

Sample 1 - February 21, 2002

Number of Reading

The assembly was mounted on a steel frame with the posts and hand rail in a horizontal position. A 400 lb. steel weight was suspended from the hand rail at midspan between the two center posts. The weight was removed after 24 hours. The deflection of the rail was measured with a micrometer dial indicator positioned relative to the supporting posts. Residual deflection was measured five minutes after removal of the load.

Test Results

Maximum deflection of rail: 0.239"

Residual deflection: 0.040"

$0.040 = .167 = 16.7\%$ def = 83.3% recovery
0.239

Sample 2 - March 13, 2002

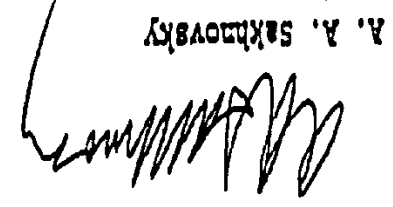
The assembly was mounted on a steel frame the same as Sample 1. A 400 lb. steel weight was suspended from the center post at a point 42" above the floor. The weight remained in place for 24 hours after which time it was removed. Periodic inspection of the post was made.

A 1" long crack developed in the wood at the notch near the bottom of the post. The crack was evident under load but closed and was barely visible after removal of the load.

Summary

The hand rail and a Newel post were each subjected to a concentrated load of 400 pounds acting for 24 hours. The load was satisfactorily sustained and has met the intent of the building official's requirements.

Respectfully submitted,
CONSTRUCTION RESEARCH LABORATORY, INC.


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AAS/pc

NO ONE SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF THIS TEST. NO ONE SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF THIS TEST.