

#64-F-21

W.P. #239-60

HWY. #401

C.N.R. OVER-

HEAD BETWEEN

KIPLING &

ISLINGTON AVES.

Mr. S. McCombie,
Bridge Planning Engr.,
Bridge Division.

Foundation Section,
Materials & Research Div.,
Room 107, Lab. Bldg.

Attention: Mr. J. Curtis

April 28, 1964

C.N.R. Overhead between Kipling Ave. and
Islington Ave., Hwy. #401, District #6.
W.P. 239-60 -- W.J. 64-F-21

As requested by you in your memo dated March 24, 1964, we have carried out two borings at the above-mentioned site for the purpose of determining the nature and the condition of the backfill material behind the bridge abutment walls. The two log sheets are attached to this memo for your information.

Following is a summary of our findings at the site:

(1) At the east abutment, backfill consists of 28 ft. of well graded fine to coarse sand in a generally loose condition. This is underlain by a very dense deposit of glacial till consisting of a heterogeneous mixture of silt, sand and gravel.

(2) At the west abutment, conditions are similar to those at the east abutment except that the total depth of the backfill material is 24.5 ft.

(3) At the west abutment, no water was observed in the borehole which was carried out to a depth of 31.5 ft. (el. 501.5). At the east abutment, ground water was observed at a depth of 28.0 ft. (el. 505.0).

(4) For purposes of computing earth pressures, we would recommend that an angle of internal friction of 30° be assigned to the backfill material, together with a unit weight of 115 p.c.f. These values are indicated by the loose condition of the material.

The above information was given verbally to Mr. B. Richardson on April 2, 1964.

If we can be of any further assistance in this matter, please contact this Office.

KGS/MdeP
Attach. (2)
cc: Foundations Office
Gen. Files

K. G. Selby,
SENIOR FOUNDATION ENGR.
For:
A. G. Starnac,
PRINCIPAL FOUNDATION ENGR.

DEFECTS IN NEGATIVE DUE TO
CONDITION OF ORIGINAL DOCUMENT

SOIL PROFILE			SAMPLES			ELEV SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT	LIQUID LIMIT ——— WL PLASTIC LIMIT ——— WP WATER CONTENT ——— W	BULK DENSITY PCF	REMARKS	
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT		SHEAR STRENGTH P.S.F.	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-bottom: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: -5px;">WP</div> <div style="position: absolute; right: 0; top: -5px;">WL</div> <div style="position: absolute; left: 50%; top: -5px;">W</div> </div> <div style="margin: 0 10px;"> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between; width: 100%;"> 10 20 30 </div> </div> </div>			
533.0	Groundlevel										
0.0											
	Well graded sand with occasional gravel (loose)		1	SS	30	530					Gr 3 Sa 87 Si) 10 Cl) Gr 7 Sa 86 Si) 8 Cl) Gr 26 Sa 65 Si) 9 Cl)
			2	SS	8						
			3	SS	4						
			4	SS	5	520					
			5	SS	5						
			6	SS	6						
			7	SS	8	510					
508.5			8	SS	20						
24.5	Silty sand and gravel till		9	SS	20						
			10	SS	60						
501.5											
31.5	End of borehole.					500					
						490					

JOB 64-F-21 LOCATION Hwy. 401 & CNR (28' East of Bridge center on Hwy. 401 E ORIGINATED BY V.K.
W P 239-60 BORING DATE March 31, 1964. COMPILED BY V.K.
DATUM Geodetic BOREHOLE TYPE Penn Drill CHECKED BY K.S.

SOIL PROFILE		SAMPLES			ELEV SCALE	DYNAMIC PENETRATION RESISTANCE		LIQUID LIMIT ——— WL			BULK DENSITY	REMARKS
ELEV DEPTH	DESCRIPTION	NUMBER	TYPE	BLOWS / FOOT		BLOWS / FOOT		PLASTIC LIMIT ——— WP	WATER CONTENT ——— W			
533.0	Groundlevel					SHEAR STRENGTH P S F						
0.0												
	Well graded sand with occasional gravel.	1	SS	11	530							
	(loose)	2	SS	8								
		3	SS	4								
		4	SS	5	520							
		5	SS	16								
		6	SS	8								
		7	SS	6	510							
		8	SS	9								
505.0	W.L.	9	SS	26								
28.0	Silty sand and gravel till	10	SS	22								
498.5		11	SS	84	500							
34.5	End of borehole.											
					490							

Gr 4
Sa 87
Si } 9
Cl }

Gr 2
Sa 86
Si } 12
Cl }

Gr 5
Sa 84
Si } 11
Cl }

Mr. S. McCombie,
Bridge Planning Engr.,
Bridge Division.

Foundation Section,
Materials & Research Div.,
Room 107, Lab. Bldg.

Attention: Mr. J. Curtis

April 28, 1964

C.N.R. Overhead between Kipling Ave. and
Islington Ave., Hwy. #401, District #6.
W.P. 239-60 -- W.J. 64-F-21

As requested by you in your memo dated March 24, 1964, we have carried out two borings at the above-mentioned site for the purpose of determining the nature and the condition of the backfill material behind the bridge abutment walls. The two log sheets are attached to this memo for your information.

Following is a summary of our findings at the site:

(1) At the east abutment, backfill consists of 28 ft. of well graded fine to coarse sand in a generally loose condition. This is underlain by a very dense deposit of glacial till consisting of a heterogeneous mixture of silt, sand and gravel.

(2) At the west abutment, conditions are similar to those at the east abutment except that the total depth of the backfill material is 24.5 ft.

(3) At the west abutment, no water was observed in the borehole which was carried out to a depth of 31.5 ft. (el. 501.5). At the east abutment, ground water was observed at a depth of 28.0 ft. (el. 505.0).

(4) For purposes of computing earth pressures, we would recommend that an angle of internal friction of 30° be assigned to the backfill material, together with a unit weight of 115 p.c.f. These values are indicated by the loose condition of the material.

The above information was given verbally to Mr. B. Richardson on April 2, 1964.

If we can be of any further assistance in this matter, please contact this Office.

KGS/MdeF

Attach. (2)

cc: Foundations Office ✓
Gen. Files

K. G. Selby,
SENIOR FOUNDATION ENGR.
For:

A. G. Stermac,
PRINCIPAL FOUNDATION ENGR.