

Laterally Loaded Pile Calculation (“LATPILE”)

Description: "LATPILE" (meaning "laterally loaded pile") analyzes a laterally loaded pile in multilayer soil. Deflections, moments and pressures are computed. Soil pressures are checked against allowable soil pressure.

Ordinarily, the engineer will need to use this program when designing retaining walls and abutments on piles to check for lateral drift. Excessive lateral drift has been the cause of many bridge expansion joints closing, for example.

Theory: The program models the soil as a series of springs using the concept of subgrade modulus. The designer is given the option of having the subgrade modulus calculated automatically by the program or manually input. When the "automatic" option is selected, the subgrade modulus is calculated using a method described by J.E. Bowles, "Foundation Engineering and Design", 1988.

Refer to program "SHTPILE" for a description of soil types.