

## *The Importance of Reinforcement*

When you need to build a wall with staying power, you need to call in the reinforcement. Geosynthetic reinforcement, that is. Made from high-tensile strength polypropylene, polyethylene or polyester, geosynthetic reinforcement is a sheet material that, when used properly, helps to support the wall system. Walls constructed with the Anchor Diamond® and the Anchor Vertica® Series have reached heights in excess of 30 and 40 feet when used in conjunction with geosynthetic reinforcement.

"Geosynthetic reinforcement works by increasing the width of the gravity mass, which enables the wall system to withstand greater external forces than a simple gravity wall constructed with just block," according to Don Armstrong, PE, manager of engineering services at Anchor Wall Systems. Multiple horizontal layers create a composite gravity mass system that confines or sandwiches the soils. Together, the soil, block and geosynthetic reinforcement are capable of resisting the forces of the external soil plus surcharges which may include dead loads such as permanent buildings and live loads such as vehicle or pedestrian traffic.

The need for geosynthetic reinforcement depends upon many factors, including wall height, soil conditions, expected loads and earth movement. Every retaining wall project, even those lower than four feet, should be evaluated by an engineer to determine whether geosynthetic reinforcement is warranted. When geosynthetic reinforcement is required, an engineer can specify the appropriate materials, number of layers and correct placement of geosynthetic reinforcement based on the particular site conditions and your project design.

### **Anchor units are the perfect choice for attractive, innovative design**

Consort's unique design divided what could have been one huge, overbearing wall into two smaller, tiered walls with an eye-pleasing planting bed all the way around. Nearly 30 feet high, the two-tiered wall extends between the facility's upper and lower parking lots.



Two 50-step stairways built with Anchor Diamond® straight and beveled face units descend from the Dell Computer building facility to the parking lots.

### **Experienced installers make the wall a reality**

Boothe Paving Company of Shiner, Texas installed the wall, which presented several unique installation challenges. First, the wall included two 50-step stairways. The design specified Anchor Diamond

straight and beveled face units for the stairways. The project also called for a 48" parapet wall to serve as a railing and traffic barrier. Tan Anchor Vertica® beveled face units were selected for all of the walls.

Russell Boothe, the owner of Boothe Paving Company and installer on the Dell wall, was pleased with his handiwork. According to Boothe, "While the Dell installation was challenging due to the split wall and stair construction, it's a very nice application of Anchor products. The wall really looks good." Having completed more than 400 retaining wall projects, Boothe has a large body of experience on which to base his comments. [E]