

EARTHWORK OBSERVATION REPORT

Report Number: M5131245.0001
Service Date: 10/22/13
Report Date: 10/23/13

**Midwest Testing**
LABORATORY, INC.
A Terracon COMPANY
1555 N. 42nd St., Unit B
Grand Forks, ND 58203
701-772-2832

Client

CHS Milton Group
Attn: Tom Lehar
515 W. Montrose Ave.
PO Box 127
Milton, ND 58260

Project

Inbound/Outbound Scales - CHS Grain Elevator
Railroad Avenue
Calvin, ND

Project Number: M5131245

Services Requested By: CHS Milton Group

Excavation Contractor: Mikkelson Bros.

Observed Location(s): During today's visit, two excavation locations for the inbound and outbound elevator scales were observed. The first location (Scale 1) was just east of the recently constructed grain bin towards the north side of the site. The second (Scale 2) was southeast of the recently constructed grain bin, and adjacent to the east side of an existing building near the south end of the site.

Exposed Subgrade Review: Shortly before our visit to the site, the Scale 1 excavation was completed and was being backfilled as we arrived on site. The trench was excavated to approximately 8 feet below ground surface and was approximately 20 feet wide prior to our visit according to the excavation crew. The trench was backfilled with engineered fill and compacted. The first lift was approximately 1 ½ feet and the other lifts were not determined by the excavation crew. The excavation crew used a vibratory roller to compact the backfill with 3 to 4 passes before starting the next lift. The southeast corner of the excavation trench was not completely covered with backfilled materials so limited soil observations were made. The Scale 2 excavation trench was completed during our visit, so the exposed soils were able to be fully examined. The excavation extended approximately 8 to 8 ½ feet below the ground surface and was approximately 20 feet wide.

The exposed subgrade of the Scale 1 excavation consisted of brown sandy fill underlain by dark brown to black topsoil fill, then by grayish-brown mottled sandy lean clays. Minimal groundwater was observed in the non-backfilled southeast corner, which had been controlled by a sump pump prior to our visit. The sandy lean clay was soft near the top of the strata, but increased in consistency toward the bottom depth of the excavation. Since most of the area within the trench was backfilled prior to our visit, no assurances can be made on the nature if the soils present are consistent with the soils that were observed in the southeast corner.

The exposed soils of the Scale 2 trench consisted of brown sandy fill underlain by natural, gray sandy lean clay and then by undisturbed natural sandy lean clay which was grayish-brown mottled in coloration. Pooled groundwater was observed on the north end of the trench which depth was less than ½ inch. The soils observed in the Scale 2 trench appeared to be firm and stable.

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Summary:

The exposed soils encountered in the excavations are consistent with those noted in the geotechnical engineering report prepared for this project (Zeltinger Geotechnical Engineering, P.C. report number ZGE #12-074 dated August 23, 2012). In our opinion, the exposed natural soils should be suitable for support of the proposed construction. Results were reported to Richie (Mikkelson Bros.) at the completion of today's activities.

Services:

Midwest Testing Laboratory, Inc. Rep.: Corey, Lindeman

Reported To: Richie (Mikkelson Bros.)

Contractor:

Report Distribution:

(1) CHS Milton Group, Emailed

Reviewed By:

rvw2: wro

Joel R. Dilley

Senior Associate – Office Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.