

DOCUMENTATION INFORMATION

GEOCRES No. 40 J 16-45

DIST. 1 REGION SOUTHWESTERN

W.P. No. 43-65-1, 8+9

CONT. No. 72-65

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

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

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

LOCATION CNR + CAH #40

LINE B, STATION \_\_\_\_\_

OVERALL DEPARTURE TO BE INDICATED ON THE REPORT 4

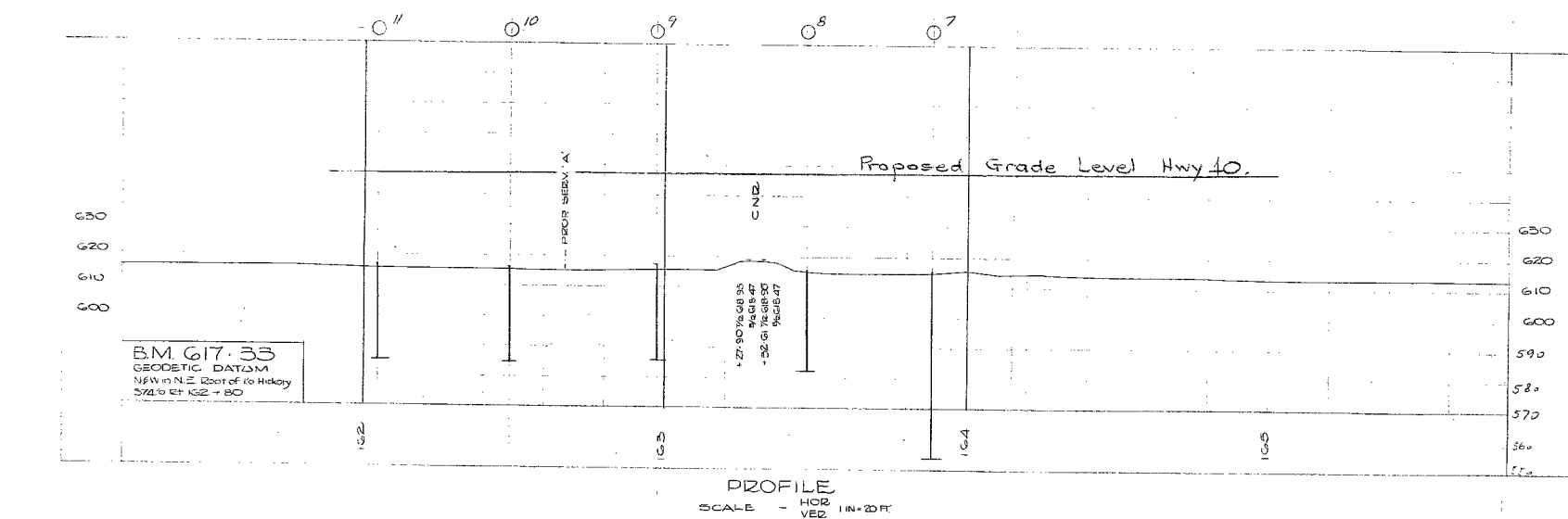
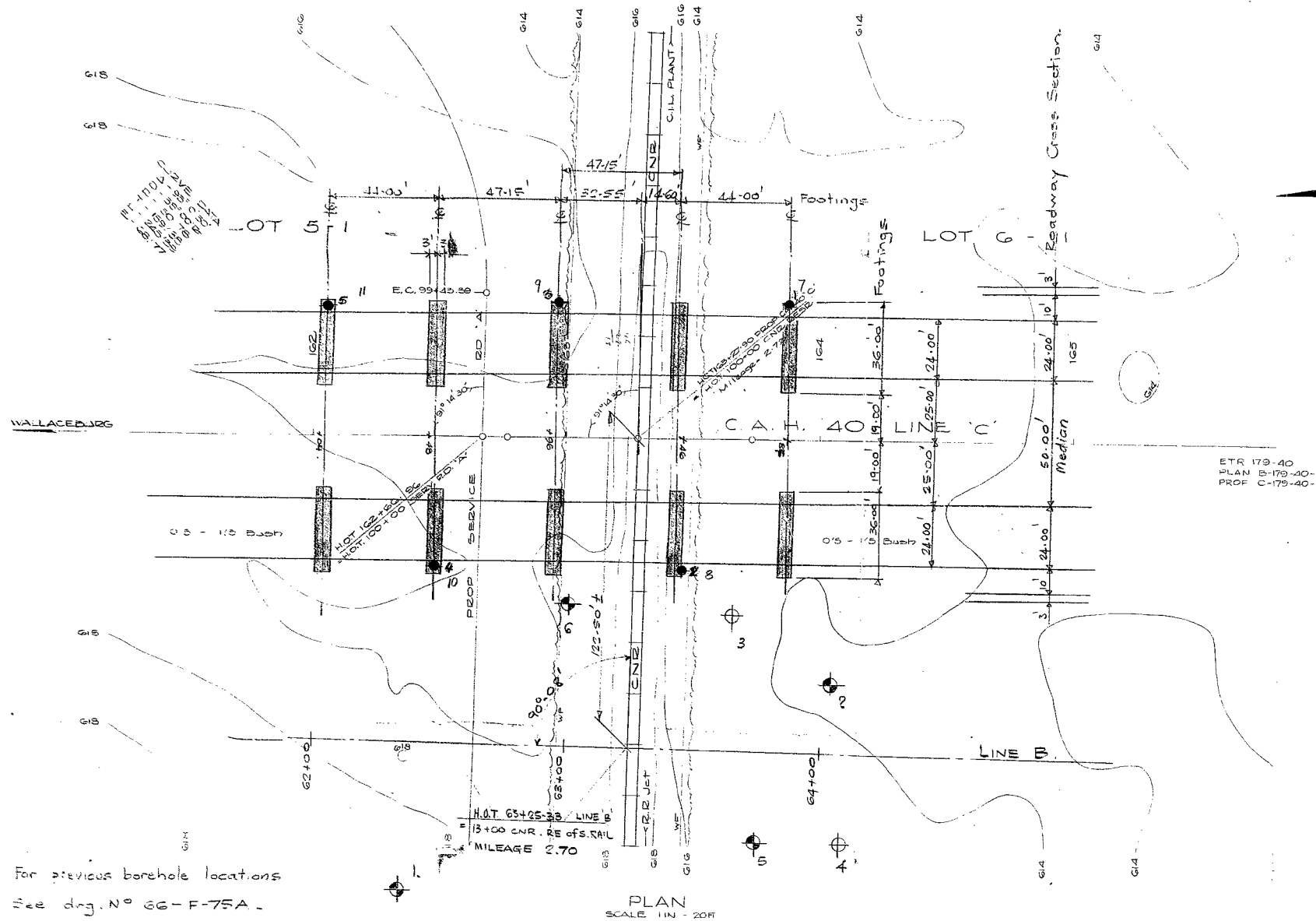
REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

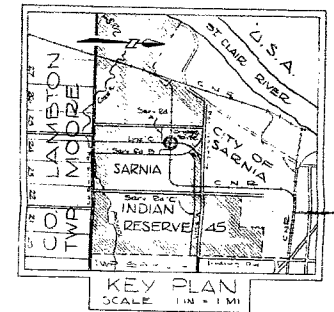
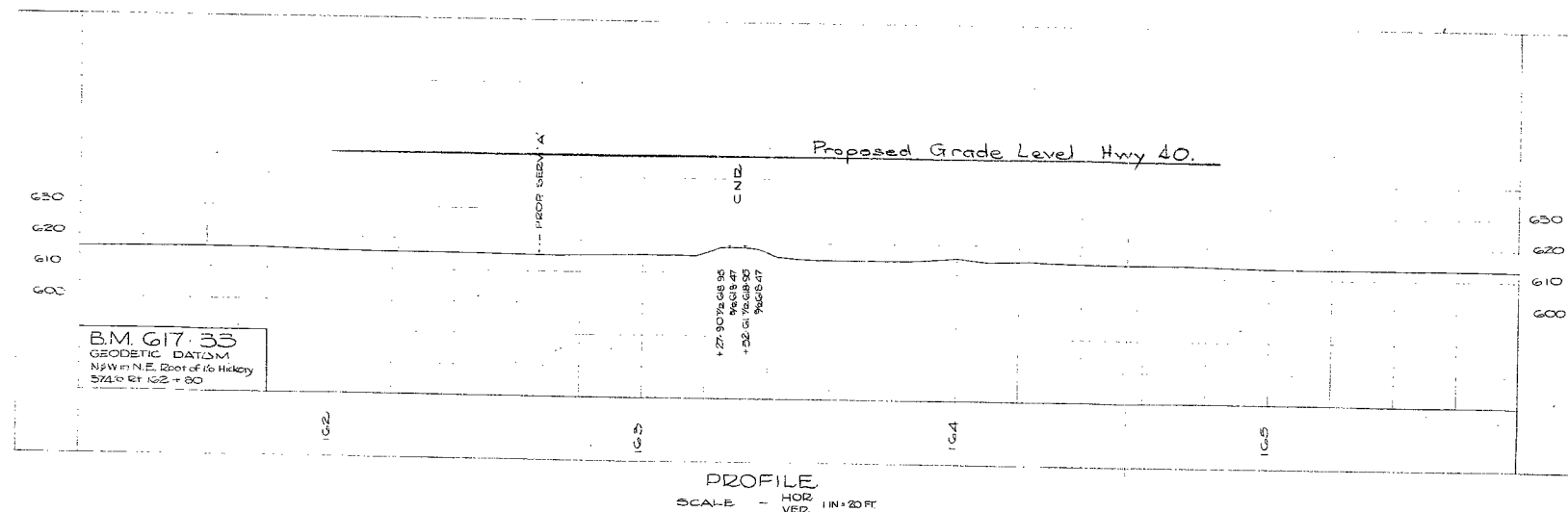
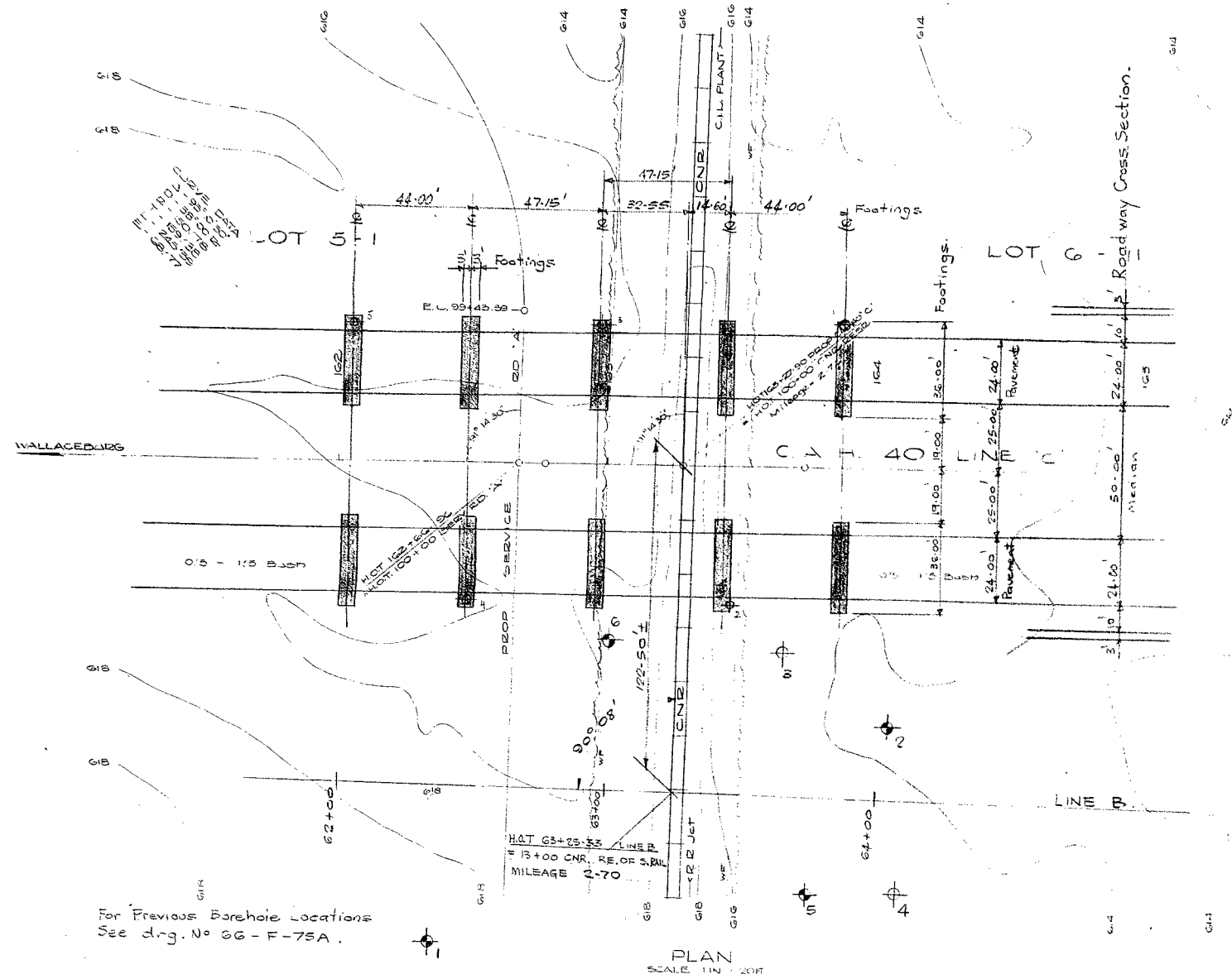
CO. LAMBTON  
CITY OF SARNIA  
INDIAN RESERVE 45  
RANGE 5

PROBABLE FOOTING LOCATIONS

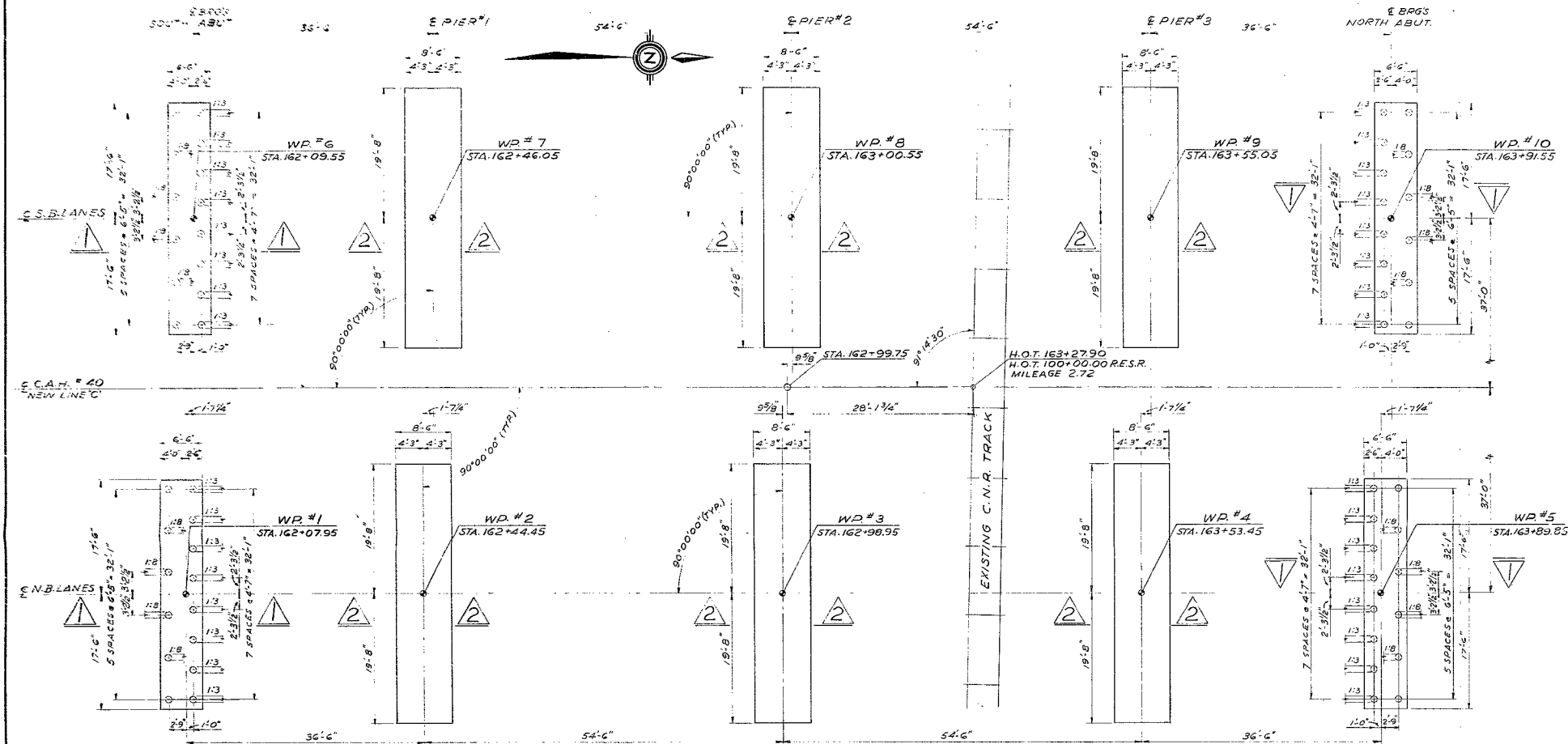


CO LAMBTON  
CITY OF SARNIA  
INDIAN RESERVE 45  
RANGE 5

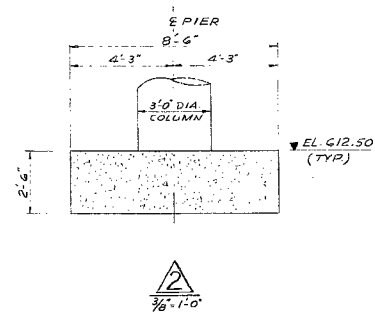
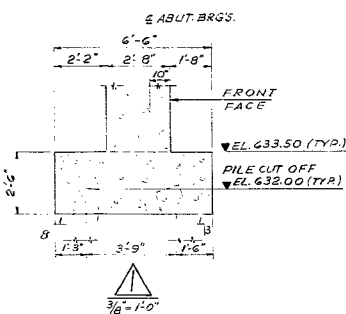
PROBABLE FOOTING LOCATIONS



WP 43-65-08			
DATE	REVISIONS & ADDITIONS	BY	CHKD
DEPARTMENT OF HIGHWAYS ONTARIO DESIGN BRANCH ENGINEERING SURVEYS OFFICE BRIDGE SITE			
PROPOSED CROSSING AT CAN. NAT. RWY. & PROP. SERV. RD. 'A' AND C.A.H. 40 LINE 'C' SARNIA INDIAN RESERVE 45 MILEAGE 2.72 SARNIA SUBDIVISION CITY OF SARNIA COUNTY OF LAMBTON			
SCALE AS SHOWN	DISTRICT 1 CHATHAM	REGION 3 WESTERN	
W.D. 93-45-65-01	Date of Survey JUNE 10 1993	SITE	
SURVEY BY Chief of Party: G. TELFORD Supervisor: S. AGNEW		DRAWN BY Draftsman: C. WASHINGTON Supervisor: O. SCHULZ	
CHECKED BY Draftsman: P. MYTRENKO Supervisor: O. SCHULZ		PLAN E-4890-1	



PLAN  
1/8" = 1'-0"



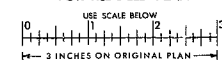
PILE DATA

12 3/4" O.D. STEEL TUBE PILES (0.25" WALL THICKNESS)				
LOCATION	N° OF PILES		LENGTH OF PILES	
	FRONT	BACK	FRONT	BACK
NORTH ABUT.	8	6	26'-0"	25'-0"
SOUTH ABUT.	8	6	26'-0"	25'-0"
NORTH ABUT.	8	6	26'-0"	25'-0"
SOUTH ABUT.	8	6	26'-0"	25'-0"

- FOR DETAIL OF PILE SHOE SEE BD B2-2 ON STANDARD DETAILS DWG.
- PILES TO BE FILLED WITH 3000 P.S.I. CONCRETE IN ACCORDANCE WITH FORM 9
- PILES TO BE DRIVEN TO EL. 608.00
- DESIGN LOAD 30 TONS PER PILE

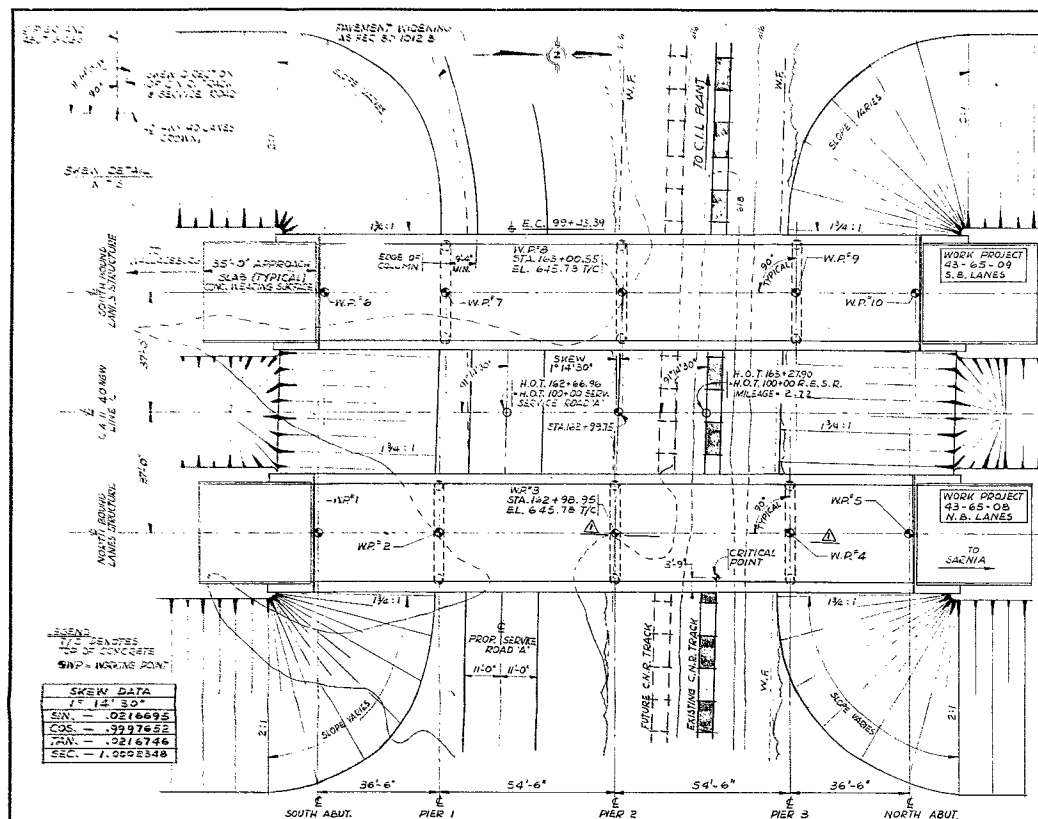


FOR REDUCED PLAN

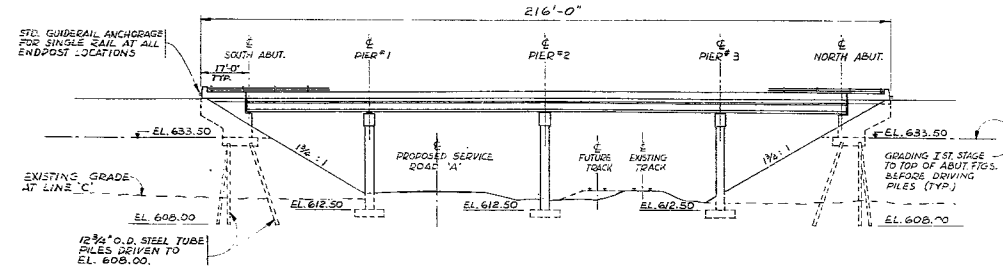


REVISIONS	
DATE	DESCRIPTION
DEPARTMENT OF HIGHWAYS ONTARIO BRIDGE OFFICE	
71-11-014	
C.N.R. & SERVICE ROAD 'A' OVERHEAD	
KING'S HIGHWAY No. C.A.H. 40 NEW DIST. No. 1	
CO. OF LAMARON SARNIA INDIAN RESERVE 45 SUBDIVISION	
TWP. CITY OF SARNIA LOT CON.	
FOOTING LAYOUT	
APPROVED	SITE No. 12-332 W.P. No. 43-55-08-00
DESIGN	CONTRACT No.
CHECK	DRAWING No.
DATE	LOADING
JUNE 77	W320-42
D-7001-3	

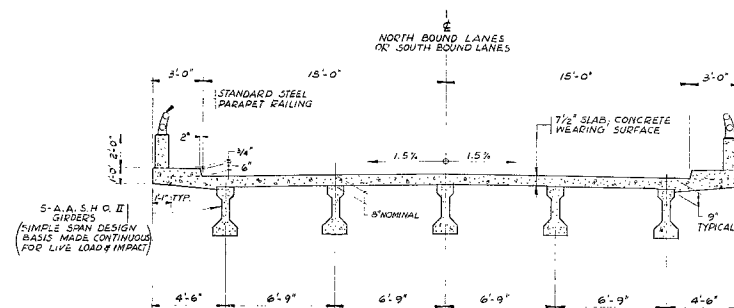
40316-45



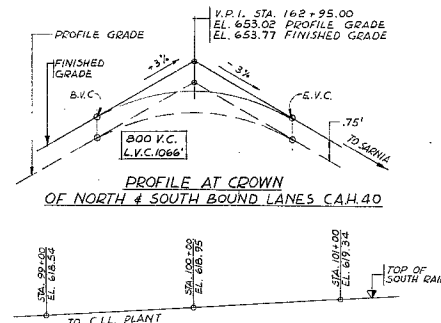
PLAN  
SCALE: 1" = 20'-0"



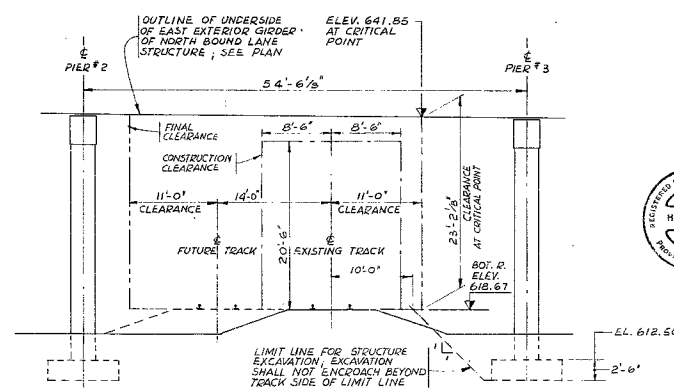
EAST ELEVATION  
SCALE: 1" = 20'-0"



TYPICAL DECK SECTION  
SCALE: 1/2" = 1'-0"

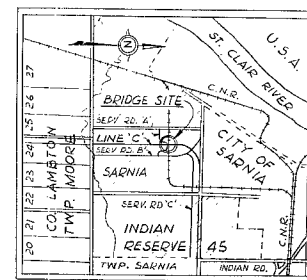
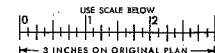


PROFILE OF C.N.R. RAILWAY



CLEARANCE DIAGRAM  
AT RIGHT ANGLES TO C.N.R. TRACKS  
SCALE: 1/2" = 1'-0"

FOR REDUCED PLAN



KEY PLAN  
SCALE: 1" = 1 MILE

#### NOTES

##### CLASS OF CONCRETE

PRESTRESSED GIRDERS & APPROACH SLAB 5000 P.S.I.  
DECK, CURBS & PARAPET WALL 4000 P.S.I.  
REMAINDER 3000 P.S.I.

##### CLEAR COVER TO REINFORCING STEEL

ROOTINGS 3"  
ABUTMENTS 3" EXCEPT WHERE NOTED  
DECK 1" BOTTOM 1 1/2" TOP  
APPROACH SLABS & CURBS 2"  
PARAPET WALL 1 1/2"  
PIERS AS NOTED

##### CONSTRUCTION NOTES

THE CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BEARING SEATS DEAD LEVEL TO THE SPECIFIED ELEVATIONS WITH A TOLERANCE OF ± 1/8".  
NO CONCRETE SHALL BE PLACED ABOVE THE ABUTMENT BEARING SEATS UNTIL THE CONCRETE IN THE DECK HAS BEEN PLACED.

#### LIST OF DRAWINGS

- D-7001-1 GENERAL LAYOUT
- 2 BORE HOLE LOCATION & SOIL STRATA
- 3 FOOTING LAYOUT
- 4 ABUTMENTS
- 5 PIER DETAILS
- 6 BEARING DETAILS
- 7 PRESTRESSED GIRDERS
- 8 DECK DETAILS
- 9 APPROACH SLABS
- 10 PARAPET WALL DETAILS
- 11 STANDARD STEEL PARAPET RAIL
- D-7001-12 STANDARD DETAILS

B.M. ELEV. 617.33 GEODETIC DATUM  
N 1/4 IN N.E. 2007 OF 1'-0" MERCURY 318.0' BY 162' 80"

REVISIONS	DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS ONTARIO  
BRIDGE OFFICE

71-11-014

C.N.R. & SERVICE ROAD 'A' OVERHEAD  
1.2 MILES NORTH OF LA SALLE ROAD

KING'S HIGHWAY No. C.A.H. 40 NEW DIST. No. 1  
CO. OF LAMBTON SARNIA INDIAN RESERVE 45 SUBDIVISION  
TWP. CITY OF SARNIA LOT CON.

#### GENERAL LAYOUT

APPROVED	14-332	W.P. No. 43-65-08-03
DESIGN	CHECK	CONTRACT
DRAWING	CHECK	DRAWING
DATE	JUNE 71	LOADING 14.20-43

703/6-45

DOCUMENT MICROFILMING IDENTIFICATION

G.I.-30 SEPT. 1976

GEOCRES No. 40516-45

DIST. 1 REGION Southwestern

W.P. No. 43-65-1, 8 & 9

CONT. No. 72-65

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

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

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

LOCATION CNR & CAH #40,

Line B, Sarnia

=====

OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. 4

REMARKS: ① documents to be unfolded  
before microfilming

# FOUNDATION INVESTIGATION REPORT

For

C.N.R. & C.A.H. #40, Line 'B'

at Sarnia, Ontario

District #1 (Chatham)

W.J. 66-F-75 -- W.P. 43-65-1

## 1. INTRODUCTION:

A request for a foundation investigation at the site of the proposed crossing of Hwy. #40, Line 'B' and the C.N.R. at Sarnia, Ontario, was contained in a memo from Mr. A. P. Watt, Regional Bridge Location Engineer, dated August 15, 1966. The site is located some 0.2 mile east of Tashmoo Ave. and 0.5 mile south of Churchill Rd.

A field investigation was subsequently carried out by this Section to determine subsoil conditions at the site of the proposed structure. Due to the urgency of the project, written recommendations pertaining to foundations, were required within one week of completion of field work. Accordingly, a preliminary report was issued, dated September 7, 1966, giving the necessary recommendations. The present report contains the complete results of our field and laboratory investigations, together with our recommendations pertaining to the foundations for the new structure.

## 2. SOIL CONDITIONS:

Subsoil over the site area consists of at least 120 feet of clayey silt to silty clay. The upper 15 feet of this deposit has a generally hard consistency with an estimated undrained shear strength in the order of 4000 - 8000 p.s.f. Below this depth, the strength is much lower, and the consistency ranges from very stiff to stiff. Laboratory and field test results are plotted on the attached borelog sheets, #1 - #6. The estimated stratigraphical profile, together with the locations of the boreholes, are shown on Drawing #66-F-75A which is included in the Appendix of this report.

cont'd. /2 ...

### 3. RECOMMENDATIONS:

It is proposed to construct a 3-span structure at this site. The maximum height of the approach fills will be in the order of 28 feet. Subsoil conditions are somewhat comparable with, but definitely more favourable than, the conditions at the site of the C.N.R. and Hwy. #40A, Line 'A' Revision (W.P. 53-63, Foundation Report #63-F-12). This latter structure was built in 1964, and has apparently been performing satisfactorily to the present time from a foundation point of view. It is recommended that a similar type of structure be built at the site presently under consideration. Detailed recommendations are as follows:

#### Piers -

The proposed piers should be founded on spread footings placed at el. 610.0. A safe net pressure of 2.5 t.s.f. may be assumed for design purposes. No dewatering problems are anticipated.

#### Abutments -

The proposed abutments may be constructed within the approach fills and be supported on 12-3/4-inch O.D. steel tube piles driven to el. 608.0. A safe capacity of 30 tons/pile should be achieved in this case. Piles must not be driven below el. 608.0, since the strength of the soil decreases rapidly below this level. Care should be taken to ensure that no bouldery fill is placed within the approaches through which piles have to be driven. It is further recommended that this portion of the fill contain no larger grain sizes than 3 inches.

cont'd. /3 ...



3. RECOMMENDATIONS: (cont'd.) ...

Approaches -

The proposed approach embankments may be designed with 2:1 side slopes without danger of base failure. Topsoil stripping should be as per D.H.O. Standards.

Settlements -

Due to the fact that the subsoil consists of compressible cohesive material, settlements due to consolidation of the latter, will occur over a long-term period. This will result in differential settlements between the abutments and piers, and for this reason, it is recommended that a structure with simply-supported spans be constructed. Since the largest part of the settlement which will occur, will be due to the weight of the approach embankments, it is recommended that the latter be constructed as far in advance of the structure as is possible. This will reduce the magnitude of differential settlements.

4. SUMMARY:

A foundation investigation at the site at the proposed crossing of C.A.H. #40, Line 'B' and the C.N.R. at Sarnia, Ontario, is reported.

Subsoil consists of at least 120 feet of hard to stiff clayey silt to silty clay. The upper 15 feet has a generally hard consistency.

It is recommended to construct a simply-supported structure with the piers on spread footings and the abutments perched within the fill, founded on steel tube piles.

No dewatering problems are anticipated.

No stability problems are anticipated.

cont'd. /4 ...

4. SUMMARY: (cont'd.) ...

Approach fills are recommended to be constructed as far in advance of the structure as possible, in order to reduce the magnitude of differential settlements between the piers and abutments.

5. MISCELLANEOUS:

The field work for this project was carried out during the period August 23rd to September 2nd, 1966, by Dominion Soil Investigation Ltd. Field supervision was carried out by Mr. D. Wan, Project Foundation Engineer. This report was prepared by Mr. K. G. Selby, Supervising Foundation Engineer.

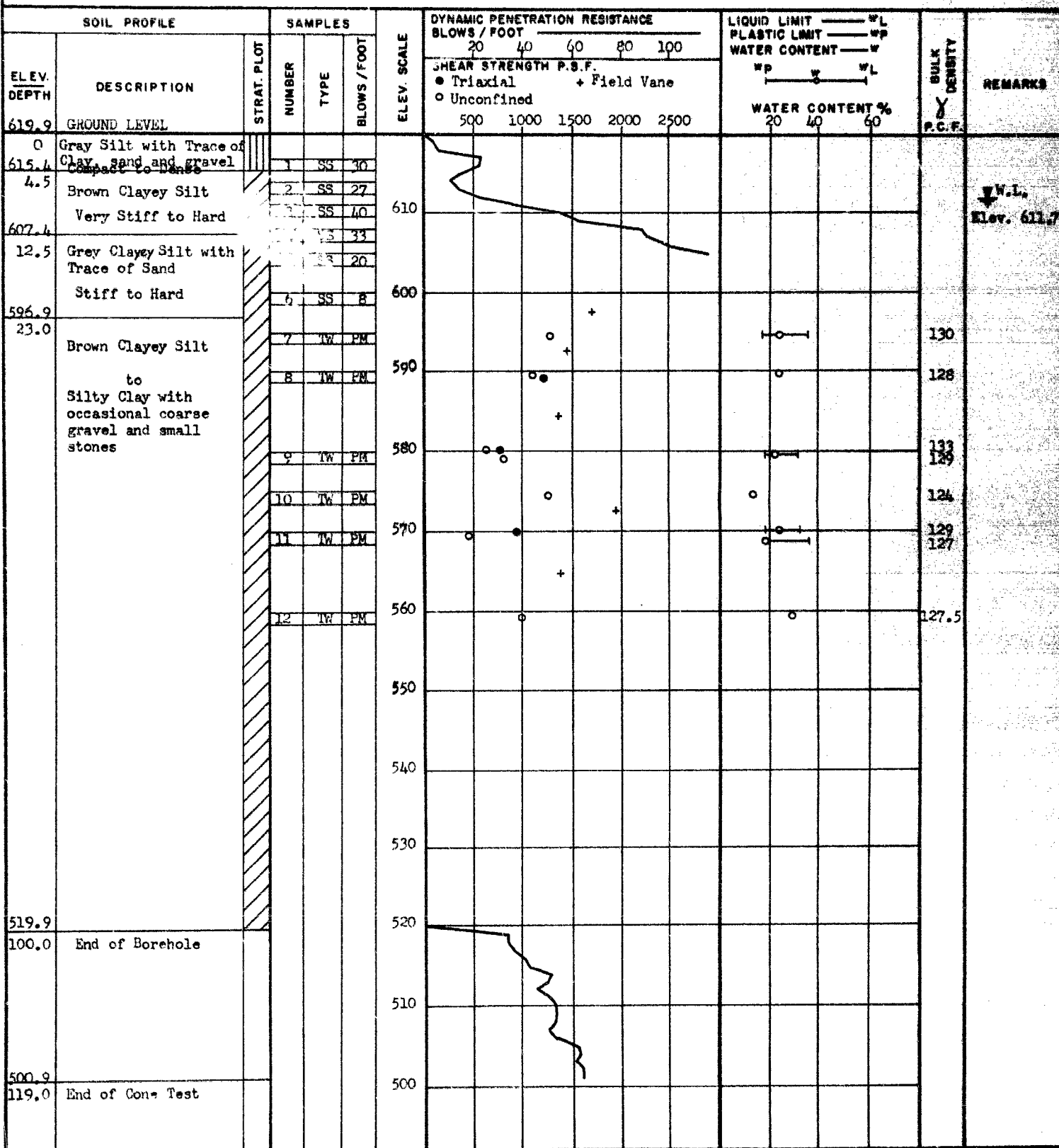
January 1967

DEPARTMENT OF HIGHWAYS - ONTARIO  
MATERIALS & TESTING DIVISION

# RECORD OF BOREHOLE NO. 1

FOUNDATION SECTION

JOB 66-F-75 LOCATION New Hwy #10, Sta. 62 & 35, 58' Right ORIGINATED BY D.W.  
W.P. 43-65-1 BORING DATE August 24, 1966 COMPILED BY A.M.S.  
DATUM Geodetic BOREHOLE TYPE Washboring and cone penetration CHECKED BY SR



DEPARTMENT OF HIGHWAYS - ONTARIO

## RECORD OF BOREHOLE NO. 2

## FOUNDATION SECTION

LOCATION New Hwy. #10. Sta. 64 + 05. 27' Left

ORIGINATED BY D.W.

BORING DATE August 30, 1966

COMPILED BY           ANS          

**BOREHOLE TYPE** Washboring and Cone Penetration

CHECKED BY                     

[illegible]

DEPARTMENT OF HIGHWAYS - ONTARIO

**MATERIALS & TESTING DIVISION**

JOB 66-F-75

LOCATION New Hwy. #40, Sta. 63 + 65, 53.0' Left

ORIGINATED BY D.W.

W. P. 43-65-1

BORING DATE August 31, 1966

COMPILED BY A.M.S.

DATUM Geodetic

BOREHOLE TYPE Dynamic Cone Penetration Test

**CHECKED BY**

SOIL PROFILE			SAMPLES			ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT 20 40 60 80 100 SHEAR STRENGTH P.S.F.	LIQUID LIMIT ——— w <sub>L</sub> PLASTIC LIMIT ——— w <sub>p</sub> WATER CONTENT ——— w w <sub>p</sub> ——— w ——— w <sub>L</sub> WATER CONTENT %	BULK DENSITY P.C.F.	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT					
614.4	GROUND LEVEL									
0						610				
600.4										
14.0	End of Borehole					600				

DEPARTMENT OF HIGHWAYS - ONTARIO

## MATERIALS & TESTING DIVISION

JOB 66-F-75

W.P. 43-65-1

DATUM Geodetic

LOCATION New Hwy. #40, Sta. 64 + 08, 35.0' Right

BORING DATE August 31, 1966BOREHOLE TYPE Dynamic Cone Penetration Test

### FOUNDATION SECTION

ORIGINATED BY D.W.

COMPILED BY A.M.S.

**CHECKED BY**

[illegible]

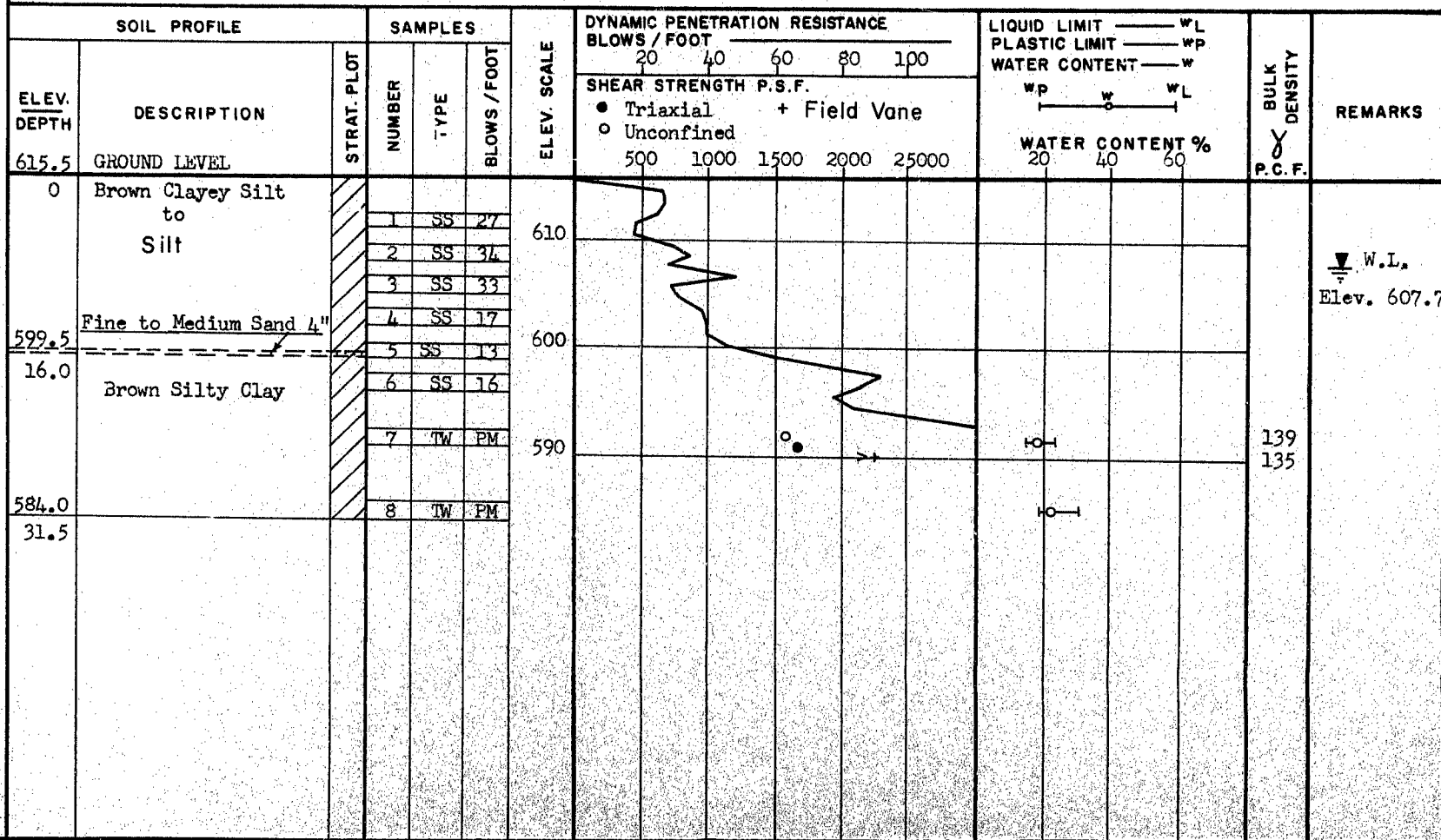
DEPARTMENT OF HIGHWAYS - ONTARIO

## MATERIALS &amp; TESTING DIVISION

JOB 66-F-75LOCATION New Hvy. #40, Sta. 63 + 75, 36.0' RightORIGINATED BY D.W.W.P. 43-65-1BORING DATE September 1, 1966COMPILED BY A.M.S.DATUM GeodeticBOREHOLE TYPE Washboring and Cone PenetrationCHECKED BY LR

## RECORD OF BOREHOLE NO. 5

FOUNDATION SECTION



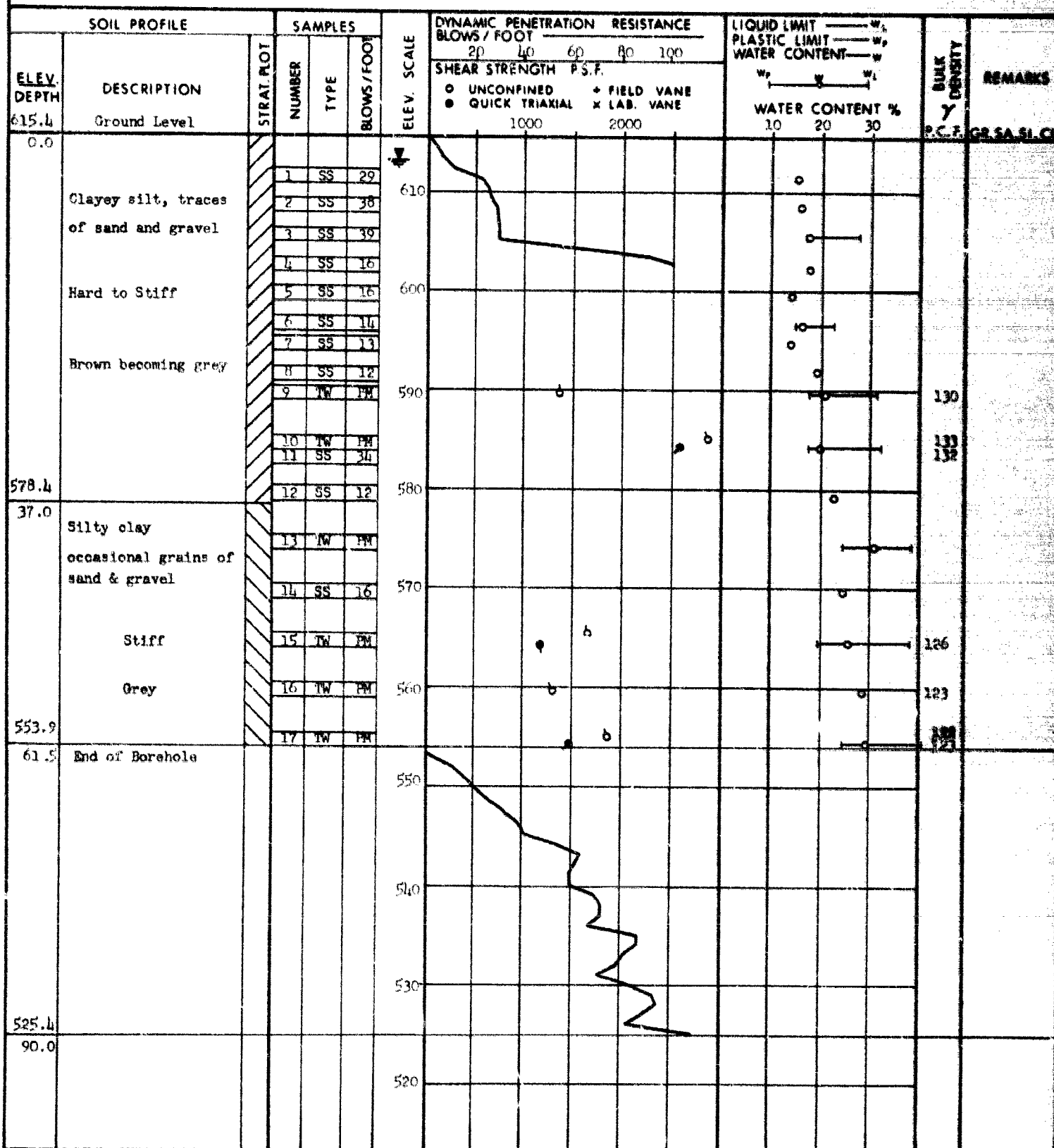
DEPARTMENT OF HIGHWAYS - ONTARIO						RECORD OF BOREHOLE NO. 6							FOUNDATION SECTION								
MATERIALS & TESTING DIVISION																					
JOB	<u>66-F-75</u>					LOCATION	<u>New Hwy. #40, Sta. 63 + 01, 56.0' Left</u>							ORIGINATED BY <u>D.W.</u>							
W.P.	<u>43-65-1</u>					BORING DATE	<u>September 1, 1966</u>							COMPILED BY <u>A.M.S.</u>							
DATUM	<u>Geodetic</u>					BOREHOLE TYPE	<u>Washboring and Cone Penetration</u>							CHECKED BY <u>[Signature]</u>							
SOIL PROFILE			SAMPLES			ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT					LIQUID LIMIT ——— WL PLASTIC LIMIT ——— WP WATER CONTENT ——— W			BULK DENSITY  P.C.F.	REMARKS					
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT		SHEAR STRENGTH P.S.F. ● Triaxial                  + Field Vane ○ Unconfined					WATER CONTENT % WP      W      WL									
616.3	GROUND LEVEL						20	40	60	80	100										
0	Brown Clayey Silt to Brown Silty Clay		1	SS	25	610															
			2	SS	27																
			3	S3	49																
	Very Stiff to Hard		4	SS	28																
			5	SS	20	600															
			6	SS	18																
			7	TW	PM	590									131						
584.8			8	TW	PM										133						
31.5																					



DEPARTMENT OF HIGHWAYS- ONTARIO  
MATERIALS & TESTING OFFICE

## RECORD OF BOREHOLE No. 7

FOUNDATION SECTION

 JOB 66-11075 LOCATION Sta. 163 + 88 52' Lt.  
 W.P. 43-65-08 & 09 BORING DATE March 5, 1971  
 DATUM Geodetic BOREHOLE TYPE Washboring, NX Casing
ORIGINATED BY HSCOMPILED BY AKBCHECKED BY AKB

FOUNDATION SECTION

JOB 66-11075 LOCATION Sta. 163 + 46 52' Rt. ORIGINATED BY HS  
W.P. 43-65-08 & 09 BORING DATE March 2, 1971 COMPILED BY AKB  
DATUM Geodetic BOREHOLE TYPE Washboring, NX Casing CHECKED BY [Signature]

[illegible]

## FOUNDATION SECTION

ORIGINATED BY HS

COMPILED BY AKB


CHECKED BY 

SOIL PROFILE			SAMPLES			ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE		LIQUID LIMIT PLASTIC LIMIT WATER CONTENT		BULK DENSITY $\gamma$ P.C.F.	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT		BLOWS / FOOT	P.S.F.	W <sub>L</sub> W <sub>P</sub> W	W <sub>L</sub> W <sub>P</sub> W		
617.2	Ground Level											
0.0	Clayey silt to silt, traces of sand and gravel  Hard to Stiff  Brown becoming Grey		1	SS	30							
			2	SS	47		610					
			3	SS	38							
			4	SS	34							
			5	SS	27		600					
			6	SS	19							
			7	SS	13							
			8	SS	PM		590					
585.7			9	SS	PM						131	
31.5	End of Borehole					580						

## FOUNDATION SECTION

ORIGINATED BY HS

COMPILED BY AKB

CHECKED BY 

SOIL PROFILE			SAMPLES			ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT	LIQUID LIMIT ———— $w_L$ PLASTIC LIMIT ———— $w_p$ WATER CONTENT ———— $w$	BULK DENSITY $\gamma$ P.C.F.	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT		SHEAR STRENGTH P.S.F. ○ UNCONFINED + FIELD VANE ● QUICK TRIAXIAL x LAB. VANE	WATER CONTENT % $w_p$ ———— $w$ ———— $w_L$		
							20 40 60 80 100	10 20 30		
616.2	Ground Level									
0.0	Clayey silt with traces of coarse sand & fine gravel  Hard to Stiff  Brown becoming Grey		1	SS	30					
			2	SS	52					
			3	SS	43					
			4	SS	22					
			5	SS	23					
			6	SS	17					
			7	SS	20					
			8	TW	PM					
			9	SS	21					
584.7			10	TW	PM		b			129
31.5	End of Borehole					580				

### FOUNDATION SECTION

ORIGINATED BY HS

COMPILED BY AKB

CHECKED BY: 

[illegible]





## MEMORANDUM

TO: Mr. A. G. Stermac,  
Principal Foundation Engineer,  
Downsview, Ontario.

FROM: Bridge Planning,  
Southwestern Region,  
London, Ontario.

ATTENTION:

DATE: February 2, 1971.

OUR FILE REF.

IN REPLY TO

## SUBJECT:

W.P. 43-65-08, N.B.L.  
43-65-09, S.B.L., Bridge Site 14-332  
1.2 miles north of La Salle Road  
Hwy 40 N.  
District 1, Chatham

Attached please find two copies of the bridge site plan E-4890-1 with the probable footing locations for the northbound and southbound lane structures marked in red on Line 'C'.

Please note that there has been a Foundation Investigation Report W.J. 66-F-75 written for the above site on Line 'B' approximately 122.5 feet along the C.N.R. tracks east of Line 'C'.

Would you kindly review the proposed new structure location and advise me if additional borings are contemplated? If additional work is going to be done, kindly arrange to have it done as soon as possible.

Also enclosed please find a copy of field reconnaissance report for your use.

For permission to enter the C.N.R. property and to make arrangements for a flagman, please contact Mr. R. N. Mehra, Canadian National Railway, London. Telephone number 519-433-4511, Local 238. A purchase order for a flagman along with a request to enter C.N.R. property stating time, location and how long, should be sent to Mr. F. K. Leighton, Area Engineer, attention Mr. R. N. Mehra.

For permission to enter the Indian Reserve Property please contact Regional Right-of-Way Manager, Mr. V. C. Fox, who will make the arrangements. Telephone number 519-451-5400, local 226.

*A. P. Watt*

APW/cc  
Encl.

A. P. Watt,  
Regional Bridge Planning Engineer,  
Southwestern Region.

cc: Mr. S. McCombie  
Mr. A. Crowley

COMPLETION DATE: - MARCH 31<sup>st</sup> 71



66-F-75

Mr. A. P. Watt,  
Regional Bridge Location Engr.,  
Regional Office, London, Ont.

Foundation Section,  
Materials & Testing Div.,  
Room 107, Lab. Bldg., Downsview.

December 2, 1966

Foundation Report for Proposed Crossing  
Hwy. #40 & C.N.R. at Sarnia, Ontario.  
W.P. 43-65-1 -- W.J. 66-F-75

This memo confirms our recent request to you by phone, for certain information which will enable us to complete the above mentioned report in its entirety. As you know, sufficient information has already been supplied by us to enable the bridge to be designed, but we would nevertheless, like to furnish you with a finished report.

The information required is as follows:

(1) A plan of the site to a scale of 1" = 20' showing the centre-line and chainages.

(2) A profile of Hwy. #40 covering the new bridge and approaches.

As soon as we receive the above, we will be able to continue work on the final report.

KGS/MdeF

cc: Messrs. S. McCombie  
J. Roy  
F. Loscombe

Foundations Office ✓  
Gen. Files

*K. G. Selby*  
K. G. Selby,  
SUPERVISING FOUNDATION ENGR.  
For:  
A. G. Stermac,  
PRINCIPAL FOUNDATION ENGR.

MEMORANDUM

*A. P. Skett*

*66-F-75*

To: Mr. R. G. Gascoyne,  
Reg'l Functional Planning Engineer,  
LONDON REGIONAL OFFICE.

FROM: D. F. Walton,  
Regional Services Manager,  
London.

DATE: August 10th, 1966.

OUR FILE REF.

IN REPLY TO:

SUBJECT:

PERMISSIONS TO ENTER - SARNIA INDIAN RESERVE,  
INVESTIGATION WORK - NEW HIGHWAY, SARNIA TO  
WALLACEBURG.

A meeting was held in my office on August 9th to discuss the investigation work required for the proposed alignment of the new highway from Sarnia to Wallaceburg across the Sarnia Indian Reserve.

- Services Branch will arrange for Permissions to Enter as previously decided upon. These Permissions to Enter are to be available by August 22nd.
- Mr. F. E. Loscombe will commence Engineering Surveys work required on August ~~23th~~  
~~22th~~.
- Materials and Testing will commence their preliminary investigation along the line established by Engineering Surveys on September 9th. It is expected that this work will be completed before September 16th.
- The fundamental investigation for the proposed overhead at the C.N.R. right-of-way will be commenced on August 24th and should be completed by September 9th.

If we are unable to obtain Permissions to Enter, all parties will be notified by myself prior to August 22nd. Copies of the procedure to be followed in respect to trespassing on Indian lands will be issued to each group carrying out work in the area. Copies of the Permissions to Enter will be supplied to all concerned.

Continued .....

Arrangements have been made to pay one of the Indian Band members to accompany our staff during the period that Department of Highways' employees are carrying out the investigation work and obtaining Permissions to Enter. The salary for this Band Member will be assumed by Services Branch.

DFW:mh

D. F. WALTON,  
REGIONAL SERVICES MANAGER.

- c.c. - A. P. Watt, Regional Bridge Location Engineer, London;  
- J. R. Roy, Regional Materials Engineer, London;  
- F. C. Brown, District Engineer, Chatham;  
- D. H. Veigel, Negotiations Supervisor, Property Sec., London;  
- F. E. Loscombe, Superintendent of Engineering Surveys, London.

## MEMORANDUM

To: Mr. A. G. Stermac  
Principal Foundation Engineer  
Lab Building  
D O W N S V I E W

FROM: A. P. Watt

DATE: December 13, 1966

Attention: Mr. K. G. Selby

OUR FILE REF.

IN REPLY TO

SUBJECT: W.P. 43-65-1,  
Grading and Drainage,  
From Sarnia Bypass S'ly to Hwy. 80,  
Highway 40,  
District 1, Chatham.

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In reply to your memorandum of December 2, 1966, please find attached a copy of the unnumbered plan (stamped preliminary) and unnumbered profile (stamped preliminary) of a proposed new Controlled Access Highway 40 which crosses the C.N.R. Tracks approximately 0.2 miles east of Tashmoo Avenue and 0.5 miles south of Churchill Road.

The proposed alignment has not been approved and negotiations are still being conducted with the Chippewas of Sarnia Indian Reserve on the proposed alignment. Results of the negotiations will not be available until December 20, 1966 and to obtain the information necessary for a site plan at this time may hinder negotiations.

The grade in the area of the structure can be considered to be 27.5 above the base of rail in the vicinity of the proposed C.N.R. Overhead.

Please advise if the information supplied is satisfactory for your work, if not, a site plan and profile can be supplied upon approval of the alignment and grade by Head Office and the Chippewas of Sarnia Indian Reserve at a future date.

*A. P. Watt*

A. P. WATT  
REGIONAL BRIDGE LOCATION ENGINEER

APW:gf  
ATT'D

c.c. Mr. S. McCombie

MEMORANDUM

344-7474

WAYNE DOWNER

WAYNE DOWNER

To: Mr. A. G. Stermac  
Principal Foundation Engineer  
Lab Building  
DOWNSVIEW

FROM: A. P. Watt

MR. L. PLANN  
THOMAS CAMP

DATE: August 15, 1966

OUR FILE REF.

IN REPLY TO:

SUBJECT: WP 43-65-1, Grading and Drainage,  
From Sarnia By-Pass S'ly to Hwy. 80,  
New Highway 40,  
District 1, Chatham.

Within the above work project, New Controlled Access Highway 40 crosses the C.N.R. tracks approximately 0.2 miles east of Tashmoo Avenue and 0.5 miles south of Churchill Road.

As the Planning Branch is interested in finding out whether an overhead structure can be built in this location and if berms are required, would you kindly arrange to have a preliminary foundation investigation conducted at the above mentioned location. I have enclosed two copies of an aerial photograph and one copy of a militia sheet showing the crossing of the Canadian National Railway and the new proposed C.A.H.40.

Controlled Access Highway 40 will have a 250 foot right-of-way and a cross section of approximately 3' rounding, 10' shoulder, 24' pavement, 52' median, 24' pavement, 10' shoulder, 3' rounding, therefore twin structures could be required. The Grade of Hwy. 40 can be considered 28'-0 above the base of rail.

As C.A.H.40 in this area passes through the Chippewas of Sarnia Indian Reserve, D. F. Walton, Regional Services Manager, will arrange for Permission to Enter, see attached memorandum.

Since the crossing is approximately 1150 feet east of Tashmoo Avenue and along the C.N.R. tracks, permission to do any investigation is required from C.N.R. Equipment can be taken to the site by either a truck trail just south of the tracks and within the railway right-of-way or by a C.N.R. push cart. For permission to enter C.N.R. right-of-way and arrangements for a push cart please write Canadian National Railways, London Area, 205 York Street, London, Ontario. Attention: Mr. M. B. Hansen, Area Engineer. A C.N.R. flag-man may be required during the investigation.

tel A.C. 813, 433-4511

continued....

Mr. A. G. Stermac

-2-

August 15, 1966

Water for the investigation can be obtained from the Polymer Corporation Limited, contact Mr. M. McLean, telephone number 337-8251 local 627.

Enclosed please find a map showing locations for accommodations along with the preliminary structure site report.

Permission to enter the Chippewas of Sarnia Indian Reservation will be proposed on a schedule bases; therefore, it is imperative that the preliminary foundation investigation be started on August 24, 1966 and completed by approximately September 9, 1966. Engineering Surveys will be establishing the line approximately 500 feet either side of the railway commencing August 22, 1966.

A letter stating that a structure can or cannot be built and will or will not require berms along with the length of berms, would be appreciated one week after the completion of the field work.



A. P. WATT  
REGIONAL BRIDGE LOCATION ENGINEER

APW:gf  
Encl.

c.c. Mr. S. McCombie  
Mr. R. Gascoyne  
Mr. D. Walton