



## DRAINAGE TEST

February 2006

### Specifications

- Dimensions: Wall is 6 ft. high (plus 3 ft. embedded) x 10 ft. long
- Fill: Piles are filled with #57 stone to 6" from top
- French Drain: A French drain spans the entire depth of the wall (6 ft) and is 3 feet wide. The soil surface of the French drain is lined with plastic so that no water can bypass going through the wall.
- Filter Fabric: The entire back surface of the wall is covered with woven filter fabric.



Test wall

### Test & Results

To start, we ran a flow rate of 20 gallons/min into the top of the French drain. For a 10 foot wall, this is to be equivalent to 10" per hour rainfall. At this rate the water backed up behind the wall to 5" deep and remained constant.

After 20 minutes at this rate, we increased to 50 gallons/min. For this flow rate, the water behind the wall raised to 13" deep and then remained constant. In total, we put approximately 1200 gallons of water through the wall in 35 minutes.

These results indicate that even during torrential rainfall the water level behind the wall will never be more than 5" higher than the canal level. Adding drains through the wall is not required as long as the wall is filled with gravel so that the joints do not clog with fine particles.

This test will be repeated at 3 months, 6 months and 12 months to see if the results change over time.

*Test performed by Scott Yeany, Engineer at Formtech Enterprises, Inc.*



Flow rate at 20 gallons/ minute



Flow rate at 50 gallons/ minute



1415 Panther Lane  
Naples, FL 34109  
(239) 591-6234  
[www.truline.us](http://www.truline.us)