Pavement route shields are new additions to highways in the San Diego, Sacramento, Stockton and Riverside-San Bernardino regions. The shields, made of heat-treated plastic material, help direct motorists into their desired lane toward an eventual destination, and avoid unsafe manuevers.

Route Signs Go Ground-Level

New Pavement Shields Guide Travelers Safely Through Unfamiliar Interchanges

Caltrans is helping drivers negotiate unfamiliar or complex freeway interchanges with new pavement markings in the shape of the familiar route shields that they are used to seeing posted as signs on posts along the highways.

The route shield pavement markings, placed on selected highways around the state, are intended to give another visual aid to travelers who are more accustomed to looking up or to the side of the highway for traditional route shield signs.

These route shield pavement markings are large enough to be viewed with a quick glance at the road surface. They're approximately 6-foot-wide reproductions of signs that identify interstate or highway numbers. Recently, State Route 65 route shield pavement markings were laid down in Roseville, which lies within Caltrans District 3, and in the Sacramento area. In addition, route shield pavement markings also are guiding motorists in Riverside and San Bernardino counties (Caltrans District 8), Stockton, nearby foothills and central Sierra Nevada (Caltrans District 10) and greater San Diego (Caltrans District 11).

Caltrans workers install the decals at night, piecing together roughly 2-by-3-foot mats and heating them so they partially melt and adhere to the roadway surface in the middle of a lane.

Made of heat-treated plastic material, each marking contains thousands of miniature glass beads, as found in lane striping, that increase light reflection. Depending on traffic volumes and weather conditions, the route shield pavement markings should last three to five years.

The route shield pavement markings are one of Caltrans' newer driver information and collision reduction strategies. They are recommended for installation on freeways and highways where:

- There are complex freeway-to-freeway interchanges.
- There is a history of collisions likely due to drivers weaving.
- Where roads diverge and crash cushions are often hit.
- There are exit-only lanes or multiple-lane exits.
- Installation of overhead signs is impractical.

Route shield pavement markings also can be placed on surface streets that lead to freeway entrance ramps,

Watch how route shields were installed in Sacramento, and hear the positive reaction of two motorists, in Episode 185 of the Caltrans News Flash series posted online.

and where overhead signs cannot easily be built due to space constraints.

Route shield pavement markings are placed a short distance past overhead signs that announce the approaching interchange, but where drivers still have room to switch lanes, if necessary. Route shield pavement markings of two highways can be placed when a lane serves as a continuation and an exit lane. No more than two identical sets of route shield pavement markings are placed in any lane before an interchange.

For example, route shield pavement markings on eastbound US Route 50 (at this point also the Capital City Freeway) through Sacramento alert motorists about the lanes that continue, the ones that curve toward eastbound Interstate 80, and those connecting to southbound State Route 99.

Although the effectiveness of route shield pavement markings has not yet been subject to statistical analysis, anecdotal feedback has been positive.

The route shield pavement markings also are intended to reduce driver stress and act as reassurances or reminders to drivers who, although familiar with the roadways, might be distracted and risk missing their exit.

The shields, cut to size, are heated to adhere to the pavement. They're coated in reflective glass beads to stand out when illuminated.

Another way drivers can familiarize themselves with a route is by using Caltrans' QuickMap, accessible online or as a mobile phone application. QuickMap is updated every five minutes with real-time traffic information to alert drivers about traffic slowdowns, chain requirements and road work, and provides rest stop locations among its many other features. A word of caution: Using mobile devices while driving is dangerous and against the law. MM

Sources: *Duper Tong, Chief of Caltrans' Office of Traffic Engineering, Atifa Ferouz, Senior Traffic Engineer, and Arshad Iqbal, Chief of Traffic Signs Branch, Office of Engineering, Caltrans Division of Traffic Operations*

Even Humble Signposts Are More Eye-Catching These Days

Caltrans has begun outfitting signposts with reflective material to enhance safety for those who walk, ride bikes, or go to school along or near a state highway.

The reflective material is being attached to the full length and width of the posts on the driver-facing side.

The reflective material on the posts and signs will be color-coordinated: fluorescent yellow or fluorescent yellow-green on bicycle and pedestrian signposts, and fluorescent yellow-green on school-related signs.

This newest safety feature is in line with the Department's ongoing commitment to improve safety on highways throughout the state by adopting the *Toward Zero Deaths* philosophy.

Caltrans has begun wrapping signposts in reflective material to alert motorists of the presence of cyclists, students or pedestrians.