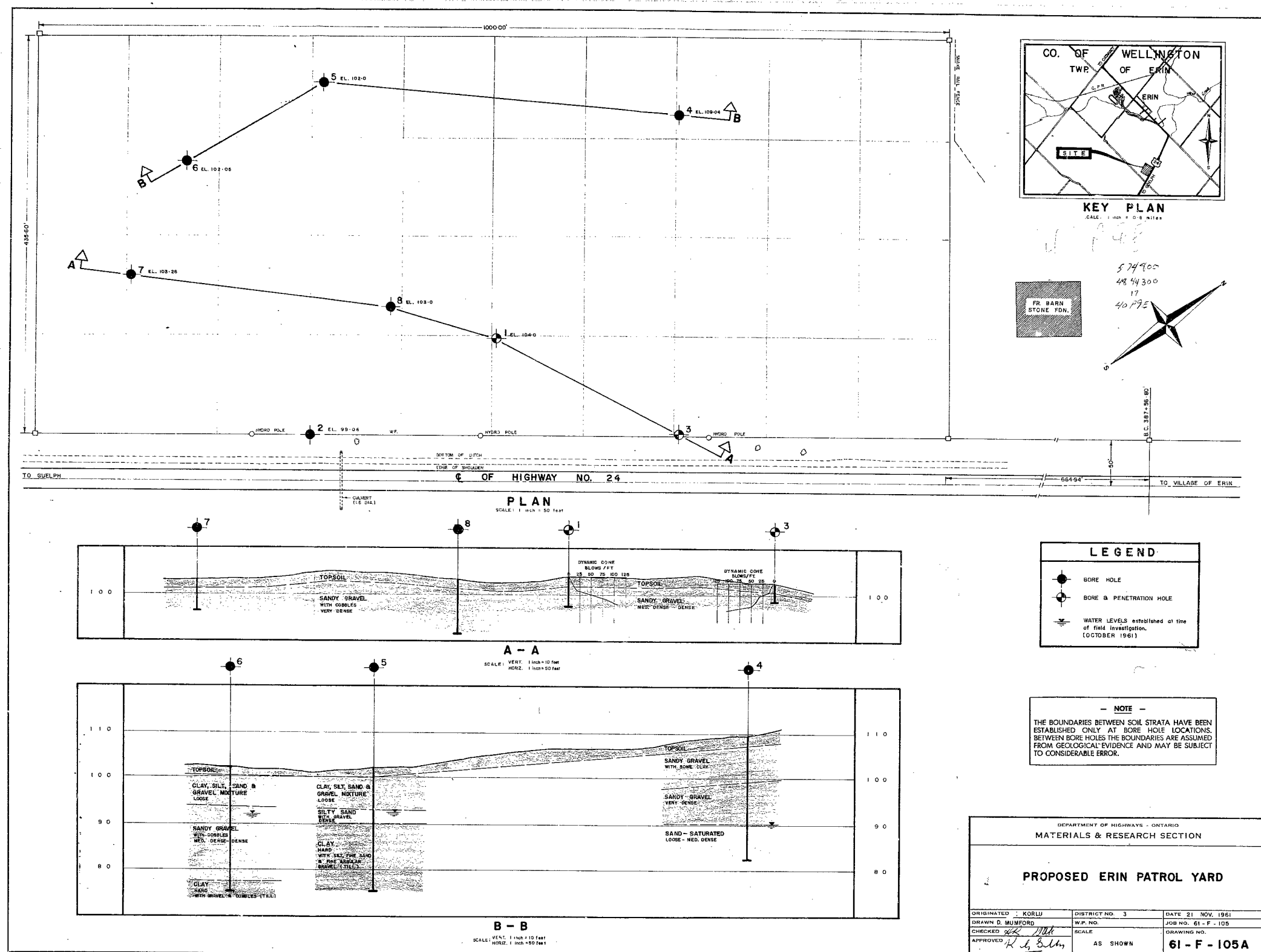


61-F-105
HWY [#]24
ERIN PATROL
YARD



Mr. F. E. Cavell,
 Superintendent,
 Special Services Section.
 Materials & Research Division,
 (Foundation Section.
 Attention: Mr. E. Hobby.

November 1, 1961.

D.H.O. PRELIMINARY SUBSOIL
 INVESTIGATION REPORT
 W.J. 61-7-105 -- P.R. 61-3467.

Re: Trin Patrol Yard, Hwy. 24th, Dist. #3.

Our field investigation, carried out at the above location, showed the subsoil to consist of about 2 feet of topsoil followed by medium dense to dense deposits of sand and gravel for at least a further 10 feet. Beneath the granular deposits, which are variable in depth, is a stratum of dense till.

Subsoil conditions are such that a bearing capacity of 3 tons/sq.ft. may be attained at a depth of 5.0'.

All topsoil should be removed prior to construction. For roadways and gravelled areas, fill should consist of acceptable sand cushion with the upper 6" G.B.C., Class 'A' material. For paved areas, a 2" base course of H.L.-3 with a 1-1/2" wearing course of H.L.-3, is recommended.

A complete report will follow at a later date.

MSR/226F

cc: Messrs. F. E. Cavell (2)

E. Hobby
 H. A. Fregosken
 H. C. Medillas
 H. C. Tackaberry
 L. D. Barrett
 I. J. Lovich
 J. Boy
 J. G. Crispier
 E. H. Saint
 F. Norman
 Foundations Office
 Gen. Files.

R. G. Selby,
 MR. PROJECT FOUNDATION ENGR.

Approved By:

Afternoon
 A. G. Storeac,
 PRINCIPAL FOUNDATION ENGR.

Mr. F. E. Cavell,
Superintendent,
Special Services Section.
Materials & Research Division,
(Foundation Section).
Attention: Mr. K. Hobby.

November 16, 1961.

D.H.O. FOUNDATION INVESTIGATION
REPORT.
W.J. 61-F-105 -- (W.P. Nil).

Re: PROPOSED NEW PATROL YARD AT ERIN, ONT.,
HWY. #24, WELLINGTON CTY., DISTRICT #3.

Attached, we are forwarding to you, our detailed
foundation report on the subsoil conditions at the above
structure site.

We believe you will find the recommendations
contained therein, adequate for your future design work.
However, should further information be required, please do
not hesitate to contact our Office.

AGS/MdeF
Attach.

agsternac
A. G. Stermac,
PRINCIPAL FOUNDATION ENGINEER

cc: Messrs. F. E. Cavell (2) K. Hobby
H. A. Tregaskes
H. D. McMillan
H. C. Tackaberry
L. D. Barrett
J. Roy
T. J. Kovich
J. E. Gruspier
E. R. Saint
F. Norman

Foundations Office
Gen. Files. ✓

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-

FOUNDATION INVESTIGATION

For

PROPOSED NEW PATROL YARD AT ERIN, ONT.,
HWY. #24, WELLINGTON CTY., DISTRICT #3.
W.J. 61-F-105 -- (W.P. Nil)

1. INTRODUCTION:

This report covers the detailed field investigation and recommendations for the proposed new Patrol Yard at Erin.

The site has 1,000 ft. of frontage on the north side of Hwy. #24 and a northerly extension of 435 ft., making an area of about 10 acres. The site is located about one mile west of Erin, on Hwy. #24.

2. DESCRIPTION OF SITE AND GEOLOGY:

The site is located in the physiographic region of the "Guelph Drumlin Fields", and the topography at the site is gently undulating.

The advance and retreat of ice in this region moulded the drumlins, gravel terraces and eskers. The drumlins consist mostly of sandy till with large boulders at the surface.

3. DESCRIPTION OF FIELD WORK:

The subsoil investigation was carried out by means of a penn-drill. During the investigation, eight conveniently spaced boreholes were drilled. At three locations, the boreholes were advanced down to a depth of 26 ft.

cont'd. /2 ...

3. DESCRIPTION OF FIELD WORK: (cont'd.) ...

Samples were obtained by means of a 2" O.D. split-barrelled spoon sampler. The energy used in driving it, conforms to the requirements of the Standard Penetration Test.

The locations and elevations of all boreholes, together with the estimated stratigraphical profiles, are shown on Drawing No. 61-F-105A which accompanies this report.

4. SOIL TYPES ENCOUNTERED:

4.1) General:

Subsoil at the site consists mostly of deposits of sand, gravel and cobbles. Over most of the area, these deposits are dense to very dense, except at the north-west corner (B.H.'s #5 and #6), where the upper 7.0' is relatively loose and contains an appreciable amount of silt and clay. In B.H.'s #5 and #6, a hard clay till stratum was observed at depths of 12' and 25', respectively. About 2.0' of organic clayey topsoil covers the whole site.

4.2) Sand, Gravel & Cobbles:

This deposit extends from the topsoil over most of the site. It consists of medium dense to very dense, well graded sand and gravel containing many cobble-sized stones. 'N' values vary from about 25 to more than 100 blows per foot. At the north-west corner of the site, this material extends from about 7.0' below the topsoil. Thickness of the stratum is variable, being

4. SOIL TYPES ENCOUNTERED: (cont'd.) ...

4.2) Sand, Gravel and Cobbles: (cont'd.) ...

about 3.0' in B.H. #5, and 25.0' in B.H. #4. In the other boreholes, the lower contact was not penetrated, maximum depth observed, being 10.0' in B.H. #8.

4.3) Clay, Silt, Sand, & Gravel:

A loose mixture of clay, silt, sand, & gravel was observed in B.H.'s #5 & #6, extending from the topsoil to a depth of about 7.0'. 'N' values varied from 3 to 8 blows per ft.

4.4) Hard Clay Till:

This deposit was observed only in B.H.s #5 & #6 at depths of 12' and 25', respectively. The lower contact was not observed, the maximum depth of the boreholes being 26.0'. The material consisted of hard silty clay containing fine to coarse sand and gravel. 'N' values varied from 52 to 75 blows per ft.

5. GROUND WATER CONDITIONS:

Water was observed only in B.H.'s #4, 5, & 6, at depths of 19', 10', and 12', respectively.

6. DISCUSSION & RECOMMENDATIONS:

The field investigation has shown that dense deposits of sand and gravel cover most of the site. Locations of proposed buildings should be confined to this area. A safe bearing capacity of 3 tons per sq. ft. may be assumed for footings placed at a depth of about 5.0'. As the highest water level observed during the

cont'd. /4 ...

6. DISCUSSION & RECOMMENDATIONS: (cont'd.) ...

investigation was at elev. 92.0' (about 10' below ground level),
no dewatering problems are anticipated.

All topsoil should be removed prior to construction.

For roadways and gravelled areas, fill should consist
of acceptable sand cushion with the upper 6", G.B.C. class 'A'
material. For paved areas, a 2" base course of H.L.-8 with a
1-1/2" wearing course of H.L.-3, is recommended.

November 1961.

REPORT PREPARED BY:

... *V. Korlu*
for V. Korlu,
PROJECT FOUNDATION ENGINEER

REPORT APPROVED BY:

... *K. G. Selby*
K. G. Selby,
SR. PROJECT FOUNDATION ENGINEER