Memtech Acoustics

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MEMTECH 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

Memtech Acoustics supplies noise and retaining wall systems that serve the needs of the transportation, building and energy sectors.

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

A HYBRID RETAINING SYSTEM

Memtech Acoustics supplies precast retaining wall systems such as cantilevered systems and lagging panels, and is always in search of complementary 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 **Memtech Hybrid Retaining Wall (MHRWS)** combines the ingenuity of a stacked panel system with built-in Mechanically Stabilized Earth (MSE).



HOW IT WORKS

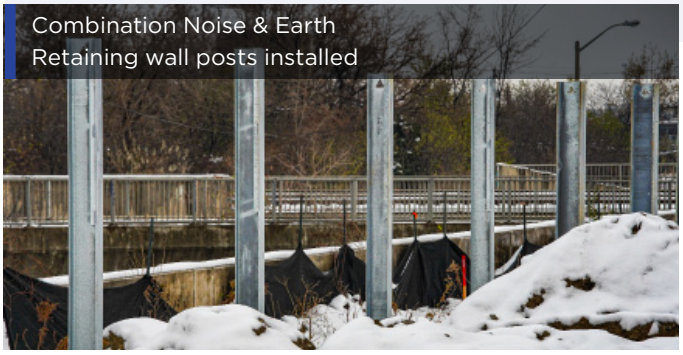
Memtech's Hybrid system utilizes a steel post and precast concrete panel wall system as a retaining wall which is made possible using vertical structural posts, cylindrical post footings and precast concrete panels with integral MSE. **The rest is engineered to each site.**

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

STRONG & DURABLE

- Designed for a minimum **75-year service life** (per CHBDC)
- Can handle **surcharge loads**
- Proven **long-term performance**

VALUE-ENGINEERED

- **Extend heights** of a retaining wall without increasing post and footing requirements/materials
- **Custom designed** based on project specific requirements to provide the most cost-effective solution

INSTALLATION EFFICIENCY

- **Posts** are prefabricated with lifting holes and installed with perfect alignment and elevation prior to grade being cut.
- **Precast panels** are installed between the posts.
- **Backfilling operations** are much quicker with a post and panel retaining wall system

COMBINATION SYSTEM

- A **single structure** that satisfies both retaining and wall system needs.
- **Compatible** with a range of wall system integrations above including Memtech noise walls.

ECONOMICAL

- **Fast to complete** panel installation and backfilling operations.
- **Economics** are achieved using the **Memtech Hybrid system** when compared to other alternatives based on the following advantages:
  - **Slender structural wall design** that integrates with wall systems such as:
    - guard rail
    - hand rails
    - noise walls
    - privacy screens
    - decorative fence
    - windscreens
    - chain link
    - transparent
    - headlight screens
  - **Quicker installation** of wall system that is designed for:
    - temporary wind loading during construction
    - 2 metre lifts of panels allowed prior to completion of back fill
    - temporary panel bracing is not required during erection

FINISHES

Standard colours and finishes available.

ON MEMTECH


1004B NATURAL


1082D TAN


1538B GREY


02589 TAN

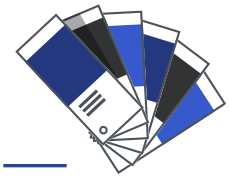

09187 GREY


11988 BROWN

ON CONCRETE


PLAIN CONCRETE


STAINED CONCRETE



HAVE AN IDEA OR NEED TO COLOUR MATCH?

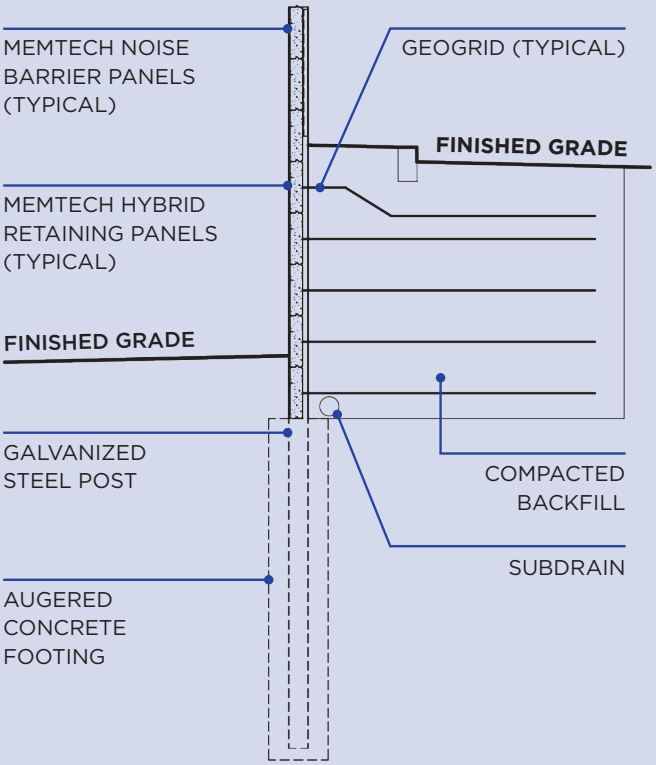
Custom wall designs are available.

ACHIEVE MORE WITH LESS

A **single structure** that satisfies both retaining and wall system needs, the MHRW 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 MHRWS meets and exceeds the requirements of the Canadian Highway Bridge Design Code (CHBDC).



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



APPLICATIONS

The MHRW 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

ASK US HOW TO UTILIZE OUR RETAINING WALL SOLUTIONS TOGETHER

NARROW FOOTPRINT SYSTEM

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

MECHANICALLY STABILIZED EARTH SYSTEM

Precast facing panels with integral MSE

RETAINING BLOCK SYSTEM

Precast gravity segmental wall system