



*Durisol*®

DURISOL.COM

# DURISOL HYBRID RETAINING WALL SYSTEM

A NEW HYBRID PRECAST POST AND PANEL  
RETAINING SYSTEM WITH INTEGRAL MSE

COMBINATION MSE  
RETAINING WALL SYSTEM

VALUE-ENGINEERED

ECONOMICAL & EFFICIENT

NOISE WALL COMPATIBLE

## A HYBRID RETAINING SYSTEM

With years of producing precast retaining walls such as cantilevered systems or lagging panels, our team is always in search of complimentary soil reinforcing techniques that can deliver **quality, reliability, efficiency, and performance** for our partners.

A product developed in the face of complex geotechnical engineering challenges; the **Durisol Hybrid Retaining Wall (DHRWS)** combines the ingenuity of a stacked panel system with built-in Mechanically Stabilized Earth (MSE).



## HOW IT WORKS

Durisol's Hybrid system utilizes our industry-leading steel post and precast concrete panel wall system as a retaining wall which is made possible using vertical structural posts, cylindrical post footings and precast concrete panels with integral MSE. **The rest is engineered to each site.**



## RECENT EXAMPLE OF HYBRID SOLUTION

The use of **horizontal integral geogrid** in the project example below, minimizes the applied loads to the steel posts and footings. As such, a slender and more efficient post and footing design is achieved.

The hybrid retaining wall structure is designed to **retain larger wall heights** without increasing panel thickness, or post and footing requirements.

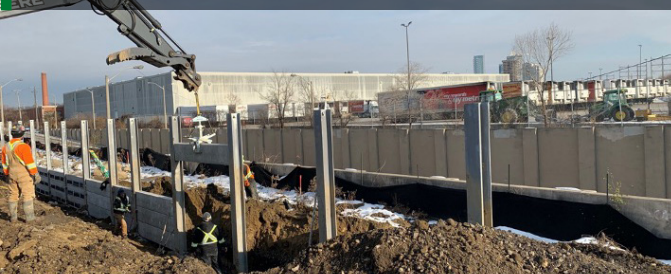
Combination Noise & Earth Retaining wall posts installed



Installation of lower MSE earth retaining wall panels




Installation of lower MSE panels and lower panels



Completed wall installation



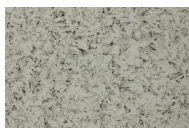
## FEATURES & BENEFITS

 <p><b>STRONG &amp; DURABLE</b></p>	<ul style="list-style-type: none"> <li>› Designed for a minimum <b>75-year service life</b> (per CHBDC)</li> <li>› Can handle <b>surcharge loads</b></li> <li>› Proven <b>long-term performance</b></li> </ul>
 <p><b>VALUE-ENGINEERED</b></p>	<ul style="list-style-type: none"> <li>› <b>Extend heights</b> of a retaining wall without increasing post and footing requirements/materials</li> <li>› <b>Custom designed</b> based on project specific requirements to provide the most cost-effective solution</li> </ul>
 <p><b>INSTALLATION EFFICIENCY</b></p>	<ul style="list-style-type: none"> <li>› <b>Posts</b> are prefabricated with lifting holes and installed with perfect alignment and elevation prior to grade being cut.</li> <li>› <b>Precast panels</b> are installed between the posts.</li> <li>› <b>Backfilling operations</b> are much quicker with a post and panel retaining wall system</li> </ul>
 <p><b>COMBINATION SYSTEM</b></p>	<ul style="list-style-type: none"> <li>› A <b>single structure</b> that satisfies both retaining and wall system needs.</li> <li>› <b>Compatible</b> with a range of wall system integrations above including Durisol noise walls.</li> </ul>
 <p><b>ECONOMICAL</b></p>	<ul style="list-style-type: none"> <li>› <b>Fast to complete</b> panel installation and backfilling operations.</li> <li>› <b>Economics</b> are achieved using the <b>Durisol Hybrid system</b> when compared to other alternatives based on the following advantages:             <ul style="list-style-type: none"> <li>» <b>Slender structural wall design</b> that integrates with wall systems such as:                 <ul style="list-style-type: none"> <li>• guard rail</li> <li>• hand rails</li> <li>• noise walls</li> <li>• privacy screens</li> <li>• decorative fence</li> <li>• windscreens</li> <li>• chain link</li> <li>• transparent</li> <li>• headlight screens</li> </ul> </li> <li>» <b>Quicker installation</b> of wall system that is designed for:                 <ul style="list-style-type: none"> <li>• temporary wind loading during construction</li> <li>• 2 metre lifts of panels allowed prior to completion of back fill</li> <li>• temporary panel bracing is not required during erection</li> </ul> </li> </ul> </li> </ul>

## FINISHES

Standard colours and finishes available.

### ON DURISOL



1004B NATURAL



1082D TAN



1538B GREY



02589 TAN



09187 GREY



11988 BROWN

### ON CONCRETE



PLAIN CONCRETE



STAINED CONCRETE



**HAVE AN IDEA OR NEED TO COLOUR MATCH?**

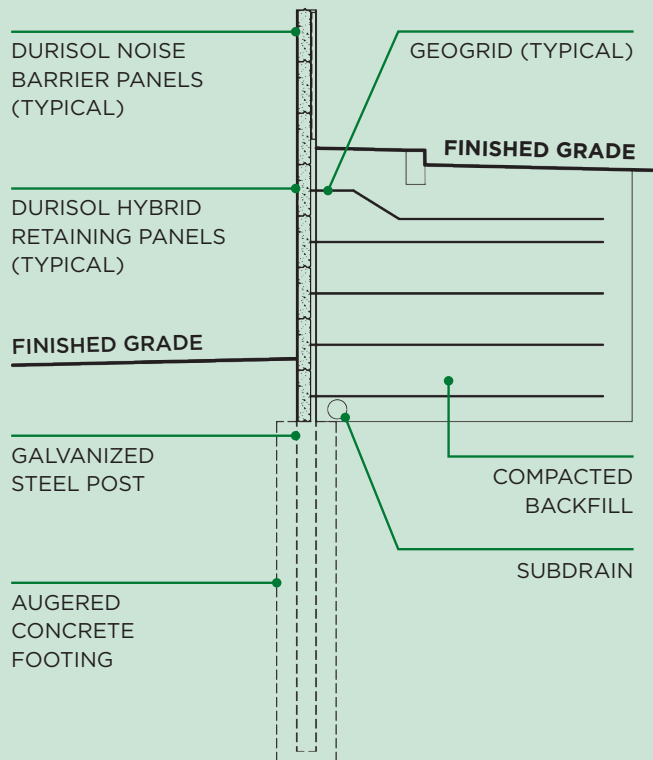
Custom wall designs are our speciality.

## ACHIEVE MORE WITH LESS

A **single structure** that satisfies both retaining and wall system needs, the DHRW achieves economics through a slender post and footing design, **faster installation** and integration with wall systems installed direct to the retaining wall structure.



# TECHNICAL DETAILS



### GRADING

- › Flexible grading options before the wall is installed or after the post/footings are installed.

### POST + PANEL WALL SYSTEM

- › Post spacing: standard post spacings up to 3.63 metres on centre.
- › Panels sizes: Standard panels are typically 527 mm high.
- › Alternative post spacing and panel size options available.

### GEOGRID

- › General rule:  
0.8 x height of retaining wall = length of geogrid behind the wall

The DHRWS meets and exceeds the requirements of the Canadian Highway Bridge Design Code (CHBDC).



## APPLICATIONS

The DHRW system can be used across site development footprints where grade separation is required, such as:

PERIMETER WALLS

BUILDING DEVELOPMENT(S)

ROADS, BRIDGES, AND WATER MANAGEMENT STRUCTURES

RAILWAY/TRANSIT INFRASTRUCTURE

A post and panel system is more cost-effective where earth retaining heights above 1.5 metres is required.

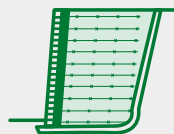


## ASK US HOW TO UTILIZE OUR RETAINING WALL SOLUTIONS TOGETHER



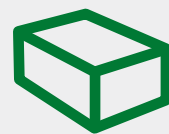
### NARROW FOOTPRINT SYSTEM

Cantilevered systems for when space is limited & lagging panels for soldier pile walls.




### MECHANICALLY STABILIZED EARTH SYSTEM

Precast facing panels with integral MSE



### RETAINING BLOCK SYSTEM

Precast gravity segmental wall system



**Let the retaining wall experts  
at Durisol custom-engineer  
a precast wall solution  
for your next project.**

Drawings and product details are for information and/or illustrative purposes only, and may vary.  
Please contact your local Durisol representative for the most current product information.



As industry leaders, Durisol® models the highest standards of noise & retaining wall systems to serve the robust needs of the transportation, building and energy sectors across North America.

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