

PRE-CONTRACT REVIEW MEETING

W.P. 265-63-01 & -04 - FROM EGANVILLE SOUTH LIMITS TO NORTH LIMITS - GD GB P & STRUCTURE - HIGHWAY # 41 & 60 - DISTRICT # 9 OTTAWA.

A PRE-CONTRACT REVIEW MEETING for the above noted WORK PROJECTS was held in the KINGSTON REGIONAL OFFICE on WEDNESDAY SEPTEMBER 2ND, 1970, IN BOARD ROOM NO. 1, COMMENCING AT 10:00 A.M..

IN ATTENDANCE

R. MacPhail	-----	Ottawa District Office
C. Quick	-----	Ottawa District Office
D. Gerow	-----	Materials and Testing, Kingston
R. Asby	-----	Engineering Audit, Kingston
T. Kingsland	-----	Bridge Section, Kingston
R. H. B. Bennett	-----	Road Design Section, Kingston
R. T. Molaro	-----	Road Design Section, Kingston
K. Turham	-----	Road Design Section, Kingston (Attended a.m. only)

CHAIRMAN

Mr. R. H. B. Bennett, Sr. Project Design Engineer, Road Design, Kingston

GENERAL COMMENTS

- 1) Regional and Head Office Reviews have been previously held on W.P. 265-63-04 on March 13th, 1969 and June 6th, 1969 respectively. On April 7th, 1970 W.P. 265-63-04 was grouped with W.P. 265-63-01.
- 2) This project has been prepared on the assumption that it would be awarded this fall and that the Contractors first operations would be the detour construction and structure repairs. For this reason Item #4 Earth Borrow (outside right-of-way), has been included so that the Bailey approaches can be built, even though there is a waste situation on the job. Should the award of this project be delayed until Spring 1971 this item should be deleted.
- 3) This project has also been prepared on a second assumption, namely that a Board Order will be forthcoming authorizing the abandonment of the C.P.R. tracks through Eganville. Should this Order not be issued then the tracks will have to be shown on the drawing and some profile and channelization adjustments made in the vicinity of them.
- 4) The District queried whether property owners have been approached regarding their revised entrance treatments. Road Design felt that the Property Section had approached all owners, however, they will further confirm this.
- 5) The District queried whether the Eganville Village Council had been acquainted with the details of reconstruction within the Village.

Cont'd....

OVER

DEPARTMENT OF HIGHWAYS OF ONTARIO  
MATERIAL AND TESTING DIVISION  
MACDONALD CARTIER FREEWAY AND KEELE STREET  
DOWNSVIEW, ONTARIO

FOUNDATION INVESTIGATION  
PROPOSED REPAIRS TO BONNECHERE RIVER BRIDGE  
EGANVILLE, ONTARIO  
SITE 29-85 W.P. 265-63

66-F-238C

Project: J3029

June, 1966

William Trow Associates Limited

NOTE

DEC. 28, 1966

NAIL AT STA 755+44.8 EL. 100.0

INFORMATION FROM D.D. SHIELDS (W.A. TROW)

(STRIP MAP) NO E-PLAN AVAILABLE AT TIME OF  
INVESTIGATION.

90 Milvan Drive  
Weston, Ontario  
749-1290

William Trow

Project: J3029

Soil Mechanics  
Consultants  
W. A. Trow  
MSc. MEIC. P. Eng.  
K. Peaker  
PhD. MEIC. P. Eng.  
D. H. Shields  
PhD. MEIC. P. Eng.



Associates Ltd

Mr. A. Rutka, P.Eng.,  
Department of Highways of Ontario,  
Materials and Testing Division,  
MacDonald Cartier Freeway and Keele Street,  
Downsview, Ontario.

June 3, 1966

Attention: Mr. A.G. Stermac, P.Eng.

Foundation Investigation  
Proposed Repairs to Bonnechere River Bridge  
Eganville, Ontario  
Site 29-85  
W.P. 265-63

Dear Sirs:

In conformance with your authorization of May 24th, 1966, a foundation investigation has been completed at the above mentioned site. The field work, which consisted of 15 borings taken into the bedrock, was carried out during the period May 24th, to May 28th, 1966. The boreholes were put down with conventional diamond drilling equipment.

In view of the excellent foundation conditions at this site, we have taken the liberty of summarizing our findings in the paragraphs which follow.

1) The limestone bedrock at the bridge site, generally, contains frequent seams for the upper 5 or 6 feet. The depth at which sound rock was sampled is shown on the borehole logs (Dwgs. 2 to 16, inclusive). We have been informed by a local contractor, who has excavated for service lines in the immediate area, that excavations with conventional construction equipment can be made for a depth of about 5 feet into the rock.

2) The safe net bearing value of the rock at the upper levels is estimated to be in the order of about 20 ksf. This relatively high bearing value on the rock, which contains frequent seams at the upper levels, is considered to be justifiable, as the seams consist of relatively incompressible and confined silty sand. Should the foundations be taken down to the sound rock, a safe net bearing value of 50 ksf will be available.

3) The river water level, was found to be at approximate El 86 feet, and is controlled by a dam. For the purpose of construction, it may be possible to lower the water level sufficiently to allow construction to proceed unhampered by water.



We trust that the information supplied in this brief report will be sufficient for you to proceed with your project. However, should you have any queries, we will be pleased to discuss them with you.

Yours very truly,

H.R. Krzywicki, P.Eng.

HRK/ss  
Encls.

Dist:- D.H.O. (10)

William A. Trow, P.Eng.

## SITE INVESTIGATIONS      SOIL MECHANICS CONSULTATION

DRAWING NO. 2  
PROJECT NO. J3029

## PENETRATION RESISTANCE

2" O.D. SPLIT TUBE        
2" I.D. SHELBY TUBE        
2" DIA CONE              

UNDRAINED TRIAXIAL                      ⓐ  
AT OVERBURDEN PRESSURE  
UNCONFINED COMPRESSION                ⓑ  
VANE TEST AND SENSITIVITY (S)     +

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

LIQUID LIMIT \_\_\_\_\_  
PLASTIC LIMIT \_\_\_\_\_

**SAMPLE TYPE**

2" O.D. SPLIT TUBE  
2" I.D. SHELBY TUBE  
3" O.D. SHELBY TUBE

BOREHOLE NO. 1  
PROJECT Bonnachere River Bridge  
LOCATION Eganville, Ontario.  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 95.6 feet  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE				350 FT LB BLOWS/FT 80	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F
				20	40	60					
	7 inches concrete sidewalk.	95.6	0								
OF O FO	FILL-boulders, wood, concrete pieces, in matrix of clayey silt and sand.										
OF O O		85.6	10								
O O O	COBBLES AND BOULDERS	84.2									
	BEDROCK-Limestone-frequent sand seams at 2 inch intervals at upper levels -very sound by about El 79.5 feet. -total recovery about 72%.		20								
	End of Bore	71.7									
Notes:	1) Borehole advanced with conventional diamond drill. Cased with RBX drilled under pressure through fill most of the time. AXT core from 11.4 feet depth.  2) Hole open to 6.0 feet depth and dry upon completion.		30          40								



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SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION

DRAWING NO. 3  
PROJECT NO. J3029

## LEGEND

### PENETRATION RESISTANCE

2" O.D. SPLIT TUBE

2" I.D. SHELBY TUBE

2" DIA. CONE

### SHEAR STRENGTH

UNDRAINED TRIAXIAL  
AT OVERBURDEN PRESSURE

UNCONFINED COMPRESSION

VANE TEST AND SENSITIVITY (S)

NATURAL MOISTURE CONTENT  
AND LIQUIDITY INDEX

### ATTERBERG LIMITS

LIQUID LIMIT

PLASTIC LIMIT

### SAMPLE TYPE

2" O.D. SPLIT TUBE

2" I.D. SHELBY TUBE

3" O.D. SHELBY TUBE

BOREHOLE NO. 2  
PROJECT Bonnechere River Bridge  
LOCATION Eganville, Ontario.  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 96.0 feet  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE 350 FT. LB BLOWS/FT				NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F
				20	40	60	80			
	1 1/2 inches plank sidewalk.	96.0	0							
	Air space below walk.									
		88.0								
		83.0	10							
	FILL-boulders, logs, boards, etc.									
	BEDROCK- Limestone occasional seams									
	-100% recovery by 19 feet depth.									
	-Total recovery 78%		20							
	End of Bore	73.3								
Notes: 1) Borehole advanced with conventional diamond drill. AXT core from 13 feet depth.										
2) Water level at 8.9 feet depth upon completion.										
			30							
			40							

73% Recovery

67% Recovery

100% Recovery



## SITE INVESTIGATIONS      SOIL MECHANICS CONSULTATION

PROJECT NO.

4  
J3029

## PENETRATION RESISTANCE

2" I.D. SHELBY TUBE \*-\*-\*

2" DIA. CONE

## SHEAR STRENGTH

UNDRAINED TRIAXIAL  
AT OVERBURDEN PRESSURE

UNCONFINED COMPRESSION

VANE TEST AND SENSITIVITY (S) +

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

## ATTERBERG LIMITS

LIQUID LIMIT

PLASTIC LIMIT


SAMPLE TYPE

2 O.D. SPLIT TUBE

2 10 SNELBY TUBE

3" O.D. SHELBY TUBE

BOREHOLE NO. 3  
PROJECT Bonnechere River Bridge  
LOCATION Eganville, Ontario  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 96.9 feet  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE 350 FT LB BLOWS/FT				NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F.	
				20	40	60	80				
	6 inches Concrete Sidewalk	96.9	0								
	Air Space Below Walk										
		88.3									
F F <sub>o</sub> F <sub>o</sub>	FILL-cobbles, bricks, wood, tins in matrix of sand and gravel.		10								
		81.2									
	BEDROCK-Limestone-occasional seams at upper levels.		20								
	-very sound by El 75 feet.										
	-Total recovery 77%										
	End of Bore	70.2									
Notes: 1) Borehole advanced with conventional diamond drill. AXT core from 15.7 feet depth.				30							
2) Water level at 9.7 feet depth upon completion.				40							

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SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION

## LEGEND




DRAWING NO. 5  
PROJECT NO. J3029

BOREHOLE NO. 4  
PROJECT Bonneshire River Bridge  
LOCATION Eganville, Ontario  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 97.0 feet  
DATUM See Dwg. 1

### PENETRATION RESISTANCE

2" O.D. SPLIT TUBE   
2" I.D. SHELBY TUBE   
2" DIA. CONE 


### SHEAR STRENGTH

UNDRAINED TRIAXIAL AT OVERBURDEN PRESSURE   
UNCONFINED COMPRESSION   
VANE TEST AND SENSITIVITY (S) 


### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

### ATTERBERG LIMITS

LIQUID LIMIT 

PLASTIC LIMIT 

### SAMPLE TYPE

2" O.D. SPLIT TUBE 

2" I.D. SHELBY TUBE 

3" O.D. SHELBY TUBE 


SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE				NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F.
				20	40	60	350 FT. LB BLOWS/FT 60			
	2 inch plank sidewalk	97.0	0							
	Air Space Under Walk									
		86.8	10							
	FILL-boulders, wood, tins in matrix of sand.	82.1								
	BEDROCK-limestone-frequent sand seams at upper levels (to about 1275 feet)		20							
	-Softer rock layers grinding casing poor recovery.									
	-Total recovery 50%.									
	End of Bore	68.0	30							
Notes: 1) Borehole advanced with conventional diamond drill. AXT core from 14.9 feet depth.										
			40							


33% Recovery  
28% Recovery  
58% Recovery  
72% Recovery


## SITE INVESTIGATIONS      SOIL MECHANICS CONSULTATION

### LEGEND


**PENETRATION RESISTANCE**


2" O.D. SPLIT TUBE 


2" I.D. SHELBY TUBE 

2" DIA. CONE 

**SHEAR STRENGTH**

UNDRAINED TRIAXIAL AT OVERBURDEN PRESSURE 

UNCONFINED COMPRESSION 

VANE TEST AND SENSITIVITY (S) 

NATURAL MOISTURE CONTENT  
AND LIQUIDITY INDEX

ATTERBERG LIMITS

LIQUID LIMIT

PLASTIC LIMIT

SAMPLE TYPE

2" O.D. SPLIT TUBE

1" I.D. SHELBY TUBE

3" O.D. SHELBY TUBE

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE				350 FT. LB BLOWS/FT	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F
				20	30	60	80				
				SHEAR STRENGTH							
	6 inches concrete sidewalk	98.3	0								
	Air Space Below Walk										
			10								
	WATER	86.3									
		82.3									
	SAND & with occasional gravel sizes.	79.3	20								
	REDROCK-limestone-very sound.										
	-Total recovery 91%										
	End of Bore	69.3	30								
			40								
Notes: 1) Borehole advanced with conventional diamond drill. AIT core from 19.0 feet depth.											

## SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION

DRAWING NO. 7  
PROJECT NO. J3029

## PENETRATION RESISTANCE

2" O.D. SPLIT TUBE      ○ — ○ — ○ —  
2" I.D. SHELBY TUBE      \* — \* — \* — \* —  
2" DIA. CONE              —————

UNDRAINED TRIAXIAL ⊕  
AT OVERBURDEN PRESSURE  
UNCONFINED COMPRESSION ⊗  
VANE TEST AND SENSITIVITY (S) +

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

ATTERBERG LIMITS

LIQUID LIMIT

PLASTIC LIMIT

SAMPLE TYPE

2" O.D. SPLIT TUBE

2" I.D. SHELBY TUBE

3" O.D. SHELBY TUBE


BOREHOLE NO. 6  
PROJECT Bonnechere River Bridge  
LOCATION Eganville, Ontario  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 98.1 feet  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE				350 FT. LB BLOWS/FT	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F
				20	40	60	80				
				SHEAR STRENGTH							
	6 inches concrete sidewalk	98.1	0								
	Air Space Below Sidewalk										
			10								
	WATER	86.1									
		85.8									
	SAND-brown										
	-encountered boulder at 17 feet depth.										
		80.6									
	BEDROCK-Limestone-occasional sand seams at upper levels.		20								
	-poor recovery attributed to grinding of softer seams of rock. Total recovery 67%.										
	End of Bore										
			30								
			40								
Notes: 1) Borehole advanced with conventional diamond drill. AXT core from 17.5 feet depth.											


## SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION

DRAWING No. 8  
PROJECT No. J3029

## PENETRATION RESISTANCE

2" O.D. SPLIT TUBE      

2" I.D. SHELBY TUBE      

2" DIA. CONE      

Labels represent typical, but not standard, shapes.

UNDRAINED TRIAXIAL                      ⊕  
AT OVERBURDEN PRESSURE  
UNCONFINED COMPRESSION                ⊗  
VANE TEST AND SENSITIVITY (S)       +

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

XL

LIQUID LIMIT \_\_\_\_\_  
PLASTIC LIMIT \_\_\_\_\_

**SAMPLE TYPE**

2" O.D. SPLIT TUBE.....  
2" I.D. SHELBY TUBE.....  
3" O.D. SHELBY TUBE.....

BOREHOLE NO. 7  
PROJECT Bonnechere River Bridge,  
LOCATION Eganville, Ontario,  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 100.2 ft.  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE				350 FT. LB BLOWS/FT	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F	
				20	40	60	80					
				SHEAR STRENGTH				PSI				
	6" CONCRETE SIDEWALK	100.2	0									
	AIR SPACE UNDER WALK											
		90.2	10									
	FILL-rock, concrete, wood and sand.	86.2										
	BEDROCK-Limestone-generally sound by El 80 ft. - occasional sand seams at upper levels.		20									
	Total recovery 83%.											
	End of Bore	71.2	30									
Notes:	1)Borehole advanced with conventional diamond drill. AXT core from 14 ft. depth.											
	2)Water level at 10.8 ft. depth upon completion.		40									

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SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION

## LEGEND




DRAWING No 9  
PROJECT No J3029

BOREHOLE No 8  
PROJECT Bonnechere River Bridge,  
LOCATION Eganville, Ontario  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 100.2 ft.  
DATUM See Dwg. 1

### PENETRATION RESISTANCE

2" O.D. SPLIT TUBE   
2" I.D. SHELBY TUBE   
2" DIA. CONE 

### SHEAR STRENGTH

UNDRAINED TRIAXIAL AT OVERBURDEN PRESSURE   
UNCONFINED COMPRESSION   
VANE TEST AND SENSITIVITY (S) 




NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX



LI 

### ATTERBERG LIMITS

LIQUID LIMIT   
PLASTIC LIMIT 

### SAMPLE TYPE

2" O.D. SPLIT TUBE   
2" I.D. SHELBY TUBE   
3" O.D. SHELBY TUBE 

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE		350 FT. LB BLOWS/FT 80	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F.
				20	40				
	FILL (ROAD)--sand, gravel and boulders.	100.2	0						
	BEDROCK--Limestone-frequent sand seams at upper levels.	89.2	10						
	-generally sound by about El 82 ft. -total recovery 68%.								
			20						
	End of Bore	77.2							
<u>Notes:</u>	1) Borehole advanced with conventional diamond drill. AXT core from 11 ft. depth.		30						
	2) Lost part of core from 13.5 to 18 ft. sample, accounting for poor recovery.		40						



## SITE INVESTIGATIONS      SOIL MECHANICS CONSULTATION

DRAWING NO. 10  
PROJECT NO. J3029

## PENETRATION RESISTANCE

2" O.D. SPLIT TUBE      —○—○—○—

2" I.D. SHELBY TUBE    —X—X—X—X—

2" DIA. CONE            —————

UNDRAINED TRIAXIAL            ⊕  
AT OVERBURDEN PRESSURE  
UNCONFINED COMPRESSION      ⊗  
VANE TEST AND SENSITIVITY (S) +

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

LIQUID LIMIT  
PLASTIC LIMIT

2" O.D. SPLIT TUBE  
2" I.D. SHELBY TUBE  
3" O.D. SHELBY TUBE



BOREHOLE NO. 9  
PROJECT Bonnechere River Bridge  
LOCATION Eganville, Ontario.  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 100.8 feet  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE		350 FT. LB BLOWS/FT 60	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F	
				20	40					60
				SHEAR STRENGTH						PSI
	6 inches concrete sidewalk	100.8	0							
	Air Space Below Sidewalk									
		89.3	10							
	Sand, Gravel and Bobbles.	87.0								
	BEDROCK-Limestone-frequent thin seams.									
	-Total Recovery 69%.		20						65% Recovery	
	End of Bore	75.3							75% Recovery	
Notes:	1) Borehole advanced with conventional diamond drill. AXT core from 13.8 feet depth.		30							
			40							



### LEGEND

## PENETRATION RESISTANCE

2" O.D. SPLIT TUBE        
2" I.D. SHELBY TUBE        
2" DIA. CONE              

### SHEAR STRENGTH

UNDRAINED TRIAXIAL            ⊕  
AT OVERBURDEN PRESSURE  
UNCONFINED COMPRESSION      ⊗  
VANE TEST AND SENSITIVITY (S) +

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

 $x^2$ 

## ATTERBERG LIMITS

LIQUID LIMIT \_\_\_\_\_  
PLASTIC LIMIT \_\_\_\_\_

**SAMPLE TYPE**

2" O.D. SPLIT TUBE  
2" I.D. SHELBY TUBE  
3" O.D. SHELBY TUBE

BOREHOLE No. 10  
PROJECT Bonnechere River, Bridge  
LOCATION Eganville, Ontario  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 100.7 feet  
DATUM See Dwg. 1

[illegible]

## SITE INVESTIGATIONS      SOIL MECHANICS CONSULTATION

DRAWING NO. 12  
PROJECT NO. J3029

### PENETRATION RESISTANCE

2" I.D. SHELBY TUBE ~~XXXX~~

2 DIA. CONE

UNDRAINED TRIAXIAL  
AT OVERBURDEN PRESSURE

UNCONFINED COMPRESSION 6

**Abstract**

VANE TEST AND SENSITIVITY (S) -

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

## ATTERBERG LIMITS

LIQUID LIMIT

LIQUID LIMIT

### PLASTIC LIMIT

### PLASTIC LIMIT

SAMPLE TYPE

2" O.D. SPLIT TUBE

2" I.D. SHELBY TUBE

3" O.D. SHELBY TUBE

BOREHOLE NO. 11  
PROJECT Bonnechere River, Bridge  
LOCATION Eganville, Ontario  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 100.5 feet  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE		350 FT. LB BLOWS/FT 80	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F	
				20	40					60
				SHEAR STRENGTH P.S.I						
	6 inches Concrete sidewalk.	100.5	0							
	Air Space Below Walk									
		88.5	10							
	HEDROCK-Limestone-3 inch layers of rock with sand seams to 6 inches thick.									
	-generally sound by El 85 feet.		20						91% Recovery	
	-Total recovery of rock below El 85 feet 95%. End of Bore.	75.2							95% Recovery	
Notes:	1) Borehole advanced with conventional diamond drill. AXT core from 15 feet depth.		30							
			40							

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SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION

## LEGEND

DRAWING NO. 13  
PROJECT NO. J3029

BOREHOLE NO. 12  
PROJECT Bonnechere River Bridge,  
LOCATION Eganville, Ontario,  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 94.2 ft.  
DATUM See Dwg. 1

### PENETRATION RESISTANCE


2" O.D. SPLIT TUBE 


2" I.D. SHELBY TUBE 


2" DIA. CONE 

### SHEAR STRENGTH

UNDRAINED TRIAXIAL  
AT OVERBURDEN PRESSURE 

UNCONFINED COMPRESSION 

VANE TEST AND SENSITIVITY (S) 


NATURAL MOISTURE CONTENT  
AND LIQUIDITY INDEX 


### ATTERBERG LIMITS


LIQUID LIMIT 

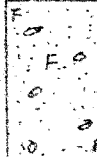


PLASTIC LIMIT 

### SAMPLE TYPE

2" O.D. SPLIT TUBE 

2" I.D. SHELBY TUBE 

3" O.D. SHELBY TUBE 

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE		NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F
				20	40 50 80 150 FT. LB BLOWS/FT			
				SHEAR STRENGTH				
		94.2	0					
	FILL (Road)—sand, gravel, cobbles and boulders.							
	(river level) 	86.2						
	BEDROCK—Limestone—frequent sand seams at upper levels, - very sound by about El 80 ft. Total recovery 83%.	84.7	10					67% recovery
	End of Bore	75.2	20					100% recovery
<u>Notes:</u>	1) Borehole advanced with convention- al diamond drill. AXT core from 9.5 ft. depth.							
			30					
			40					

# WILLIAM TROW ASSOCIATES LTD.


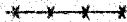
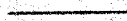
SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION

## LEGEND




DRAWING NO. 14  
PROJECT NO. J3029


BOREHOLE NO. 13  
PROJECT Bonnechere River Bridge,  
LOCATION Eganville, Ontario,  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 89.7 ft.  
DATUM See Dwg. 1

### PENETRATION RESISTANCE

2" O.D. SPLIT TUBE   
2" I.D. SHELBY TUBE   
2" DIA. CONE 

### SHEAR STRENGTH




UNDRAINED TRIAXIAL AT OVERBURDEN PRESSURE   
UNCONFINED COMPRESSION   
VANE TEST AND SENSITIVITY (S) 


NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX 

### ATTERBERG LIMITS

LIQUID LIMIT   
PLASTIC LIMIT 

### SAMPLE TYPE

2" O.D. SPLIT TUBE   
2" I.D. SHELBY TUBE   
3" O.D. SHELBY TUBE 

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE				350 FT. LB BLOWS/FT 80	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F
				20	40	60					
				SHEAR STRENGTH							
		89.7	0								
	BEDROCK-Limestone-at surface-very sound, total recovery 100%.										
	End of Bore	85.7									
<b>Notes:</b>	1)Borehole advanced with convention- al diamond drill. AXT core from ground surface.  2)Borehole put down over edge of wall - bedrock at surface.		10								
			20								
			30								
			40								

## SITE INVESTIGATIONS      SOIL MECHANICS CONSULTATION

DRAWING NO. 15  
PROJECT NO. J3029

## PENETRATION RESISTANCE

2" O.D. SPLIT TUBE 

2" I.D. SHELBY TUBE ~~X~~~~X~~~~X~~~~X~~

3 DIA CONE

### SHEAR STRENGTH

UNDRAINED TRIAXIAL  
AT OVERBURDEN PRESSURE

UNCONFINED COMPRESSION 9

NAME TEST AND SENSITIVITY (S) 1

VANE TEST AND SENSITIVITY (B) T

### NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX

### ATTERBERG LIMITS

LIQUID LIMIT

### PLASTIC LIMIT

**SAMPLE TYPE**

2" O.D. SPLIT TUBE

2" I.D. SHELBY TUBE

3" O.D. SHELBY TUBE

BOREHOLE NO. 14  
PROJECT Bonnechere River Bridge,  
LOCATION Eganville, Ontario,  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 89.0 ft.  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV FEET	DEPTH FEET	PENETRATION RESISTANCE				350 FT. LB BLOWS/FT RQ	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO	NATURAL UNIT WEIGHT P.C.F.
				20	40	60					
				SHEAR STRENGTH							
		89.0	0								
	FILL-sand, gravel and cobbles.										
		85.7									
	BEDROCK-Limestone-occasional sand seams - badly fissured, becoming very sound by about El 80 ft. Total recovery 83%.		10								100% recovery
											63% recovery
											88% recovery
		76.0									100% recovery
	End of Bore										
Notes:	1) Borehole advanced with conventional diamond drill. AXT core from 3.3 ft. depth.		20								
			30								
			40								




# WILLIAM TROW ASSOCIATES LTD.

SITE INVESTIGATIONS SOIL MECHANICS CONSULTATION




DRAWING NO. 16  
PROJECT NO. J3029


## LEGEND

### PENETRATION RESISTANCE

2" O.D. SPLIT TUBE   
2" I.D. SHELBY TUBE   
2" DIA. CONE 

### SHEAR STRENGTH




UNDRAINED TRIAXIAL AT OVERBURDEN PRESSURE   
UNCONFINED COMPRESSION   
VANE TEST AND SENSITIVITY (S) 

NATURAL MOISTURE CONTENT AND LIQUIDITY INDEX 

### ATTERBERG LIMITS

LIQUID LIMIT   
PLASTIC LIMIT 

### SAMPLE TYPE

2" O.D. SPLIT TUBE   
2" I.D. SHELBY TUBE   
3" O.D. SHELBY TUBE 

BOREHOLE NO. 15  
PROJECT Bonnechere River Bridge,  
LOCATION Eganville, Ontario,  
HOLE LOCATION See Dwg. 1  
HOLE ELEVATION 93.2 ft.  
DATUM See Dwg. 1

SYMBOL	SOIL DESCRIPTION	ELEV. FEET	DEPTH FEET	PENETRATION RESISTANCE		350 FT. LB. BLOWS/FT. BO	NATURAL MOISTURE CONTENT AND ATTERBERG LIMITS % DRY WEIGHT	SAMPLE TYPE AND NO.	NATURAL UNIT WEIGHT P.C.F.
				20	40	60			
		93.2	0	SHEAR STRENGTH					
	FILL (ROAD)-sand, gravel, cobbles and rock slabs.								
		83.2	10						
	BEDROCK-Limestone-frequent sand seams at upper levels. Noticeably more sound by about El 79 ft. Some softer layers washed away, accounting for poor recovery of lower portion. Total recovery 49%. End of Bore								
		72.2	20						
			30						
			40						

27% recovery

57% recovery

Notes: 1) Borehole advanced with conventional diamond drill. AXT core from 10 ft. depth.

1971 FEB 2 AM 11:21

MX KINR FEB 2/71 11 AM

OTTA 1 TO J E CALLAGHAN DIST ENGR

ATT M PEVERETT

DOWN 2 TO A G STERMAC FOUNDATION SECTION

KINR COPIES TO T C KINGSLAND BRIDGE OFFICE

J E GRUSPIER M AND T

H B MCKAY ENG AUDIT

R J FORREST SCHEDULING CO-ORDINATOR

P D BILLINGS REG DIRECTOR

M R ERNESAKS FUNCTIONAL PLANNING

RE WP 265-63-02, HWY 60, EGANVILLE INTERSELTION OF

HWY 41 AND 60 E'LY TO E. LTS OF VILLAGE, DIST 9, OTTAWA

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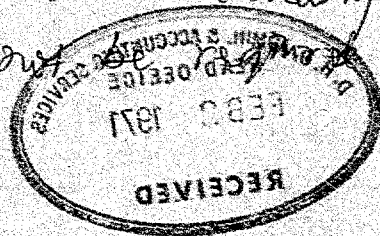
PLEASE BE ADVISED THAT A PRE-CONTRACT REVIEW MEETING WILL BE HELD IN THE  
OTTAWA DISTRICT OFFICE FOR THE ABOVE NOTED PROJECT, WEDNESDAY  
MARCH 3RD, 1971 AT 10.30 A.M.

R T MOLARO ROAD DESIGN

JM

Discussed with R.T. Molaro of Road Design, Kingston on 4th Feb  
1971 by Telephone and it was agreed as follows:

The retaining wall will be founded on bedrock and it  
was felt there are no major foundation problems to be  
discussed at the meeting. In view of this our presence  
will not be required at this meeting.



M. Devata  
Feb 4th 1971

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- 6) Road Design informed the Committee that both themselves and Functional Planning had met Council, however, a further meeting was to be arranged now that the drawings had been completed.
  - 7) Road Design recommended that a 5' paved strip be placed behind the curb and gutter in areas where there was no shoulder. It is Road Design's experience that grass behind the curb and gutter is killed by salt action. The Committee concurred with this recommendation. Materials and Testing recommend 4" granular and 2" H.M. be placed.
  - 8) The Committee recommends that the District photographically document existing retaining walls in the Village before and after the contract. Many privately owned walls in the Village are in very bad structural repair and it is anticipated claims may be made against the Department should any failures occur during the contract.
  - 9) The Village and O.W.R.C. are presently constructing a sanitary sewer throughout the Village. This facility has been designed by J. L. Richards and Associates of Ottawa with whom Road Design have had liaison to ensure that there is no conflict between the sanitary and storm sewers. The Committee recommends that the District acquire "as constructed" details of the sanitary sewer as soon as possible so that a further check on conflict between the sewer lines can be made and also so that our rock lines can be checked. It is pointed out that any conflict between storm and sanitary sewers is the responsibility of O.W.R.C. due to the terms of the Encroachment Permit and correspondence between Road Design and J. L. Richards.
- Committee recommended that the District carry out spot checks on the backfill compaction of the sanitary sewer.
- 10) The Committee recommended that a H.M. allowance be set up for restoring the Village Street to be used as a detour between Sta. 12+88.07 and Sta. 24+00.
  - 11) The Committee questioned whether the surface course on Highway #41 should be 1½" as seems to be current practice. The Materials and Testing Representative considered that it should remain at 1½".

SHEET # 6

District told the Committee that there is a buried Bell Cable that does not appear on the plans, at the intersection of Highways #512 and #41. Road Design will check this out with the Bell Telephone.

Road Design will check the numbering sequence of catch basin removals.

SHEET # 7

Further detail should be shown on the enlargement detailing the extent of paving behind the curb and gutter.

SHEET # 9

Road Design requested Materials and Testing to check joint details of concrete sidewalk in the intersection of Highways #41 and #60.

Cont'd.....

Sheet #9 Cont'd.....

District requested that curb and gutter be changed from Type "A" to Type "D", between Sta. 0+85+ and Sta. 3+60 John Street.

District pointed out that the Village of Eganville has been in touch with them about a light pole on channelization island at approximately Sta. 751+25. Road Design will make attempts to clarify illumination in this area.

SHEET # 10

Materials and Testing will check for condition of stone foundation at Sta. 747+ right.

District felt there was a buried Bell conduit at the intersection of Highways #60 and #41. Road Design will check this.

SHEET # 14

Road Design to check with Property Section about the relocation of the commercial sign at Highway #41 and Elgin Street.

SHEET # 15

Road Design will insert a Special Provision telling the Contractor to give the owner of the property at Sta. 16+50 approximately left, two weeks notice prior to construction of the storm sewer outlet, so that the car park can be kept free of vehicles.

SHEET # 16

Road Design to check the location of the commercial sign at Sta. 16+50 left approximately.

SHEET # 26

Road Design to check the sewer profile to make sure the water main crossings are all shown.

SHEET # 29

Road Design should indicate which side of manhole #44A will require a plug for a future connection.

RETAINING WALL NO. 1

Discussion took place about the protection of the house at Sta. 5+00+ Highways #41 and #60 during the demolition and reconstruction of Retaining Wall #1.

Due to the close proximity of the house the abnormally steep embankment behind and above the wall, it is anticipated that temporary protection will be required and the Contractor will bid accordingly. The Committee recommends that separate items be set up for Retaining Wall #1.

Retaining Wall No. 1 Cont'd.....

The Road and Bridge Design Offices will clarify the numbering system of Retaining Walls now that W.P. 265-63-01 and W.P. 265-63-04 have been grouped.

Road Design to check the earth excavation for structure foundation Items with the Bridge Office.

D-4

Item #4 - Item shall be deleted if spring award. See general comments.

Item #6 - Committee recommends the compaction item be eliminated due to the small amount of rock.

Item #11 - Due to a misunderstanding it appears that a conversion factor of 1.8 has been used instead of 2.0.

Concrete Pipe Bedding Items - Materials and Testing recommend Class 3B Bedding in all locations.

Item #37 - SD-8-42 shows 3 types of bedding for C.S.P. sewers. These bedding types are not numbered and so cannot easily be shown on the breakdown sheets under the appropriate column. Standards Engineer to review.

#### SPECIAL PROVISIONS

Overloading Special is to be revised. (New Overloading Special has been received subsequent to Review and will be included.)

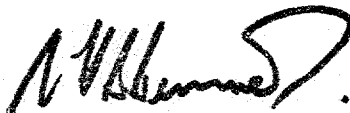
Road Design will check forthcoming projects in Eganville vicinity to see if they can be used as sites for the disposal of excess material.

#### CONTRACT LENGTH

Committee recommended one full construction season on a completion basis or 105 days on a working day basis.

#### BOOKS REQUIRED

Twenty copies of contract books are required by the District.



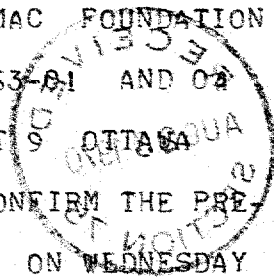
R. H. B. Bennett,  
SR. PROJECT DESIGN ENGINEER  
CHAIRMAN REVIEW COMMITTEE.

H. Forsythe  
D. Patterson  
R. Verscheure

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Trow 166 11-1-20

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DOWN KINR 9 AUGUST 21/70 4:15 PM  
MR A G STERMAC FOUNDATION SECTION  
RE W P 265-63-01 AND 02 HWY 41, , 41 AND 60 VILLAGE OF EGANVILLE  
DISTRICT 9 OTTAWA

THIS WILL CONFIRM THE PRE- CONTRACT REVIEW DATE FOR THIS PROJECT  
AT 10/30 AM ON WEDNESDAY SEPTEMBER 2ND 1970 AT KINGSTON REGIONAL  
OFFICE.

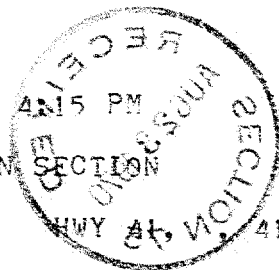
R T MOLARO ROAD DESIGN -  
C C J E GRUSPIER M AND T KINGSTON  
H B MCKAY ENG AUDIT KINGSTON  
R J FORREST PROGRAM SECTION  
M B ERNECACKS FUNCTIONAL PLAN

Advise R.T. Molaro and also  
Regional Materials Section that the  
foundation section will not ~~be present~~  
at this meeting. The Retaining Wall  
Foundation have been investigated  
by the Section.

107-1127-10

1970 AUG 24 AM 8:31

453



DOWN KINR 9 AUGUST 21/70 AM 15 PM

MR A G STERMAC FOUNDATION SECTION

RE W P 265-63-01 AND 04

HWY 41 AND 60 VILLAGE OF EGANVILLE

DISTRICT 9 OTTAWA

THIS WILL CONFIRM THE PRE- CONTRACT REVIEW DATE FOR THIS PROJECT  
AT 10/30 AM ON WEDNESDAY SEPTEMBER 2ND 1970 AT KINGSTON REGIONAL  
OFFICE.

R T MOLARO ROAD, DESIGN

C C J E GRUSPIER M AND T KINGSTON

H B MCKAY ENG AUDIT KINGSTON

R J FORREST PROGRAM SECTION

M P FENEGAKS FUNCTIONAL PLAN

Please :

file with WP 265-630

If we haven't got  
such number file  
with "District 9"

Thank you

Wp

Feb 2, 1967.



MEMORANDUM

To: Mr. A. G. Stermac,  
Principal Foundation Engineer,  
Room 107,  
Laboratory Building,  
DOWNSVIEW, Ontario.

From: Bridge Section,  
KINGSTON, Ontario.

Date: February 1, 1967

Our File Ref.

In Reply To

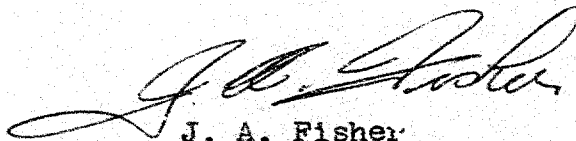
Subject:

W.P. 265-63-04, Site 29-85, Bonnechere River Bridge,  
Highway 41, District 9, Ottawa

We are sending you herewith one print of preliminary plan D-6007-1 pertaining to the above listed structure.

Present proposal involves placing a new concrete deck slab on the existing masonry walls which are believed to be in good condition, although some sections will be replaced as indicated.

If you wish to make any comments on this project, we would appreciate receiving same before February 15, 1967.



J. A. Fisher

For: G. Scott  
REGIONAL BRIDGE LOCATION ENG.

JAF/GS/h1

Attach.

NOTE:

THE PROPOSED WORK CONCERNS THE SUPERSTRUCTURE ONLY. CONSEQUENTLY WE HAVE NO COMMENTS TO MAKE  
FEB. 2, 1967.

AGS

*file with report*  
*WSD*

Mr. G. Scott  
Regional Bridge Location Engineer  
Bridge Division, Kingston

M. & T. Division  
Kingston

*THOU 66*

October 27, 1966

Re: Hwy. 41, W.P. 265-63  
Bonnechere River

Further to my letter of a week ago, additional information was obtained in the latter part of last week.

A 3" core was taken through the upper crack 3'-4' from the top of the wall in the north west concrete retaining wall which was 28" thick. The crack was visible in the hole for the first 10" - 12" but dipped below the level of the hole. Beyond this distance the lower part of the hole showed the concrete to contain numerous voids and the crack could not be determined as such. The upper part of the hole showed the concrete to be relatively free of voids. As mentioned earlier, it would appear that the crack followed along a cold joint and the great number of voids was due to the lack of compaction of the concrete. At the time of drilling, water was seeping from other voids in the face of the wall at distances of about 4' right and 2' left of the borehole, indicating continuity of the voids in the wall.

The impact hammer was used as a guide to the strength of the concrete and the average values at two locations in the north west wall were 3500 PSI and 4200 PSI.

The core obtained was in several pieces and indicated the very open nature (large number of voids) of the concrete. Since the concrete appears fairly uniform it would seem that the concrete is similar throughout as described above.

It is felt that all the concrete retaining walls should be considered for replacement at this time. The stone arch portions are in very good shape and should last for many years to come.

JEG:mgm

cc: W. McFarlane  
A. G. Stermac

*J. E. Gruspier*  
Regional Materials Engineer

A.G. Stermac

---

Mr. G. Scott,  
Reg. Bridge Location Engineer,  
Bridge Office, Kingston.

M.A.T. Division, Kingston.

October 16, 1966.

Re: Hwy. 41. W.P. 265-63. Bonnechere River Bridge at Eganville

The following comments are submitted with respect to the meeting held in Eganville to discuss the proposed repairs to the bridge across the Bonnechere River.

There was considerable discussion regarding the extent of the proposed repairs to the structure. One involves the replacement of the deck over the entire structure with minor repairs to the east concrete retaining wall between the stone arches. The other involves the replacement of the deck along with the west concrete retaining wall north of the north arch due to a slight diagonal crack in it, and possibly the east retaining wall opposite it.

The slight diagonal crack in the northwest retaining wall follows along the line of a cold pour at the time of construction. There is no definite indication of the depth of the crack or its cause. The concrete shows signs of honeycombing and doesn't appear to be the best of concrete. However, considering it has been exposed for over 40 years, it is standing up quite well and must be of reasonably good quality. There is no indication that the concrete would deteriorate rapidly in the foreseeable future. The concrete in the other retaining walls is similar in appearance. If the replacement of one of these walls is warranted (based on the condition of the concrete) then it would appear that all of the retaining walls should be replaced.

The present asphalt surfaced deck of the structure is slightly uneven and shows signs of isolated patched settlements in 3 or 4 small areas adjacent to the sidewalks. There may be voids underlying these patched areas and indeed it is visible in one area. After the removal of the existing pavement it would be necessary to compact the underlying granular along with any additional granular to be placed before the deck slab is poured.

Concern was expressed regarding the lateral stability of the present roadfill between the stone arches where the east retaining wall is apparently not continuous. I can see no stability problem since the driveway leading to the powerhouse provides adequate lateral support.

As mentioned at the field review, I feel it would be advantageous to obtain a core through the crack in the northwest concrete retaining wall. This information would indicate the extent of the crack, the quality of the concrete, and the thickness of the retaining wall which might indicate whether it is of the gravity type or other design. I believe you indicated the type of wall might have an effect on whether it should be replaced.

Based on the proposed repairs to the deck of the structure, it would appear that a detour utilizing a bailey bridge would be necessary. The location some distance east of the present structure which we reviewed appears suitable. A limited amount of grading would be necessary.

JEG:cdr

  
J. E. Cruspier  
Regional Materials Engineer

c.c. W.S. Aitken  
A.G. Stermac

File

Hwy. 401 & Keele St.,  
Downsview, Ontario.

May 24, 1966

Materials and Testing Division

William A. Trow Associates Ltd.,  
90 Milvan Drive,  
Weston, Ontario.

Attention: Mr. Wm. A. Trow

Re: Foundation Investigation -  
Sonnechere River Bridge at Eganville,  
Site 29-85, District No. 9 (Ottawa),  
K.P. 265-63.

Dear Sir:

This is to authorize you to carry out a foundation investigation required in connection with the intended repair of the above mentioned bridge.

The plan showing the outlay of requested boring, together with additional pertinent information, was given to your Mr. Wm. A. Trow on May 18, 1966.

It is understood that you will commence the investigation as soon as possible, presumably this week. From the copy of the correspondence between the Bridge Division and our Division, it is evident that the job is of great urgency, and we would expect you to act accordingly.

We would also suggest that a meeting be held with a representative of the Bridge Division as soon as the field information becomes available so that any delays in the design could be avoided. Should such a meeting be conclusive, there would not be a great urgency for the submission of the final report. We will require ten (10) copies of the report for distribution.

Because the drawings accompanying the foundation reports, showing the location of borings, the inferred subsoil conditions, etc., are to become contract drawings, you are requested to prepare them in accordance with the D.E.O. standards. To enable you to do this, we are supplying you with sample drawings with all the necessary

cont'd. /2 .....

Mr. Wm. A. Trow -  
William A. Trow Associates Ltd.

- 2 -

May 24, 1966

explanations, together with linen sheets for your drawings. You are also requested to provide us with Cronaflex copies of the drawings.

Charges for the work performed will be in accordance with your Schedule of Rates, dated January 1, 1966, and invoice to be addressed to the attention of the undersigned.

We are attaching Purchase Order J 34808, covering the purchase of any new material required for this work, in order that you may use this as a basis for exemption from the Federal Tax for such purchases. The Exemption Certificate is printed thereon.

Yours very truly,

*C. Rutka*

ACS/MdeF  
Attach.

A. Rutka,  
MATERIALS & TESTING ENGINEER

cc: Messrs. S. McCombie  
R. S. Pillar  
L. E. Walker  
J. E. Graspier  
Mrs. I. Steinberg  
E. Konings  
A. Crowley  
H. Szymanski (2)  
Foundations Office  
Gen. Files (2)

Mr. E. R. Davis,  
Bridge Engineer,  
Bridge Division.

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

Attention: Mr. S. McConbie

June 6, 1966

JUN 7 1966

FOUNDATION INVESTIGATION REPORT BY:  
William Trow Associates Ltd. -  
Proposed Repairs to Bonnesbore River Bridge,  
Eganville, Ontario, District 9 (Ottawa).  
Site 29-85 -- W.P. 265-63

Attached, please find the above mentioned report prepared and submitted by the consultant, William A. Trow Associates Ltd.

The recommendations contained in the report are self-explanatory and we trust, will be adequate for your further design work.

Should you have any questions that you would like to discuss, please feel free to contact this Office.

AGS/Wief  
Attach.

*A. C. Sterns*  
A. C. Sterns,  
PRINCIPAL FOUNDATION ENGINEER

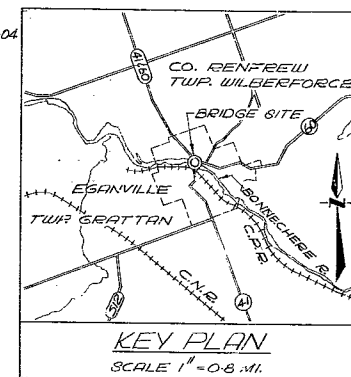
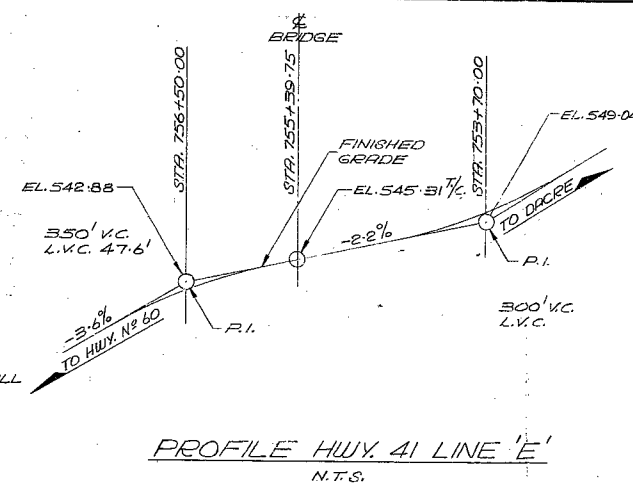
cc: Messrs. E. R. Davis (2)  
E. A. Tregaskes  
D. W. Farren  
R. S. Pillar  
L. E. Walker  
J. E. Gruespier  
A. Watt

Foundations Office  
Gen. Files



#66-F-238C  
W.P.#265-63-04  
HWY#41 & #60  
BONNECHERE  
RIVER  
BRIDGE





## NOTES

CLASS OF CONCRETE  
3000 P.S.I.

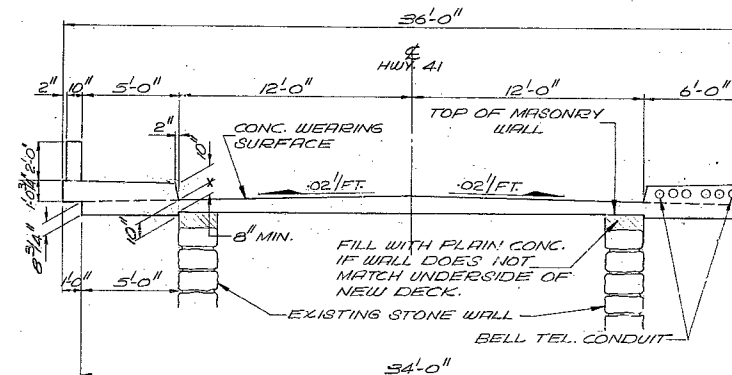
CLEAR COVER ON REINFORCING STEEL

PARPET WALLS - 1 1/2"

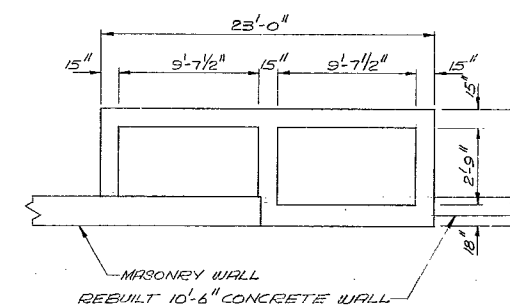
CUREIS - 2<sup>nd</sup>

DECK - TOP  $2\frac{1}{2}$ " BOTTOM 3"  
RETAINING WALLS - 3"

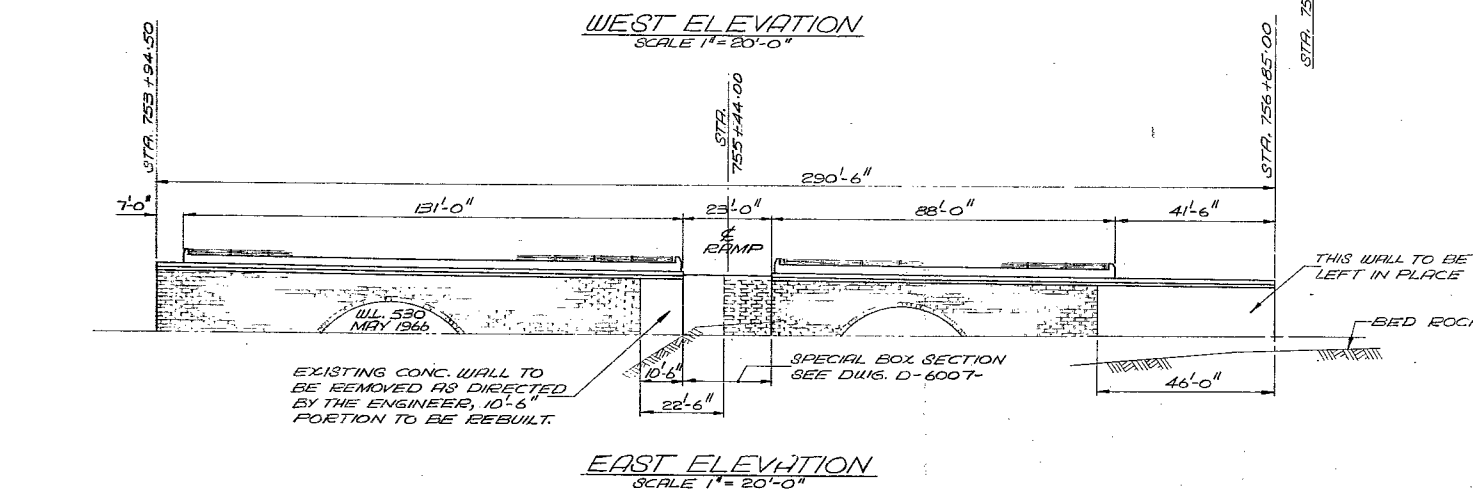
CONSTRUCTION NOTES



SECTION A-A  
SCALE 1/4" = 1'-0"



SPECIAL BOX SECTION  
SCALE  $\frac{3}{16}'' = 1'-0''$



D.H.O. B.M. 64-178

RED BRICK BANK OF MONTREAL BUILDING ON THE WEST BANK OF THE BONNECHERE RIVER, OPPOSITE THE CENTRAL HOTEL IN THE MAIN SECTION OF ESPANVILLE. TABLET IS SET HORIZONTALLY IN THE WEST FACE OF STONE FOUNDATION, BEING 36 FEET NORTH OF THE SOUTH-WEST CORNER OF THE BANK AND 0.5 FEET BELOW FIRST COURSE OF BRICKWORK.

[illegible]