### RELATED INFORMATION AVAILABLE FROM LANE

Gabion and Mattress Construction Guide

To view this guide visit: lane-enterprises.com/GabionMattressConstrGuide.

Welded Wire Mesh Gabion Design Manual

To view this manual visit: lane-enterprises.com/GabionMattressDesignManual.

## RELATED SERVICES AVAILABLE FROM LANE:

- CAD Design and Drawings
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### NORTH CAROLINA

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## **LANE Products**

Corrugated Metal Pipe Spiral Rib Pipe **Corrugated HDPE Pipe** Corrugated Polypropylene Pipe Structural Plate Pipe and Arches Structural Plate Box Culverts **Storm Water Collection Chambers Storm Water Management Systems** Storm Water Filters CFT (HDPE) Water Quality Unit **CMP Sandfilter Open Top Slotted Drain** Welded Wire Mesh Gabions Structural Plate Headwall-Culvert Systems Custom Fabrications (Pond Kits, Trash Racks, etc.) Long Span Bridge & Culvert Services **Rebar and Custom Powder Coatings** 





# WELDED WIRE MESH GABIONS AND GABION MATTRESSES

**EASY INSTALLATION, LESS COST** 





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## WELDED WIRE MESH GABIONS

## About LANE

As a full-line manufacturer of corrugated metal and plastic drainage products, Lane Enterprises, Inc. operates plants throughout the Northeastern, Mid-Atlantic, and South-Central states producing various types of buried structures for the construction industry.

For nearly 90 years, Lane has partnered with contractors, engineers, and municipalities to supply reliable products that provide the highest levels of service life, strength, versatility, and economy. Our focus on quality products, responsive customer service, and technical expertise has established a long, proven history of successful partnerships within the industries we serve.



## Welded Wire Mesh Gabions

Lane is one of the few manufacturers of pre-assembled welded wire mesh gabions and gabion mattresses. Lane engineers the highest-quality welded wire mesh products for earth retention, soil stabilization, erosion control, flood management and various architectural applications.

Welded wire mesh means that each point of contact in the grid is welded to form a rigid connection, making this type of gabion material indispensable in achieving a flat, sharp appearance. The added stiffness provided by welded wire mesh also makes rock filling less cumbersome – resulting in less time and cost for installation.



Lane gabions are shipped flat, are easily assembled and provide better shape control giving your project the strength you need while reducing installation costs.

# Less Costly Than Concrete

Gabions and gabion mattresses are used in applications which require earth retention, soil stabilization or scour protection. A gabion system is a network of interconnected, rock-filled, heavy-duty rectangular wire mesh containers. Individually, the filled baskets are building blocks. Integrated into a unit, the gabion system becomes a flexible, permeable and monolithic structure for a number of applications that provide a less costly alternative to reinforced concrete.





# Common Gabion Applications

- Retaining Walls
- Revetments
- Earth Retention
- Channel Linings

Culvert Headwalls

Culvert Outlets

- Slope Protection
- Rock-Fall Mitigation
   Levees and Weirs
- Earth Dams
- Erosion Control
- Groins and Jetties Scour Aprons
  - Energy Dissipaters

    - Bridge Abutments
    - Stream Bank Protection

Wing Walls

# <sup>1</sup>GABIONS (GALVANIZED 9 or 11 GAUGE, PVC 12 GAUGE)

Standard Sizes L x W x H	Cells	Capacity (yd³)
3' x 3' x 3'	1	1.00
6' x 3' x 3'	2	2.00
9' x 3' x 3'	3	3.00
12' x 3' x 3'	4	4.00
3' x 3' x 1.5'	1	0.5
6' x 3' x 1.5'	2	1.00
9' x 3' x 1.5'	3	1.50
12' x 3' x 1.5'	4	2.00
3' x 3' x 1'	1	0.33
6' x 3' x 1'	2	0.66
9' x 3' x 1'	3	1.00
12' x 3' x 1'	4	1.33

<sup>1</sup>Made from a wire mesh with a 3" x 3" grid.



<sup>1</sup> MATTRESSES (GALVANIZED 13.5 GAUGE, PVC 13.5 GAUGE)		
Standard Sizes L x W x H	Cells	Capacity (yd³)
12' x 6' x 9''	4	2.00
9' x 6' x 9''	3	1.50
12' x 6' x 6''	4	1.33
9' x 6' x 6''	3	1.00
12' x 6' x 12''	4	2.67
9' x 6' x 12''	3	2.00

<sup>1</sup>Made from a wire mesh with a 3" x 1" grid.

# Strong, Stable, Efficient

Gabions are most often used in areas where ground conditions are inherently unstable and prone to shifting and sliding. Gabions provide a needed alternative to concrete walls that would crack or buckle under pressure.

## Benefits of Gabions

- Flexibility, strength and permeability
- No cure times, rebar schedules, etc.
- Low cost installation
- Rarely requires separate footings or foundations
- Locally available fill materials

- Bioengineering potentials
- Minimal equipment needs
- Easily shipped and unloaded
- No maintenance demands
- Field customizable

Lane gabions are shipped flat (i.e. collapsed) with hinged panels that easily fold into a rectangular basket. Sides are raised and the seams temporarily fastened. The basket is placed and adjacent edges permanently laced.

Once expanded and placed, Lane gabions are simply and securely interconnected with corkscrew spiral binders at each vertical junction. Lane's welded wire mesh gabions are assembled, placed and filled considerably faster than woven wire baskets.

Welded wire mesh provides shape control superior to twisted or woven wire fabric. Diaphragms and preformed stiffeners brace adjacent panels and provide added stiffness for more shape control.



Lane gabions and mattresses meet ASTM A974 in regard to the material used and the method of manufacture. ASTM A974 also establishes minimum requirements for preassembly of the baskets and mattresses for shipping. The wire mesh used is galvanized or PVC coated. PVC-coated gabions are used in applications where greater durability or an environmentally-blended appearance is desired.

> Studies have shown that welded wire baskets install at a rate that reduces labor by at least 40%.