

HR-378 Metric Short Courses for the Office of Bridges and Structures

Key Words: Metrics, Training, Structures,

Abstract

This metric short course was developed in response to a request from the Office of Bridges and Structures to assist in the training of engineers in the use of metric units of measure which will be required in all highway designs and construction after Sept. 30, 1996 (CFR Presidential Executive Order No. 12770).

The course notes which are contained in this report, were developed for an one-half day course. The course contains a brief review of metrication in the U.S., metric units, prefixes, symbols, basic conversions, etc. The unique part of the course is that it presents several typical bridge calculations (such as capacity of reinforced concrete compression members, strength of pilecaps, etc.) worked two ways: inch-pound units throughout with end conversion to metric and initial hard conversion to metric with metric units throughout. Comparisons of partial results and final results (obtained by working the problems the two ways) are made for each of the example problems.