

MODIFIED SALT CHUTE

Connecticut Department of Transportation

Contact:

James F. Wilson
Training Coordinator
Connecticut Department of Transportation
Bureau of Highway Maintenance, District 2
(860) 823-322

Problem Statement:

The modified materials chute is a conceptual model that was created and field tested to determine the feasibility of improving the Department's effectiveness to apply snow and ice control materials to the State's roadways during winter storm conditions. Over-scattering of snow and ice control materials is a contributing factor leading to the ineffectiveness for deicing materials to work at maximum capabilities.

Discussion of Solution:

By bypassing the truck's salt spinner, this chute allows for maximum flow of a material onto the middle of the roadway, increasing the effectiveness of the material and allowing the brine solution to work more efficiently. Tests show greatly reduced scatter and experience has shown a reduction in the amount of material used.

Cost:

The cost to research and create the modified materials chute will be minimal to the Department. The chutes were made from recycled street signs that were designed to conform to the various designs of our 9-ton dump trucks. The Department uses three basic styles to accommodate the different types of vehicles in our fleet. The only cost incurred would be the labor to manufacture the modified chute. The testing chutes were created with a few basic hand tools and work bench, our production chutes will be produced by a metal brake to department specifications.

Savings & Benefits:

In addition to the benefit of greater control over the placement of snow and ice control materials, operators reported that they noticed they used less snow and ice control materials during various types of storms. It appears that the increased concentration and the placement of snow and ice control materials reduced the time needed to create a salt brine solution. In some cases it extended the time between reapplication of the snow and ice control materials. Some operators decreased their application rate in response to the results of the modified materials chute effectiveness.

