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## No. NH-33044/2/88-DO II

Dated the 21st March, 1990

Τо

Chief Engineers of State PWDs/Union Territories dealing with NHs and other Centrally financed schemes; Director General (Works), CPWD; Director General Border Roads

Subject: Execution of bridge works on National Highways and under other centrally financed Schemes - sub-soil investigations.

Attention is invited to para 1.2 of the instructions contained in this Ministry's circular letter No. RW/ 33044/2/88-DO II dated 19.1.89 pertaining to sub-soil investigations which are reproduced as under:

"In view of the problems being faced in collection of totally undisturbed soil samples for testing and the difficulties in reconciling the variable results and interpretations thereof, given by different agencies/research laboratories, it is now decided that detailed sub-soil investigations shall be carried out only once i.e. at the time of detailed project preparation. For a fully developed departmental design, proposal for foundations shall be formulated on the basis of these detailed investigations and no further confirmatory bores shall be called for from the contractor who takes up the construction work later on. It shall, therefore, be ensured that soil investigations are carried out in complete and thorough manner with the required equipments so as to furnish reliable results".

2. As the soil investigations which are to be carried out only once have to be reliable and accurate, there is a need for State PWD to supervise the soil investigation work. For this purpose an experienced and competent soil engineer conversant with the codal provisions of IRC: 78 and other relevant standards of BIS, and with boring and testing methods should be identified and made responsible. In case Officers with required experience are not available in the department, persons from other departments/institutions/consultancy organisations can also be considered for this purpose.

3. In order to achieve the best results, it will also be necessary to draw up the terms of reference for the investigation work in sufficient detail covering all aspects such as equipments to be used, number of samples required, type of tests to be carried out and the soil parameters and analysis required for design and construction.

4. It is requested that necessary instructions in this regard may please be issued to all concerned.

1 Para 1.2 of circular No RW/33044/2/88-DO II dated 19.01.89 pertaining to sub-soil investigations reproduced.