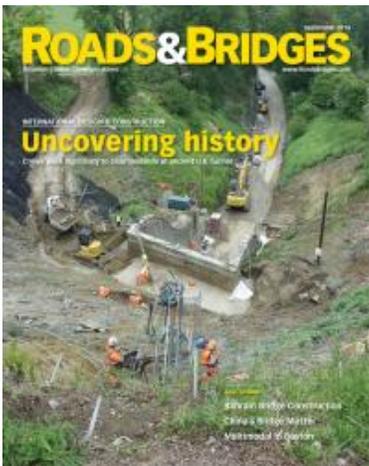




CURRENT ISSUE  
September 2014



# CASE STUDY: Varenne, Québec, upgrades road hardware to reduce crashes

[ROAD CONSTRUCTION](#) | [CASE STUDIES](#) | AUGUST 01, 2014

## WEBINARS

**Bentley BrIM Webcast Series - Best Practices for Utilizing 3D Modeling in Mega Projects**

**Bentley BrIM Webcast Series - Design Innovations for the Palmetto Section 5, SR826/836 Interchange**



## AWARDS



**CONTRACTORS CHOICE**



The city of Varenne, Québec, is on a mission to improve the safety of Canadian highways while saving taxpayer dollars. After recently completing a bridge replacement project on Autoroute 30, the city of Varenne led to upgrade already-installed road departure devices.

## **AWARDS**

These awards honor top products selected by contractors.



### **GO-TO LIST**

The Go-To List honors the top design and contractor firms.



### **RECYCLING AWARDS**

These awards honor the top recycling projects.



### **TOP 10 BRIDGES 2013**

These awards recognize the best in bridge construction for 2013.



### **TOP 10 ROADS 2013**

These awards recognize the best in road construction for 2013.

## **WHITEPAPERS**

### **WHITE PAPER: Ten Reasons Governmental Agencies Lease Heavy Equipment**

---

### **Stainless Steel Corrosion Protection in Transportation Infrastructures**

[VIEW ALL](#)

## **CASE STUDIES**

### **Madera County, Calif., chooses slip-lining for culvert rehab**

Many contractors, engineers and road authorities are looking for road departure devices that employ simpler installation procedures, fewer proprietary parts and a lighter-weight impact head.

With lighter and simpler devices, contractors would need less time and fewer crew members to install them. The bottom line would be savings for Québec.

Also near the top of the wish list is end treatments that have the flexibility to be configured for a variety of applications. A consistent performance record, with low repair costs and with minimal inventory requirements, also would contribute to Varenne's successful roadside upgrades.

After careful review of all NCHRP 350-approved end terminals, Varenne decided on the use of the X-Lite end terminals made by Lindsay Transportation Solutions, Omaha, Neb.

X-Lite impact heads weigh only 28 lb while using up to 34% fewer components—and with a higher ratio of nonproprietary components—than other end terminals on the market. As a result, Varenne's contractors should be able to install the end terminals with an experienced crew in less than 15 minutes. X-Lite end terminals are available in tangent or flared configurations, so engineers only need to specify one type of end terminal as a road departure device. They also use telescoping technology found in much higher priced nongating crash cushions to better capture an errant vehicle.

**Ring road in Finland presents challenges**

[VIEW ALL](#)



RELATED CONTENT

[ROAD DESIGN: J-turns reduce crashes in Missouri study](#)

[New poll: In a recent study of red-light camera enforcement, right-angle crashes were down 15%, but rear-end crashes were up 20%. If red-light cameras reduce right-angle crashes but increase rear-end collisions, are they worth the effort?](#)

[Mendocino County, CA Sign Upgrades Reduce Crashes](#)

[TTI Study: HOV lanes without positive separation linked to car crashes](#)

[CASE STUDY: Cleveland's Innerbelt Bridge hosts flock of cranes](#)



VISIT OUR STOREFRONT

[Lindsay Transportation Solutions](#)

Register Now!

Reinventing Transportation  
in our Connected World



Sept. 7-11, 2014  
Detroit, Michigan

FEATURED VIDEO



MORE VIDEOS

TWITTER FEED



AGC of America

RT @AGCARKANSAS: @AGCARKANSAS loves to see members @RobertsMcNutt & @BaldwinShell showing pride in the AGC! @ScottCopas @AGCofA <http://t.co...>

26 min 7 sec ago

[Reply](#) [Retweet](#) [Favorite](#)



ARTBA

Congrats @RoyalTruckEquip on winning 2014 ARTBA Roadway #Workzone Safety Award!

42 min 14 sec ago

[Reply](#) [Retweet](#) [Favorite](#)



IBTTA

Calif. Passes Mileage Tax <http://t.co/ncUG3rUqoJ> #TollRoads  
#Transportation #Infrastructure

45 min 30 sec ago

[Reply](#) [Retweet](#) [Favorite](#)



AASHTO

1936: AASHTO Special Committee on Planning & Design Policies is authorized. #100days100years <http://t.co/jxFiZPIfoo>

1 hour 9 min ago

[Reply](#) [Retweet](#) [Favorite](#)



ARTBA

[@TILUMAGFAR](#) won 2014 ARTBA #Workzone Safety Awareness Award for its #TheHaloLight innovation! Congratulations!!

<http://t.co/PUkhoPeuhr>

1 hour 12 min ago

[Reply](#) [Retweet](#) [Favorite](#)



AGC of America

The Atlantic Cities takes an interesting look at which political parties favor road building as a traffic solution..

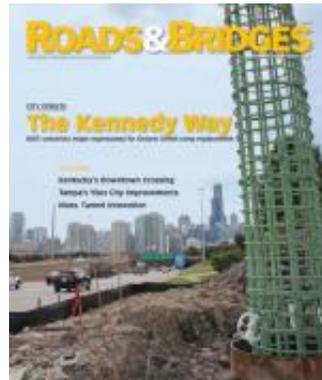
<http://t.co/Bi2Oc4X9QJ>

1 hour 37 min ago

[Reply](#) [Retweet](#) [Favorite](#)

FOLLOW [@ROADEDITOR](#) ON TWITTER

SUBSCRIBE TODAY



Enter your email address here to be automatically subscribed to our weekly newsletter!

[Subscribe](#)