*University of Michigan* *Department of Civil and*

*Environmental Engineering*

**Semester Project**

**CEE 546 – Slopes, Dams and Retaining Structures**

**Winter 2013**

You just received a phone call at your office from Dr. Mary Murphy who works for the Michigan Railroad authority. Based on your professional reputation as a leading geotechnical engineer in the area, Dr. Murphy asks for your support in evaluating the causes of a major railroad failure that led to a closure of a city road in Ann Arbor causing significant damage and flooding. You quickly pick up a piece of paper to write some notes as she describes the event.

Here are some of the notes that you hastily wrote:

* *Wednesday May 25th 2011, 9:23 pm*
* *railroad failure, ~2000 cubic yards…*
* *closure of Plymouth road between Barton Road and Maiden Ln.* (yes, a few blocks from here; haven’t you heard?)
* *significant rainfall preceded the failure…*

Given the media exposure and the complaints raised by many Ann Arbor residents, Dr. Murphy wants a complete geotechnical report that will technically describe what happened and evaluate the cause of failure. Dr. Murphy and her technical team that included UMich Faculty and graduate students visited the site the day after the failure (May 26th, 2011). She has a whole set of photos collected that she will pass on to you, as well as various technical information that she needs to dig out. She promises to send you a couple of picture by e-mail as a start. The project will have a strict and tight deadline. You arrange to meet on Monday February 11, 2013 at 1371 GGBL at 10:30 am so that you can go over the details and get going with the project (you are lucky, your reputation for efficient and high quality work precedes you and you will not have to bid for the project).

You hang up the phone. The e-mail is already in your mailbox. Two photos are included.

You need to do the following things by 2/11/13:

1. Identify your partner who will work with you on the project and accompany you to the meeting;
2. Review material available on the internet regarding this failure to get more background on what happened and be well prepared for the meeting on Monday. Search Google with the right keywords. Did you find the relevant material on the web? Are you certain? Store these files in a project folder and submit a list of resources that you found to Prof. Athanasopoulos-Zekkos together with a 1-page summary of your understanding of what happened based on the resources you collected.

***Good luck! It is good to be billable, so make sure you keep track of how many hours you and your partner spent on this project!***

****

****