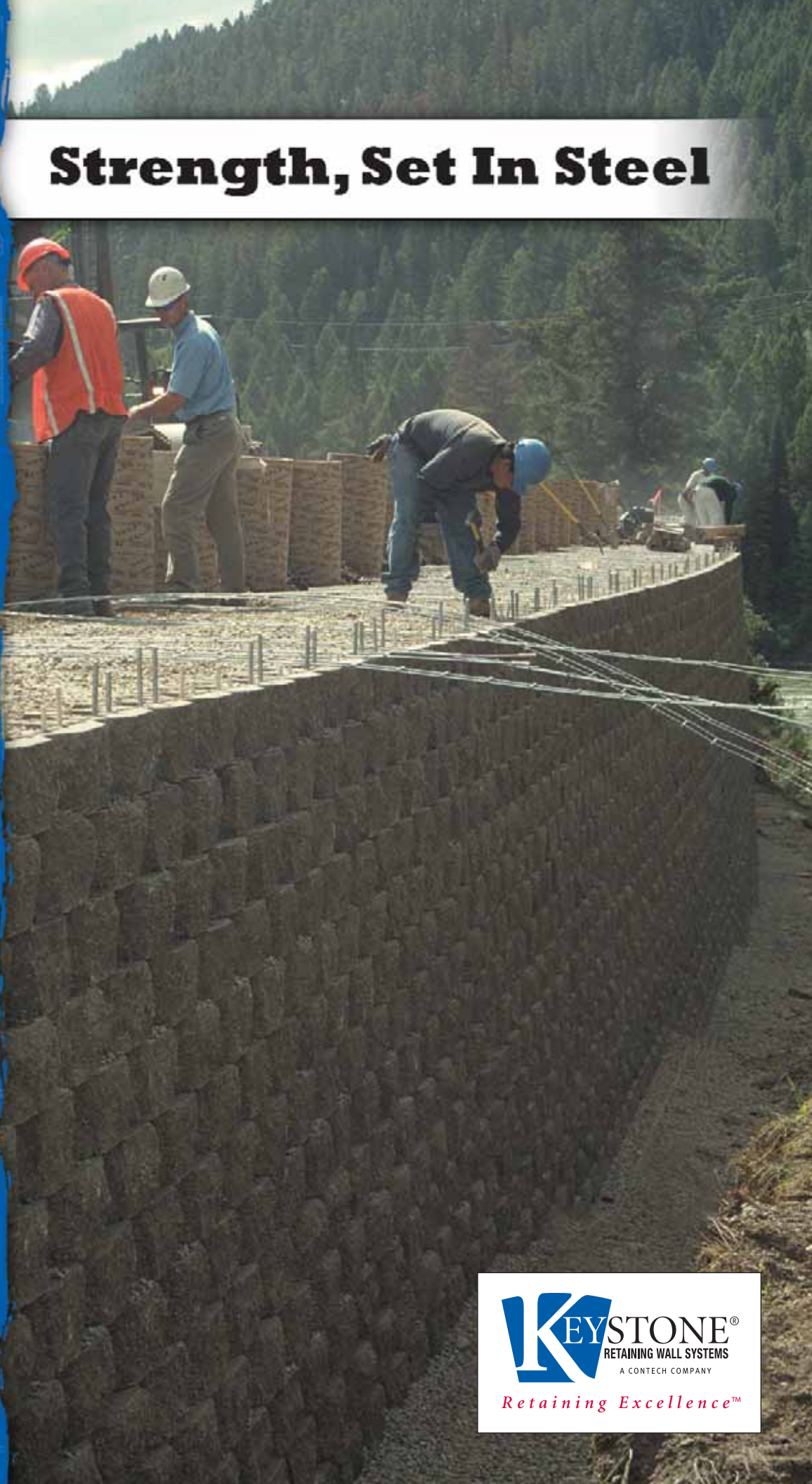
KEYSTONE™

RETAINING WALL SYSTEM

Strength, Set In Steel



KEYSTONE® RETAINING WALL SYSTEMS
A CONTECH COMPANY

Retaining Excellence™

Keystone KeySystem I™ is a world-class structural retaining wall system, specifically designed for use with highways and heavy construction. KeySystem I™ combines patented Keystone modular concrete units and inextensible steel soil reinforcement to develop an extremely stable, aesthetically appealing and cost-effective retaining wall structure.

Keystone KeySystem's aesthetic options include a wide range of completed wall appearances without the high cost of customization. KeySystem I also utilizes design methodology and material components that comply with the standards for inextensible reinforcement as outlined in the current AASHTO Standard Specifications for Highway Bridges.

Galvanized Steel Connection Pins
9/16" x 8"
(14.3 x 203 mm)

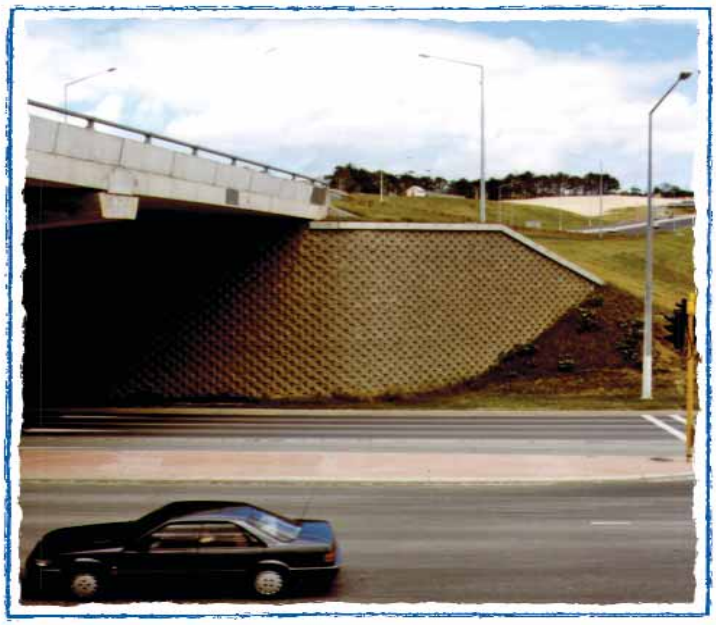
Fiberglass Alignment Pins
1/2" x 5-1/4"
(12.7 x 133mm)

Straightface

8"h x 18"w x 12"d
(203 x 457 x 305 mm)

Sculptured Rock Face

8"h x 18"w x 12"d
(203 x 457 x 305 mm)



Features & Benefits

Durable Components
- *Inextensible steel reinforcement and 75 to 100 years of design life*

Aesthetic Appeal
- *Wide variety of color options, textures and patterns*

Design Flexibility
- *Curves, corners and unique geometries*

Ease of Construction
- *Quick and easy, no cranes required*

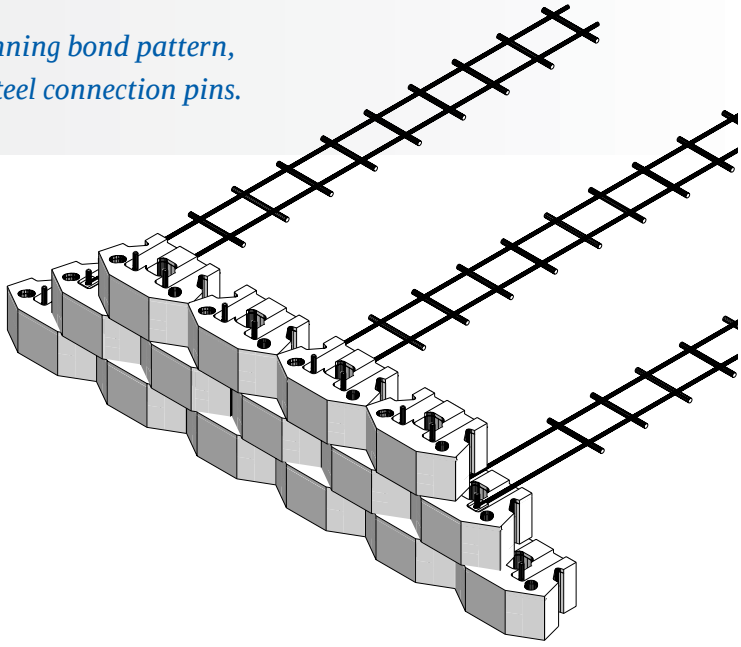
Cost-Effective Results
- *Competitive with other MSE structures*

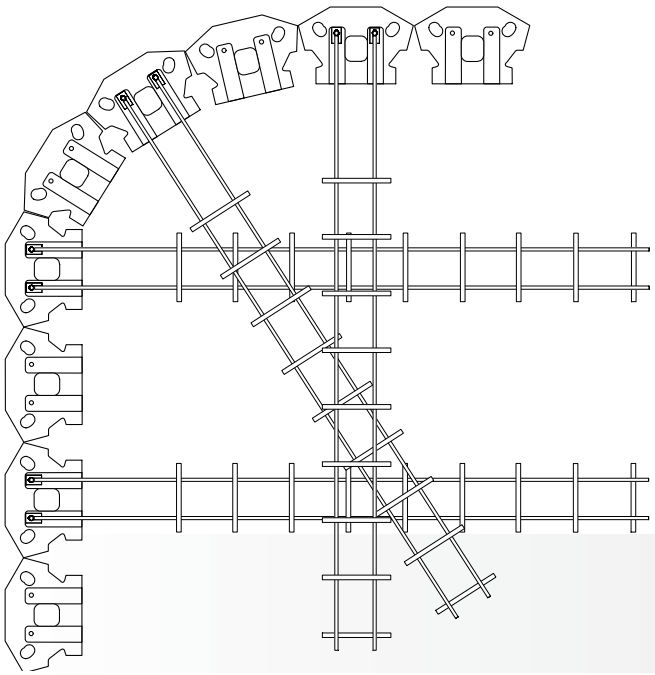
Intended for the Most Demanding Jobs
- *Deflections with steel reinforcement are reduced by over 66% compared to geosynthetic reinforcement*

Ideal for Deflection Sensitive Applications:
- *Bridge abutments*
- *Tall walls*
- *Walls with heavy surcharges*
- *Walls where loads or structures bear on or are immediately behind the reinforced mass*

- *Designed in accordance with more rigorous AASHTO standards.*
- *Designed for transportation or other projects requiring AASHTO compliance.*
- *KeySystem I is a high-performance, mechanically-stabilized earth retaining wall system for highway and heavy applications using inextensible reinforcing. KeySystem I is evaluated by HITEC, in accordance with AASHTO specifications.*

KeySystem I modular components interlock in a running bond pattern, utilizing fiberglass alignment pins and galvanized steel connection pins.



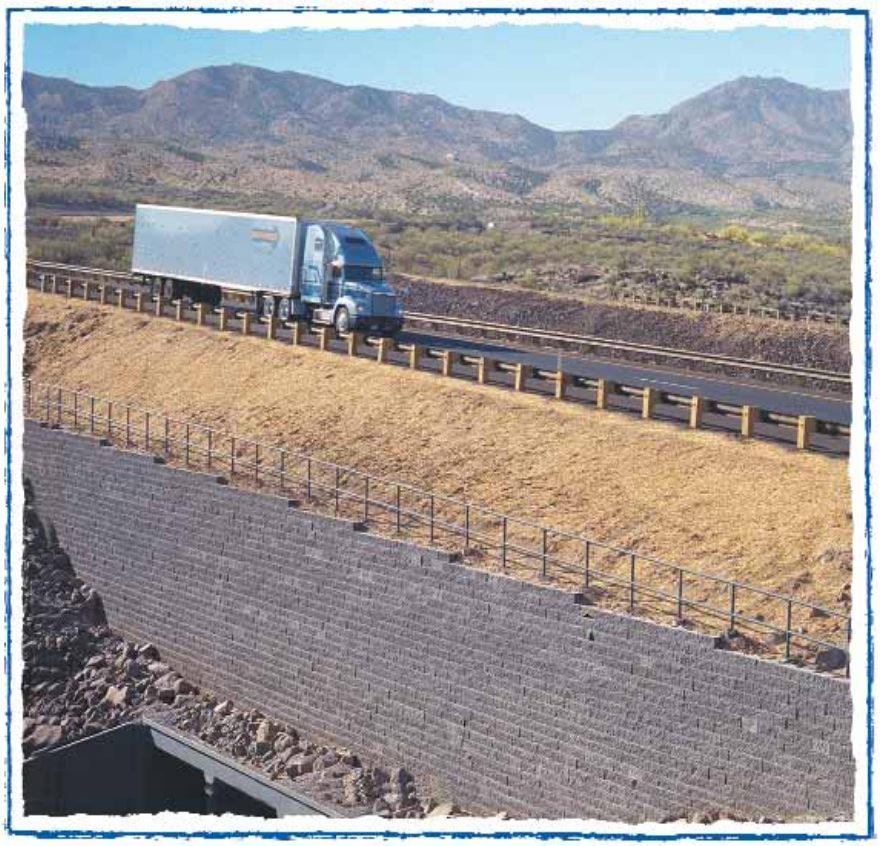


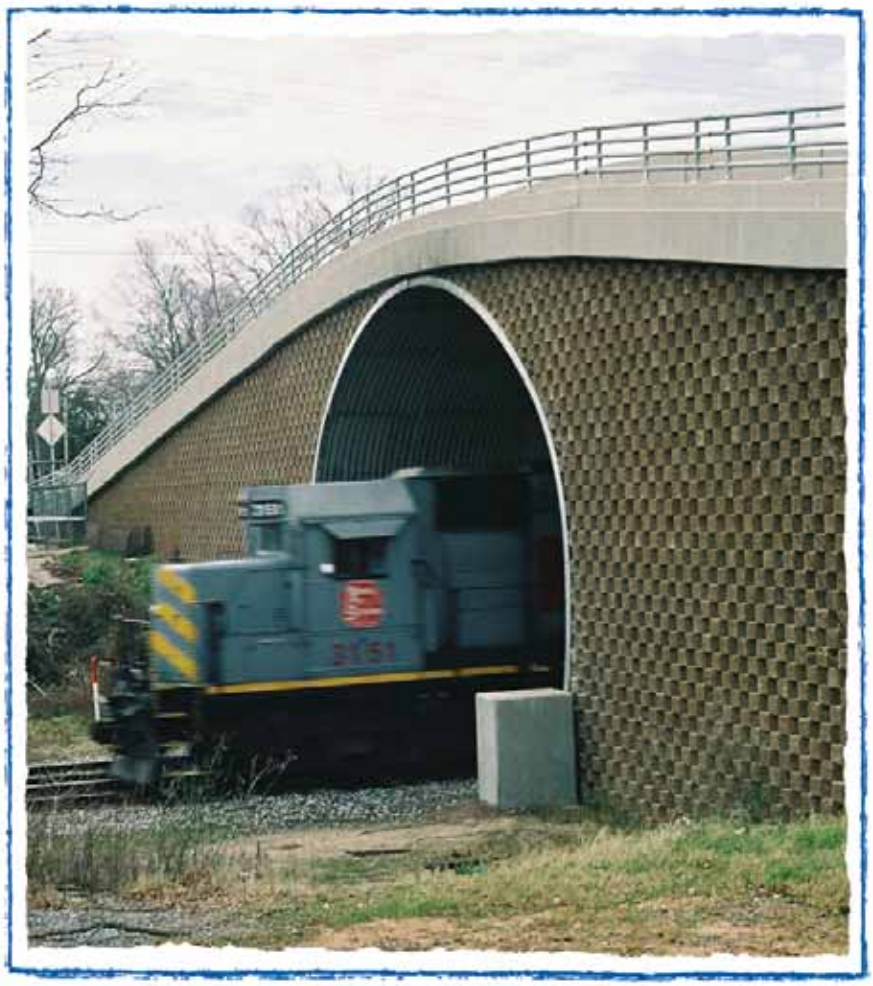
A typical steel layout plan for curves and straight wall construction.

Strength

The strength and performance of a retaining wall system is an obvious top consideration for wall specifiers and designers. KeySystem I is one of the most durable retention solutions available. It features patented concrete units that are manufactured to a minimum compressive strength of 4,000 psi. The units are dry stacked and interlocked vertically and horizontally using high-strength fiberglass pins and galvanized steel pins. This method provides a very strong, mechanically interlocked facing system.

KeySystem I is also the ideal product for tall walls. Many walls using KeySystem I have been constructed to over 50 ft. (15 m) with a variety of loading conditions. KeySystem I steel soil reinforcement offers an economical and extremely strong structural solution for tall walls and extreme loading conditions.





KeySystem I™ Flexibility Offers Seismic & Aesthetic Benefits

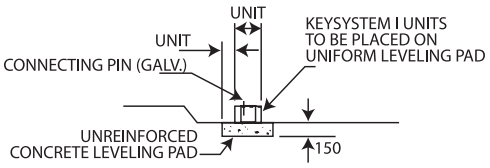
Copings, crash barriers, railing options, construction slip joints, curves and corners are all possible design elements in the KeySystem I package, without the need for specialized moldings and custom fabrication.

Seismic design loads are easily factored into the KeySystem I design analysis. The semi-flexible (MSE) system handles seismic events better than more rigid systems.

KeySystem I structures have a proven track record of high performance, withstanding seismic events in the Pacific Rim and Western United States without failure or significant detrimental effects on the wall structure.

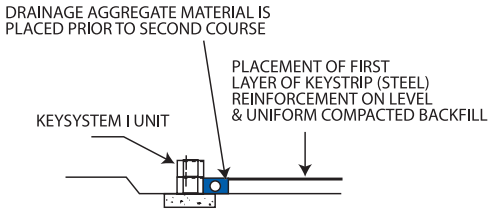
KeySystem I™ Construction Sequence

STEP 1



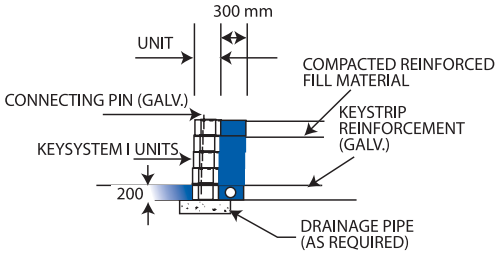
INITIAL COURSE OF KEYSYSTEM I

STEP 2



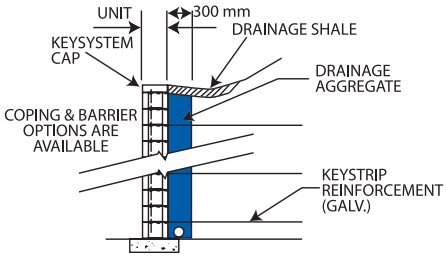
SECOND COURSE OF KEYSYSTEM I

STEP 3



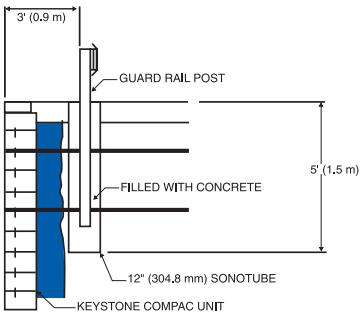
ALTERNATE CONSTRUCTION COURSES

STEP 4



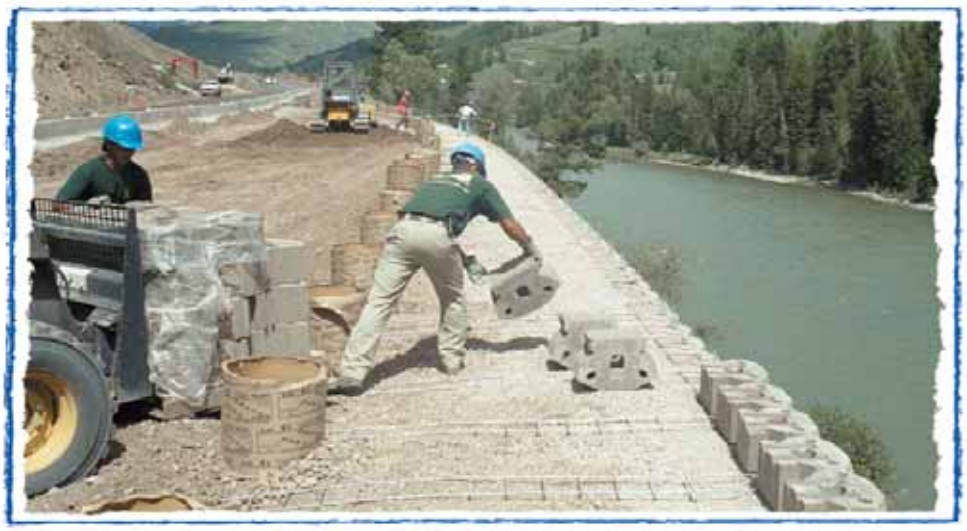
KEYSYSTEM I CAPPING OPTION

GUARDRAIL



TYPICAL GUARDRAIL/BARRIER DETAIL

90° CORNER



KeySystem I installation is rapid and minimizes heavy equipment requirements.

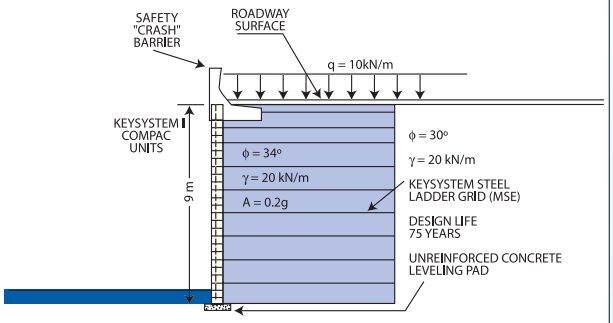
KeySystem I is also cost-competitive with all forms of AASHTO specified MSE structures.

Picardy Avenue/ I-10 Interchange

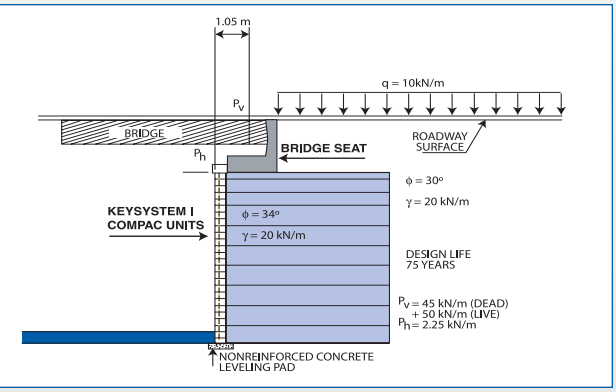
KeySystem I handles all structures with heavy loads and crash barriers and also supports bridge loads and approach walls.

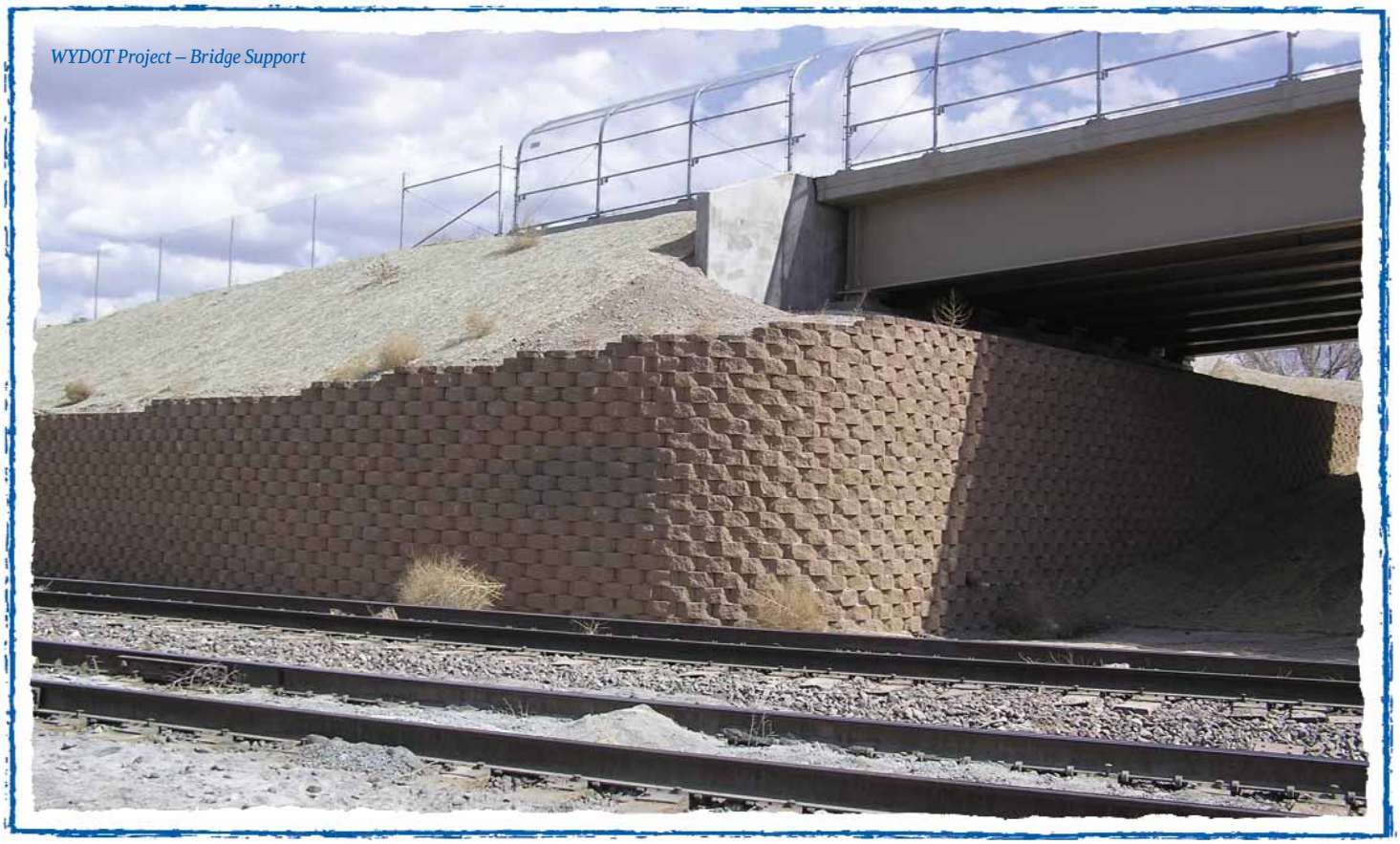
A Strong, Structural Solution

HEAVY LOADS



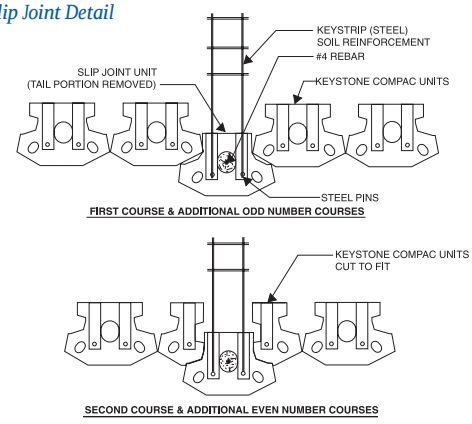
BRIDGE LOADS





WYDOT Project – Bridge Support

Slip Joint Detail



Bridge Support & Slip Joint

The Keystone Advantage

When KeySystem I is specified, a complete retaining wall system is engineered and supplied to meet site-specific conditions. Keystone's engineering department provides the design package and coordinates with local licensed manufacturers to ensure a completed project meets the demands of critical structure requirements. They also ensure timely arrival and sequencing of materials for construction.

After over 20 years at the forefront of the industry, Keystone Retaining Wall Systems, Inc. continues to set the standard for excellence and innovation within the segmental retaining wall industry. Keystone represents the global benchmark in soil retention, erosion control and landscape systems. Holding over 50 patents, Keystone symbolizes cutting-edge design, performance and aesthetics. Keystone partners with the best network of product developers, engineers, sales professionals and manufacturers in the business. They help ensure that Keystone offers the best in site solutions for residential, commercial, recreational, industrial and government applications.

Distributed by:

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Retaining Excellence™

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