

**ST. LOUIS COUNTY, MISSOURI**  
**BUZZ WESTFALL, COUNTY EXECUTIVE**  
DEPARTMENT OF PUBLIC WORKS  
JOHN L. HOFFMANN, AIA, DIRECTOR

February 13, 1995

Mark Woolbright, President  
St. Louis Retaining Wall Co.

St. Louis, MO

Re: Masterplan approval for Hercules Block Retaining Wall

Dear Mark:

The plans submitted for Hercules Block Retaining Walls have been reviewed and approved. Here are the Masterplan Numbers:

Hercules Standard Wall with level backfill and concrete footing	709-94-01
Hercules Standard Wall with level backfill	709-94-02
Hercules Standard Wal with sloping backfill	709-94-03
Hercules Mega and Standard Wall with level backfill	709-94-04
Hercules Mega with slope backfill at 1:3, 1:4 and 1:6 slope	709-94-05

Please inform your customers of the following procedures that they need to follow when applying for a permit.

1. Submit completed permit application form that includes the Masterplan Number.
2. Submit four copies of the site plan showing the location and length of the wall, drawn to scale. Dimension wall distance to any structures and property lines.
3. Submit four copies of plan view of wall.
4. Submit four copies of front elevation views of wall with dimensions.



**SAINT LOUIS**  
**RETAINING WALL COMPANY**  
A Midwest Products Group Company

3916 Geraldine Ave.  
St. Louis, MO 63115  
phone: 314-389-9255  
fax: 314-389-6416  
[www.herculesmfg.com](http://www.herculesmfg.com)



Mark Woolbright, President  
St. Louis Retaining Wall Co.  
February 13, 1995  
Page 2

5. Submit four sets of cross-section details of wall. This must show leveling pads, wall height, slope of wall and slope of backfill.
6. Applicant must indicate whether he is using the Standard or Mega Hercules Blocks.

If you have any questions, please feel free to call me.

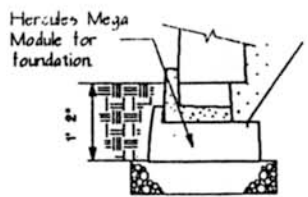
Sincerely,



Siti Kirkpatrick, P.E., 889-3733  
Building Code Review Section  
Division of Building Permits

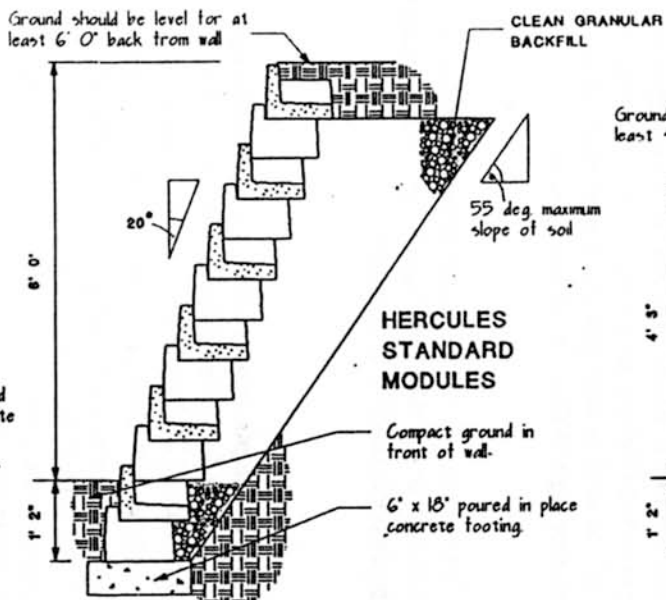
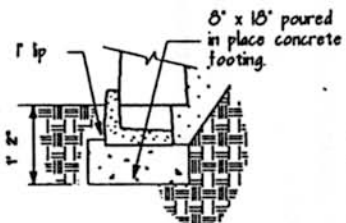
SK:am

# MASTERPLAN FOR RESIDENTIAL RETAINING WALLS OF HERCULES STANDARD AND MEGA MODULES

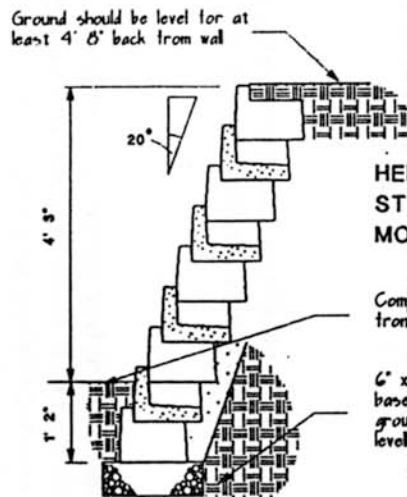


ALTERNATE FOOTING DETAIL FOR 6' 0" HERC. STD. WALL

ALTERNATE CONCRETE FOOTING DETAIL FOR ANY HERCULES STD. WALL

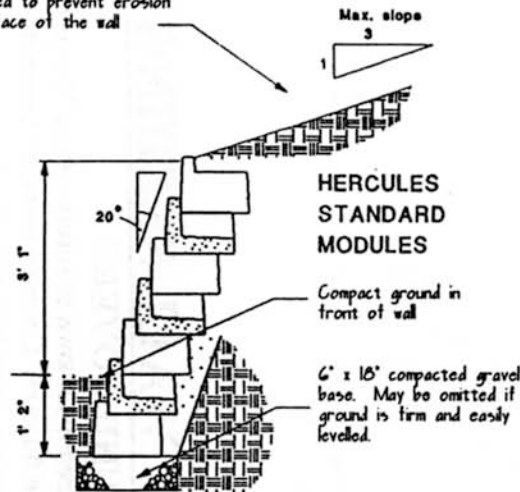


HERCULES STANDARD MODULES

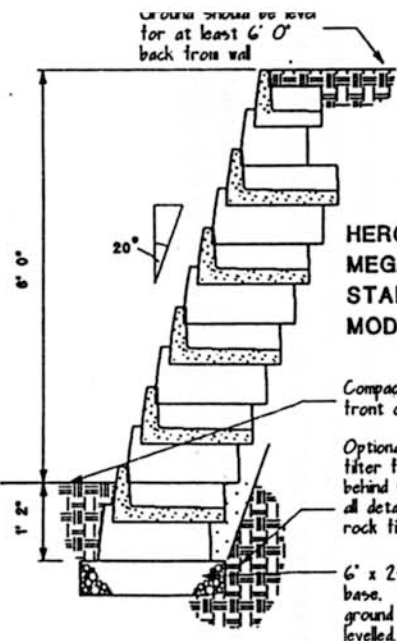


HERCULES STANDARD MODULES

A runoff collection swale can be formed to prevent erosion at the face of the wall

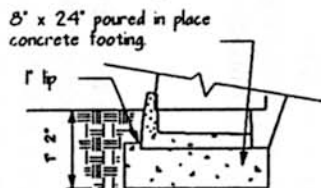


HERCULES STANDARD MODULES

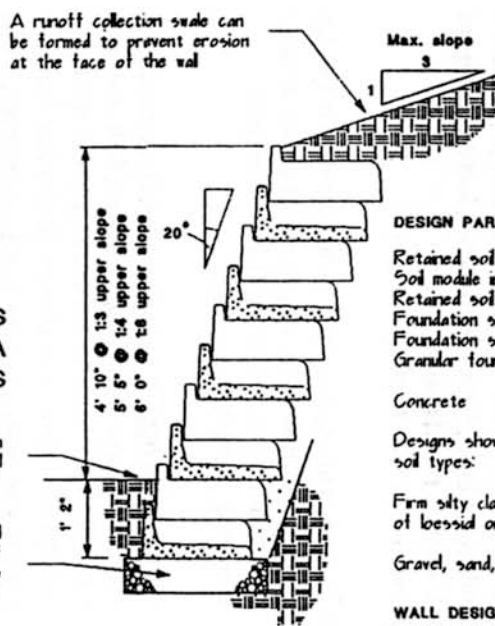


HERCULES MEGA and STANDARD MODULES

ALTERNATE CONCRETE FOOTING DETAIL - for Hercules Mega walls shown



HERCULES MEGA MODULES



A runoff collection swale can be formed to prevent erosion at the face of the wall

**DESIGN PARAMETERS**

- Retained soil density 120 pcf
- Soil module infill density 100 pcf
- Retained soil PHI angle 25 degrees
- Foundation soil PHI angle 25 degrees
- Foundation soil adhesion 250 pcf
- Granular foundation PHI angle 34 degrees

Concrete  $f_c = 3000$  psi

Designs shown are suitable for the following soil types:

Firm silty clays typical of the firmer silty clays of loessial origin occurring in the St. Louis area

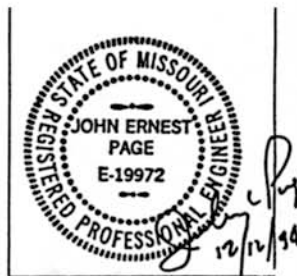
Gravel, sand, or gravelly or sandy clays

WALL DESIGNS ARE NOT SUITABLE FOR MOST BOTTOM LAND SOILS

**FOUNDATION NOTES**

Using the concrete footing detail with a lip will save one course of modules in the foundations (see detail).

Using the Mega Module for the footing with the 6' 0" Std. wall will avoid using a concrete footing for this wall.



The Engineer's seal (above) on this drawing attests only to the possibility of the detailed construction for the theoretical parameters used. Any person attempting to use these details is cautioned to hire the services of an engineer experienced in soil and foundation work. Building code authority inspectors should take particular care to ensure that conditions in the field do not vary from those indicated for the construction type shown.

ST LOUIS RETAINING WALL COMPANY			
DESIGNED BY: J.E.P.	REVIEWED BY:	DATE: 12-18-94	
DRAWN BY: J.E.P.	TITLE: MASTER PLAN		
APPROVED BY: M.A.W.	SCALE: 7/16-94	SHEET: 1 OF 1	



LEED-NC

Green Building Rating System

For New Construction & Major Renovations

12-22 Points can be earned

Version 2.2

For Public Use and Display

### **SS Credit 5.1: Site Development: Protect or Restore Habitat**

#### **1 Point**

Intent

Conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

### **SS Credit 6.1: Storm Water Design: Quantity Control**

#### **1 Point**

Intent

Limit disruption of natural water hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from storm water runoff, and eliminating contaminants.

### **SS Credit 6.2: Storm Water Design: Quality Control**

#### **1 Point**

Intent

Limit disruption and pollution of natural water flows by managing storm water runoff.

### **SS Credit 7.1: Heat Island Effect: Non-Roof**

#### **1 Point**

Intent

Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

### **Water Efficiency**

#### **WE Credit 1.1: Water Efficient Landscaping: Reduce by 50%**

##### **1 Point**

Intent

Limit or eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

#### **WE Credit 1.2: Water Efficient Landscaping: No Potable Water**

##### **Use or No Irrigation**

##### **1 Point in addition to WE Credit 1.1**

Intent

Eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

### **EA Credit 1: Optimize Energy Performance**

#### **1–10 Points**

Intent

Achieve increasing levels of energy performance above the baseline in the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

### **MR Credit 4.1: Recycled Content: 10% (post-consumer + ½ pre-consumer)**

#### **1 Point**

Intent

Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials

**MR Credit 4.2: Recycled Content: 20% (post-consumer + 1/2 pre-consumer)**  
**1 Point in addition to MR Credit 4.1**

Intent

Increase demand for building products that incorporate recycled content materials, thereby reducing the impacts resulting from extraction and processing of virgin materials.

**MR Credit 5.1: Regional Materials: 10% Extracted, Processed & Manufactured Regionally**  
**1 Point**

Intent

Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

**MR Credit 5.2: Regional Materials: 20% Extracted, Processed & Manufactured Regionally**  
**1 Point in addition to MR Credit 5.1**

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Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

**Innovation & Design Process**

**ID Credit 1–1.4: Innovation in Design**  
**1–4 Points**

Intent

To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED-NC Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED-NC Green Building Rating System.

**SS Credit 5.1: Site Development: Protect or Restore Habitat**  
**1 Point**

Intent

Conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

**SS Credit 5.2: Site Development: Maximize Open Space**  
**1 Point**

Intent

Provide a high ratio of open space to development footprint to promote biodiversity.

**SS Credit 6.1: Storm Water Design: Quantity Control**  
**1 Point**

Intent

Limit disruption of natural water hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from storm water runoff, and eliminating contaminants.

## **SS Credit 6.2: Storm Water Design: Quality Control**

### **1 Point**

Intent

Limit disruption and pollution of natural water flows by managing storm water runoff.

## **SS Credit 7.1: Heat Island Effect: Non-Roof**

### **1 Point**

Intent

Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

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### **WE Credit 1.2: Water Efficient Landscaping: No Potable Water**

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#### **1 Point in addition to WE Credit 1.1**

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