

Safety Cone Organizer

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Describe your innovation:

The Safety Cone Organizer is a custom-designed storage and deployment system intended to improve the efficiency and safety of loading and unloading safety cones in the field.

Describe how your Innovation benefits the SCDOT:

Traditionally, workers must climb into the truck bed or trailer to access and deploy cones—an action that increases the risk of slips, trips, and falls. The Safety Cones Organizer eliminates this hazard by allowing cones to be accessed from ground level.



Video Links:

<https://youtu.be/wTw1cBCB8g4>

<https://youtu.be/L31rINBIKZM>

SAFETY CONE ORGANIZER

**2025 INNOVATION
SUBMITTAL**



PAUL PHILLIPS

**WILLIAMSBURG
MAINTENANCE**

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Innovator Biography

My name is Paul Phillips, and I've been employed with the South Carolina Department of Transportation (SCDOT) for six years. I currently serve as a Highway Maintenance Worker III (Crew Leader). Throughout my time with SCDOT, I've gained valuable knowledge and hands-on experience that have helped me grow both personally and professionally.

I'm blessed to be married to my wonderful wife, Crystal Phillips, and together we have three amazing children. One of my favorite ways to unwind is camping with my family—those moments bring me joy and peace.

In my role with SCDOT, I've been fortunate to find opportunities to improve work zone efficiency and develop better setup procedures. One such opportunity led to the creation of the **Vertical Work Zone Sign Stand Rack**, which provides a safer and more organized way to store signposts vertically. This simple innovation has made a significant impact here at the Williamsburg Maintenance Department, and our team greatly appreciates its usefulness.

More recently, I designed and fabricated a **Safety Cone Organizer** to further enhance safety and efficiency on the job. This new creation helps keep traffic cones neatly stored and easily accessible on our labor trucks, reducing setup time and improving overall work zone organization.

I'm proud that both of these tools are making a positive difference for our team, and I hope they can benefit other SCDOT departments across the state and beyond.



Safety Cone Organizer – Design Overview

Innovation Description

The Safety Cone Organizer is a custom-designed storage and deployment system intended to improve the efficiency and safety of loading and unloading safety cones in the field. Constructed using ¼" x 3" flat bar, 1½" square tubing (1/8" wall thickness), ¼" plate steel, and 12 bearings, this organizer is simple yet highly effective, with a material cost under \$250.00.

The system utilizes a triple-drawer track mechanism, each designed to hold stacks of 5 to 7 cones. These drawers slide in and out from the rear of a truck or trailer, allowing easy access without requiring personnel to climb into the vehicle. Each compartment is dimensioned to secure the base of the safety cones, ensuring stable storage and transport. This innovation not only maximizes usable space but also greatly reduces the risk of injury during cone handling.

Benefits to SCDOT Operations

Traditionally, workers must climb into the truck bed or trailer to access and deploy cones—an action that increases the risk of slips, trips, and falls. The Safety Cones Organizer eliminates this hazard by allowing cones to be accessed from ground level.

With three retractable drawers:

1. The first stack is pulled out and accessed at the tailgate.
2. After removing the cones, the drawer is pushed back in.
3. An extension handle is then used to pull out the next drawer.
4. The process is repeated until all cones are deployed.

This method keeps the worker safely on the ground at all times. Since implementation, this system has improved work zone setup times and significantly reduced injuries related to manual cone handling.

Materials List

Material	Quantity
1/4" x 3" Flat Bar	40 ft
1 1/2" x 1 1/2" x 1/8" Square Tubing	32 ft
1/4" x 28" x 16" Plate Steel	3 pcs
Bearings (1/2" ID / 1 1/4" OD)	12 pcs
7/16" x 1 1/2" Bolts	12 pcs
7/16" Nuts	12 pcs
7/16" Jam Nuts	12 pcs
7/16" Washers	24 pcs

Pictures



Pre-install View



Pre-install View



Front View



Front View



Rear View



Rear View



Tray #1



Tray #1



Tray #2



Tray #2



Tray #3



Tray #3

