

#67-F-29

Hwy. #73

PORT BRUCE

SLOPE FAILURE

AREA

67F-29

FILE IN  
DISTRICT FILE  
AGS

00280

DOWN LOND 8 APRIL 6/67

2.33P

1567 APR 8 1967  
PRIORITY  
PM 2:37

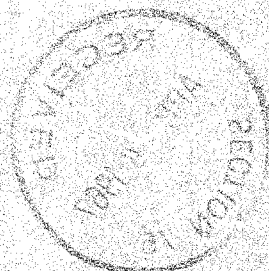
M DEVATA MAT & TEST

HWY 73 PORT BRUCE

WOULD YOU PLEASE ADVISE MR GREENLY DIST CONSTR ENGR, LONDON  
THE TIME YOUR REPRESENTATIVE WILL BE AT PORT BRUCE TO-MORROW.

J ROY REGL MAT ENGR

MURTY DEVATA & LAVERNE PALMER  
WENT TO VISIT THE SITE  
ON FRIDAY APRIL 7, 1967.  
AGS.



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April 11/67 LP.

General.

The failure site was visited on April 7 in the afternoon and appeared as indicated on the enclosed sketch. It was not possible to walk on most of the slide area due to the softness of the material.

It was very difficult to ascertain the cause of the failure or even the sequence of failure because of remedial work started between the first at least failures.

Discussion:

It would appear that the natural slope of about  $1\frac{1}{2}$ :2 to 1 is subjected to progressive superficial creep (as indicated by the typical displaced and curved shape of the trees adjacent to the failure). The ground surface immediately south of the failure zone was very soft and spongy and appeared to be saturated and on the verge of failure.

From the general topography it seems possible that the failure has occurred down an old tributary valley of the main creek valley. The initial failure which caused concern may have been superficial in nature similar to the movement indicated south of the

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slide combined with some local failure of the embankment itself (a loose sand fill)

Subsequent attempts at remedial measures may have aggravated the slope stability by trimming the upper slope as well as piling debris on the lower slope. In any case, the material slide seems to involve both original ground and the fill in the "presupposed valley".

### Test Boring:

The boring was undertaken and completed during April 10, 1967 using a Pennhill. (No sketch for location)

The boring indicated 11 feet of very loose to loose silty sand underlain by about 10 feet of grey clayey silt with traces of organics in the upper portion and considerable wood in the lower portion of the deposit. This appeared to be fill material. From 21 feet to the end of the boring (36.5 feet) the deposit was very stiff to hard clayey silt with some sand (till-like) with 'N' values of 14 to 21 blows per foot.

During the drilling no seepage was noticed in the borehole. From 12.5 to 21.0 feet some moisture was noticed in the spore sample. The borehole was observed for

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$\frac{3}{4}$  hour after drilling ceased and was completed dry at the bottom after that time. This seems to correspond with the observation that although the slide area is very wet, no actual seepage zones are evident.

401 & Keele Street  
Downsview, Ontario

Materials and Testing Division

April 13, 1967

Master Soil Investigation  
104, Kenhar Drive  
Weston, Ontario

Dear Sirs:

This is to confirm our request of April 7, 1967 for the supply of a Penn Drill together with all necessary equipment, as specified under the terms of our Contract Agreement, at Port Bruce, Ontario, on April 10, 1967.

This project bears Job Number 67-F-29.

Yours truly,

*M. Devata*

M. Devata  
Supervising Foundation Engineer  
for: A. G. Stermac  
Principal Foundation Engineer

MD:mt

cc: R. Konings  
H. Szymanski ✓

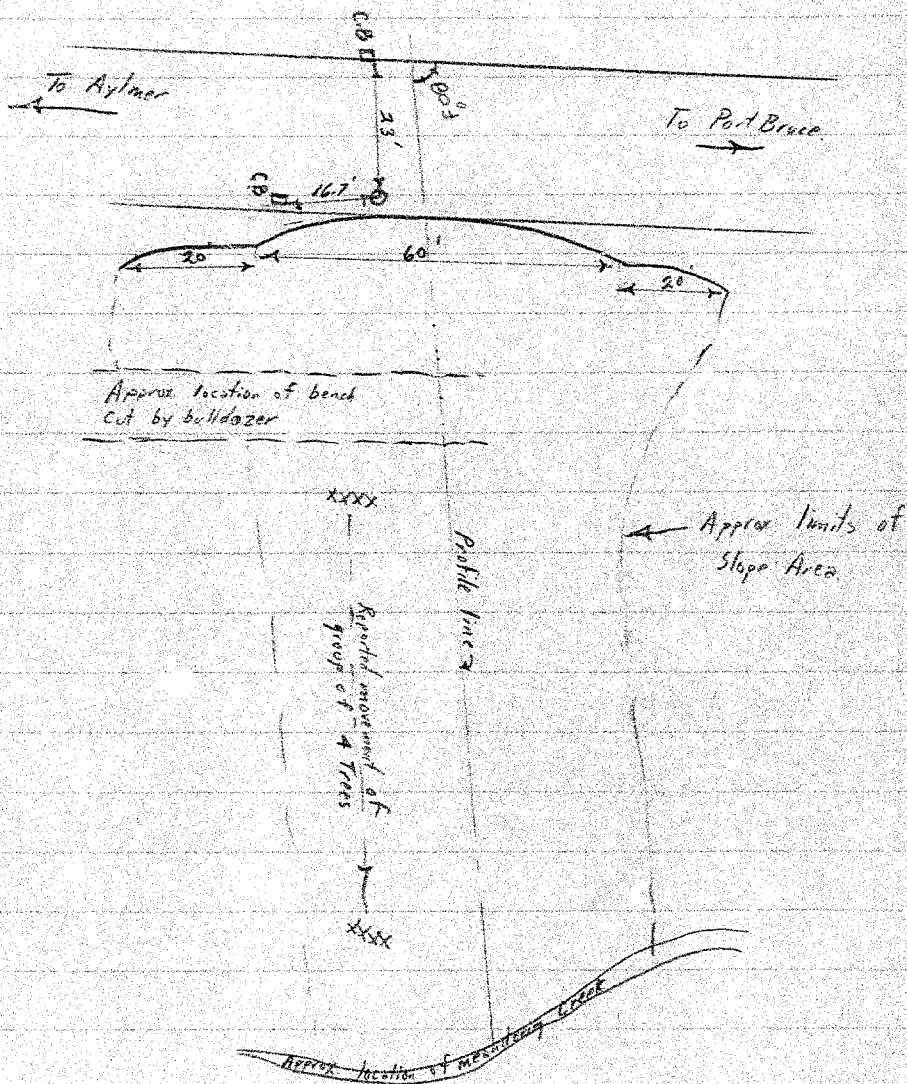
Foundation Files  
General Files



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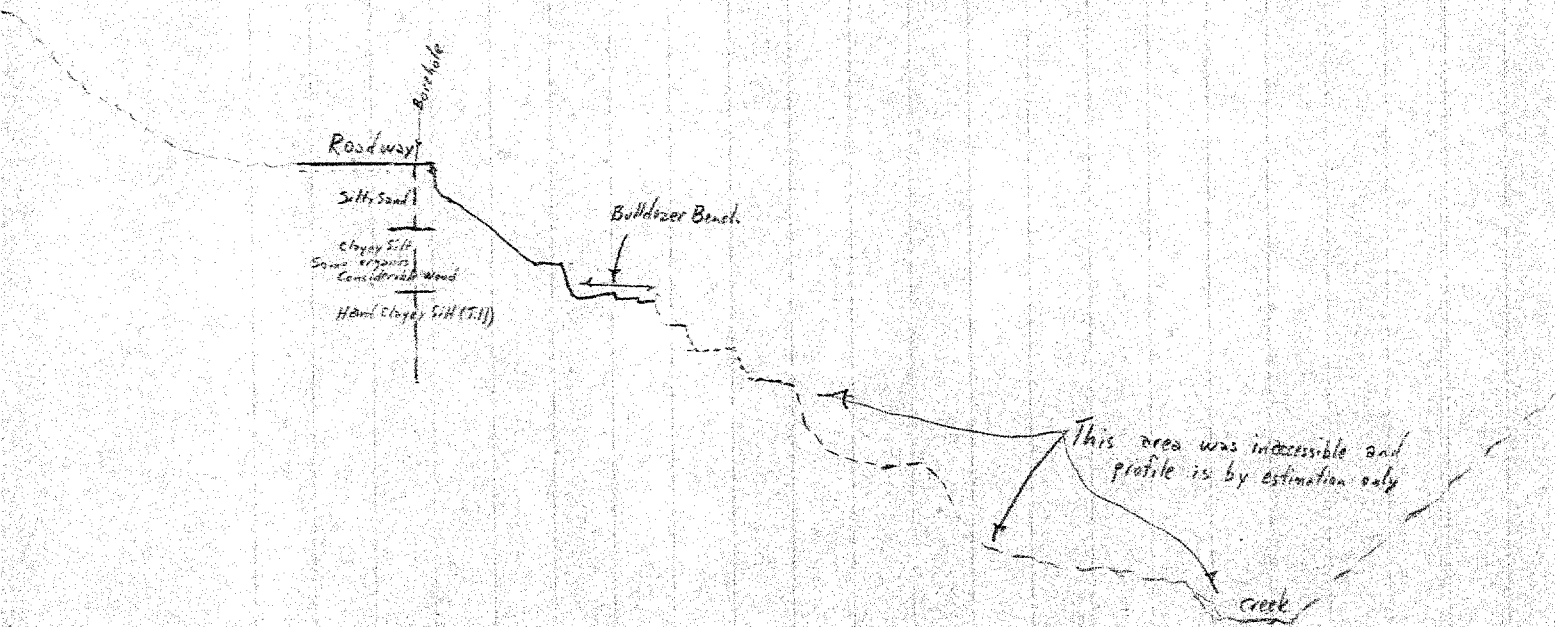
Sketch of Plan of Failure Area

April 11/67



Scale - Approx only, about 1" = 30'

67-F-29  
(5)



Profile Down Center of Slide  
Looking Towards Port Bruce

Scale - Approximate only - about 1" = 30'