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July 27, 2012

Mr. Todd Hileman
Village Manager
Village of Glenview
1225 Waukegan Rd.
Glenview IL 60025

Mr. Richard A. Nahrstadt
Village Manager
Village of Northbrook
1225 Cedar Lane
Northbrook, IL 60062

Subject: Union Pacific Railroad
UPRR Restoration at Shermer Road

Dear Messrs. Hileman and Nahrstadt:

Union Pacific Railroad has retained Alfred Benesch & Company (Benesch) to provide the following information regarding the derailment restoration at Shermer Road:

Task 1: Monitor the top of rail profile and alignment daily to determine if the track is moving more than would typically be expected.
Task 2 Prepare calculations to determine if utilities in the corridor are subject to additional load stresses due to the placement of temporary fill and railroad live load.
Task 3 Prepare slope stability analysis to estimate the factor of safety of the temporary embankment.

Summary of Benesch Activities and Findings - July 20 through July 26

Task 1
Benesch initiated work for this assignment on July 6, and collected topographic field survey that included locating existing Shermer Road, the temporary stone embankment, and the top of rail for both main tracks. This information was used to develop our "Situation Plan", and the engineering model of the site.

The tops of rail of both main tracks were surveyed daily from July 20 to July 26. After our review of the survey data and plots that were prepared from that data, we have concluded that the tracks have not experienced movement beyond what would typically be expected for new track construction. Benesch will continue to collect survey data on a daily basis until directed to cease such operations, and will report to the Village on a weekly basis.

Task 2
There has not been any change to the utility stress calculation issue since the report of July 20.

Task 3

Slope Stability & Settlement Calculations

Union Pacific installed additional material on the north slope of the embankment this week. The purpose of this work was to flatten the slope and provide additional factor of safety in the case of any weather related erosion of the embankment. Benesch has surveyed the new slope and will evaluate the revised factor of safety in the coming week. Previous analysis provided safety factors against failure of 1.3 for both the short-term (undrained) and long-term (drained) conditions based on the existing 1.5(H):1.0(V) north side slope and assumption of loaded coal cars on both tracks. A factor of safety of 1.3 is considered adequate to assume the slope will remain stable over the short and long terms. The slope on the south side varies between 2.7(H):1.0(V) and 3.0(H):1.0(V) and was not evaluated further.

There has not been any change to the consolidation issue since the report of 7/20/2012.

Please let me know if you have any questions or if we can be of further assistance.

Richard D. Conrath, P.E.
Vice President

RDC:r