

The Shoulder Wedge Maker™

What the innovation is:

The Shoulder Wedge Maker™ is an innovative device that creates an angled, compacted shoulder at the edge of an asphalt paved roadway. This eliminates the abrupt drop at the edge of a roadway which may lead to serious accidents with possible fatalities. The Shoulder Wedge Maker™ is designed to be adjustable, versatile, durable and economical and can mount on virtually any road paving machine.

Why it is innovative:

Research and jobsite studies around the United States and other countries indicate that roadways built without shoulders, especially those with over 2" lift thickness, include sharp drop-offs that may lead to serious accidents with possible fatalities. The problem, according to numerous jurisdictions, is twofold: One, the sharp, vertical pavement edge, when crossed by a vehicle, may cause an abrupt drop, which in turn may be the cause of the vehicle colliding with trees, guard rails and other objects. Secondly, and on most occasions far worse, the driver overcompensates when steering the car back up over the road edge, often crossing into oncoming traffic.

The Shoulder Wedge Maker™ provides an innovative cost effective solution to the problem. By utilizing TransTech Systems' patented pre-compaction feature, along with the ramp angle and a smoothing surface, our device adds stability to the road edge ramp. The device attaches to the face of the screed extension on virtually any road paving machine with just two 1/2" screws which hold the mounting plate in place. The device is held on its mounting plate using a cotter pin arrangement which allows for quick deployment or removal. Its internal spring system allows the device to deal with changing conditions on the road edge and is self adjusting to height variations making it very user friendly. The Shoulder Wedge Maker™ is versatile, durable and economical.

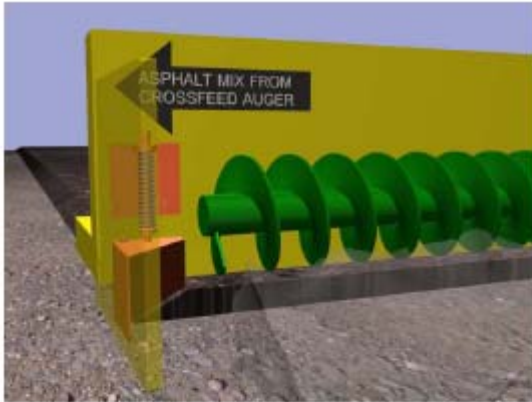
What it changed or replaced:

Several approaches have been taken in the past to combat the shoulder drop-off situation along many of our roadways. Among those approaches were backfilling the road edge with fill material to the pavement edge, or using a strike off device to form a ramp edge on the pavement. The first method was costly and required additional labor and material. The strike off, though providing a ramp, did not compact the ramp material and therefore would deteriorate quickly returning the edge of the road to a vertical drop.

Where and when it originated, has been used, and is expected to be used in the future:

The device was developed in 2003 at the request of the Federal Highway Administration. The first demonstrations of the system were done for the Georgia Department of Transportation outside of Augusta and in upstate New York with the assistance of the Schenectady County Department of Transportation. Further demonstrations were performed in 2004 and 2005 in New York State for the NYSDOT as well as in Indiana as part of the Federal Pooled Fund Study on Road Edge Drop-Off Mitigation. Projects are currently underway with various DOTs to continue to gain state approvals throughout the country. The Shoulder Wedge Maker™ was introduced for sale in 2005 and has been used by many contractors and DOTs to date. In addition, the Shoulder Wedge Maker™ was selected by the AASHTO TIG Program as a New Focus Technology for 2006.

**Contact: Gary Antonelli • Transtech Systems, Inc • 594 State St • Schenectady, NY 12304
518-370-5558 • Fax 518-370-5538 • gantonelli@transtechsys.com • www.transtechsys.com**



← This diagram shows the asphalt feeding from the paver, with the auger crossfeeding the asphalt out to the Shoulder Wedge Maker™, then compacting the asphalt and creating a wedge along the edge of the roadway. The Shoulder Wedge Maker™ creates a smooth wedge for easy transition onto the roadway if a vehicle were to veer from the road.
←

→ The actual Shoulder Wedge Maker™
ready for mounting on virtually any paver.
→



← Paving with the Shoulder Wedge Maker™ in
Schenectady County NY.
←



→ This photo illustrates the angle and
surface finish using the Shoulder Wedge
Maker™.
→

