

Bauske, Shelly A.

From: Jim Jacobs <jim@northwestscale.com>
Sent: Thursday, October 24, 2013 10:08 AM
To: Fahn, Patrick J.; Bauske, Shelly A.
Cc: 'Tom Lehar'
Subject: CHS Calvin Request for Variance
Attachments: CHS Calvin Request for Variance.pdf; Inbound Outbound Scales - CHS Grain Elevator Earthwork Observation 2013-10-22 Rpt 0001.pdf; 117' x 12' OTR Slab Foundation Drawing (Reference Only).pdf; Preliminary Boring Report for CHS Calvin.pdf

Importance: High

Pat & Shelly,

This e-mail contains some of the preliminary recommendations and draft boring report for the CHS Calvin truck scale site. After reviewing the preliminary report, CHS moved forward to have the scale locations excavated down 8 feet and rebuilt with engineered fill. I've attached the Earthwork Observation report for this completed work.

Please review the variance request and provide approval as soon as possible as we would like to move forward with this project. Let me know if you have any further questions.

Thank you,
Jim Jacobs
Northwest Scale, Inc.

From: CO-Milton, Tom Lehar [mailto:Tom.Lehar@chsinc.com]
Sent: Monday, October 14, 2013 8:52 AM
To: Jim Jacobs
Subject: FW: Preliminary recommendations for Calvin scales

From: Ballinger, Ezra [mailto:EBallinger@braunintertec.com]
Sent: Saturday, October 12, 2013 7:52 AM
To: Gales, Jim; CO-Calvin, Bruce Cahill; CO-Milton, Tom Lehar
Subject: RE: Preliminary recommendations for Calvin scales

Good Morning Gentlemen,

The preliminary boring logs and location sketch for the Calvin site are attached. In short we found about 3 to 6 feet of sandy fill materials from the surface in all of the borings. In three of the borings the fill was buried topsoil from 1/2- to 1 1/2-feet thick. The buried topsoil was underlain by rather soft glacial till soils to depths of about 10 feet. From about 10 feet to the boring termination depths we encountered rather stiff to hard glacial till. Groundwater was observed in only one boring at a depth of 14 feet. We anticipate that there may be localized perched groundwater at shallower and variable depths.

Based on my conversation with Jim last week I understand that the scales will be supported on a mat foundation at grade with loads of about 1500 pounds per square foot (psf). Of greatest concern at this site is the presence of frost susceptible soils, undocumented fill and buried topsoil in the scale footprints. It's my understanding that the fill has been recently placed and there may be testing to document that it was properly compacted, however, in three of the borings we encountered buried topsoil beneath the fill. The risks associated with undocumented fill and buried topsoil

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Email Including Request for Variance, Earthwork Observation Report, Slab Foundation Drawing, Preliminary Boring Report
Northwest Scale, Inc.

are variable and unpredictable settlement that can result in distress to overlying foundations. We recommend that all undocumented fill and buried topsoil be removed from beneath the footprint of the scale foundations.

Additionally, the extreme frost penetration depth at this site is about 7 1/2 feet. Some of the existing fill soils and all of the native soils encountered above this depth are considered frost susceptible and if left in place beneath the scale foundations there will be a risk of frost heave beneath the foundations. We recommend that frost susceptible soils be removed from beneath the scale footprint to a depth of 7 1/2 feet. Excavations for frost susceptible soils would likely be deeper than that necessary for removal of undocumented fill and buried topsoil. The excavations should be backfilled with non-frost susceptible fill soils, defined as sands containing less than 5% passing the #200 sieve. Some of the existing fill soils may meet these requirements, however additional fill will need to be imported in order to balance the excavations. In addition to the placement of nonfrost-susceptible soils below the structures, we recommend that surface drainage be established and maintained to reduce the potential for water collecting in the backfill and creating a "bathtub" condition (and subsequent frost heave). We recommend sloping the perimeter grades down and away from the structure at a minimum slope of 2 to 5 percent.

The anticipated settlement of the scale foundation supported over 7 1/2 feet of compacted non-frost susceptible soils and loaded to 1500 psf is predicted to be less than about 1 inch.

I will get lab testing going on Monday and will get a report to you once it is done. I will be out of the office Wednesday through Friday this week so anticipate having the report done and submitted to you by Wednesday of the following week (10/23). Please let me know with additional questions at this time.

Ezra Ballinger, PE
Braun Intertec Corporation
701-205-2515

From: CO-Milton, Tom Lehar [<mailto:Tom.Lehar@chsinc.com>]
Sent: Thursday, October 10, 2013 8:20 AM
To: Ballinger, Ezra; Gales, Jim
Cc: CO-Calvin, Bruce Cahill
Subject: RE: Tom Lehar

Perfect. Thank you.

From: Ballinger, Ezra [<mailto:EBallinger@braunintertec.com>]
Sent: Thursday, October 10, 2013 8:16 AM
To: CO-Milton, Tom Lehar; Gales, Jim
Cc: CO-Calvin, Bruce Cahill
Subject: RE: Tom Lehar

We will be on site late morning tomorrow to do this drilling. I will review the samples and send out preliminary information on Saturday morning at the latest. Let me know with questions in the meantime. Thank you.

Ezra Ballinger, PE
Braun Intertec Corporation
701-205-2515

From: CO-Milton, Tom Lehar [<mailto:Tom.Lehar@chsinc.com>]
Sent: Friday, October 04, 2013 4:37 PM
To: Ballinger, Ezra; Gales, Jim
Cc: CO-Calvin, Bruce Cahill
Subject: RE: Tom Lehar

The Calvin scales are 117' x 12'.

From: Ballinger, Ezra [<mailto:EBallinger@braunintertec.com>]
Sent: Friday, October 04, 2013 4:33 PM
To: Gales, Jim
Cc: CO-Milton, Tom Lehar; CO-Calvin, Bruce Cahill
Subject: RE: Tom Lehar

Thanks Jim. As we discussed we will drill four 20' borings at the site, one on each end of each scale. We'll drill the site next Thursday or Friday. I understand there will be 6' of structural fill already in place and the fill will be tested by others. The scales require 1500 psf under an 18" thick mat foundation. What is the approximate size of the scales? I'll have you preliminary recommendations the day after drilling and will confirm those with lab testing and follow up with a report.

We'll perform the work at the unit rates shown on cost estimate attached. Let me know with questions. Thank you for the opportunity to work with you on this project!

Ezra Ballinger, PE
Braun Intertec Corporation
701-205-2515

From: Gales, Jim [<mailto:Jim.Gales@chsinc.com>]
Sent: Friday, October 04, 2013 3:10 PM
To: Ballinger, Ezra
Cc: CO-Milton, Tom Lehar; CO-Calvin, Bruce Cahill
Subject: Tom Lehar

Hello Ezra,

Tom is the GM for CHS Milton.



Jim Gales PMP



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