constructed wall will vary slightly from the pattern dimensions shown. Block size and placement shown are for reference only. Individual Outcropping blocks will vary with installation pattern. For more information visit rosettahardscapes.com

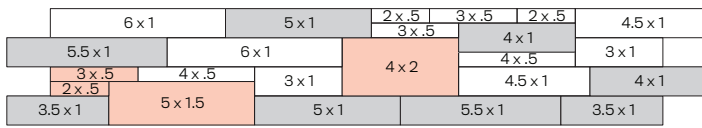
45 ft X 2 ft (13.7 X 0.60 m)



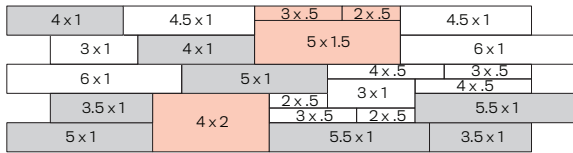
30 ft X 3 ft (9.14 X 0.91 m)



22.5 ft X 4 ft (6.85 X 1.21 m)



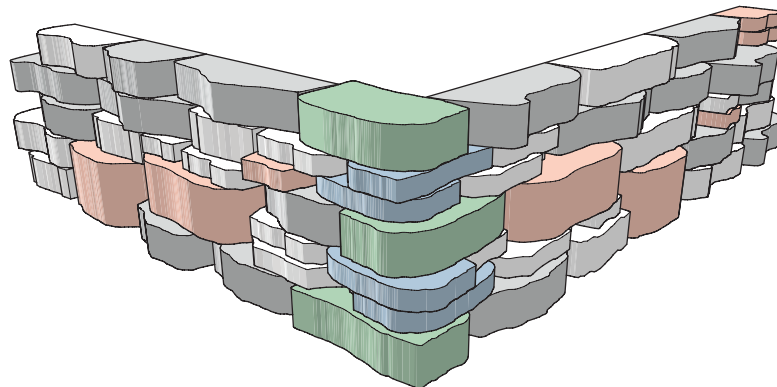
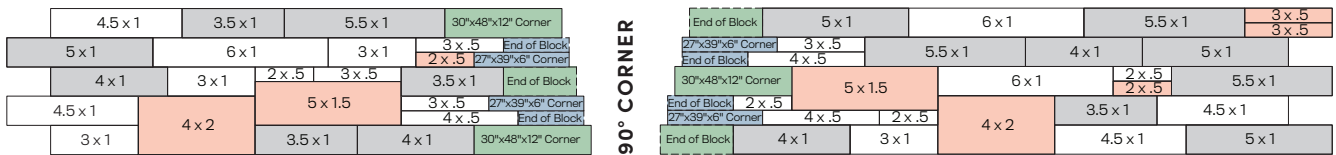
18 ft X 5 ft (5.48 X 1.52 m)



90° CORNER WALL

Outcropping has two corner blocks to help make a 90° corner in the wall. The corner blocks are four-sided, and can be installed with alternating faces exposed to maintain a more random look.

The size of the corner blocks have been chosen to account for the wall batter in both directions. Two 6 in (152 mm) high corner blocks are typically stacked on top of each other and placed on top of a 12 in (305 mm) block. The corner blocks are intended to be stepped back 3 in (76 mm) in both directions. In a few areas, you may need to trim a small part of the corner blocks near the back of the wall to avoid interference with the shear heels on adjacent blocks. See the pattern shown here, which details how to make a 90° corner with (4) A pallets, (4) B pallets, (2) C pallets, (3) 12 in (305 mm) corner blocks and (4) 6 in (152 mm) corner blocks.



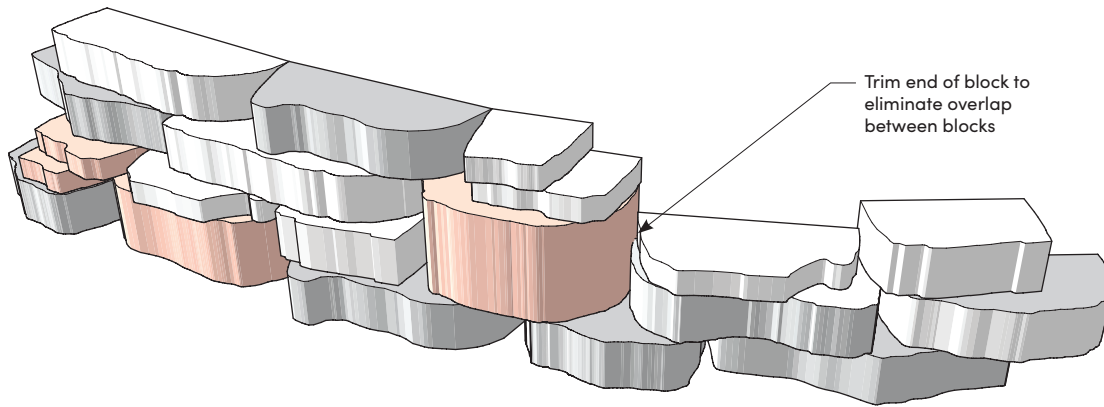
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CURVES

Outcropping blocks have shear heels to help with wall integrity and provide a setback from lower blocks in the wall, thus causing the wall to batter back. The batter is important to the engineering design of the wall, and it must be accounted for during construction of a curved wall section.

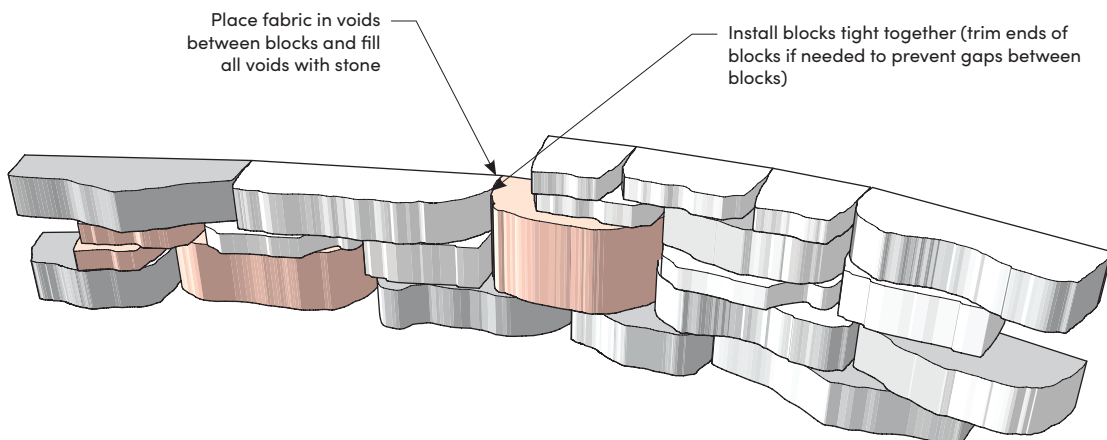
OUTSIDE (CONVEX) CURVE

If you are constructing an outside (convex) curve, the wall batter will cause the blocks higher in the wall to have a shorter radius around the curve than lower blocks. This will cause the higher blocks to ingrow in the wall layout pattern. (This is similar in concept to the inside lane of a race track being shorter than the outside lane). The result is a potential overlap between some of the blocks in the wall. The best way to deal with this overlap is to saw cut the end of the smaller block, which allows the blocks to fit tight together and all the shear heels to be properly engaged. This saw cut is typically made on an angle to match the taper on the block you are abutting.



INSIDE (CONCAVE) CURVE

If you are constructing an inside (concave) curve, the wall batter will cause the block higher in the wall to have a longer radius around the curve than lower blocks. The important step when constructing an inside curve is to keep all blocks tight together. In most cases, the blocks will touch somewhere along the sides of the blocks, not at the back of the blocks. If needed, you can trim the ends off some blocks to prevent gaps from opening up between blocks. When constructing a curve with a short radius, voids may form at the back of the wall where two blocks meet. If this happens simply fill the void areas with filter fabric and drainstone.



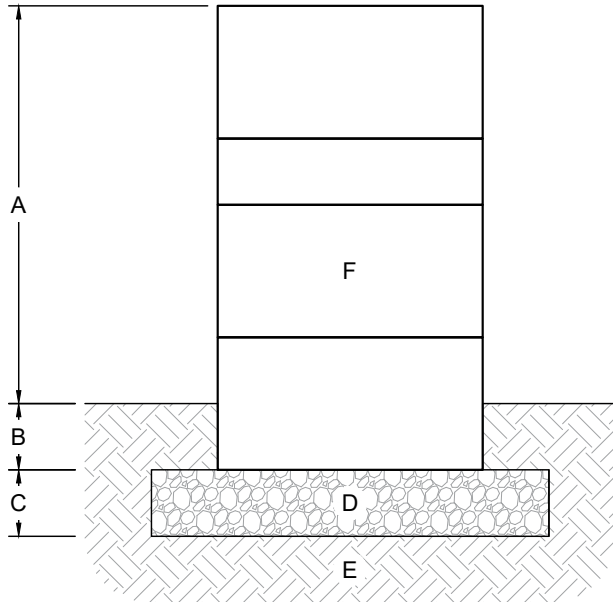
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GENERAL NOTES FOR WALL SECTIONS

This page shows typical construction details for Outcropping walls. These drawings are representative of major components required in wall construction. Specific details including geotextile reinforcement layers, drainage details, soil requirements, etc. shall be per engineered design for the wall. For more cross-section and design options, visit our website.

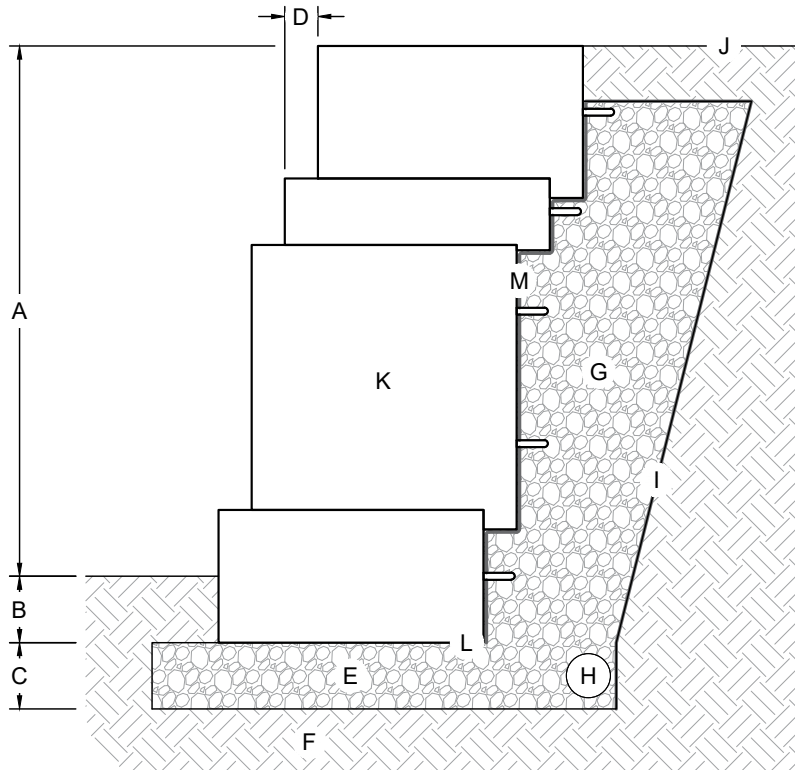
- These drawings are for preliminary reference only (not for final construction).
- Final designs for construction **must be prepared by a registered professional engineer using the actual conditions of the proposed site and loads.**
- Block size and placement shown are for reference only, individual Outcropping blocks will vary with installation pattern.

TYPICAL FREESTANDING WALL DETAIL



- A. Exposed height (varies, max. 36 in (1067 mm))
- B. Bury depth (min. 6 in (152 mm))
- C. Leveling pad depth (min. 6 in (152 mm))
- D. Crushed stone leveling pad
- E. Foundation soil compacted to 95% max. dry density
- F. Freestanding wall blocks

TYPICAL GRAVITY RETAINING WALL DETAIL



- A. Exposed height (varies by design)
- B. Bury depth (varies by design, min. 6 in (152 mm))
- C. Leveling pad depth (varies by design, min. 6 in (152 mm))
- D. Horizontal setback, 3 in (76 mm) per 12 in (305 mm) vertical (14° batter angle on wall)
- E. Crushed stone leveling pad
- F. Foundation soil compacted to 95% max. dry density
- G. Drainstone (ASTM #57) min. 12 in (305 mm) behind wall
- H. 4 in (102 mm) corrugated perforated drain pipe
- I. Non-woven geotextile fabric
- J. Finish grade to drain away from the wall
- K. Wall blocks
- L. Shear heel removed from base block (optional)
- M. Non-woven geotextile fabric at back of blocks and top of drainstone (required)

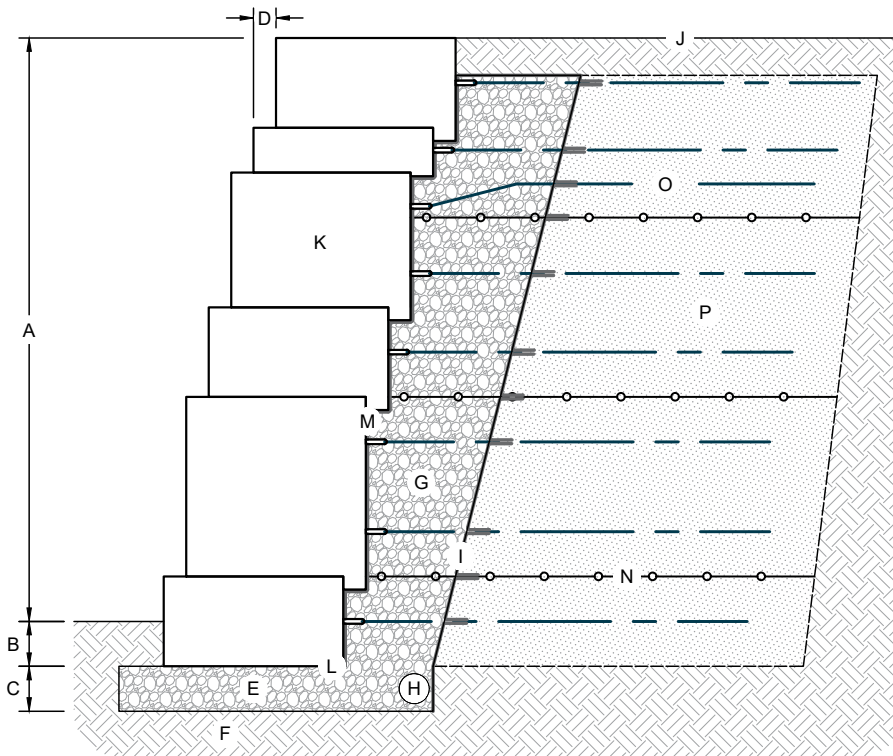
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GENERAL NOTES FOR WALL SECTIONS

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TYPICAL RETAINING WALL DETAIL WITH SOIL REINFORCEMENT



- A. Exposed height (varies by design)
- B. Bury depth (varies by design, min. 6 in (152 mm))
- C. Leveling pad depth (varies by design, min. 6 in (152 mm))
- D. Horizontal setback, 3 in (76 mm) per 12 in (305 mm) vertical (14° batter angle on wall)
- E. Crushed stone leveling pad
- F. Foundation soil compacted to 95% max. dry density
- G. Drainstone (ASTM #57) min. 12 in (305 mm) behind wall
- H. 4 in (102 mm) corrugated perforated drain pipe
- I. Non-woven geotextile fabric (recommended)
- J. Finish grade to drain away from the wall
- K. Wall blocks
- L. Shear heel removed from base block (optional)
- M. Non-woven geotextile fabric at back of blocks and top of drainstone (required)
- N. Geogrid reinforcement, abutting the backside of the block (length, vertical placement, and geogrid type varies by design).
- O. Paraweb strap installed on every loop (embedment depth varies by design, maintain a min. 3 in (76 mm) vertical space from geogrid)
- P. Reinforced soil compacted to 95% max. dry density

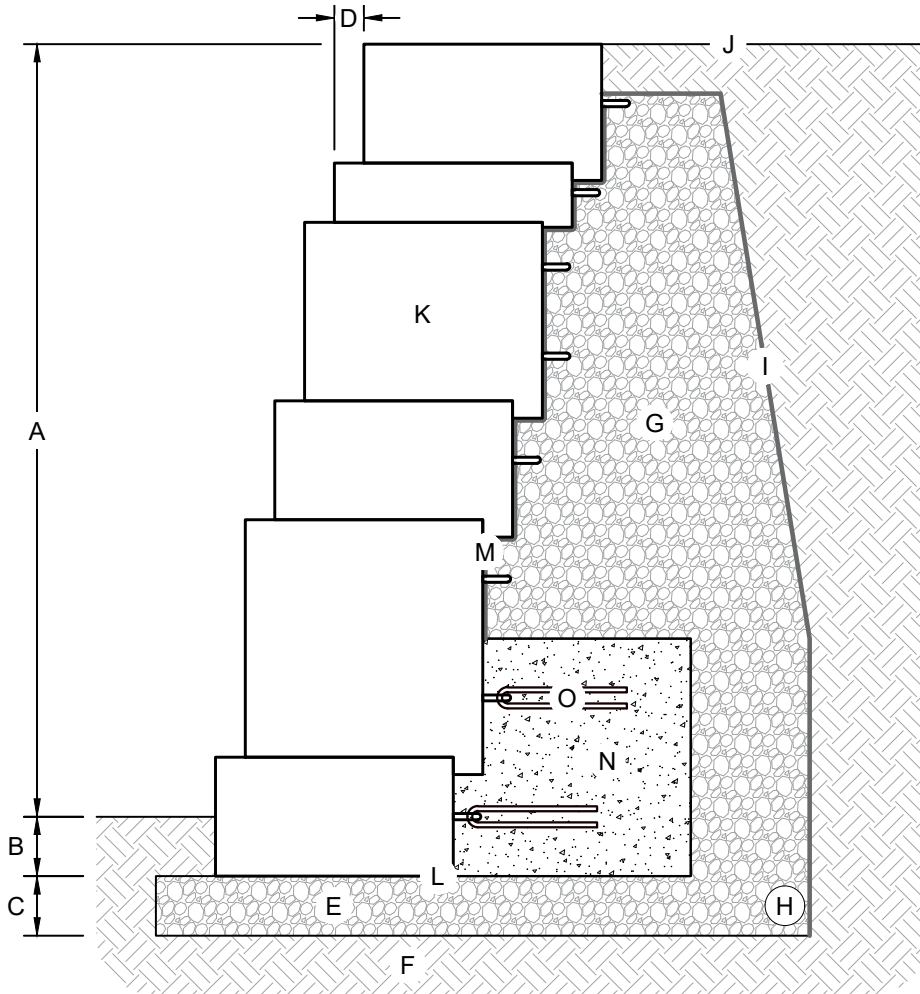
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GENERAL NOTES FOR WALL SECTIONS

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TYPICAL RETAINING WALL DETAIL WITH CAST-IN-PLACE CONCRETE BACKFILL



- A. Exposed height (varies by design)
- B. Bury depth (varies by design, min. 6 in (152 mm))
- C. Leveling pad depth (varies by design, min. 6 in (152 mm))
- D. Horizontal setback, 3 in (76 mm) per 12 in (305 mm) vertical (14° batter angle on wall)
- E. Crushed stone leveling pad
- F. Foundation soil compacted to 95% max. dry density
- G. Drainstone (ASTM #57) min. 12 in (305 mm) behind wall
- H. 4 in (102 mm) corrugated perforated drain pipe
- I. Non-woven geotextile fabric
- J. Finish grade to drain away from the wall
- K. Wall blocks
- L. Shear heel removed from base block (optional)
- M. Non-woven geotextile fabric at back of blocks and top of drainstone (required)
- N. Cast-in-place ready-mix concrete, min. 2,500 psi (17 MPa) (height & depth vary by design)
- O. #4 rebar, 18 in (457 mm) lengths ben in half (9 in (229 mm) embedment), installed on every loop.

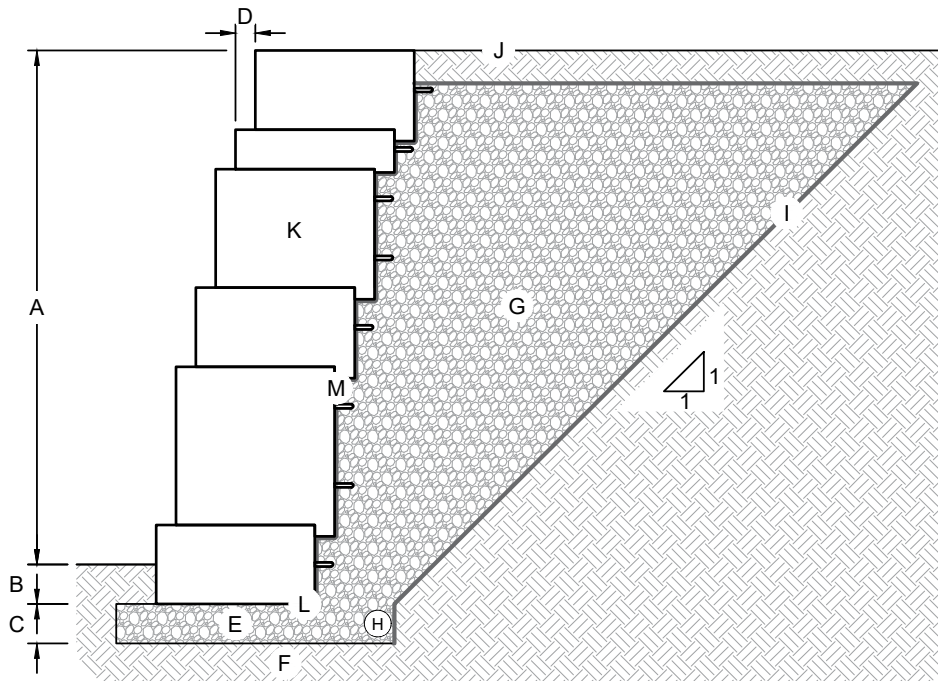
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GENERAL NOTES FOR WALL SECTIONS

This page shows typical construction details for Outcropping walls. These drawings are representative of major components required in wall construction. Specific details including geotextile reinforcement layers, drainage details, soil requirements, etc. shall be per engineered design for the wall. For more cross-section and design options, visit our website.

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- Final designs for construction must be prepared by a registered professional engineer using the actual conditions of the proposed site and loads.
- Block size and placement shown are for reference only, individual Outcropping blocks will vary with installation pattern.

TYPICAL GRAVITY RETAINING WALL DETAIL WITH AGGREGATE WEDGE BACKFILL



- A. Exposed height (varies by design)
- B. Bury depth (varies by design, min. 6 in (152 mm))
- C. Leveling pad depth (varies by design, min. 6 in (152 mm))
- D. Horizontal setback, 3 in (76 mm) per 12 in (305 mm) vertical (14° batter angle on wall)
- E. Crushed stone leveling pad
- F. Foundation soil compacted to 95% max. dry density
- G. Drainstone (ASTM #57) installed on 1H:1V slope behind wall
- H. 4 in (102 mm) corrugated perforated drain pipe
- I. Non-woven geotextile fabric
- J. Finish grade to drain away from the wall
- K. Wall blocks
- L. Shear heel removed from base block (optional)
- M. Non-woven geotextile fabric at back of blocks and top of drainstone (required)

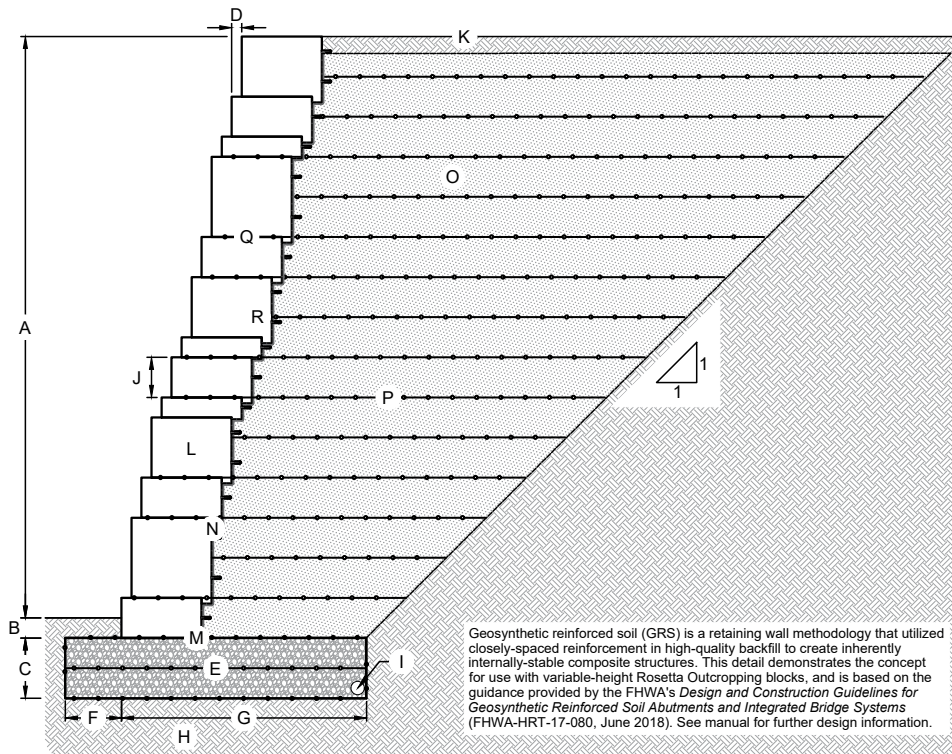
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GRS CHART

This page shows typical construction details for Outcropping walls. These drawings are representative of major components required in wall construction. Specific details including geotextile reinforcement layers, drainage details, soil requirements, etc. shall be per engineered design for the wall.

- These drawings are for preliminary reference only (not for final construction).
- Final designs for construction **must be prepared by a registered professional engineer using the actual conditions of the proposed site and loads.**
- Final wall design must address both internal and external drainage and shall be evaluated by the professional engineer who is responsible for the wall design.
- Block size and placement shown are for reference only, individual Outcropping blocks will vary with installation pattern.

TYPICAL GEOSYNTHETIC REINFORCED SOIL (GRS) RETAINING SECTION



- A. Exposed height (varies by design)
- B. Bury depth (varies by design, min. 6 in (152 mm))
- C. Foundation depth, $C = 0.25 * F$ (varies by design)
- D. Horizontal setback, 3 in (76 mm) per 12 in (305 mm) vertical (14° batter angle on wall)
- E. Reinforced soil foundation
- F. Foundation toe, $C = 0.25 * F$ (varies by design)
- G. Foundation base, $F = 0.3 * A$ (greater than or equal to 5 - 6 ft (1.52 - 1.83 m))
- H. Foundation soil compacted to 95% max. dry density, additional depth and width of reinforced soil foundation may be necessary due to soft soils. Consult with a geotechnical engineer to determine suitability.
- I. 4 in (102 mm) corrugated perforated drain pipe
- J. Reinforcement Spacing, $I = 12$ in (305 mm) max.
- K. Finish grade to drain away from the wall
- L. Wall blocks
- M. Shear heel removed from base block (optional)
- N. Non-woven geotextile fabric at back of blocks
- O. Well-graded or open-graded backfill, compact to min. 95% max. dry density
- P. Geosynthetic reinforcement (typical woven polypropylene with MARV strength of 4,800 lb/ft (70.05 kN/m)), extend to stable cut slope
- Q. Place reinforcement between blocks where possible.
- R. Trim reinforcement around blocks where necessary.



LOCATIONS & CONTACT INFO

ASP ENTERPRISES

aspent.com
salesasp@aspent.com

BOWMAN CONSTRUCTION SUPPLY

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Wichita, KS 316.393.1554

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Colorado Springs, CO 719.257.7840
Loveland, CO 970.535.0863

Des Moines, IA
515.289.1271

Portland, OR
971.339.1020

SOLUTIONS WE SUPPLY

GEOSYNTHETICS

Filter Fabrics
Stabilization Fabrics

Geogrids

- Road Grids
- Wall Grids
- Slope Stabilization

Specialty Fabrics

Composite Geomembranes

- GCLs, PVC, HDPE, LLDPE, EPDM, Granular Bentonite

SEDIMENT CONTROL

Inlet Protection

- Grated Inlet, Curb Inlet, Area Inlet Protection

Ditch Checks

- Triangle Silt Dike
- GeoRidge

Perimeter Protection

- High and Low-Porosity Silt Fence, Straw Wattles, Silt Socks
- Safety Fence

Flocculants & Water Treatment

- Polymer-Based & Natural Flocculants

Sediment Basin Skimmers

Dewatering Bags

Trackout Control

- FODS
- Rumble Grates

Turbidity Curtains

EROSION CONTROL

Basic Hydraulically Applied Mulches

- Wood
- Paper
- Blends
- Straw

High-Performance Hydraulically Applied Products

- BFM
- FGM
- Additives & Tackifiers

Temporary Erosion Control Blankets

- Coir & Jute Mat/Nettings
- Short-Term ECBs
- Extended-Term ECBs

Permanent Erosion Control Blankets

- Turf Reinforcement Mats
- HP-TRMs
- Anchor Reinforced Vegetation System

Structural BMPs

- Transition Mats
- Geoweb Cellular Confinement
- Composite Vegetated Armor System
- Flex MSE Vegetated Wall System
- Articulated Concrete Block
- Gabions
- Grout-Filled Geotextile Mats

Vegetation Establishment

- Native Seed & Turf Seed
- Fertilizers
- Organic Soil Additives
- Stratavault Soil Cells

STORMWATER MANAGEMENT

Water Quality

- Inlet Filter Boxes
- Pre-Treatment Chamber
- Nutrient Separating Baffle Boxes
- High-Flow Biofiltration Media
- Hydrodynamic Separators
- Stratavault

Water Quantity

- Modular Underground Storage Systems
- Chamber Detention Systems

Drainage

- HDPE Swale Liner
- Pipe & Fittings
- Drainage Composites
- Strip Drain

Inlet Structures

- PVC
- Drain Basins, In-Line Drains
- Landscape

Permeable Pavers

- Permeable Articulating Concrete Block
- Grass Pavers
- Gravel Pavers
- Concrete Pavers

SPECIALTY

Natural & Synthetic Coir Fiber Logs

Vegetated Reinforced Soil Slopes

Soil Anchors

Root Barrier System

AquaBlok

Muscle Wall

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SEDIMENT CONTROL | REVEGETATION | HARDSCAPES**