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G.I.-30 SEPT. 1976

GEOCRES No. 30M15-86

DIST. 7 REGION

W.P. No. 88-74-01

CONT. No.

W. O. No.

STR. SITE No.

HWY. No. 401

LOCATION WEIGH SCALE SITE

BOWMANVILLE

No of PAGES - 1

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OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT.

REMARKS:

RECORD OF BOREHOLE NO 1

PROPOSED WEIGH SCALE - BOWMANVILLE

JOB 74-11023

LOCATION 110' to STA. 402+35; HWY 401

ORIGINATED BY PK

W.P. ~~144~~ 88-74-01

BORING DATE MAY 29 1974

COMPILED BY PK

DATUM GEODETIK

BOREHOLE TYPE HOLLOW STEM AUGER AND CONE TEST

CHECKED BY _____

[illegible]

20
15 5 % STRAIN AT FAILURE
10

W P-88-74-01

Structural Research Section,
Central Building,
Downsview.

Soil Mechanics Section,
Geotechnical Office,
West Building, Downsview.

Mr. P.F. Csagoly.

June 11th, 1974.

Subsoil Investigation, Bowmanville,
Dynamic Weigh Scale Site,
District #7, Port Hope,
W.O. 74-11023.

In reply to your request of May 21st, 1974, in regard to the Bowmanville Weigh Scale site, the subsoil investigations have been completed and the preliminary findings are as follows:

Ground Elevation used 275.8

Depth 0" - 12" (Elev. 274.8)	Sand and gravel, shoulder of existing ramp.
Depth 12" - 5'0" (Elev. 270.8)	Gravelly sand, traces of silt, very dense, fill material of existing ramp.
Depth 5'0" - 17'6" (Elev. 258.3)	Clayey silt with silt seams, traces of sand, brown stiff to hard, to elev. 263.8; then grey in colour and firm to elev. 258.3.
Depth 17' - 19'0" (Elev. 256.8)	Clayey silt, some sand and gravel (glacial till) very dense.

Water was encountered at elevation 263.0, water rose in borehole to elev. 269.8.

Recommendations:

We understand that the weigh scale pit is to be approximately 20 ft. wide by 4 ft. long by 10 ft. deep and is to contain electronic measuring devices. From this, we assume that the weight of the structure and contents will not exceed the weight of soil to be removed. The base of the pit will be at approximately elevation 265.0, therefore, water problems are not anticipated. Net soil bearing capacity at this elevation is estimated at 1.5 t.s.f. The net soil bearing capacity of the softer soil, 4 feet lower, appears to be greater than the 0.5 t.s.f. required.

June 11th, 1974.

Structural Research Section - RE: W.O. 74-11023.

Because of the softer soil located between the pit base and the dense till material further down, we anticipate that some small deflections of the structure may occur due to impact loads. If this is not acceptable for proper operation of the electronic equipment, we would recommend that the pit be placed on timber piles driven down to elevation 255.0. Approximate pile length is 10 feet, approximate safe capacity would be approximately 20 tons per pile.

We trust that the above information will be of some assistance.

For: W. Greskow
K.G. Selby,
Supervising Engineer.

WG/mj

c.c. G.C.E. Burkhardt
E.J. Orr
B.R. Davis
R.S. Pillar
D.P. Collins
B.J. Giroux
D. Gunther
G.A. Wrong
P. Lewycky
A. Argue

Files
Documents

3355

W.P. 88-74-01

MINISTRY OF TRANSPORTATION AND COMMUNICATIONS, ONTARIO

MEMORANDUM

TO: Mr. K.G. Selby,
Supervising Engineer,
Soil Mechanics Section,
West Bldg.

FROM: Engineering Research and
Development Branch.

ATTENTION:

DATE: May 21, 1974.

OUR FILE REF. 0710

IN REPLY TO

SUBJECT: Subsoil Investigation - Bowmanville Dynamic Weigh
Scale Site.

74-11023

Further to your conversation with Mr. P. King of this branch on May 14, 1974, this will confirm our request for an investigation into the subsoil conditions at the site of the proposed dynamic weigh scale. Enclosed is a site plan showing the location of the structure with respect to the present weigh scale, situated on the westbound lane of Hwy. 401 between exits 75 and 76. The structure is 235'-0" east of the centre of the present weigh scale platform in the north lane of the two lane approach. The base of the weigh scale pit is to be founded 10' below the present roadway and shoulder surfaces.

36 M.

PC/em.
Encl.

P. Csagoly
P. Csagoly,
Head, Structural Research.

3355

c.c. Mr. P. King.



Dickenson

416

Houston

826

8852381

PORT HOPE



B.F. CON.
LOT 8

B.F. CON.
LOT 7

PRESENT SCALE PLATFORM. (EL. 275.81 CROWN RDWY.)

PROPOSED WEIGH SCALE
(EL. 276.08 CROWN RDWY.
EL. 275.99 NORTH EDGE PAV.)

WEIGH SCALE

400+00

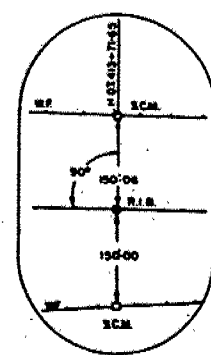
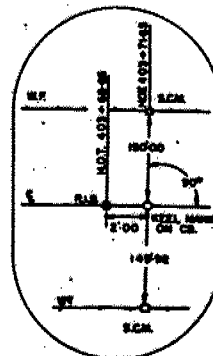
235'-0"

410+00

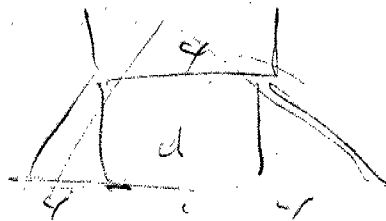
LANE 5

NOTE:

WEIGH SCALE TO BE PAVED
WITH H.L. 1 1/4" AS DIRECTED
BY THE ENGINEER.



871.8
12.8
263.0



1.5" Tol

.50 Tol