

Mr. A. M. Toye,
Bridge Engineer.
Materials & Research Section,
(Foundations Office).

May 8, 1961.

D.H.C. FOUNDATION INVESTIGATION
REPORT.

W.J. 61-F-30 -- W.P. 136-61

Attention: Mr. S. McCoghie.

Re: Park's Creek and King's Highway No. 11-B,
(Approx. 2 Miles West of North Bay)
Twp. of West Ferris, Dist. of Nipissing,
District No. 13.

Due to the intended improvement of Hwy. No. 11-B,
it is planned to widen the bridge which carries Hwy. No. 11-B
over Park's Creek. The chainage at this point is 172 + 36 for
Hwy. 11-B.

In order to determine the soil properties and decide
on the type of foundations, an investigation was carried out by
this Section. The field investigations have been confined to two
sampled boreholes, supplemented by the same number of cone penetration
holes. 5 feet of core was taken in each borehole.

The elevations, as well as the locations (chainages) of
the boreholes, are given on Drawing No. 61-F-30A, attached to this
report (Appendix I.).

The stratigraphy of the soil at the site was found to be
quite uniform. The top 2 to 3 feet are formed by loose fine to med.
sand with organic matter, underlain by loose sandy silt, followed by
sound reddish granite with layers of white quartz.

The ground water table was found at the surface.

Because of the loose state of the sandy silt and the high water table, spread footings have to be ruled out. It is therefore recommended that steel 'H' or timber end-bearing piles, driven down to bedrock, be used. The safe load per steel 'H' pile should not surpass 40 tons, and that of a timber pile, 20 tons.

If the bridge is built in the summer when the water table will be lower, the falsework footings can be placed at the surface. The maximum bearing load should not exceed 0.5 tons/sq.ft., provided the soil is not softened by standing or running water.

Problems due to water seeping into the excavations are likely to present some difficulty. Wooden cofferdams will have to be erected and pumping facilities employed.

WJ/MSF
Attach.

L. G. Soderman,
PRINCIPAL FOUNDATION ENGINEER
Per:

REPORT PREPARED BY: G. G. Cherrington
for W. Kulmatickar,
Project Foundation Engineer.

REPORT APPROVED BY: A. G. Sternac
A. G. Sternac,
Supervising Foundation Engineer.

cc: Messrs. A. W. Foye (2)
H. A. Fregaskes
H. D. McMillan
C. E. Hunter
B. Foster
C. E. Seint
A. W.
Foundations Office
Gen. Files.

APPENDIX I.

OFFICE LOCATION -
DOWNSVIEW AVE.
KEELE ST. - HIGHWAY 401
TORONTO, ONTARIO.



ONTARIO
DEPARTMENT OF HIGHWAYS

POSTAL ADDRESS -
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS,
TORONTO 5, ONTARIO.

Bridge Division,
October 17, 1961.

MEMORANDUM TO:

Mr. A. Stermac,
Principal Foundation Eng.,
Department of Highways,
Room 107,
Downsview, Ontario.

RE: W.P. 136-61
Parkes Ck. Widening
Hwy. #11B District 13

Attached please find one print of preliminary
plan D 4914 for the above structure.

The foundation has been designed in accordance
with the foundation report submitted by D.H.O.

A handwritten signature in cursive script, reading "J. C. McAllister".

JCMCA/et

J. C. McAllister,
for S. McCombie,
Bridge Planning Engineer.

No Comment

A handwritten signature in cursive script, reading "T. Hobday".

#61-F-30

W.P. #136-61

Hwy. #11B E

PARK'S CREEK

2 MILES W. OF

NORTH BAY

