

## PROJECT

*Dow Corning's rapid cure silicone helped Colorado highway officials cost-effectively protect its bridges in Glenwood Canyon while keeping the road closure time to a minimum.*

## PRODUCTS

Dow Corning® 902 RCS Joint Sealant  
X.J.S.® Expansion Joint System

## KEY PARTICIPANTS

Colorado Department of Transportation  
(Denver, Colorado)

G.A. Western Construction Co.  
(Palisade, Colorado)

Silicone Specialties Inc. (SSI)  
(Tulsa, Oklahoma)

Dow Corning Corporation  
(Midland, Michigan)

## DOT Finds Cost-Effective Solution to Water Damage with Dow Corning and Silicone Specialties Inc.

Bridges and elevated sections of highway have to perform in extreme conditions. Handling changing weather conditions and high traffic loads means fixed and expansion joints need to allow for structure fluctuations, while being sealed to protect structure integrity.

Most bridges built after the late 1960s use preformed rubber compression to seal joints, which typically begin to fail after only a few years. This leads to water leaks and accumulation of de-icing salts and debris, which can rust or corrode the



*The bridge joints along I-70 in Glenwood Canyon are subject to high traffic loads and extreme temperature changes.*

substructure components, columns and piers of a bridge or elevated roadway.

Replacing these seals can be an expensive and laborious process, especially when the likelihood that the new seals will fail again and require another replacement is considered.

The Colorado Department of Transportation (CDOT) was looking for a better solution when it needed to reseal the joints along I-70 in Glenwood Canyon. It wanted a cost-

effective, easy installation that would prevent water from entering the joint and not require long road closure times.

### Dow Corning and SSI Joint System Provides Solution

CDOT turned to Silicone Specialties, Inc. (SSI), a nosing material manufacturer and Dow Corning Sealant Distributor, and Dow Corning to learn more about the benefits of the X.J.S.® Expansion Joint System, which combines the tough, wear-resistance of SSI's Silspec® 900 Polymer Nosing System (PNS) with the rapid-curing, high-movement capability of *Dow Corning*® 902 RCS Joint Sealant.

“There was a rubber seal in place when we began the project,” said Joe Kelly of G.A. Western Construction. “We removed the rubber, replaced it with an epoxy and then applied the X.J.S. system to the two-inch expansion joint. So far the project has done an excellent job of solving CDOT’s perennial problem with faulty two-inch joints.”

**DOW CORNING**

The X.J.S. system enhances joint performance without complicated installation or extensive road closures. “The X.J.S. system has provided a relatively simple solution for joint replacement and repair,” said Delmon French of the Colorado Department of Transportation. Road closures are a particular concern in remote areas, like Glenwood Canyon, where alternate routes are not available.



*The X.J.S. joint seals gave CDOT a cost-effective, easy installation that is performing well.*

“We worked closely with CDOT’s bridge engineers to find ways to complete needed repairs with minimal impact on the traveling public,” noted Dale Baker of SSI Highway Products Sales. “The X.J.S. Joint System gave CDOT a flexible solution in terms of joint configuration and traffic accommodation when repairing bridge expansion joints in Glenwood Canyon.”

The X.J.S. system has been in use since the early 1990s throughout the United States in a wide variety of climates and configurations, proving their versatility. “Some of the joints are up to five years old and as of January 2008 have performed well in the harsh conditions experienced on this stretch of I-70,” reported CDOT’s French.

The product has been used successfully by DOTs and transportation authorities throughout the United States.

“We will definitely be working with the product on current and future projects,” said Kelly of G.A. Western Construction.

**FOR MORE INFORMATION**

For more information about these and other Dow Corning materials for the construction industry, or for the name of the Dow Corning representative in your area, call toll-free 1-877-SEALANT (1-877-732-5268). Or visit our construction web site at [www.dowcorning.com/construction](http://www.dowcorning.com/construction).

**LIMITED WARRANTY INFORMATION - PLEASE READ CAREFULLY**

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer’s tests to ensure that Dow Corning’s products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning’s sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

**DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.**

**DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Dow Corning is a registered trademark of Dow Corning Corporation.

We help you invent the future is a trademark of Dow Corning Corporation.

© 2008 Dow Corning Corporation. All rights reserved.

Printed in U.S.A.

Form No. 63-1068



*We help you  
invent the future.™*

[www.dowcorning.com](http://www.dowcorning.com)