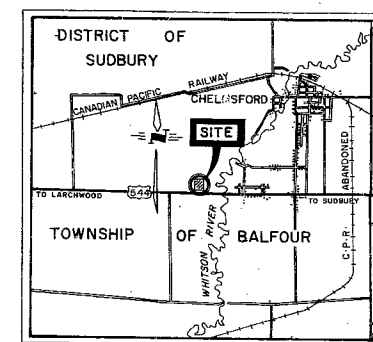
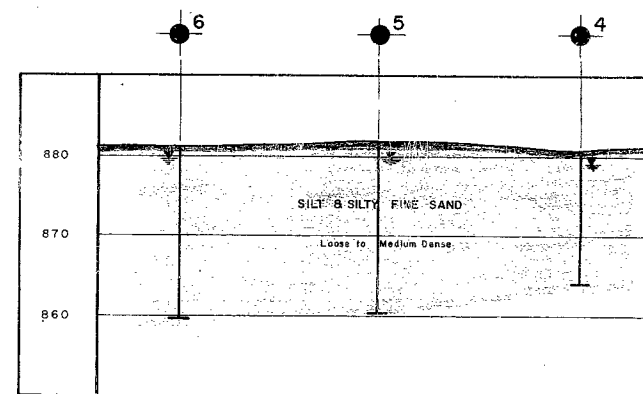
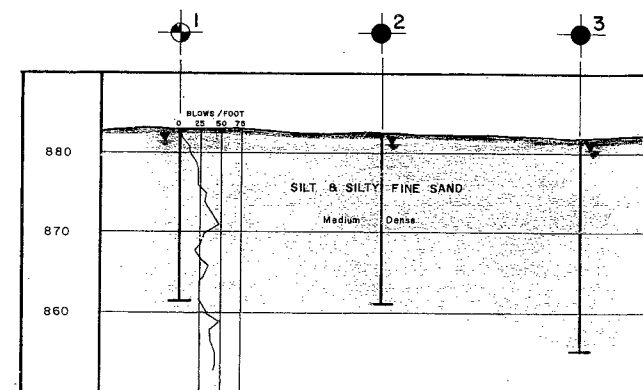
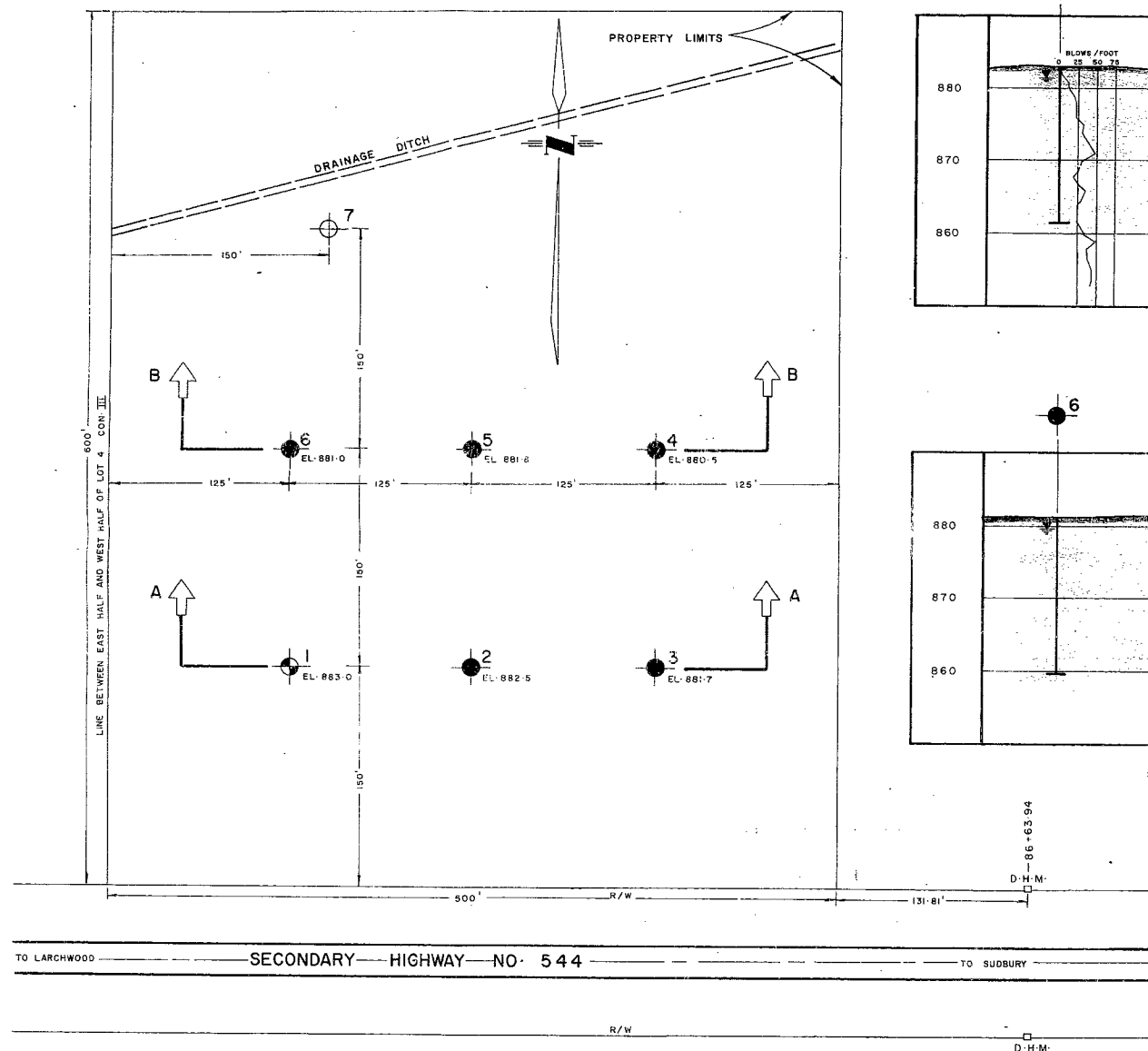


#61-F-98

CHELMSFORD

PATROL

YARD



LEGEND	
	BORE & PENETRATION HOLE
	BORE HOLE
	PENETRATION HOLE (CONE)
	WATER LEVELS Established at the Time of Field Investigation 27 Sept 1961

483650  
5157300  
41111E  
17

NOTE  
THE BOUNDARIES BETWEEN SOIL STRATA HAVE BEEN ESTABLISHED ONLY AT BORE HOLE LOCATIONS. BETWEEN BORE HOLES THE BOUNDARIES ARE ASSUMED FROM GEOLOGICAL EVIDENCE AND MAY BE SUBJECT TO CONSIDERABLE ERROR.

DEPARTMENT OF HIGHWAYS - ONTARIO MATERIALS & RESEARCH SECTION		
CHELMSFORD PATROL YARD		
ORIGINATED T. WIDDIS	DISTRICT NO. 17	DATE OCT. 20, 1961
DRAWN F. CLARK	W.P. NO. —	JOB NO. 61-F-98
CHECKED <i>AK</i>	SCALE	DRAWING NO.
APPROVED <i>Di. Director</i>	AS SHOWN	61-F-98A

23-65-112

Mr. F. E. Cavell,  
Superintendent,  
Special Services Section.

October 17, 1961.

D.H.C. FOUNDATION INVESTIGATION  
REPORT.

Materials & Research Division,  
(Foundation Section).

W.J. 61-P-98.

Attention: Mr. E. Hobbv.

Re: PROPOSED NEW PATROL YARD  
Lot 4, Con. 3, Twp. of Balfour,  
Chelmsford, District #17.

A foundation investigation was carried out by this Section during Sept. 1961, to determine the subsoil conditions existing at the proposed Patrol Yard site. At the time of investigation, the exact locations of various buildings, parking areas, etc., were not available; therefore, boreholes were located in order to give a general picture of subsoil conditions over the whole site. A total of 6 boreholes and 2 dynamic cone penetration tests, were carried out. The locations and elevations of these, together with the estimated stratigraphical profile, are shown on the Drawing #61-P-98a.

The subsoil conditions at the proposed site are generally uniform. The site is covered by a thin layer of sandy topsoil which is followed by a granular deposit consisting mostly of silts and fine sands varying randomly both in relative density and deposition.

cont'd. /2 ...

The water table at the time of investigation, varied from one to two feet below the ground surface. This will, no doubt, vary seasonally and should be determined again at the time of construction.

It is recommended that the foundation for the buildings be placed at least 6 ft. below the ground surface. A dewatering scheme will be necessary. If sheeting is used for this, it must be driven to an adequate depth below the bottom of the excavation. This depth will depend on the height of the prevailing water table above the bottom of the excavations and should be equal to it. It is pointed out that sheeting driven to an inadequate depth could result in quick sand conditions which would lower the bearing capacity of the subsoil. A design load of 0.75 tons per square foot, may be used for the building foundations, and must include the maximum loadings due to crane loads, etc., which are likely to occur after the buildings are in use. The above design load is based on the possible differential settlement of up to 1 inch, and the footings should be designed accordingly. The buildings should not be located in the vicinity of B.H.'s. #5 and #6 because of the presence of loose silt and silty sand.

It is recommended that all topsoil over the construction area should be removed. Where fill is necessary, this should consist of acceptable sand cushion. The top 6" of gravelled area, paved areas, and roadways, should consist of G.B.C. Class 'A' material. Surfacing material for the roadways and parking areas should consist

of a 2" binder course of H.L.-4 and a 1-1/2" wearing course of H.L.-4. The wearing course should be modified to allow the use of a sandier mix.

Information obtained from local residents, indicates that domestic wells in the area have been developed at a depth of approx. 80 ft. below existing ground surface. The quantity of water to be expected at this depth at this site, has not been proven by our Section.

October 1961 REPORT PREPARED BY:

*for* *T. Holubec*  
.....  
T. P. Piodis,  
PROJECT FOUNDATION ENGINEER.

REPORT APPROVED BY:

*M. Novata*  
.....  
M. Novata,  
SR. PROJECT FOUNDATION ENGINEER

cc: Messrs. F. E. Cavell (2)  
K. Hobby  
M. A. Tregaskas  
B. D. McMillan  
H. C. Tackaberry  
T. A. Sharpe  
T. J. Kovich  
J. Roy  
J. E. Graspier  
C. H. Saint  
F. Norman

Foundations Office  
Gen. Files.

APPENDIX I.