Rural Road Safety Solutions

Rural roads aren't like urban roads. While they can feel safer due to their lower levels of traffic and complexity, the reality is almost half of all fatal crashes occur in rural locations — even though only 19% of the population lives there. (source)

High speeds, sharp turns, hidden intersections, and poor lighting are just some of the hazards that make rural roads so dangerous.

Fortunately, many of these hazards can be mitigated with effective, if underutilized, treatments that increase awareness, reduce speeds, and keep road users safe.

More information on Carmanah's family of rural safety products can be found at <u>carmanah.com</u>



ROAD DEPARTURES ON CURVES

LED Enhanced Chevron Signs

Alert drivers to changes in horizontal alignment and reduce road departures with highly configurable, connected LED-enhanced signs.

Chevron signs have been shown to reduce nighttime crashes by up to 25% (source)

CHEVRON-MX

- Meets MUTCD Standards for color, flash rate, and dimming
- Ultra-bright simultaneous flash pattern
- Radar-activated or 24/7 operation
- Single or double-sided
- Built-in knockdown sensor
- Actionable email and text alerts
- 3 years free remote connectivity
- Free mobile app for easy system setup and local access



Horizontal Alignment Sign Selection

| | Difference Between Speed Limit and Advisory Speed | | | | |
|---|---|-------------|----------|----------|----------|
| Type of Sign | 5 mph | 10 mph | 15 mph | 20 mph | 25 mph |
| \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | Recommended | Required | Required | Required | Required |
| 35 MPH | Recommended | Required | Required | Required | Required |
| | Optional | Recommended | Required | Required | Required |

Note: Required means that the sign and/or plaque shall be used, recommended means that the sign and/or plaque should be used, and optional means that the

¹ Albin et al. Low Cost Treatments for Horizontal Curve Safety 2016. FHWA-SA-15-084, (2016)

MX CLOUD

3 years
FREE remote

connectivity

R247-MX

 LED enhanced W1-2 warning sign with static plaque **ROAD DEPARTURES ON CURVES**

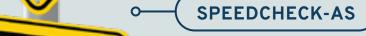
SpeedCheck® Advisory Speed Signs

Capture drivers' attention and signal that speeds should be reduced ahead of a potential hazard like a sharp curve.

- High-contrast LED display visible in all weather and lighting conditions
- "SLOW DOWN" message can be set to flash at user-defined speed thresholds
- Mobile app for iOS® and Android™ for quick set-up and on-site access
- Solar Power Report™ prepared for every location to ensure battery longevity
- MUTCD and Buy America/BABA compliant system



MPH



SpeedCheck advisory sign with static W1-5 warning sign

Advisory Alert Settings

















Blank Speed Advisory + Slow Down Message

HIGHWAY TO COMMUNITY TRANSITION ZONES

School Zone Beacons

Reduce speeds and encourage vigilance in one of the busiest—and most dangerous—places on the road for vulnerable road users.

Flashing beacons have been shown to decrease vehicle speeds by 5 to 7 mph in school zones (source)

R829-MX

- Highly configurable with beacons, LED enhanced sign, or both
- Retrofits easily onto existing poles/signage
- Create, adjust, and delete schedules remotely (via MX Cloud™) or locally (via the MX Field App™)
- Quick installation and easy on-site access with MX Field App
- Actionable email and text alerts







| | SPEEDCHECK-12 | SPEEDCHECK-15 | SPEEDCHECK-18 | |
|-------------------|---------------|---------------|-----------------|--|
| LED Digit Size | 12" | 15" | 18" | |
| Speed Limit | Under 45 mph | Under 45 mph | 45 mph and over | |
| Slow Down Message | No | Yes, optional | Yes, optional | |

Included with every sign: Mobile app or PC Setup and Scheduling Software

SpeedCheck® Radar Speed Signs

Bring drivers' attention to their speed and improve safety in neighborhoods and school zones with industryleading radar speed signs.

Reduce speeds by as much as 9 mph (source)

- High-contrast display readable at a distance
- Mobile app for iOS® and Android™ for quick set-up
- Optional "SLOW DOWN" message, strobes, and external beacons available
- Data collection with visualization and reporting software



RURAL CROSSINGS

Intersection Conflict Warning Systems

Reduce crashes at hazardous unsignalized crossings by providing real-time advance warnings to drivers about potentially conflicting vehicles.

Before/after studies of sites with intesection conflict warning systems have shown crash reductions up to 19% (<u>source</u>)



- Brightest light output in the industry
- Radar activated or 24/7 operation
- LED sign or red beacon

TRAFFIC APPROACHING WHEN FLASHING

R247-MX

- LED sign or yellow beacon
- 24/7 operation or activated by radar on mainline

MX Cloud™

Convenient remote access to all MX systems, from any web browser. 3 years free MX Lite subscription.



MX Field App™

Easy setup and on-site access for MX systems. Free app for Android and iOS devices.



NOAD



R247-MX

- Static sign with yellow beacons
- 24/7 operation or activated by stop sign radar on cross road



- LED enhanced sign
- 24/7 operation or activated by stop sign radar on cross road

Smarter Asset Management

Gain comprehensive network visibility of all your MX systems. Review event logs, monitor battery health, and access detailed module information and warranty dates.

Actionable Alerts & Data

Receive timely email/SMS alerts about your MX systems. Get insights into system health like battery voltage and solar panel charge.

Remote Programming & Scheduling

Push changes to system settings from anywhere. Create, delete, and adjust schedules in advance or on-the-fly, with unlimited and easy-to-apply exceptions.

Contact us to learn more and build an custom system at carmanah.com.

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