

# Innovation is Local

## 2020 & 2021 “You Show Us” Contests

Noël Clocksin  
SDDOT/Local Government Assistance

Leanna Emmer  
NDLTAP



**Moving Forward**  
36<sup>th</sup> Annual North Central Local Roads Conference  
Sioux Falls, SD - October 19-21, 2021

Good afternoon. As you may have noted on the agenda, the “You Show Us” contest is being rebranded as the **“Innovation is Local”** contest. This title better reflects the local ingenuity we are trying to showcase. This contest has been a phenomenal opportunity for local government entities to get well deserved recognition for innovations they have fabricated or improved. We hope that by showcasing these folks’ efforts during this conference it gives them much deserved recognition as well as hopefully inspiring others to put forward their own innovations. I am joined by Leanna Emmer of NDLTAP who will be on the floor seeking a sentence or two from our state winners about their particular innovations. This will be a fast paced but very informative 45 minutes as we cover two year’s worth of state winners.

# Contest Requirements

- Problem Statement
- Discussion of Solution
- Labor, Equipment, & Materials Used
- Total Cost
- Savings & Benefits to Agency
- PHOTOS & VIDEOS

2021 North Central Local Roads Conference

State winners are annually selected by their respective Local Transportation Assistance Programs, based on the requirements shown. They are then submitted to compete in the LTAP North Central Region contest to determine the region winner. Being creative and innovative is what local governments are really good at due to necessity. All of you that do this every day don't always realize how good you are at what you do nor do you think of sharing your innovations. That is what this contest is all about. We help to give you the opportunity to showcase something that has worked and of which you are proud. It also allows you to share what you've learned with your counterparts across the region and beyond.

## Panel of Judges

- Gary Brennan Brosz Engineering Managing Principal
- Marc Hoelscher FHWA SD Division Structures Engineer
- Jim Hyde SDDOT Pierre Region Operations Engineer
- Tim Blow SDDOT Pierre Region Equipment Shop Foreman
- Travis Sparks SDDOT Highway Maintenance Supervisor / Former SD Highway Superintendent

2021 North Central Local Roads Conference

This year's region contest judges include Gary Brennan of Brosz Engineering, Marc Hoelscher of the SD Division of the Federal Hwy Administration, and three members of the SD Dept. of Transportation, Jim Hyde (Region Operations Engineer), Tim Blow (Region Equipment Shop Foreman), and Travis Sparks (Hwy Maintenance Supervisor and a former SD county highway superintendent).

This group of experts thoroughly enjoys this process every year which allows them to see all the creativity among all of you. I want to read a few comments I received from the judges this year.

- What an amazing lineup of entries for the YSU Awards Contest again this year! All of the entries are highly innovative.
- It was extremely difficult to choose a top winner with so many good candidates.
- "All entries great, which is why they were nominated."
- I think these were overall the best batch of entries I've seen. Congrats to them all. I can see why it's a close race.
- Again thanks for the opportunity to be a judge in a very important contest that recognizes how innovative and budget minded our maintenance workers are, be it State, County, Township, or Municipality. All of the projects were creative and important for maintenance.

# Judges' Ranking Sheet

PROJECT NAME:	Sign Maintenance Safety Platform	Spring Load Arm Enhancement for Gravel Saver Disc	Street Blade Assembly	Strut Lifter for Motor Grader Wing	Truck Safety Step
Safety Improvement					
Operational Efficiency					
Innovation					
Cost Savings					
Ease of Implementation by Others					
<b>TOTAL:</b>					
<b>PLACE (1<sup>st</sup> thru 5<sup>th</sup>)</b>					

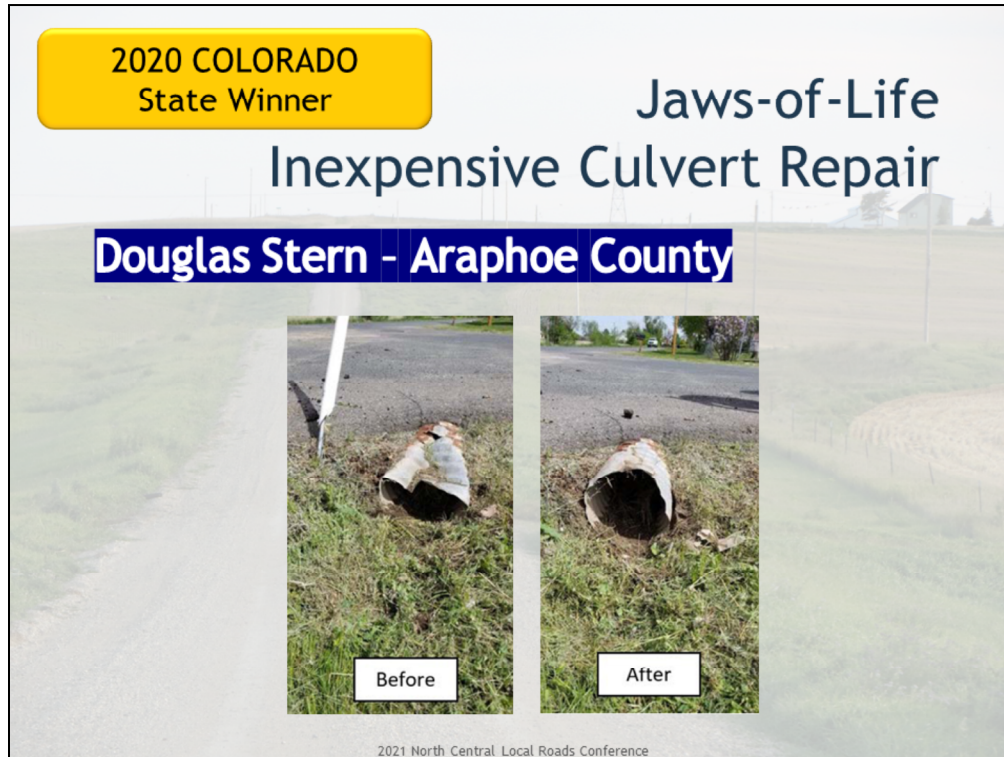
2021 North Central Local Roads Conference

The judges receive all the state winning entries with all items of identification removed, such as names, agencies, etc. Even the photos are checked to ensure that license plates and street signs are blurred. They then review and rank the entries based on the following things: safety improvement, operational efficiency, innovation, cost savings, and ease of implementation by others. They are then asked to provide a comment or two as to why they selected their first choice.





We will begin with our 2020 State Winners followed by the 2020 North Central Region Winner.



### **Jaws-of-Life**

#### ***Inexpensive Culvert Repair***

Arapahoe County, Colorado

Douglas Stern, Road & Bridge Operations Manager

[DStern@arapahoe.gov](mailto:DStern@arapahoe.gov)

720-874-6829

(Heather Carlson – CO LTAP)

### **Problem**

Arapahoe County has hundreds of damaged culverts throughout the eastern rural areas of the county with the damage generally occurring from large trucks or farming equipment making a sharp turn onto a narrow roadway, crushing the end of the culvert. Compounding the problem with this damage is that it results in filled ditches and even overtopping of the roadway during storm events all of which damages the roadways. Repair by traditional manner involves digging out the asphalt or gravel from over the pipe; excavating all the way around the pipe in order to cut the damaged steel off; adding a new section and installing a steel collar. Once the damaged culvert is replaced, the road surface must be repaired.

### **Solution**

Arapahoe County Road and Bridge has created a culture of innovative thinking amongst employees and has a system in place to encourage and reward innovation. Each maintenance facility has a large board affectionately called the “***Thought Spot***” where employees are encouraged to add suggestions and ideas regardless of cost or complexity. The original suggestion submitted to solve this problem was to buy some sort of hydraulic ram to use to open the crushed culverts as all previously investigated ideas had failed. After doing some research on hydraulic tools the county decided to try out a hydraulic rescue tool similar to the “Jaws-of-Life” used by fire departments. An employee worked directly with the

local fire department to experiment with the idea and found it to be a huge success.

**Labor, Equipment, Materials**

A cordless battery powered version of the Jaws-of-Life was determined to be the best fit and it only takes one employee to operate it. Other than a normal maintenance truck, no other equipment was needed.

**Cost**

The total cost to buy a cordless Jaws-of-Life tool with an extra battery and charger was \$11,900. The device fits inside of the county toolbox so there were no additional costs after the initial purchase.

**Savings & Benefits**

The traditional repair took 4-6 hours in labor and cost \$1,000 per culvert including both ends of the culvert. With the Jaws-of-Life it takes one employee 5-10 minutes to make the repairs with no disruption of traffic. This tool has proven to be an overwhelming success in efficiency and economics. The equipment has paid for itself within the first 12 culvert repairs and they expect to save approximately \$300,000 over the life of the equipment.

2020 IOWA  
State Winner

## Snow Fence Roller

Jeff Sherlock - Page County



2021 North Central Local Roads Conference

### Snow Fence Roller

Page County Secondary Road Department, Iowa

Jeff Sherlock

[engineer@co.page.ia.us](mailto:engineer@co.page.ia.us)

(712) 542-6984

(Keith Knapp – Iowa LTAP)

### Problem

Page County has increased the use of snow fence during the winter season and its placement and removal is very labor intensive. They needed a better method to take down snow fence in the spring. Rolling snow fence up neatly is particularly troublesome.

### Solution

The Maintenance Superintendent had an idea about how to make fence removal easier. They needed a powered rotating spindle to wrap the snow fence into a coil again. They have several skid steer machines and various attachments for them, one of which is a post hole digger which was the hydraulic powered rotating power source they were looking for.

### Labor, Equipment, Materials

They used the hydraulic motor output shaft as a rotating power source which they already had available, fastened on a 3" x 6' long steel pipe with a bolt, and took it to field locations where snow fence had been placed in late fall. After separating the fence from the posts, threading a post thru the end of the fence to keep it flat and provide a little weight, they wound the snow fence up on the pipe using hydraulic power. It was fast and worked very well.

**Cost**

Total = \$33

(\$13 pipe and bolt and \$20 in labor to cut and drill the pipe.)

**Benefits**

Using a piece of equipment already on hand for another task reduced the cost of the solution and made the machine more versatile. Where it once took 3 days and 4 employees to pick up 2,000 feet of snow fence at 4 different locations, it now takes 1 day and only 3 employees. Given the minimal cost of the snow fence roller, the return on investment of this device has been huge. The county has been amazed at how such a simple device works so well. Additionally, the snow fence coil is very neat and compact.



2020 KANSAS  
State Winner

## Box Culvert Cleaning Attachment

**Darren Fishel - Saline County**



2021 North Central Local Roads Conference

### **Box Culvert Cleaning Attachment**

Saline County Road & Bridge, Kansas

Darren Fishel

[Darren.fishel@saline.org](mailto:Darren.fishel@saline.org)

785-826-6525

(Hemin Mohammed, Ph.D., P.E., RPIC. / Road Safety Resource Coordinator)

### **Problem**

The county needed an effective way to clean out low concrete box culverts that is relatively inexpensive and utilizes existing equipment.

### **Solution**

The county had an idea for a skid loader attachment that could be hauled to the project in stacked sections and assembled at the worksite on the same trailer used to haul the skid steer loader.

### **Equipment**

The county used a local manufacturing company to build the attachment they needed.

### **Cost**

\$4,000

### **Benefits**

The box culvert cleaning attachment helps the county to clean culverts allowing for the free passage of runoff and drainage waters. This saves damages to the roadways and personal property.

2020 NORTH DAKOTA  
State Winner

## Pipe Cleaner

Jay Showers, Corey Ackerman - Traill County



2021 North Central Local Roads Conference

### Pipe Cleaner

COUNTY: Traill County Highway Department, North Dakota

DESIGNERS: Jay Showers and Corey Ackerman

CONTACT: Corwyn Martin, Jay Showers

E-MAIL: [corwynm@nd.gov](mailto:corwynm@nd.gov); [kshowers@nd.gov](mailto:kshowers@nd.gov)

TELEPHONE: (701)636-4341 (701)430-9320

(Leanna Emmer – NDLTAP)

### Problem

The flow of water through culverts and pipes in roads becomes restricted or reduced for a multitude of reasons. The hazards of obstructed culverts and pipes compromise the integrity of roads and create safety issues for the motoring public. Traill County needed to come up with a way to quickly and effectively open culverts and pipes from end to end.

### Solution

The innovators started with a 10-foot square tube that was retrofitted with steel plates to allow quick attachment to the arm of a backhoe. Toward the end the 10-foot tube are two paddles and at the very end is a piece of channel iron made into a point. The paddles, which extend from the side at 18 or 48 inches, push and pull debris through the pipe/culvert. Quarter inch steel plates (stops) are welded to the tube, so the operator does not retract the pipe cleaner too far and compromise the integrity of the paddles. With the backhoe on the roadside, the pipe cleaner reaches into a culvert over 8 feet pushing debris through the pipe. The channel iron point and metal plates bolted to the outside of the paddles are also used to break chunks of ice that have pushed up against the opening of a pipe or culvert. The bolted plates are inverted and flush with the end point when breaking ice chunks.

### Labor, Equipment, Material

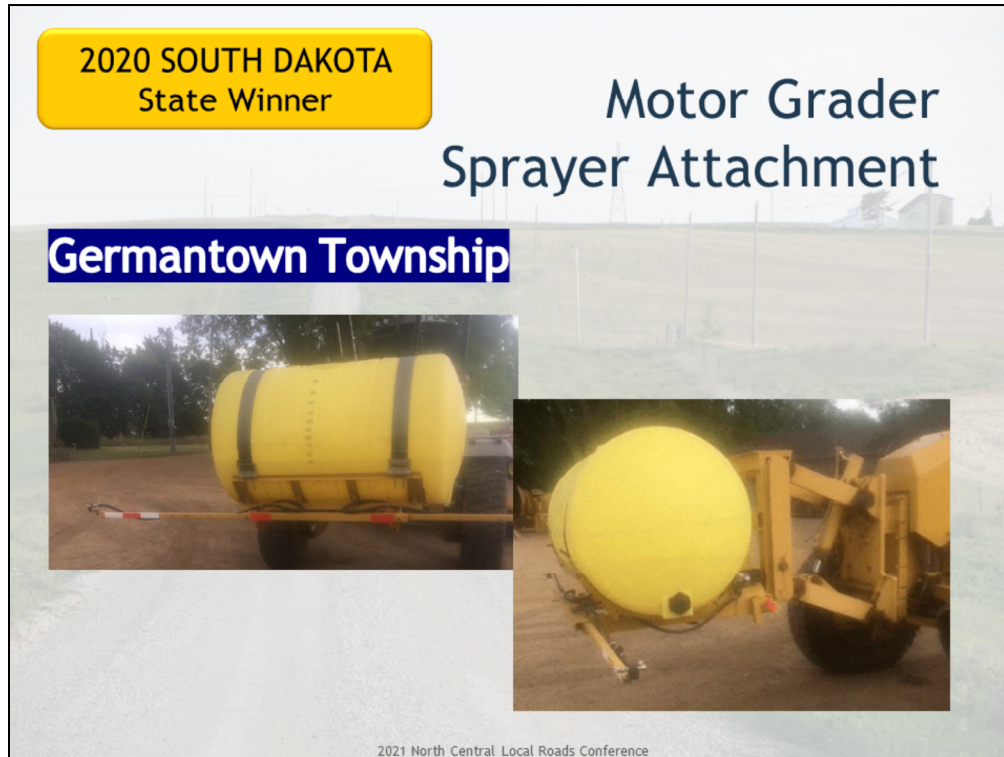
The pipe cleaner took 2 people a total of 82 hours for design and discussion. Equipment and materials included a welder, acetylene torch, drill press, various salvaged material, and the purchase of a hydraulic motor.

**Cost**

Total Cost: \$1,338.43 plus labor, with the purchased hydraulic motor comprising the biggest portion at \$1,036.

**Savings, Benefits**

Culverts and pipes can now be completely cleaned out versus just the ends as in the past. Although the process takes a little longer now, the benefits far outweigh the additional time. The process itself is safer for the operators. Roads are in better condition and are safer to the motoring public. Water no longer accumulates in the ditches sitting up against road edges, backing up in the fields, or flowing over the roads. Less maintenance work or reconstruction is required reducing road costs for the county and taxpayers.



### **Motor Grader Sprayer Attachment**

Germantown Township in Turner County, South Dakota  
 Phone: 605-750-0300  
 (Andrew Peterson – SDLTAP)

### **Township Members:**

Merlyn Steever, Lynn Heeren,  
 Orlyn Steever, Gary Jongeling,  
 Verlyn Heibult

### **Problem**

Germantown Township in Turner County SD needed to spray noxious weeds in the township but did not want to have a separate operation. The township only has one blade with a part time operator.

### **Solution**

The township added a sprayer to the motor grader allowing the operator to spray weeds while blading and maintaining the gravel roads in the township. This saves money both in equipment time and labor.

### **Cost**

Total = \$2,500  
 \$1,200 – Pump (wires, hoses, pump)  
 \$500 – 300 gallon tank  
 \$800 - Fabrication

### **Savings**

Instead of hiring a local sprayer for approximating \$5,000 as they have in the past, the township now can eliminate noxious weeds without a separate operation and costly additional equipment.



The 2020 North Central Region Winner is Traill County, ND with their Pipe Cleaner.

**Judges' Comments:**

"Since the pipe cleaner was designed with a quick attachment feature, I felt it earned slight favor over the highly competitive box culvert cleaning attachment and edged it out by the narrowest of margins. The ability to clean out culverts in the spring of the year to prevent flooding is a critical part of the maintenance operations for any county. To be able to do it from the top of the road with a single piece of equipment is an excellent innovative idea that was put into practice."

"The pipe cleaner looked well built and didn't involve multiple people to operate. Made for safe cleaning of ice jammed culvert."

"I chose the Pipe Cleaner because the crew figured out a safe way to clear culverts of ice, it is very innovative, and a huge cost savings as they were able to repurpose most of the parts from stuff already laying around."

"The Pipe Cleaner appears to have the best overall impact to the road assets. If you don't clean out pipe, it affects so many things: roadway, approaches, farm ground, private property. As there are more round pipe on a county system than any other type of structure, this device has the biggest impact in maintaining the overall road system. "

And with a shout out to Colorado – "If a county has the pipe cleaner and the jaws-of-life, they would have an awesome system!"





We now move on to our 2021 State Winners followed by the 2021 North Central Region Winner.

2021 COLORADO  
State Winner

## Humper/Bumper Brake Pumper Form

Kyle Beck - City of Lakewood



Installed using the Humper/Bumper  
Brake Pumper Form



2021 North Central Local Roads Conference

### Humper/Bumper Brake Pumper Form

City of Lakewood, Colorado

Kyle Beck

303-987-7951

[kylbec@lakewood.org](mailto:kylbec@lakewood.org)

[\(Heather Carlson – CO LTAP\)](#)

### Problem

Lakewood's Street Maintenance inhouse crew is annually tasked with replacement of several speed humps following their annual overlay program as well installing new ones at approved locations. Work is done next to live traffic and involves several labor-intensive techniques used to move and place asphalt prior to compaction. Man-handling 7-14 tons of 280-degree asphalt for each speed hump is no small task. One-way traffic with flaggers is used to stop traffic as crew members need to step into live traffic to work the high ends of the speed hump. Holding up traffic often results in high acceleration of impatient motorists once the flagger allows traffic to go through the construction site which has resulted in several near misses. The staff decided something needed to be done to improve the process and ensure they get home safely at the end of the day.

### Solution

"Hump Day" for Lakewood's Street Maintenance crew does not mean half-way through the work week but a day of hard labor that is dreaded by all who see their name listed on the task. Staff invented a speed hump form & implementation process to simplify and improve their safety. An adjustable form meeting Lakewood's 12' and 24' speed hump specification was created. The simple form is made of a 4x4 timber, flat stock steel slider, and connectors. The interlock connection allows the form to transition from 12' to 24' with minimal effort. The essential component is the crew and how they utilize their asphalt paver

to float the paver screed along the form, creating a consistent and uniform hump. This innovative process eliminates speed hump bird baths, minimizes the number of personnel required for installation, increases site safety, and has doubled daily production.

#### **Labor, Equipment, & Material Used**

The crew size has been reduced by one. The most noticeable differences with this new process are the reduction on the wear and tear on staff and the increased safety measures. Utilizing the paver to perform most of the asphalt placement speeds up the process and increases production. Having the paver as a buffer between traffic is a significant advantage for safety.

The crew is comprised of 2 paver operators, 2 laborers, 1 asphalt patch truck driver, and 1 flagger. Equipment includes an asphalt truck, tack truck, paver, roller, and the humper/bumper form.

#### **Cost**

\$517 for the humper/bumper form

#### **Savings & Benefits**

Past installation methods allowed for 2-12'x30' speed humps to be installed in a workday. With this form and utilizing the asphalt paver, the crews can now install 6 in a workday. Utilizing the form and associated equipment produces increased efficiency, perfection of the finished product, and keeps hand tools and staff members from creeping outside of the cone zone into live traffic. As times change and hiring within the labor field becomes challenging, creating a unique, positive, and safe culture that retains employees is priceless. Installing speed humps/bumps was once the most dreaded task in road maintenance. Now their installation is like just another day of patching and overlay.



**Entry title:** Shoulder Maintenance – Stone Placement

**Agency Name:** Jones County Secondary Roads, Iowa

**Name:** Todd Postel

**Phone:** (319) 462-3785

**Email:** [todd.postel@jonescountyiowa.gov](mailto:todd.postel@jonescountyiowa.gov)

(Keith Knapp – Iowa LTAP)

**Problem:** Routine maintenance of shoulders on the county's paved system has always presented issues. Past methods resulted in a slow process that did not provide uniform application of stone. Clean up during the application of shoulder stone was also very timely. Jones County has been testing and researching a multitude of alternative equipment options, but never found a setup with more than marginal advantages.

**Solution:** Jones County looked at the Iowa DOT's District 6 maintenance method of applying stone on their shoulders which is similar to the apparatus they had constructed. The DOT's device requires them to change out the end gate on their dump trucks and place flutes in the dump box. The county fabrication team put together a prototype that addressed a couple key components they felt would improve efficiencies. They constructed theirs with the use of the existing dump box tailgate that's on all their trucks so it would be universal, and no dump box flutes would be required. The hopper is designed with sloped sides, Teflon liner, and a vibrator to ensure material flows down the chute and onto the shoulder. Theirs also has a fully adjustable striker plate to accommodate the elevation difference from the hard-surfaced road to the shoulder, which is due to their narrower roadway widths and provides them with the ability to run one wheel on the paved surface.

**Labor, Equipment, Materials:** County fabricators made all their own sketches and produced these units entirely in-house using raw materials purchased locally. Their

fabrication shop is equipped with the necessary tools including a mill/lathe to produce these units. Currently they have two with another scheduled for production. A total of 35 hours is required to produce one unit using primarily two fabricators.

**Cost:**

Total Estimated Cost for One Shouldering Unit = \$4,822 (material costs \$3,500, labor cost \$1,322)

**Safety, Benefits:** Shouldering maintenance is a high priority and is an annual operation in Jones County. This will be the first season they can quantify their efforts. This work typically costs are from \$150k - \$200k annually for approximately 50 lane miles. These units will result in less material wasted, reduced labor and equipment costs, and produce more lane miles covered. Shoulder edge drop-off is a major safety issue that the Jones County Secondary Road Department continually mitigates with their shoulder replacement program. This new equipment adds another component to their toolbox that will address this important issue for the traveling public.

**Judge's Comment:** "Improves safety by addressing shoulder drop off at pavement edge. Safety benefit to all traveling public, especially the motorcycle community for the edge drop off."





Saline County Road & Bridge, Kansas

Darren Fishel

785-826-6525

[Darren.fishel@saline.org](mailto:Darren.fishel@saline.org)

(Hemin Mohammed, Ph.D., P.E., RPIC. / Road Safety Resource Coordinator)

### **Problem**

Many old wooden boxes less than bridge length were coming to the end of their service life. A low-cost alternative was needed.

### **Solution**

The county purchases blocks from a concrete supplier and buys and salvages bridge beams. Decking is purchased from auctions and suppliers. The county has built a dozen or so of these over the last ten years and have experienced no issues.

### **Labor, Equipment**

Concrete blocks, beams, and decking material are used. It takes 1 week to construct a Leggo Block Box.

### **Cost**

\$5,000 - \$8,000

### **Positive Impact**

The Leggo Block Box is much cheaper than a cast-in-place box and can be constructed in less time. These will hold up heavy farm and construction equipment, school buses, garbage and propane trucks.

**Judge's Comment** - The Leggo Block scored high in safety improvement over the old wooden boxes that were replaced. It scored high on innovation because of who would have thought of using blocks to build a bridge? It also scored high in the cost savings as we all know how expensive it is to build a pre-cast or pour in place box culvert.

## Leggo Block Boxes



2021 North Central Local Roads Conference

2021 NORTH DAKOTA  
State Winner

## Guardrail Maintainer

Eric Abrahamson, Dean Thompson - Walsh County



2021 North Central Local Roads Conference

### **Guardrail Maintainer**

COUNTY: Walsh County Highway Department, North Dakota

DESIGNERS: Eric Abrahamson and Dean Thompson

CONTACT: Stuart Swartz

E-MAIL: [shop3@polarcomm.com](mailto:shop3@polarcomm.com)

TELEPHONE: (701)331-0088

(Leanna Emmer – NDLTAP)

**PROBLEM STATEMENT:** Gravel, debris, vegetation, and snow accumulate between the guardrail posts. The debris and gravel between these posts catches the snow and creates snow drifts across the roads. It is critical to remove this accumulation of material prior to snowfall. This task was typically done manually by a crew of 4 people, each with their own shovel, and a skid steer with a bucket. The skid steer is hauled to each site with a pickup and trailer.

**SOLUTION:** The county designed and fabricated the guardrail maintainer to clean between the guardrail posts. The motor grader operator can pin the guardrail maintainer to the end of the moldboard using a wedge and mounting pin after detaching 4-feet of the cutting edge. The unit is then inserted between each post, retrieving good gravel, removing vegetation and other debris or snow that has built up between the posts. The guardrail maintainer is designed with a shear bolt so it will easily breakaway should the operator inadvertently hit the guardrail or if the snow is frozen. This task now requires only the operator of the motor grader instead of a total of 4 people, each with a shovel, and the elimination of the skid steer.

### **LABOR, EQUIPMENT, AND MATERIAL:**

2 people, 8 hours each

Wire feed welder, acetylene torch, grinder (used to remove paint and clean)

**COST:**

Total Cost: \$65.00 plus labor

**SAVINGS AND BENEFITS:**

The task of reclaiming good gravel, removing excess debris, vegetation, or snow buildup between the guardrail posts is done more effectively, efficiently, and safely. The task is completed by one person verses four and the crew is no longer working on the road exposed to possible injury by motor vehicles. Another added benefit with the guardrail maintainer is a better ability to maintain the 27" W-beam guardrail height typically used on the local network. Maintaining this height can be challenging on gravel roads when new gravel is placed as material shifts from the mainline under the guardrail.

Prior to the guardrail maintainer, it took a minimum of 1 hour to clean 10' of guardrail plus an additional hour in travel time for a crew of 4 people, and a pickup and trailer with a skid steer. With the guardrail maintainer, the motor grader operator can clean a site when out blading eliminating the additional travel time and other crew members. In less than 5 minutes he can attach the unit to the moldboard and clean out 10' of guardrail within 20-30 minutes.



2021 SOUTH DAKOTA  
State Winner

## Modified Litter Collection Unit

Dustin Hansen - City of Sioux Falls



2021 North Central Local Roads Conference

### Modified Litter Collection Unit

City of Sioux Falls, SD

Dustin Hansen

605-367-8166

[dhansen@siouxfalls.org](mailto:dhansen@siouxfalls.org)

(Andrew Peterson – SDLTAP)

### Problem

The City also owns and operates the largest landfill in South Dakota and must keep the haul roads to the landfill free of litter which takes a lot of money and man hours. The traditional method of picking up litter by hand is still used and takes a number of individuals to clean just a small stretch of roadway. The City uses its own workforce, plus hires day labors from a local temp agency to maintain the level of cleanliness its residents and guests expect. These efforts are a weekly task, if not daily. It's also becoming more and more difficult finding workers willing to pick litter because of the conditions and also the potential for safety issues (needles, rain, wind, snow, etc.) Knowing the problem will most likely never go away the City needed to find more efficient ways to use their time and resources more wisely.

### Solution

The City has evaluated various litter picking equipment, techniques, policies, and better education to residents of the community. None of these things solve the problem and various litter vacuums and litter rakes on the market were not the right fit or they were very costly, some even exceeding over \$100,000. The landfill team started to experiment with the goal of reducing the number of workers and time needed to pick litter from an area or roadway by using existing equipment. The team instituted the help of its fleet division who was asked to build a self-contained unit, using existing equipment, able to be operated by

one person. The modified unit allows the operator to pick litter along roadways and be protected from the elements.

**Labor & Materials**

Materials consist of an old trailer and tractor, large air compressor, and existing nozzle and tube. A large, enclosed hopper was added to the trailer for the litter to be blown into from the nozzle end. The hopper was built on the trailer and hydraulics were added so the operator could dump the load when full.

**Cost**

Total = \$15,500 (which includes \$7,500 for fabrication by the City Fleet Division and \$8,000 for steel, hoists, and miscellaneous parts.)

**Savings & Benefits**

The modified litter collection unit has increased efficiency, reduced labor and resources, increased safety to workers and drivers, and reduced operational costs. Reduced labor is estimated at about a 4:1 ratio based on one worker picking litter for a 300 linear foot stretch in about 40 minutes. The time it takes for the modified litter vac with an operator is about 10 minutes for the same footage. This also eliminates the need for a monitor, which is typically a higher paid worker to monitor the production and safety of employees working on roadways. While no financials were looked at for removing or limiting workers on highways or in ditches, it will over time reduce work compensation claims. It is also reducing the safety risk of workers being injured by a motor vehicle.

**Judge's Comment** - For me, selecting the top choice came down to Innovation with the Modified Litter Collection Unit.....standalone innovative solution.

## Modified Litter Collection Unit



2021 North Central Local Roads Conference



The 2021 North Central Region Winner is Walsh County, ND with their Guardrail Maintainer.

#### Judges' Comments:

Cleaning under Guardrail is a very time-consuming procedure. Commercial devices are very expensive and complicated. This is a simple device that utilizes existing motor grader and is really clever and innovative.

I like the guard rail maintainer it utilizes an existing piece of equipment in a function it was not developed for. It was built a bit crude, I understand they utilized scrap materials that probably would have been discarded. I have seen other similar devises but not utilizing a motor grader.

# Innovation is Local

## 2020 & 2021 “You Show Us” Contests

Noël Clocksin  
SDDOT/LGA | [noel.clocksins@state.sd.us](mailto:noel.clocksins@state.sd.us)

Leanna Emmer  
NDLTAP | [leanna.emmer@ndsu.edu](mailto:leanna.emmer@ndsu.edu)



### Moving Forward

36<sup>th</sup> Annual North Central Local Roads Conference  
Sioux Falls, SD - October 19-21, 2021

We hope this presentation sparks the innovation in all of you but most importantly we hope you share those innovations with your neighbors, states, and hopefully all of us at next year's Local Roads Conference.