



Side Chute System

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Problem Statement:

The Arapahoe County Road and Bridge Crew was looking for an easier way to fill in around the guard rail portions of our bridge decks after we had cleaned, graded, and added new asphalt near the guard rail sections of the bridge.

Solution:

The Road and Bridge Crew has access to a shouldering machine, but felt that it was too big and would still not put the material where it needed to be - under the guard rail areas. The Crew then looked at tandems that have conveyer belts in the bottom and feed a side spinner for applying salt and sand. We pulled a spinner off the truck and extended the side chute. We made it so we could adjust it with a chain and could fold the chute up completely for travel mode. The chute is on the driver's side of the truck allowing the driver to see the amount of material needed and that it is being put out evenly. This allows other crew members to rake the material down to match grade without need of other equipment and with little or no waste.

Labor, Equipment and Materials Used:

The process to build the Side Chute and attach it to the truck took about 4 hours. The materials needed to build the chute included:

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|---------------------------------|-------------------------|
| 1 - 4'X2' used sign | 6 - ½" lock washers |
| 1 - 4'X2.5' used sign | 6 - ½" flat washers |
| 1 piece of ½ " conduit 13" long | 3 - ¼" nuts |
| 1 - 5/16" chain hook | 3 - ¼" lock washers |
| 1 - 5/16" clevis | 3- ¼" flat washers |
| 10' of 5/16" chain | 3 - ¼" X 1" Bolts |
| 18" of ½" thread | 2 – Tarp Straps 6" long |
| 12 - ½" nuts | |

Savings and Benefits to Agency:

Total Cost was approximately \$200.

There is a great savings of time and material to Arapahoe County since we started using the Side Chute system. We are using about 25% as much time and material as we previously were to do fill-ins on the guard rail projects. The savings of materials and manpower has been significant.

By using the Side Chute system the projects are completed much quicker and more efficiently making it easier for us to control traffic and keep our safe by spending less time in the roadways.

