# AASHTO Technology Implementation Group
## Nomination of Technology Ready for Implementation

| | |
|---|---|
| **Sponsoring DOT** | 1. Sponsoring DOT (State): Pennsylvania |
| **Primary Technical Contact** | 2. Name: Gary L. Hoffman<br>Organization: Pennsylvania Department of Transportation, Highway Administration<br>Address: 400 North Street 6th Floor<br>City: Harrisburg State: PA 6875 Zipcode: 17120<br>E-mail: Phone: 717-787-6898 Fax: 717-705-1560 |
| **Technology Description** | 3. Name of Technology:<br>Notch Wedge Joint Maker (NWJM) |
| | 4. Briefly describe the technology.<br>The NWJM is a device which when attached to the face of a paver's screed extension against the endgate produces what is commonly known as a Michigan Wedge Longitudinal Joint. The NWJM produces a tapered wedge at the centerline longitudinal joint area to provide a smooth transition from the unpaved to the paved lane. The NWJM also forms a 1/2 to 1 inch (depending on maximum stone size) notch or step to avoid a feathered joint that is susceptable to raveling. For closing the joint, the NWJM provides an extrusion configuration that compacts the joint for increased joint density. |
| | 5. Briefly describe the history of its development.<br>In the early 1990's, a shoe type wedge was developed for the New York State Thruway Authority that was mounted on the screed face to provide pre-compaction for increased density on vertical longitudinal joints. TransTech Systems began work on a tapered version of this device in 1999, producing a prototype and developing it's use. Over the past several years the NJWM has gone through several design improvements and one major redesign. Most recently, to accommodate thinner paving lifts, a second version called the Notch Wedge Joint Maker 2 was produced having a shorter wedge section to provide for a steeper taper on the shallower lifts. |
| **State of Development** | 6. For how long and in approximately how many applications has your organization used this technology?<br>The technology has been used for over five years in a number of applications across the state. More than 30 units have been purchased by PennDOT and Pennsylvania contractors in the past 5 years. The Pennsylvania Department of Transportation (PennDOT) specifies the TransTech Systems NWJM for most highway projects and several PennDOT districts have purchased and used the NWJM. |
| | 7. What additional development is necessary to enable routine deployment of the technology?<br>The Notch Wedge Joint Maker as designed and manufactured is currently being offered for sale in TransTech System's product line and requires no additional development work.. |
| | 8. Have other organizations used this technology? If so, please list organization names and contacts.<br>Organization / Name / Phone / E-mail<br>See attached list 1. |
| **Potential for Payoff** | 9. What benefits has your organization realized from using this technology? Include cost savings, safety improvements, transportation efficiency or effectiveness, environmental benefits, or other advantages over other existing technologies.<br>This technology saves about 30% on average in paving costs. These savings are a result of less lane closures, reduced numbers of traffic pattern changes and the drastic reduction of non-productive movement of equipment, signage, and personnel. Finally, the NWJM provides a better quality longitudinal joint which reduces maintenance and extends pavement life. |

# AASHTO Technology Implementation Group
## Nomination of Technology Ready for Implementation

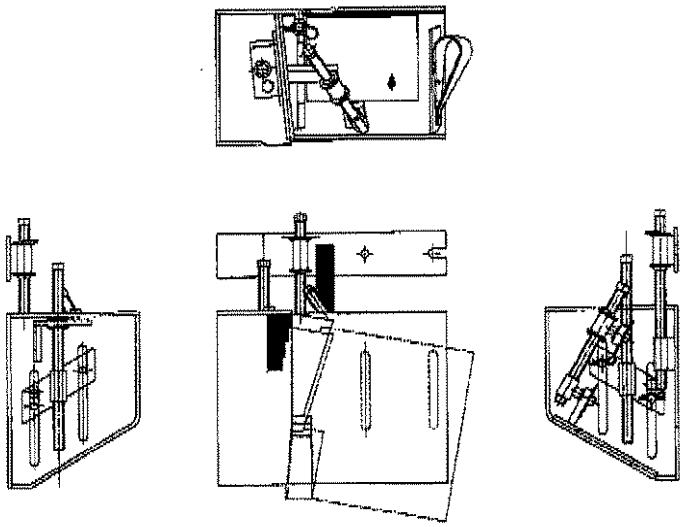
| | |
|---|---|
| **Implementation Potential** | 10. Please describe what actions another transportation agency would need to take to adopt this technology.<br>Where necessary, conduct demonstration/ evaluation projects to prove efficacy, then merely specify its use on the longitudinal joint on paving projects. |
| | 11. What is the estimated cost, effort, and length of time required for procurement or adoption by another transportation agency?<br>Approximately $12,000 for each evaluation/ demonstration site for purchase of a device along with technical support. A Notch Wedge Joint Maker pair has a retail price of $6,200. |
| | 12. What organization(s) currently supply and provide technical support for this technology?<br>TransTech Systems currently supplies the device, and provides technical support through its headquarters staff and field offices. |
| | 13. Please describe any legal, regulatory, social, intellectual property, or other issues that could affect ease of implementation.<br>None |
| **Willingness to Champion** | 14. Is the sponsoring DOT willing to promote this technology to other states, if partially supported by the AASHTO Task Force on Technology Implementation? ☒ Yes ☐ No |
| **Date Submitted** | 15. Date: August 26, 2005 |

16. Please include image(s) of sketches or photographs, if available ☒ Image(s) are attached

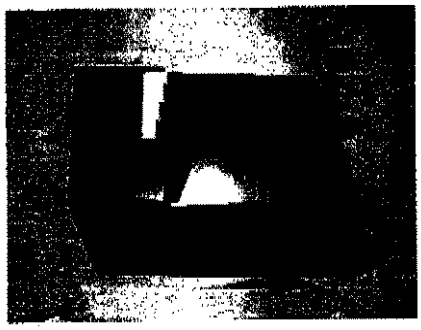

| | | |
|---|---|---|
| | Jeremy Fissel | Phone: 202.624.3640 |
| | Program Manager for Engineering | Fax: 202.624.5469 |
| | AASHTO | jfissel@aashto.org |

# AASHTO Technology Implementation Group
# Nomination of Technology Ready for Implementation

## Notch Wedge Joint Maker
## Illustration



## Notch Wedge Joint Maker
## Photograph of Front View



# AASHTO Technology Implementation Group
# Nomination of Technology Ready for Implementation

## Attachments

**List 1**

| Organization | Name | Phone |
|---|---|---|
| City of Allentown | Angela Marino | 610-437-7624 |
| Eastern Industries, Inc. | Kim Rudy | 570-524-2251 |
| J. D. Eckman, Inc. | Mike Eckman | 610-593-5143 |
| James D. Morrissey, Inc. | Eddie Rowen | 215-333-8000 |
| Sharon Paving | Tom Perman | 724-962-7811 |
| Valley Quaries, Inc. | Jeff Geesaman | 717-267-5962 |
| Vogele America, Inc. | Becky | 717-264-3200 |
| W. O. Dunn | Bill Dunn | 814-425-7420 |

ATT: CAROL

Post-it® Fax Note 7671 | Date 8-25-05 | # of pages ▶ 4

| | |
|---|---|
| To GARY HOFFMAN | From HARRY APKARIAN |
| Co./Dept. | Co. TRANSTECH SYSTEMS INC. |
| Phone # | Phone # 518-370-5558 |
| Fax # 717-346-0400 | Fax # |