

HIGHWAY DEBRIS: THE UNEXPECTED DANGER

FRED BERGSTRESSER, J-TECH



J-TECH

HELPING YOU MAKE ROADS SAFER.

ROAD DEBRIS IS A GLOBAL PROBLEM

The PROBLEM:

68,410 cases of road debris reported in UK during 2022 =192 incidents per day.

Even if just one of those debris reports causes a crash, the cost is staggering.

The COST: “A 2-hour delay on M6 costs the economy 3/4 of a million pounds.”

Richard Leonard, Head of Road Safety,
Highways England



USA DEBRIS-RELATED CRASH STATS



*The Prevalence of Motor Vehicle Crashes Involving Road Debris, United States, 2011-14

Averages* in the USA every year:

- 50,000 crashes, 9,800 injuries, 125 deaths
- 37% of crashes result from *swerving to avoid* objects.
- 4 times as likely to occur on interstate highways, expressways, or motorways .



FHWA's EVERY DAY COUNTS

CAI Home **Every Day Counts** STIC Network AID Demonstration AMR Program R

Photo: PA Turnpike Commission Photo: Utah DOT Photo: FDOT

Next-Generation TIM: Technology for Saving Lives

USA Federal Highway Administration's program to share effective strategies developed in one state with other states as an efficient means to spread working solutions quickly. Clearing roadway incidents more quickly reduces exposure for incident responders and restores traffic for commerce, productivity, and quality of life for roadway users.

WORKER DANGERS



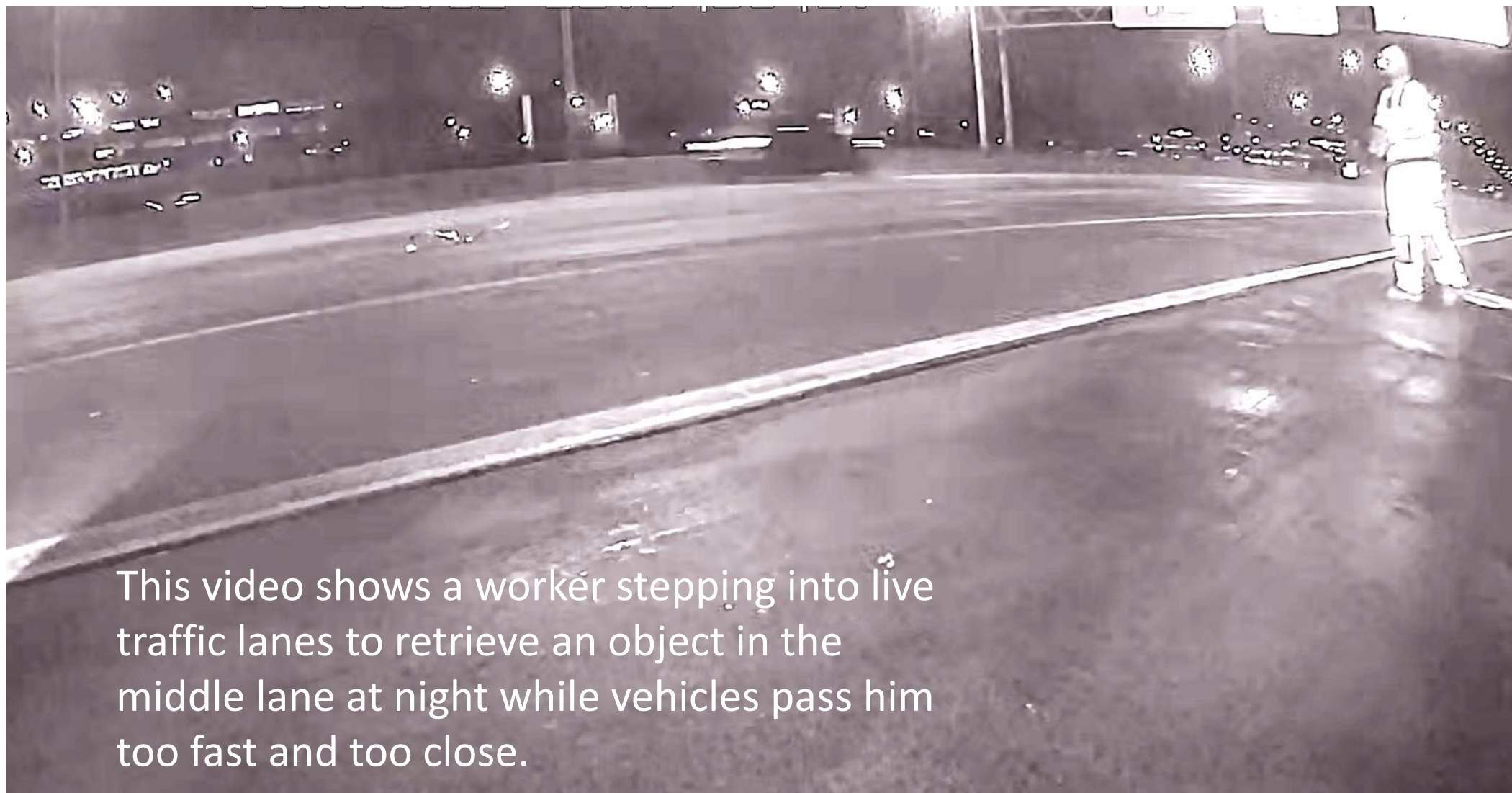
Highway maintenance workers are often subjected to extreme danger in the workplace. This worker has been hit 3 times but now Washington State Dept of Transportation has installed the LaneBlade® as a safety solution.

Ken Buretta, an incident-response lead technician, WSDOT, clears debris from I-5 near Everett Washington.

Seattle Times, June 19, 2017



Worker
Danger:
Night-
Time
Manual
Debris
Removal



This video shows a worker stepping into live traffic lanes to retrieve an object in the middle lane at night while vehicles pass him too fast and too close.



Road Closure for Debris Removal



This video shows a somewhat safer way to remove debris from active lanes. CLOSE the lanes with a rolling stop. Notice when the officer is signaling to his team to reopen the lanes. You can see he is rushing and nervous about keeping lanes closed any longer than necessary because of the added dangers of secondary crashes as vehicles enter the growing queue behind the stop.



WORKER SACRIFICE – a too often occurrence.

These are few names of workers whose lives have been lost recently trying to manually remove road debris. If there's one key takeaway from today's meeting, it's that we must urgently implement a better solution for handling these incidents. Our priority is to keep our teams off foot, preventing them from running across roads and putting themselves, and others, at risk, while also providing our roadway users with safer road conditions.

October 2023, Christopher Neff was *struck and killed* while he was attempting to clear debris from Route 29 Peoria IL .

August 2023, Roger L. Olson, was attempting to remove debris from the road when he was struck by a vehicle in Whatcom County, WA.

May 2023, Tim Harris, an ARDOT worker has *died after being hit* by a vehicle on I-430 while attempting to clear debris from the road.

November 2022, Sargent Chris Jenkins was *trying to pull debris off* the interstate I-75 in TN and was fatally struck by a semi-truck



DANGEROUS DEBRIS EFFECTS EVERYONE



Road User Dangers

Injuries & Fatalities
Hit debris or hit by debris.
Swerve & avoid maneuvering.

Road Worker Dangers

Injuries & Fatalities
Unfair Job – Not Safe

Economic costs

Injuries & Fatalities
Property damage
Loss due to delays

QUICKLY & SAFELY

REMOVE DEBRIS FROM ACTIVE TRAFFIC LANES.

Now we
have a
solution!

LaneBlade® is
the Safety
solution.

JTECH

HELPING YOU MAKE ROADS SAFER.

JTECHUSA.COM

HELPING YOU MAKE ROADS SAFER WORKPLACES.

LaneBlade[®] is the **SAFETY** solution.

Remove obstacles = Traffic flows unobstructed = Fewer crashes and secondary crashes.

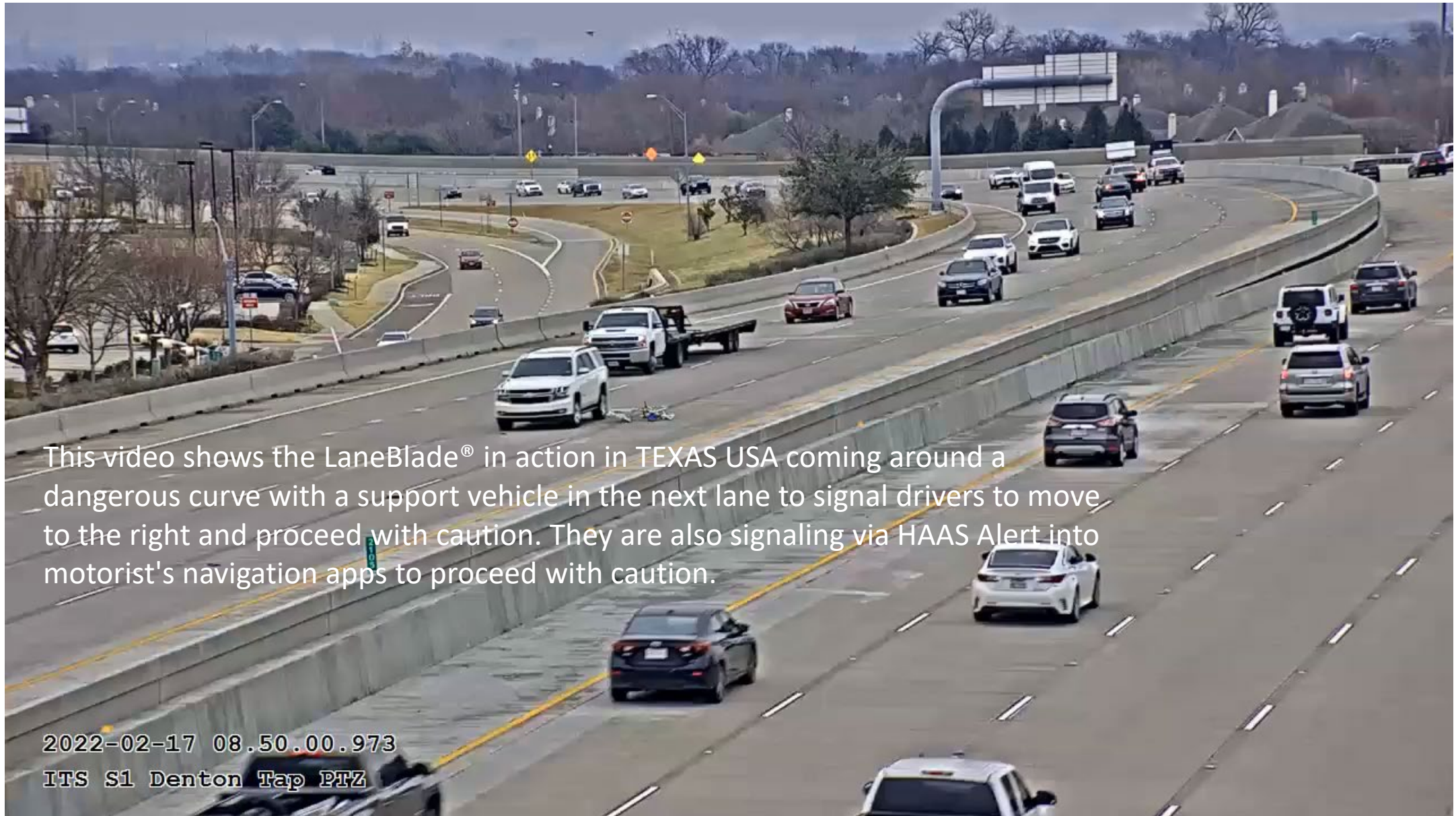
SAFE WORKERS: in the cab and not on foot.

MOBILE OPERATION: moves with traffic, not stopped.

ADVANCE WARNING: Traffic flows smoothly around mobile removal process.

QUICK RESPONSE: without mobilizing teams and extra equipment.





This video shows the LaneBlade® in action in TEXAS USA coming around a dangerous curve with a support vehicle in the next lane to signal drivers to move to the right and proceed with caution. They are also signaling via HAAS Alert into motorist's navigation apps to proceed with caution.

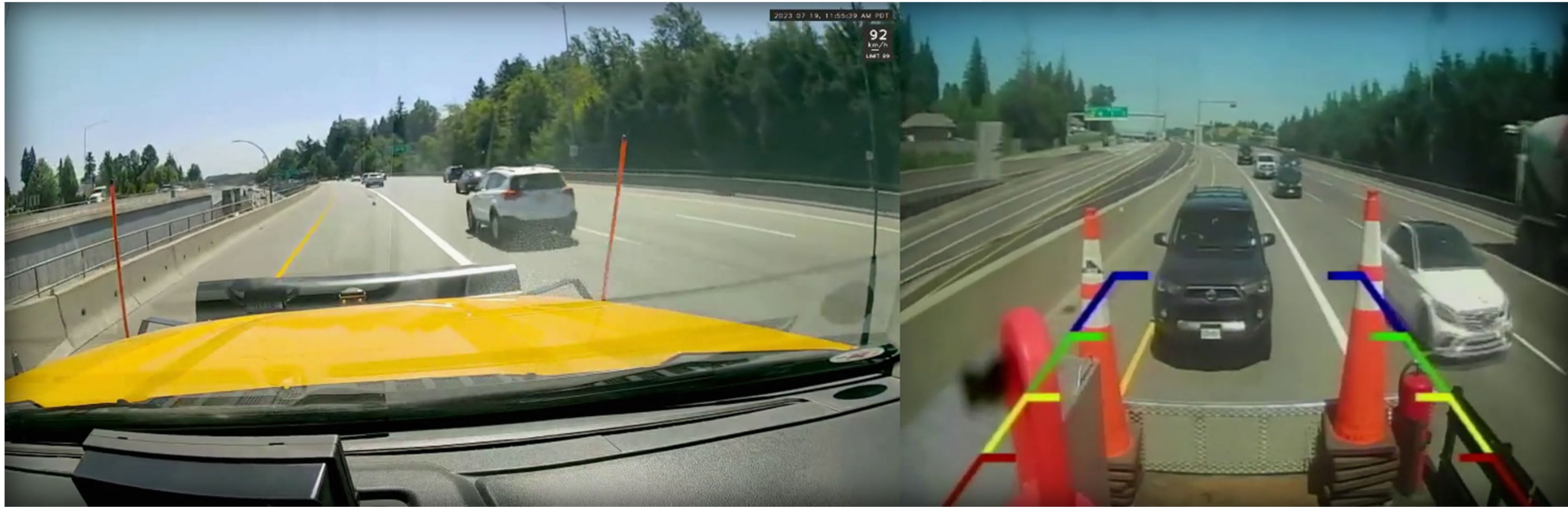
2022-02-17 08.50.00.973

ITS S1 Denton Tap PTZ

This video shows the LaneBlade® pushing a 70Kg piece of metal from the center lane of a 3-lane highway at night. This was accomplished in minutes with the LaneBlade®. Before the introduction of the LaneBlade® the road or at least 2 lanes would have been closed to remove the object. This would take time and a marshalling of resources – people and equipment and a delay would ensue.



LaneBlade® on Highway 1 British Columbia – a dangerous curve with safe debris removal.



The **LANEBLADE**®

is the safety solution.

JTECHUSA.COM

HELPING YOU MAKE ROADS SAFER WORKPLACES.

INTERNATIONAL BRIDGE TUNNEL AND TOLLWAY ASSOCIATION

IBTTA 2023

TOLL EXCELLENCE

AWARD FOR SAFETY

presented to

Pennsylvania Turnpike

for its work with safe

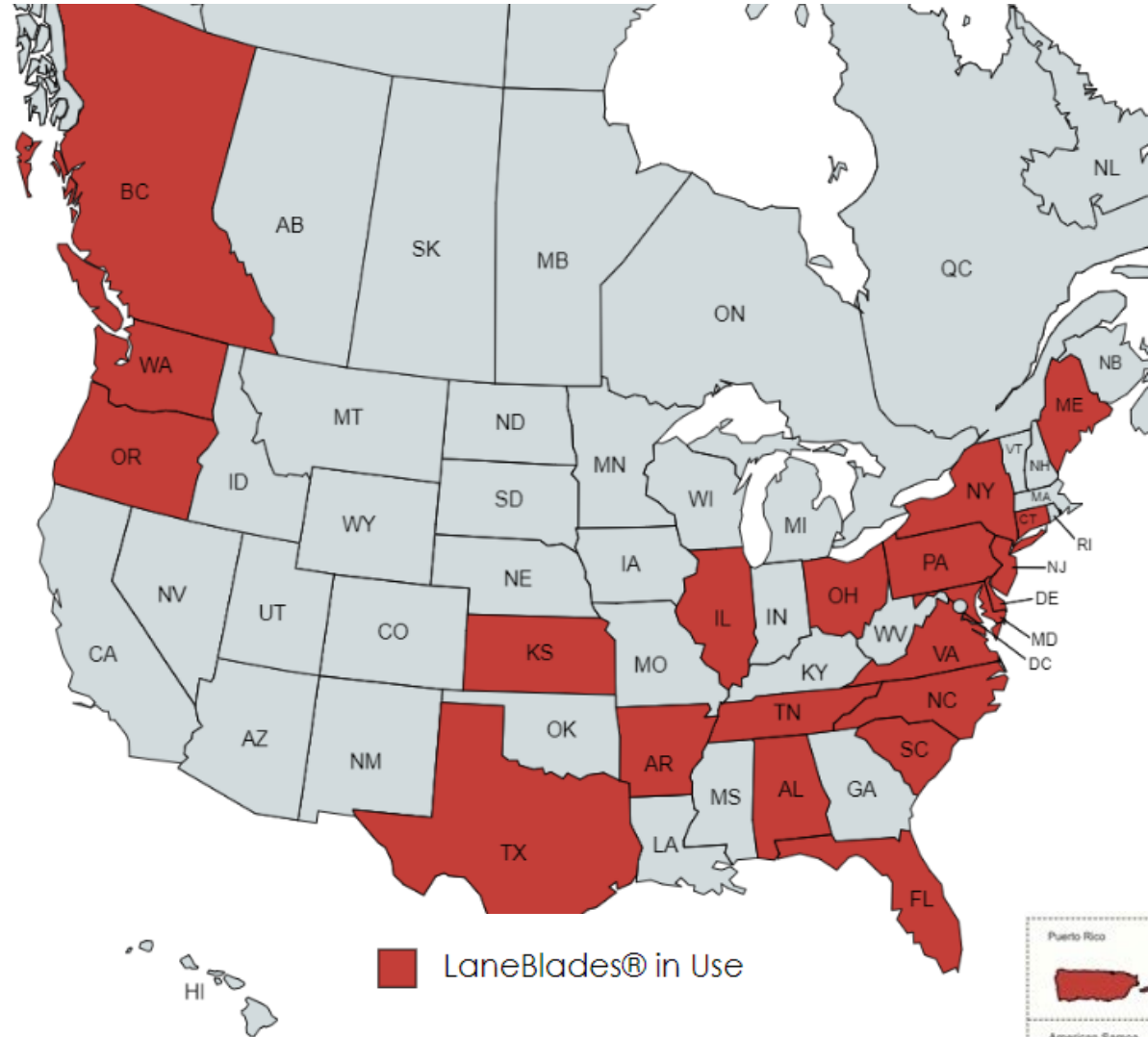
debris removal with

the LaneBlade®



LANEBLADE®

Today **30 Agencies**
across North America
see the lifesaving
benefits to highway
workers and road
users.



118 LaneBlades® in service

JTECHUSA.COM

HELPING YOU MAKE ROADS SAFER WORKPLACES.

LANEBLADE®

FEATURES

- **DUAL FUNCTIONS:**
Push bumper & debris removal.
- **SAFE DEPLOYMENT SPEED:**
Prevents initial use over 20 mph.
- **COMPATIBILITY:**
 $\frac{3}{4}$ ton or greater vehicle.
- **HEAVY DUTY:** steel construction.
- **SOLID:** direct-to-frame mounting.



LANEBLADE®

NEW FEATURES

- **INSTALL IT YOURSELF:** LaneBlade® kit now available with installation manual & support. (North America models only)
- **POWER TO PULL:**
4080 lb. rated d-ring tow point.
- **WEAR EDGE OPTION:**
Steel or rubber available.
- **GREATER GROUND CLEARANCE:**
New shorter profile.



LANEBLADE®

NEW FEATURE

EASE OF USE:

One touch
deployment with
integrated touch
screen controller.





Connected Vehicle Options

DVR Digital Video Recorder

- Telematics and DVR (US option)
 - Vehicle Tracking software
 - Remote camera (video & audio) live view
- 720p IR Camera (included, standard)
 - LaneBlade mounted camera
 - Camera in the cab (optional)
 - Integrate backup camera



HAAS ALERT

Cloud monitoring (optional)

Alerts motorists through Waze or OEM Navigation system that there is a maintenance operation ahead. Specific message may be available to warn motorists. "Caution debris removal ahead"



LANEBLADE[®]

Debris is a global problem:
This technology is needed.

European LaneBlade[®] is coming.

US and European maintenance and safety fleets are different.
We are working to bridge that difference.

Vehicle Compatibility

- J-Tech is a resource for European agencies to help them match the LaneBlade[®] to their fleet.

Future Vehicle Compatibility

- Work with interested European agencies to make a European version that is tailored to the equipment being used currently.
- J-Tech is a resource for European agencies to help them meet their safety goals.



INCREASE

- **WORKER SAFETY – KEY TAKEAWAY**

Workers remain in the truck and not on foot, never stepping foot on active travel lanes.

INCREASE

- **ROAD USER SAFETY – VERY EFFECTIVE TECHNOLOGY**

Remove debris quickly, reduce dangerous avoidance maneuvering
Enable free flowing traffic without obstructions.

INCREASE

- **EFFICIENCY**

A multi-functional device removes debris and disabled vehicles.
Do more with fewer people and less equipment.
Minimize response time.



QUICKLY & SAFELY

REMOVE DEBRIS FROM ACTIVE TRAFFIC LANES.

BOOTH 09.412

Road Safety Hall 9

Let's solve this global problem together. Come to our booth to problem solve!

Fred Bergstresser

fred@jtechusa.com

610-509-3956

JTECH

HELPING YOU MAKE ROADS SAFER.

