

## ReCon Case Study

### 14' 8" Gravity Wall Saves Money & Solves Problem for Customer!

#### **The Challenge:**

The customer had to build an 1100-foot long wall with an average height of 10' (and a maximum height of 14' 8") without reinforcement. On top of the wall was a considerable back slope and then a number of existing homes. Excavation at the top of the wall was problematic because the soil was quite sandy, and would not hold a cut. This posed a threat to the stability of the existing homes at the top of the slope. In addition, the soils at the lower portions of the wall were competent rock, which would have been difficult and expensive to excavate. The customer considered soldier piles and lagging with a decorative concrete veneer in front of the wall. However, this proved quite costly.

#### **The Solution:**

ReCon was asked to study the site and propose a solution. With the help of ReCon's consulting engineer, a proposal to build the wall as a gravity wall was developed. The "batter" of the ReCon wall was increased from the standard 3.6 degrees to 10.6 degrees, using a concrete leveling pad. With a combination of the competent bedrock as foundation and retained soils (for at least approximately half the height of the wall) and then the existing sand in place as the retained soils at the upper portions of the wall, a gravity wall became the solution. Significant excavation was avoided. Soldier piling was not needed. Time and money was saved. A great looking wall was created.

#### **Project Details:**

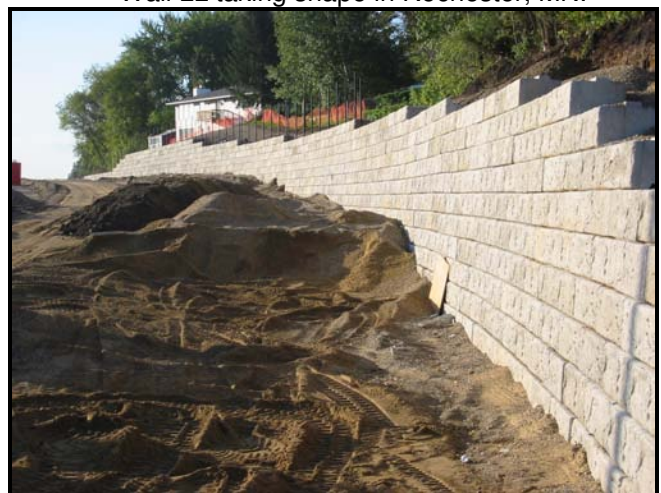
- Project Name: TH52 (Minnesota DOT Highway 52) Design Build Project, Wall LL
- Customer: Zumbro River Constructors
- Wall Contractor: Zumbro River Constructors
- Engineer: MRJ Engineering, Inc.
- Wall Material: ReCon Wall System
- Total Sq. Ft. of Wall: 11,024
- Length of Wall: 1134 feet
- Maximum Wall Height: 14' 8"
- Date of Wall Completion: September 2004
- SEE BACK OF PAGE FOR WALL CROSS SECTION!



Cut at base of wall revealing bedrock.



Wall LL taking shape in Rochester, MN.



A new frontage road will be constructed in front of the wall. The durability of the ReCon block will resist the adverse affects of road salts and repeated freeze thaw cycles.

