



DM0191

SOUTH CAROLINA
DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
P.O. BOX 191
COLUMBIA, S.C. 29202

January 2, 1991

MEMORANDUM TO DESIGN GROUP LEADERS & CONSULTANTS

Subject: Safety Factors for Driven Pile Foundations

Design Memorandum DM0989 dated September 14, 1989 requires the safety factors for driven pile foundations to be shown on the plans and Design Memorandum DM1289 dated October 25, 1989 specified the safety factor to be used based on the construction control procedures to be specified in the Special Provisions.

As noted in DM1289, the safety factor selected will depend on design factors such as quality of subsurface information and geotechnical analysis, as well as construction factors such as the use of load tests, index piles and wave equation. Since DM1289 was issued, we have received the draft report of Research Project No. 541 conducted by Dr. Baus. Based on this research, the safety factors specified in DM1289 have been modified and the following factors of safety are to be used based on the construction control procedures to be specified in the Special Provisions:

Static Load Test/Wave Equation	2.00
Dynamic Load Test (PDA)/Wave Equation	2.50
Index Piles/Wave Equation	3.00
Wave Equation	3.00

These safety factors may be modified to fit the requirements of individual projects after consultation with the appropriate Assistant Bridge Design Engineer and the Bridge Geotechnical Engineer. Some conditions for which modifications may be considered are piles bearing on rock, uniform soil stratum, and additional geotechnical information exceeding the normal level of information.

Group Leaders should consult with the appropriate Assistant Bridge Design Engineer to determine the level of construction monitoring that will be required for each individual project. Consultants should discuss construction monitoring with the Consultant Coordinator in the Bridge Design Office.

This Memorandum supersedes Bridge Design Memorandum DM1289 dated October 25, 1989.



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