



WAL-MART SITE DEVELOPMENT PROJECT OLATHE, KANSAS

Application: The site required three retaining walls to provide a building and parking pad for planned retail operations.

The Challenge: The site was derelict and used as a dump for trash and concrete debris.

Site Conditions: "The site conditions were more extreme than usual," says David Lotz, P.E., a Senior Civil Engineer for Continental Consulting Engineers, Inc. The subgrade included soft soils, fill material and extensive areas of shale and limestone. One of the biggest challenges for Lotz and his associate,

Civil Engineer Brian Lavery, P.E., was developing foundation treatments that would address these highly variable conditions.

Alternative Solutions: Because of its proven track record, the Mesa® System was only considered for this project.

The Solution: Five foundation-improvement scenarios based on wall height were developed. Each involved removing at least five feet of overburden soil, sometimes to bedrock or shale, and then building up the foundation with well-graded aggregate and Tensar Uniaxial (UX) 1600 Geogrid (installed at 18 in. above the subgrade). Shorter wall sections were similarly improved but without geogrid reinforcement at the base.

To meet the construction timeframe, Randy Grego, general manager of BC Hardscapes, set up an assembly line to build the walls. "Each man had a specialized task, like cutting grid or stacking block using a grapple," he says.

The Mesa System's XL Units weighed 115 pounds, Grego notes, so using the mechanical grapple was a tremendous time and labor saver. "It helped us keep a consistent production."

Lavery says areas behind the wall structure were reinforced either with Tensar UX1100 Geogrid or



The Mesa® System was used to overcome extreme site conditions.

PROJECT HIGHLIGHTS

Project:

Wal-Mart Site Development

Location:

Olathe, Kansas

Installation:

Winter–Summer 2007

Quantity:

70,000 sq ft;
Max wall heights exceeding 50 ft

Owner/Developer:

Wal-Mart Stores, Inc.

Engineer:

Continental Consulting Engineers, Inc.

General Contractor:

Jim Kidwell Construction

Installation Contractor:

BC Hardscapes of Claycomo, Missouri

Materials Supplier:

Midwest Block & Brick

CASE STUDY



Tensor UX1500 Geogrid. “The UX1500 was installed up to the second tier.”

Grego was able to recycle onsite material, however completing the reinforced zone behind the wall required importing approximately 90,000 tons of .75-in. clean gravel. “The site and schedule made this one of our most challenging jobs,” he says. “But the Mesa System was the right pick for getting it done. The wall looks great.”



The Mesa System provided a structurally sound and attractive solution.

The Mesa System Advantage: The Mesa System can offer many advantages to your next project such as:

- A strong, dependable mechanical connection
- A connection that is resistant to seismic loads
- A connection strength that is not tied to friction in any way
- A choice of near vertical or 5/8-in. setback
- A single source of supply and product responsibility
- Evaluation by HITEC
- PE stamped drawings and installation assistance.

Additional Information and Services:

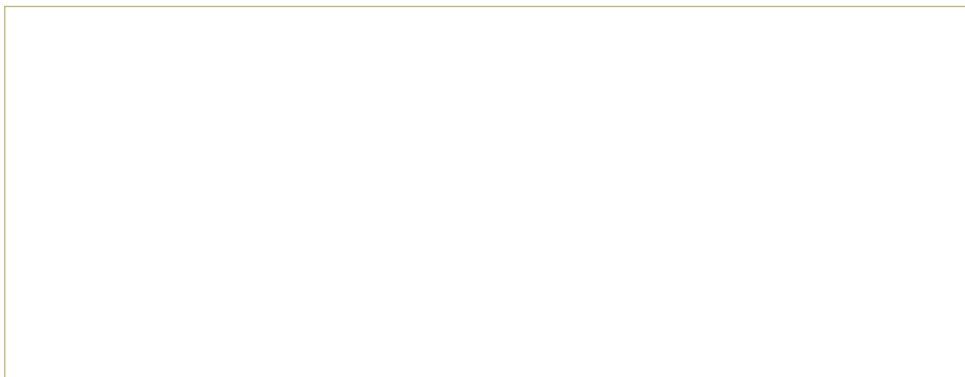
Tensor International Corporation specializes in solutions for site development problems such as

grade changes requiring retaining walls and poor soil conditions affecting the cost of roadways, parking lots and building structures. Our solutions use proprietary engineered systems and our own unique products, services and application technologies. Our products and technologies, backed by the most thorough quality assurance practices, are at the forefront of the industry. Highly adaptable, cost-effective and installation-friendly, they provide exceptional, long-term performance under the most demanding conditions. Our support services include site evaluation, design consulting and site construction assistance.

For innovative solutions to your engineering challenges, rely on the experience, resources and expertise that have set the industry standard for more than two decades.

For more information on the Mesa Retaining Wall Systems or other Tensor Systems, call **800-TENSAR-1**, e-mail info@tensarcorp.com or visit www.tensar-international.com.

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