

DOCUMENT MICROFILMING IDENTIFICATION

GEOCRES No. 31 F - 78

W.P. No. _____

CONT. No. _____

W. O. No. _____

STR. SITE No. _____

HWY. No. _____

LOCATION PROP. NEW BRIDGE,
LOTS 20 & 21, CON. X,
FITZROY TWP.

OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. NONE

REMARKS: _____

8A2534

JOHN D. PATERSON & ASSOCIATES

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OTTAWA 3, CANADA

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OFFICES AND LABORATORY:

1479 LAPERRIERE AVE.

INSPECTION SERVICES
LABORATORY TESTING
APPRAISALS, RESEARCH
SOIL INVESTIGATIONS



REPORT OF SOIL INVESTIGATION

PROPOSED NEW BRIDGE

LOT 20 & 21 CONCESSION X

TOWNSHIP OF FITZROY

FOR

OTTAWA SUBURBAN ROADS COMMISSION

C. C. PARKER & ASSOCIATES LIMITED

DESIGN CONSULTANTS

REPORT NO. S401-64

NOVEMBER 18, 1964.



INTRODUCTION:

At the request of Mr. D. C. Cramm, P. Eng., Bridge Department Manager, C. C. Parker and Associates Limited, on behalf of the Ottawa Suburban Roads Commission, a soil investigation was conducted at the site of a proposed bridge replacement over the Carp River at Lots 20 & 21, Concession 10, Fitzroy Township.

The instructions outlining the drilling program in Mr. Cramm's letter, Reference 2207-20-102, were adhered to as closely as possible.

FIELDWORK PROCEDURE:

Two test holes were put down on diagonally opposite sides of the bridge at the locations shown on the Test Boring Plan.

At each location a cone probe was driven to refusal to check the uniformity of the soils. Also, casing was driven, the soils sampled and bedrock located.

A Standard Drilling Rig operated by a crew of two was supervised and directed in the field at all times by a soils technician from our staff.

SAMPLING AND TESTING:

Because the depth to refusal of the cone probes indicated that bedrock would be encountered at a convenient footing elevation, all samples were recovered by means of the split spoon sampler.

Both clay and granular soils were sampled. During the recovery of each sample the Standard Penetration test was conducted and the results are recorded as "N" values. Each sample was retained in a plastic bag.

Core samples of bedrock recovered by diamond drilling were logged and retained in core boxes.

OBSERVATIONS:

(a) Soil Types

In Hole No. 1 the following soil profile occurs:

0	-	1.5	Topsoil
1.5	-	9.0	Medium stiff, oxidized, brownish grey, silty, fissured clay.
9.0	-	13.1	Medium dense, saturated very fine grained sand with some gravel at 12.5 feet.
13.1	-	20.1	Bedrock. Grey limestone (dolomitic) slightly sandy and considerable calcite crystal growth.

In Hole No. 2 the following soil profile occurs:

0	-	9	Boulders and fill material.
9	-	12	Stiff, oxidized, brownish grey silty clay with a trace of organic inclusions (small roots).
12	-	16	Stiff, grey, silty clay.
16	-	17	Medium stiff sandy clay.
17	-	21	Bedrock. Grey limestone (dolomitic) slightly sandy and considerable calcite crystal growth.

(b) Ground Water

The ground water level in each of the holes at the completion of the field work was approximately the same as the water level of the stream (el 89.3). It is expected that the ground water level will continue to fluctuate with the seasonal rise and fall of the stream.

(c) Test Results

The results of the Standard Penetration Test indicate that the clay is medium stiff to stiff in consistency and the sand is medium dense.

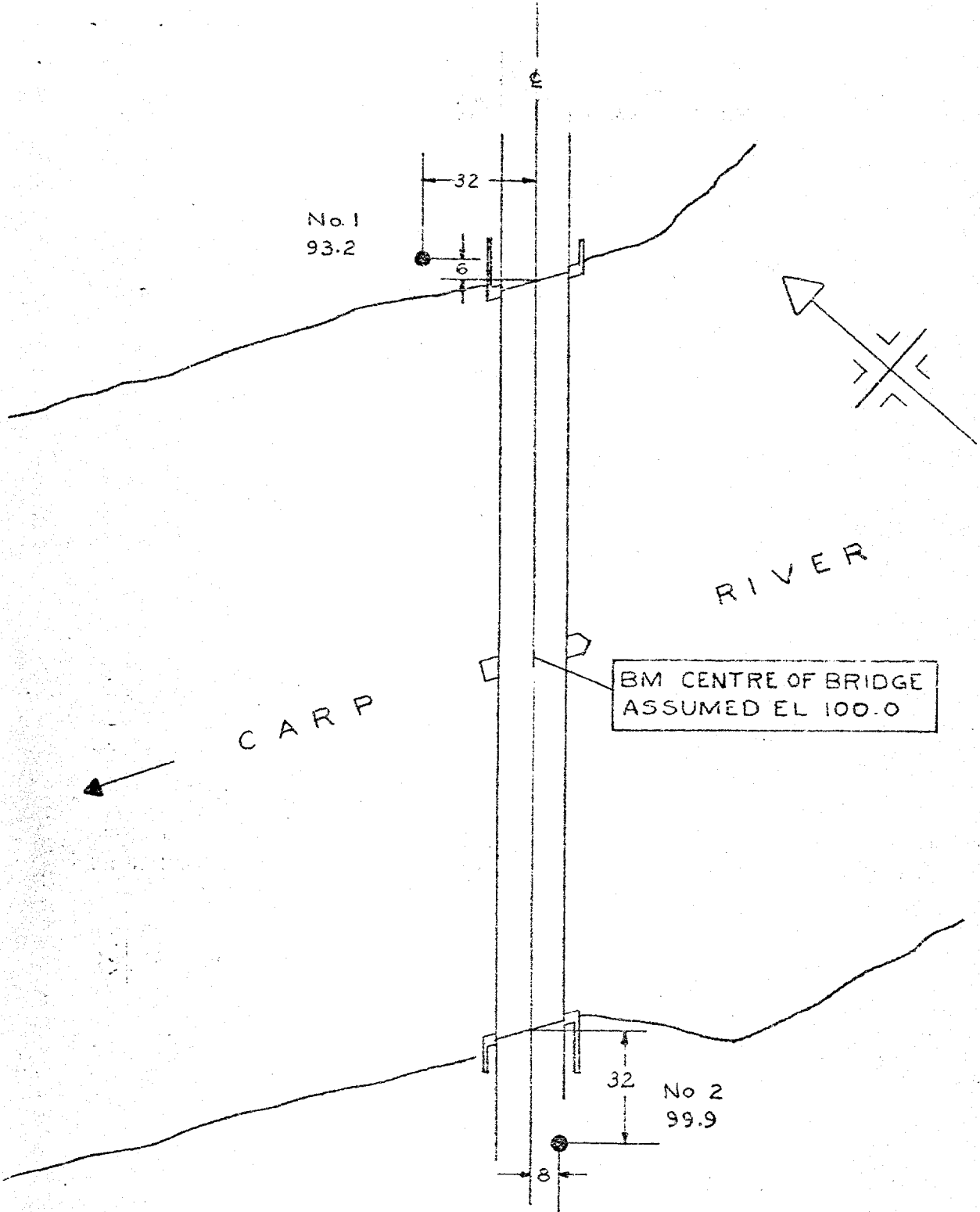
CONCLUSIONS AND RECOMMENDATIONS:

It is concluded that the sand occurs as lenses and may be encountered interbedded with the clay. However, since the clay is medium stiff to stiff and the sand medium dense, no problems of stability are anticipated if embankments similar in size to those existing are constructed.

The bedrock surface appears to be more or less flat lying and at a convenient elevation (82 ± 1) at which to place the footings of the abutments. If a centre pier is contemplated, it is expected that the bedrock at that position is at elevation 82.

It is recommended that the footings be placed on bedrock with a maximum loading value of 20,000 pounds per square foot.

L. Bredeson
L. Bredeson, P. Eng.



No 1
93.2

RIVER

CARP

BM CENTRE OF BRIDGE
ASSUMED EL 100.0

No 2
99.9

TEST BORING PLAN
PROPOSED
BRIDGE REPLACEMENT
OVER CARP RIVER
LOT 20 & 21 CONC X
FITZROY TOWNSHIP

Scale 1" = 40'

JOHN R. PATTERSON & ASSOCIATES LTD
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1450 LAURENCE AVE. WEST, SUITE 100
OTTAWA, K1G 1C1

CANADA

LOCATION: Lot 20 & 21, Concession 10
Fitzroy Township

Sheet No:1 of 2

Boxings By: F.E. Johnston Drilling Co.

Date: Oct. 28, 1964.

Hole No: 1

[illegible]

CANADA

LOCATION: Lot 20 & 21, Concession 10
Fitzroy Township

Sheet No: 2 of 2

Borings By: F.E. Johnston Drilling Co. Date: Oct. 29 & 30/64 Hole No: 2

[illegible]