



Product Application Guide

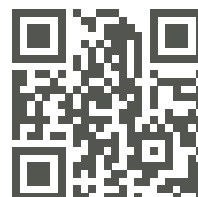
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Durable Systems. Enduring Partnerships.

Recon Wall Systems was formed in 2000 by a group of six Twin Cities individuals who had a vision to make large retaining wall blocks from “returned concrete” (thus the name “ReCon”). Five of these founders had a construction background, with expertise in concrete finishing and hardscape construction.

It did not take long for the marketplace to send two very important messages to the team. The first being that it embraced the concept of a large retaining wall block with a natural texture which could be machine set and utilized to build tall gravity walls. The second being that the use of returned concrete was equated with lower or inconsistent quality. Thus, in early 2002 Recon changed course and began working directly with precast concrete companies to manufacture a high-quality mix for its use.

With the help of over 60 licensed Recon producers, almost twenty-million square feet of Recon retaining walls have been installed around the world. We are proud to be an international big block retaining wall company and look forward to many more years of growth.





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01

Wall Systems

Recon Wall Systems has three different systems, our gravity retaining wall system, our reinforced retaining wall system, and our freestanding wall system, each with their own unique characteristics and challenges that they solve. Check out each of the durable systems that Recon has to offer and find what is right for your next project.





Gravity Retaining Walls

A gravity retaining wall system relies solely on the mass of the blocks to resist the earth pressure behind the wall. With an industry leading number of block depths, and Recon's solid block system, our gravity wall is one of the most efficient ways to maximize usable space and hold soil back. Our Gravity Wall System can achieve heights of over 25 feet (7m) and is a great way to fit tall walls in small spaces.



Reinforced Retaining Walls

A Reinforced Retaining Wall is a composite structure incorporating layers of geo-grid to reinforce backfill material creating a solid, reinforced mass. Capable of supporting a variety of load conditions and reaching heights in excess of 40 feet (12m), Recon's Reinforced Wall System is a great choice when you need to maximize usable space at the top of the wall.



Freestanding Walls

A freestanding wall can either be installed at the top of a retaining wall or as a separate, independent structure. Freestanding walls can be used as screen walls when placed independently or as a pedestrian barrier when placed on top of a retaining wall. With texture on both the front and back face, freestanding blocks installed on the top of a retaining wall can be partially buried or fully exposed; allowing for greater flexibility of finished grading at the top of the wall.

Reasons to Choose a Recon Gravity Wall System:

- ✓ **Solid Block System**
Recon's system efficiently utilizes gravity and the weight of concrete.
- ✓ **Installation Efficiency**
Recon's system can be installed quickly and effectively across numerous applications.
- ✓ **Limit Excavation**
Recon's system is ideal for small spaces where there is no room for Geogrid and it is imperative to limit excavation and maximize space.

Reasons to Choose a Recon Reinforced Wall System:

- ✓ **Construction Efficiency**
Machine set with fewer base course step ups required.
- ✓ **More Top of Wall Options**
Many different ways to finish your wall by using our freestanding system.
- ✓ **Durable Facing Unit**
Wet-cast concrete has a proven long-term durability.

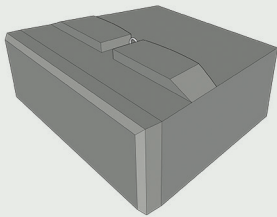
Reasons to choose a Recon Freestanding Wall System:

- ✓ **Integrated Barrier**
Pedestrian or traffic barrier integrated into the top of the wall.
- ✓ **Grading Flexibility**
Allows you to have a smoother grade transition on the back of the wall.
- ✓ **Aesthetics**
Freedom and flexibility to finish off the top of your wall in a way that makes the most sense for your site/project.

02

Block Information

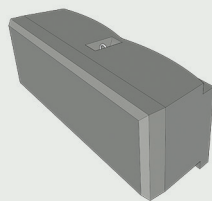
Block Options



Gravity Retaining Wall Blocks

Recon's gravity wall blocks represent the workhorse of the product offering. With an industry leading number of block depths, and the ability to create custom setback, creating an economical design with simple installation has never been easier.

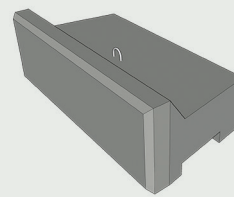
Front face dimensions of 16" (40.6cm) x 48" (122cm) and depths ranging from 24" (61cm) to 84" (213.4cm).



Reinforced Retaining Wall Blocks

Recon retaining wall blocks, when combined with layers of geogrid reinforcing and backfill material, create a composite structure capable of supporting a variety of load conditions. Recon's Reinforced Wall System is a great choice when you need to maximize usable space at the top of the wall.

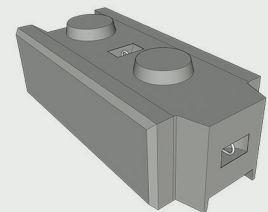
Front face dimensions of 16" (40.6cm) x 48" (122cm) and a depth of 16" (40.6cm).



Top of Wall Blocks

Recon top of wall blocks allow for the customizations and flexibility to finish off a retaining wall in nearly any application. The Full High Cap and Capstone create an above grade finish that is visible from the back of the wall. The corner top blocks provide a return to facilitate easier grading at top of wall steps.

Front face dimensions of 16" (40.6cm) x 48" (122cm) and depths of 24" (61cm) to 39" (100cm).



Freestanding & Column Blocks

Recon's freestanding blocks can either be installed at the top of a retaining wall or as a separate structure. These blocks can be placed independently to create a screen wall or stacked on top of a retaining wall to create a pedestrian barrier.

Face dimensions of 16" (40.6cm) x 48" (122cm) and a depth of 24" (61cm).





Block Staining & Sealing

Staining and sealing allow for customization of any of our products. When applied by experienced professionals, concrete stains combined with the realistic stone appearance of Recon textures can produce a wall nearly indistinguishable from natural stone. The options used to achieve these effects include waterborne concrete stains, acid etch stains, and hybrid stains that combine features of both, while sealing boosts the durability without changing the desired look of the wall.



Learn more at: ReconWalls.com

Block Textures



Northshore Granite

Provides the full 48" X 16" (122cm X 40.6cm) face size in a natural weathered granite finish. It looks great unstained.



LeSueur County Limestone

Takes its name from the natural limestone found on Minnesota's river bluffs and used to construct retaining walls.



Old World

Represents a departure from Recon's natural stone textures, featuring a smooth face retaining wall block with chamfered edges.



Rustic

Rustic provides a great looking retaining wall in its natural grey concrete finish.



Weathered Edge

Creates a natural stacked stone retaining wall appearance with a comfortable randomness and an enhanced depth of texture.

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Applications

Whether you are widening a road, building a new commercial site, or creating the backyard of your dreams, Recon has the product and solution to fit your application. With a variety of block shapes and sizes, Recon walls can be tailor made and designed to fit your needs.





Department of Transportation

With constant construction and improvement taking place in our transportation network, cities and states need a product that can be used in a variety of conditions. Capable of supporting heavy loads and tailored to fit specific projects, Recon's gravity wall system and reinforced wall system are the products of choice for many DOT retaining wall applications.

- ✓ Wall Supporting Roadways
- ✓ Wall Widening Roadways
- ✓ GRS-IBS
- ✓ Water Applications



Commercial Applications

Many sites require retention structures to balance the land prior to development. Recon's gravity wall system and reinforced system give you options tailored to the conditions. With a variety of face textures that can be stained to match building facades plus the flexibility to add freestanding blocks to customize the wall, Recon is the perfect product choice for your next commercial development project.

- ✓ Entrances & Signage
- ✓ Retail Box Stores
- ✓ Water Applications
- ✓ Site Development



Residential Applications

With five face textures to choose from and multiple ways to customize your top-of-wall finish, Recon is a great choice for your backyard transformation. When it comes to creating a backyard space that is not only aesthetically appealing but will also withstand the test of time, Recon has the products and resources to create the project of your dreams.

- ✓ Driveway Support
- ✓ Tiered Planting Beds
- ✓ Backyard Landscaping



Specialty Applications

From football fields to local parks and channel lining to headwalls, Recon's wall systems are used in a variety of specialty applications. With a wide variety of block shapes and sizes and the ability to customize and tailor your solution, Recon is the perfect product choice for unique situations that require earth retention.

- ✓ Parks & Athletic Fields
- ✓ Amphitheaters
- ✓ Headwalls & Culvert Openings
- ✓ Channel Walls

04

Resources

If you are designing or installing a Recon wall, you need the tools and resources to get the job done right. From design charts and details to installation guides and videos, Recon's library of resources is your go-to location for everything you'll need to make your next design or installation a success.





Design Overview

Proper design of a Recon Wall Systems' retaining wall is important for ensuring the long-term performance of the wall. With all of the tools available from Recon, designing and detailing Recon walls has never been easier. If you have any questions regarding design, please feel free to reach out to us today!

Five Design Considerations:

1 Application Type

It is important to understand the application in which the wall is being used. This helps determine the best process for the design of the wall.

2 Site Geometry

In addition to wall heights, lengths, and layout, site-plans (grading plans) offer additional information about adjacent structures, surcharges, site access, property lines, utility locations and site drainage.

3 Soils Information

Soil is one of the main components of the structure. Soils come in numerous types and compositions. Therefore, Soil properties are used in the wall analysis to predict a wall's overall performance.

4 Wall Type

Recon offers both gravity and geogrid reinforced options. The application type will help determine which wall system best fits the project.

5 Wall Geometry

The geometry will be dictated by the specifics of the project site and topography. Geometry for each wall generally consists of: wall length, wall height and the location of corners and curves.



Installation Overview

Proper installation of a Recon Wall Systems' retaining wall is important for ensuring the long-term performance of the wall. In general, Recon walls are fast, easy, and efficient to install with each block measuring 16"(40.6cm) by 48" (122cm) on the front face – that's 5.33 square feet (0.5 square meters) per block!

Five Steps:

1 Site Preparation and Excavation

It's time to get the site ready for installing the wall. Care should be taken to excavate the wall area to the grades and alignment shown on the construction drawings.

2 Preparing and Installing the Leveling Pad

Installing and compacting a proper leveling pad is important to the long-term performance of the retaining wall.

3 Install the Base Course

Once the leveling pad is established, the base course is installed. As base blocks are laid, ensure they are in full contact with the leveling pad and level in all directions.

4 Place Additional Course, Backfill, and Compact

After the base course has been placed, continuing installing blocks while backfilling and properly compacting the soils behind the wall. Ensure proper drainage stone is placed between the blocks as well as behind.

5 Top of Wall Finish and Final Grading

The wall is almost finished! Choose from one of Recon's options for top of wall finish and install the final course. Complete the final grading behind the wall promoting proper surface water drainage.



RECON
Wall Systems™

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