

DOCUMENT MICROFILMING IDENTIFICATION

GEOCRES No. 31 E - 83

W.P. No. \_\_\_\_\_

CONT. No. \_\_\_\_\_

W. O. No. \_\_\_\_\_

STR. SITE No. \_\_\_\_\_

HWY. No. \_\_\_\_\_

LOCATION PROP. BRIDGE,  
OBLONG RIV., LOT 2, CON. 6,  
HARBURN TWP.,

OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. NONE

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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# RAYMOND

CONCRETE PILE COMPANY, LIMITED

31E-83
GEOCRES No.

HIGHWAY NO. 7, UNIONVILLE, ONTARIO

293-2486

TELEPHONES

364-3644

## SOIL INVESTIGATION REPORT

### PROJECTS:

- Proposed Bridge

### SITE:

- Oblong River,  
Lot 2, Con. 6,  
Township of Harburn,

### CLIENT:

- Township of Dysart, et al.

### TOPOGRAPHY:

- Site is relatively flat and accessible on the upstream side of the site. The downstream side has relatively steep banks and is not easily accessible. At the time the borings were made, ground surface elevations were not known. The boreholes have been plotted based on a relative elevation of 100.0, being two spikes on a blaze mark on a white birch tree located at the S.E. corner of the existing bridge.

### PERIOD OF FIELD WORK:

- June 14th to June 19th, 1961.

### OUR JOB NUMBER:

- Raylin B-1176-T

### DATE OF REPORT:

- June 20, 1961.



### INTRODUCTION

Two boreholes were completed by Raymond Concrete Pile Company Limited at the above site for purposes of evaluating soil conditions for foundation design of the proposed bridge.

The borings were made by standard exploratory techniques, using 3" flush joint casing. The Standard Penetration Test was performed every 2 or 3 feet to a depth of 15 feet and at 5-ft. intervals thereafter. A record was kept of the number of blows required to drive the 2" O.D. Sampling Spoon one foot, using a 140-lb. weight falling freely 30 inches. Soil samples were obtained after completion of each driving test.

The two holes were taken to depths considered necessary to give adequate information.

### SOIL PROFILE

The boreholes, placed opposite and at the north and south extremities of the existing structure, revealed similar deposits of a 3 to 4.5 layer of coarse gravel and boulders, followed by dense to very dense brown sandy gravel. At the location of Borehole No. 1, this material extended to a depth of 15 feet and was followed by grey sandy silt or silty sand, extending to a depth of 23 feet. Underlying this stratum was found two layers of brown sandy gravel and grey sandy silt, or silty sand, respectively.

These deposits are characteristic of stream deposits. The heavier deposits laid down while the stream was running relatively

fast and lighter deposits of silt or fine sand laid down at a time when the stream was possibly dammed off below the site; hence, making a relatively slow flow.

The general area is rocky with rock outcrops visible. It is possible that this site is a rock gorge eaten out by an old river filled in with these deposits over the ages. However, conversation with the Township's superintendent indicates gravel deposits are prevalent to the south of the site to considerable depths.

#### CONCLUSIONS

Based on the results of the Standard Penetration Tests obtained, the deposits are suitable for the use of spread foundations. For foundations placed on the brown sandy gravel, a Safe Soil Bearing Value of 4000 pounds per square foot is suggested below Elevation 87. This value is based on an N value of 45 at Elevation 84 in Borehole No. 1 and is the worst condition.

It is understood that the proposed structure is to be rigid framed and it is usual to place foundations some 3 to 4 feet below existing stream bed. The deposits in this area are extremely pervious in nature and it is pointed out that to excavate below existing river level would present extremely difficult water problems and create a hydrostatic condition which could disturb the natural density of the deposits if the excavation was to be kept dry.

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The difference in water level of the two boreholes is attributed to the presence of an old beaver dam on the upstream side of the old structure, tending to partially dam the water.

To eliminate the water problem mentioned above, it might be necessary to excavate the pier locations in the wet, at no time removing the water so as to create the hydrostatic condition and the pier brought up to water level by means of tremie concrete.

Another suggestion would be to place the foundations at water level, for which extensive and proper rip rap or erosion preventive would have to be employed.

RAYMOND CONCRETE PILE CO. LIMITED



J. Hodd, P. Eng.  
Boring Manager.

JH:jm

# RAYMOND

CONCRETE PILE COMPANY LTD.

## LOCATION PLAN

To TOWNSHIP OF DYSART ET AL, c/o COUNTY OF ONTARIO - ENGINEERING

Date

JUNE

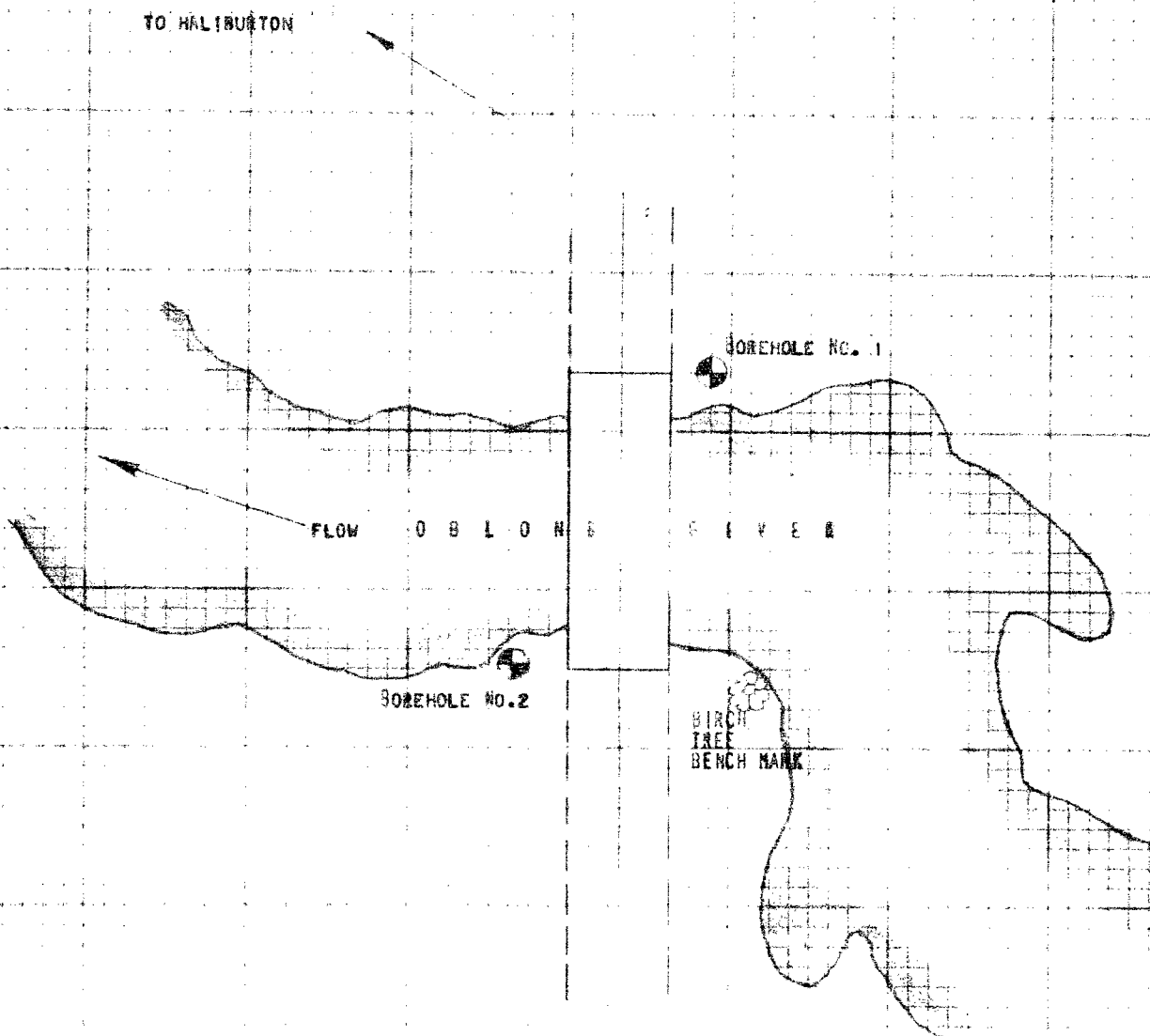
1961

Address CENTRE STREET, WHITBY, ONTARIO

Project PROPOSED BRIDGE OVER OSLONG RIVER - LOT 2 CON. VI

TOWNSHIP OF HARBURN, ONTARIO

SCALE 1" = 30' (APPROX.)



Compass Points



This boring report prepared in the

TORONTO

OFFICE of the

Raymond Concrete Pile Company Ltd.

By J. HODD

Job No. B1176

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# TEST BORING REPORT RAYMOND

CONCRETE PILE COMPANY LTD.

## SOIL TEST DIVISION

To TOWNSHIP OF DYSART ET AL

Date

JUNE

19 61 Job No. B11767

Location of Borings BRIDGE OVER OBLONG RIVER, LOT 2, CON. VI, TOWNSHIP OF HARBURN, ONTARIO

All borings are plotted to a scale of 1" = 8 ft. using NAILS ON SIDE OF WHITE BIRCH TREE S.E. SIDE EXISTING BRIDGE AS 100.0 as a fixed datum.

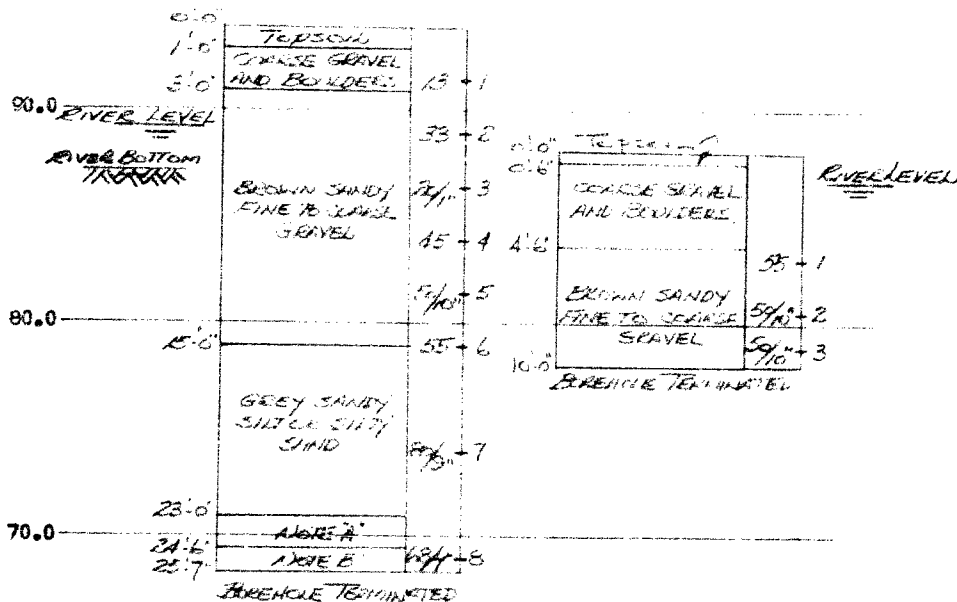
No. \_\_\_\_\_  
ELEVATION

No. #1 \_\_\_\_\_

No. #2 \_\_\_\_\_

No. \_\_\_\_\_

100.0



NOTE A: LIGHT BROWN SANDY FINE GRAVEL

NOTE B: GREY SANDY SILTY CLAY SAND

Classifications are made by VISUAL inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage \_\_\_\_\_

Foreman K. KITCHENER

Classification by K. KITCHENER

Sheet \_\_\_\_\_ of \_\_\_\_\_