



2022

Build a Better Mousetrap Competition:

Recognizing Innovative Inventions and Improvements

PennDOT Local Technical Assistance Program



pennsylvania

DEPARTMENT OF TRANSPORTATION

LOCAL TECHNICAL ASSISTANCE PROGRAM



Have You Built a Better Mousetrap?

Have you or one of your coworkers recently built an innovative gadget or developed an improved way to do a job? If so, now is the time to show off a project your municipality is proud of in the Build a Better Mousetrap Competition.

PennDOT is looking for projects that you, your employees, or crew designed and built. It can be anything from the development of tools, equipment modifications, and/or processes that increase safety, reduce cost, improve efficiency, and improve the quality of transportation.

If you have something you think would qualify for this competition, submit your entries by **Friday, May 6, 2022**. Entries will be judged by a committee of municipal road employees on cost savings/benefits to the community, ingenuity, transferability to others, and effectiveness.

The winning entry will be submitted to the national competition to compete for recognition and, of course, bragging rights. Winners of the national competition will be announced at the annual LTAP/TTAP national conference. All entries at the national level will be posted on the LTAP/TTAP program website and compiled into an electronic booklet.

To enter the competition, complete the entry form that follows and **return it by Friday, May 6, 2022**

If you have questions, please feel free to email them to ltap@psats.org, or call Karen Atkinson at 717-763-0930 ext. 156.

Judging Criteria

The competition is judged on the criteria listed below within the framework of a 10-point rating scale. Provided is a list of the judging criteria and the rating scale. The winner is the entry with the highest number of overall points.

Judging Criteria

- Cost Savings/Benefits to the Community
- Ingenuity
- Ease of Transferability to Others
- Effectiveness

Five-Point Rating Scale

- 5 = Excellent
- 4 = Very Good
- 3 = Good
- 2 = Fair
- 1 = Poor

2021 Build a Better Mousetrap: Pennsylvania Winners

Winning Entry: Snow Fence Winder **Penn Township, Lancaster County, PA**

The crew came up with a way to use the hydraulics on its small dump truck to create a winder that rolls up the fencing on a metal rod. A used stone pan from the back of a dump truck supplied the framework for the new tool. The crew removed the floor of the pan and welded on a platform to hold the hydraulic valve and controls. With the addition of some hoses, a couple universal joints, and scrap that the department had on hand, the snow fence winder was built for \$520. The new equipment has increased the efficiency of rolling the snow fence into tighter rolls for storage.



Runner-Up: Snow Fence Installation Equipment **Jefferson Township, Butler County, PA**

This snow fence winder innovation helps with snow fencing installation. The crew modified a donated post pounder that attaches to a tractor's three-point hitch to install the snow fence posts and then fabricated other attachments to carry the fencing, posts, wooden slats, and other materials. The tool enables all the elements to be laid out as the posts are driven into the ground. All the equipment can be mounted on the township's tractor with the side deck mower removed.



The crew spent less than \$250 to purchase new hydraulic hoses, steel, and hardware. The rest of the materials were scrap or items on hand. The device helps the crew safely and efficiently install temporary snow fence in about one-third the time of previous years. Three workers can install approximately 2,500 feet of snow fence in roughly seven hours.

Runner-Up: Excavation Hammer Holder **Brentwood Borough, Allegheny County, PA**

This excavation hammer holder invention enables the borough to store its excavator hammer in an upright position to keep the hammer's seals from getting damaged. The holder allows the excavator hammer to be stored indoors, out of the elements, and out of the way until it is needed, which helps to reduce the need for repairs and downtime.

A member of the public works crew built the holder in six hours using a plasma cutter and welder with materials found in the shop, including an old trailer ramp, pipe covers, and spray paint. The device cost just \$150 in labor and saved the borough more than \$1,000 compared to if it had purchased a new holder.



2022 Build a Better Mousetrap Competition Entry Form

Agency Name: _____ Contact Person: _____

Contact Phone #: _____ Contact Email: _____

Contact Address: _____

County: _____

Entry Title: _____

1. What was the challenge (i.e., problem) or objective you set out to solve? Fully describe the challenge (up to 500 words max):

a. Provide specific details on the issues you faced and why it needed to be addressed.

2. How did you develop and implement your solution? (Up to 500 words max.)

a. Provide details on how you developed, built, and implemented your solution to meet your objective(s). Address the originality of the solution and why you selected this solution

3. What labor, equipment, plans, or materials did it take to make the solution work?
a. *What did it take to make this solution a reality? Include design sketch, drawing, and materials list as applicable.*

4. What was the cost of implementation?
a. *Add supporting data, such as cost of materials, equipment used, etc.*

5. What was the positive impact/results/outcome of your efforts (e.g., long-term benefits, productivity, financial, personnel performance, benefits to the community, safety, etc.)?
a. *Include a discussion of data or evidence to support the outcome and/or the revised level of effort upon implementation to complete the job or process. Has this been shared? With whom? Results?*

Please email photographs to ltap@psats.org and include the municipality and the entry title.

You may enter more than one entry. Use separate forms for each entry.

Please return your completed form by **Friday, May 6, 2022**, to ltap@psats.org,
fax it to 717-763-9732, or mail it to:



PennDOT LTAP
c/o PSATS
Attention: Karen Atkinson
4855 Woodland Drive
Enola, PA 17025

Questions? Please call Karen 717-763-0930, ext.156 or email
katkinson@psats.org.