



ONTARIO
DEPARTMENT OF HIGHWAYS

Memo to Mr. F. E. Cavell, Date May 30, 1962.
Superintendent,
Special Services Section. Subject D.H.C. FOUNDATION INVESTIGATION
Materials & Research Division, REPORT.
 From W.J. 62-F-41 -- W.P. (Nil).

(Foundation Section).

RE: COURTLAND PATROL YARD PT. LOT 20, CONC. III,
TWP. MIDDLETON, HWY. #59, DISTRICT #2.

A foundation investigation for the proposed Courtland Patrol Yard was requested by Mr. F. E. Cavell, Superintendent of Special Services. The site is approximately 3 miles south of Courtland on the west side of Hwy. #59.

The foundation investigation was carried out by this Section on April 26th, 1962, to determine the subsoil conditions existing at the site. Boreholes were located to give a general picture of the subsoil conditions over the entire site. A total of 9 boreholes and two dynamic cone penetration tests were carried out. The locations and approximate elevations of these, together with the estimated stratigraphical profile, may be seen on Drawing 62-F-41A.

The proposed Patrol Yard is located on a triangular shaped field bordered by a creek, Hwy. #59 and a township road. The field is slightly undulating with the

surrounding area being predominantly flat. The site lies on the Norfolk Sand Plain.

The subsoil at the site consists of a granular deposit of silty fine sand. This stratum was proven to a depth of 25' in B.H. #5. The relative density of the granular subsoil, as determined by Standard Penetration Tests was compact with a corrected 'N' value of 21 blows/ft. The subsoil is overlain by $\frac{1}{2}$ to 1 ft. of dark brown fine sandy topsoil.

The water table at the time of the investigation varied from $3\frac{1}{2}$ to 6 ft. below the ground surface. This will, no doubt, vary seasonally and should be determined at the time of construction.

It is recommended to found the structures on 2 ft. wide spread footings 5 ft. below the ground surface. A design load of 1.0 tons per square foot may be used for the building foundations. This load must include the maximum crane load etc. which might occur during the use of the structure.

In the lower areas of the field a dewatering scheme might be necessary. If sheeting is used for this, it must be driven to an adequate depth below the bottom of the excavation. This depth will depend on the height of the prevailing water table above the bottom of the excavations and should be equal to it. The maximum settlement anticipated with a design load of 1 T.S.F. is 1 inch.

cont'd. /3...

For the roads and parking areas 18 inches of granular material consisting of 12 inches of sand cushion and 6 inches of G.B.C. class "A" material are recommended. Prior to placing of the granular material, topsoil should be stripped and removed. The surfacing of the paved area should consist of 2 inches of HL-6 Binder Course and 1½ inches of HL-3 Surface Course.

The field work, performed during the period from April 26 to April 30, 1962, together with the preparation of this report, was undertaken by Mr. I. Holubec. The general investigation was carried out under the general supervision of Mr. K. G. Selby who reviewed this report.

cc: Messrs. -

F. E. Cavell (4)
H. A. Tregaskes
H. D. McMillan
W. L. Fraser
T. J. Kovich
J. Roy
J. E. Gruspier
E. R. Saint
F. Norman

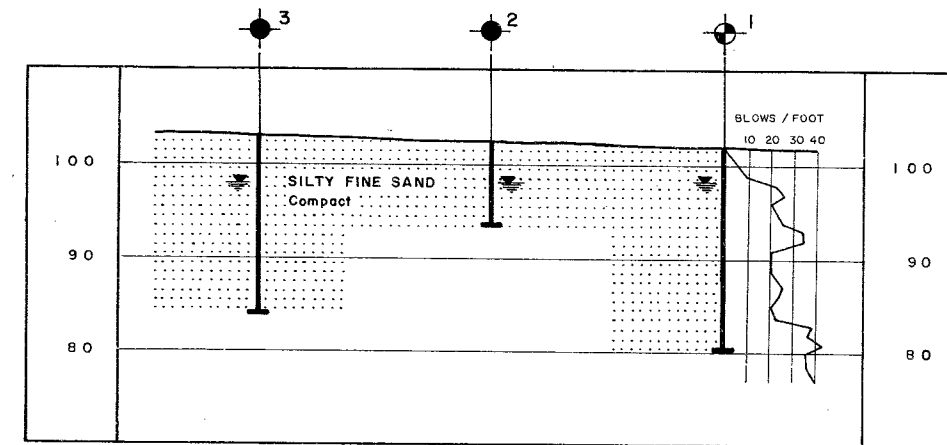
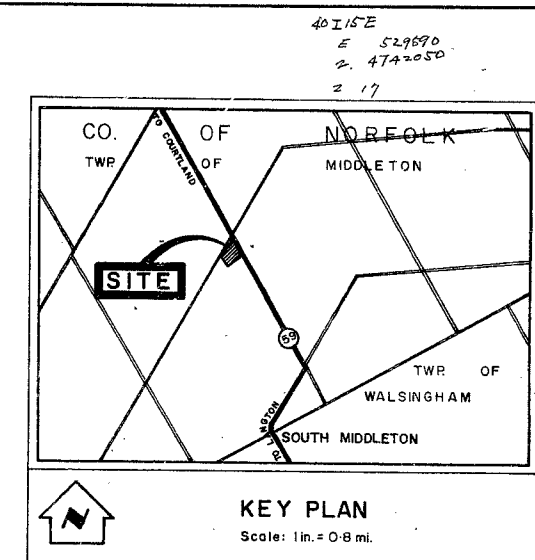
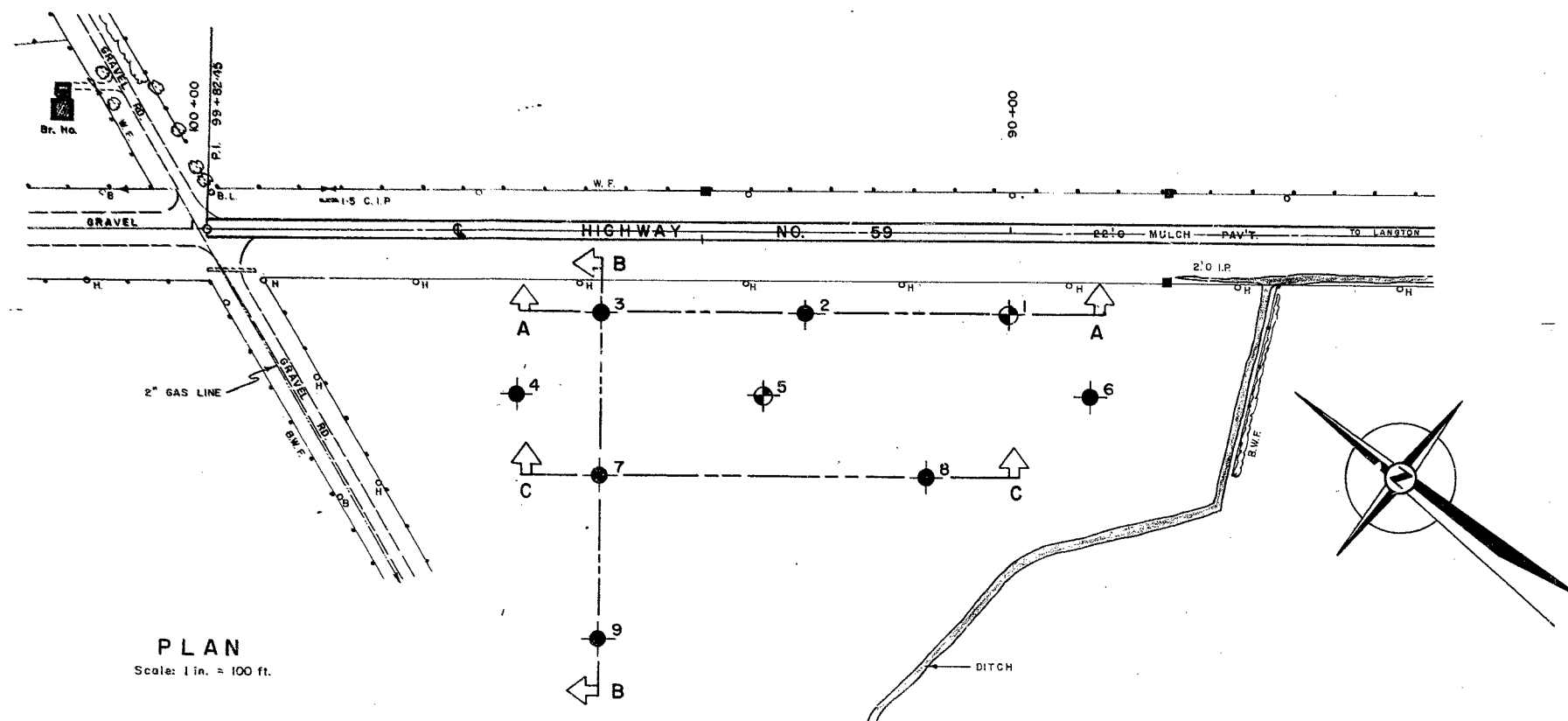
Foundations Office ✓
Gen. Files.


K. Y. Lo,
SUPERVISING FOUNDATION ENGR.

For:
A. G. Stermac,
PRINCIPAL FOUNDATION ENGR.

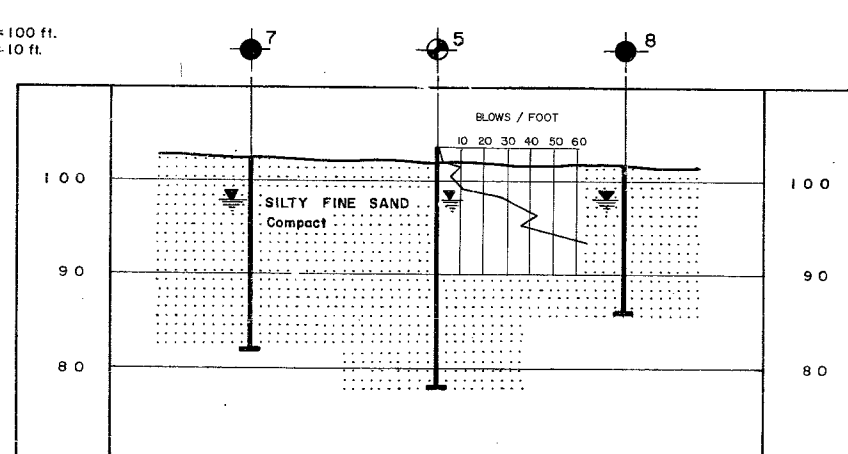
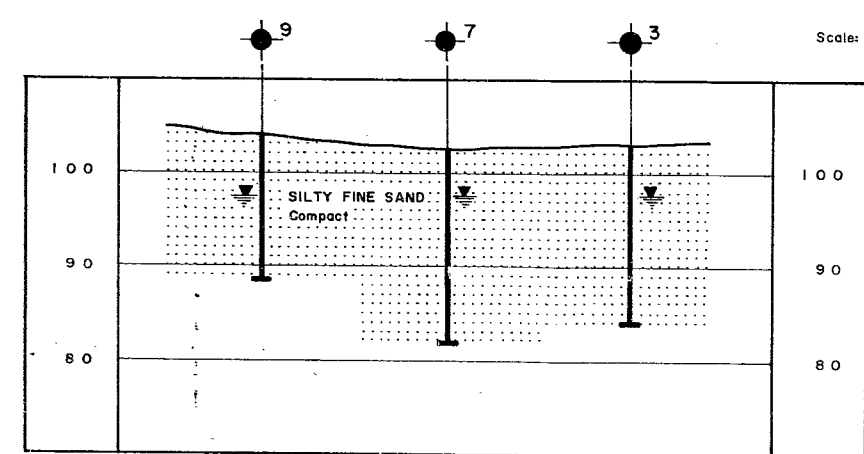
APPENDIX I.

#62-F-41
Hwy #59
COURTLAND
PATROL YARD



NOTE: GROUND PROFILE IS APPROXIMATE WITH AN ASSUMED ELEVATION OF 100'

LEGEND			
	BORE HOLE		
	BORE & PENETRATION HOLE		
	CONE PENETRATION HOLE		
	WATER LEVELS established at time of field investigation.		
HOLE	ELEVATION	STATION	OFFSET
1	102.0	90+00	100' LT.
2	102.5	92+50	100' LT.
3	103.0	95+00	100' LT.
4	103.0	96+00	200' LT.
5	103.5	93+00	200' LT.
6	102.5	89+00	200' LT.
7	102.5	95+00	300' LT.
8	101.5	91+00	300' LT.
9	104.0	95+00	500' LT.



DEPARTMENT OF HIGHWAYS - ONTARIO		
MATERIALS & RESEARCH SECTION		
COURTLAND PATROL YARD		
ORIGINATED I. HOLUBEC	DISTRICT NO. 2	DATE MAY 16, 1962
DRAWN D. MUMFORD	W.P. NO.	JOB NO. 62-F-41
CHECKED <i>[Signature]</i>	SCALE	DRAWING NO.
APPROVED <i>[Signature]</i>	AS SHOWN	62-F-41A