

# LOCK+LOAD Retaining Wall Design Procedure

Disclaimer: The information and applications depicted herein accurately represent the use and design of **LOCK+LOAD** retaining walls but the applicability to any specific project is the sole responsibility of the user. **LOCK+LOAD** assumes no responsibilities for the drawings and calculations provided, as they are intended to be only general examples of the proper use of the **LOCK+LOAD** product.

Forward:

Presented here are the locations of recommended references and software suitable for use in the design of **LOCK+LOAD** retaining structures.

General Background:

**LOCK+LOAD** “modules” are used either by themselves or with soil reinforcement (i.e. geogrids, metal mats, etc.) to erect mechanically stabilized earth (MSE) retaining walls where the stabilized earth mass acts as a traditional gravity retaining structure.

The two most general parameters governing retaining wall design are: soil strength and geometry. The design goal being to satisfactorily balance the “driving forces” from the retained earth with the “resistive forces” the MSE mass to give suitable factors of safety for the required design criteria.

**LOCK+LOAD** recommends that MSE retaining walls using its “modules” be designed using the procedures presented in the U.S. Dept. of Transportation Federal Highway Administration Publication No. FHWA NHI-00-043 Titled:

**“Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines”**

The FHWA design procedures are implemented in computer software by the program MSEW 3.0 by ADAMA Engineering ([www.geoprograms.com](http://www.geoprograms.com)) the use of which is presented within the FHWA document.

A copy of FHWA NHI-00-043, which can be downloaded as a PDF from:

[http://www.fhwa.dot.gov/engineering/geotech/library\\_sub.cfm?keyword=020](http://www.fhwa.dot.gov/engineering/geotech/library_sub.cfm?keyword=020)

Titled: Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines 2000  
Document No.: FHWA-NHI-00-043.

For specific questions regarding the application of the above FHWA manual to the design of **LOCK+LOAD** retaining walls or for MSEW(3) “start” files with **LOCK+LOAD** and geo-grid data pre-entered please Email technical support at:

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