



2010 - 2011

November Meeting Notice

Minnesota Geotechnical Society

**Investigation of Recycled Plastic Piles for Support of Structures
in Expansive Shale Environments**

Eric J. Brandner, Barr Engineering

Expansive clay and shale formations can be found throughout the United States. When subjected to wetting, many of these formations have the potential to swell and exert large uplift forces which can significantly damage lightly-loaded structures founded on these materials. Designing an economical foundation that can resist upheaval forces is thus tremendously critical to prevent damage to these structures. Current solutions to control uplift forces, such as over-excavation and replacement of the expansive material, or drilled shafts, are costly and problematic. Recycled plastic piles may be a solution. Due to a lower coefficient of friction along the interface than traditional foundation systems, solid recycled plastic piles can allow expansive soils to move independently from the pile when wetted. This results in little to no uplift force being transferred to the structure and thus minimizes the risk of significant structural damage. This presentation will discuss the results of research using recycled plastic piles in an expansive shale environment.

Date: Wednesday, November 10, 2010

Location: Rose Vine Hall (downstairs at Grumpy's Bar & Grill)
2801 Snelling Ave. N., Roseville, MN

Time: 6:00 Social Hour, Sponsored by Geo-Instruments.

7:00 Dinner & Dessert: Salad, Rolls, Coffee/Soda and a choice of:

1. 10-Ounce Top Sirloin - Char-grilled and topped with bleu cheese garlic butter. Served with white cheddar mashed potatoes and a sautéed vegetable medley
2. Feta Cheese and Sun-Dried Tomato Stuffed Walleye - Served over white cheddar mashed potatoes with a drizzle of lemon thyme butter sauce.
3. Seared Chicken Parmesan - Tender chicken breast crusted with aged Parmesan cheese and rapidly seared until golden brown. Served over white cheddar mashed potatoes and a sautéed vegetable medley.
4. Manicotti – Fresh Pasta tubes filled with ricotta, mozzarella and parmesan cheeses. Baked in marinara sauce and finished with melted mozzarella.

8:00 Presentation – Eric Brandner, Barr Engineering
(One professional development hour toward continuing education requirements for Professional Engineers is available).

Cost: \$25.00 members, \$30.00 non-members, and \$5.00 Full-time students, payable to MGS at the door.

Reservations: Requested by 12 Noon, Friday, November 5, 2010

Please register via the website at <http://www.mngeotechnicalsociety.com/eventsmpls.asp>

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