



2015-2016

April Meeting Notice

Minnesota Geotechnical Society

Highway 53 Bridge Test Pile Program, Virginia, MN

Nate Iverson, PE

The Highway 53 Bridge will be Minnesota's tallest bridge. The bridge will span the now retired Rouchleau Mine Pit in Virginia, Minnesota, which now serves as Virginia's drinking water reservoir and a scenic vista for tourists to the region. In order to build this record setting bridge, a foundation system was required to support the future structure. This foundation system would be required to penetrate up to 130 of mine blast rock and spoils and then extend 45 feet into the underlying bedrock. In order to evaluate the feasibility and type of deep foundation system at the site, a test pile program was proposed.

The test pile program would evaluate an 8' diameter conventional drilled shaft as well as a 16" and 24" pipe pile. These pile would be installed over the water within the pit along a potential alignment for the future highway. It was anticipated that down the hole hammers (DTH) or cluster drills would need to be utilized to penetrate the overburden and underlying bedrock, due to the potential of extremely large obstructions in the overburden fill soils and the penetration required into the extremely hard bedrock.

The presentation will highlight the history of the site, geotechnical challenges, the access/environmental concerns of the site, the equipment and methodology employed, the installation and the testing program and finally the results.

Date: Wednesday April 13, 2016

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

Time: 6:00 Social Hour – Sponsored by Veit

7:00 Dinner: Salad, Rolls, 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 – \$40.00
2. Chicken Marsala - A chicken breast lightly breaded and drizzled with marsala wine sauce, mushrooms and onions– \$35.00
3. Feta Cheese and Sun-Dried Tomato Stuffed Walleye - Served over white cheddar mashed potatoes with a drizzle of lemon thyme butter sauce – \$35.00
4. Chicken Fettuccine Alfredo - Fettuccine noodles, snow pea pods, and mushrooms tossed in an Alfredo cream sauce and topped with a grilled chicken breast and parmesan cheese – \$30.00
5. Cobb Salad - Iceberg topped with turkey, ham, bacon, hard cooked eggs, avocado, diced tomatoes, bleu cheese crumbles, and black olives with choice of dressing (Ranch, Fat Free Ranch, Bleu Cheese, French, Fat Free French, Italian, Fat Free Italian, Balsamic Vinaigrette) – \$25.00

8:00 Presentation – Nate Iverson

(One PDH toward continuing education requirements for Professional Engineers is available).

9:00 Coffee and Dessert – Sponsored by Veit

Cost: Paid 2015-2016 MGS Members receive a \$5 meeting discount on the meal costs listed above. The cost for full-time students is \$5, payable to MGS at the door.

Reservations: Requested by 12 Noon, Friday, April 8, 2016

PayPal Now Available for online reservation

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