INTERIM REPORT ON SILICOFLEX STRIP SEAL JOINT SYSTEM
BERLIN, VERMONT

OVERVIEW:

Bridge No 1 on northbound Rte 62 was built in 1974 with a neoprene joint at the upper abutment. By 1984 leakage of deicing salt solutions had caused severe delamination of the steel girder ends due to the joint which failed to return to its original dimension as the joint opened in the winter.

On August 1st, 1995 the Vermont AOT District 6 maintenance forces replaced the neoprene joint with a Silicoflex Strip Seal Joint System. Installation proceeded as by the manufacturer’s specifications which included blast cleaning and wiping the contact area with Silicoflex cleaner/primer.

PRODUCT DESCRIPTION:

Silicoflex is a preformed silicone joint seal that is bonded directly to concrete, elastomeric concrete, polymer concrete or steel joint interfaces, with a specially developed, fast curing, silicone locking adhesive. The product is a 3-1/2" preformed elastic strip seal extruded in a modified flat “V” configuration. It is installed by squeezing the strip seal together, inserting it to the desired depth in the open joint and then locking it in place by extruding a silicone sealant along both sides of the seal element.

Credits: Silicoflex.com
SITE VISIT:

On March 16, 2005, personnel of the Materials and Research Section performed a visual inspection and took photographs for the records. The seal joint itself appears to be in good condition, however, only a section of about seven feet (7ft) is still attached to the inside walls of the open joint.

Photo - 1
Looking west
Notice there is no strip seal left

Photo - 2
Looking west
Notice the strip seal had dropped down passed original level as seen in Photo -3

Photo - 3
Looking east
Only about 7 feet remains in place At its original level

FOLLOW-UP:

Due to the bonding failure, there is no need to continue monitoring the performance of this product in this particular application. Additionally, The New York Thruway Authority also reported a similar failure in that the joint material appeared to be durable but in most of them the bonding failed. However, further evaluation of this product may be warranted and if requested will be considered.

DISCLAIMER

"The information contained in this report was compiled for the use of the Vermont Agency of Transportation. Conclusions and recommendations contained herein are based upon the research data obtained and the expertise of the researchers, and are not necessarily to be construed as Agency policy. This report does not constitute a standard, specification, or regulation. The Vermont Agency of Transportation assumes no liability for its contents of the use thereof."