

Route Renumbering

New Green Markers Will Replace Old Shields

New white-on-green route markers are replacing the familiar black and white shields along some of California's state highways.

Fewer than 50 routes will be affected in the immediate future, although a general renumbering of state highways has taken place in accordance with legislation (Senate Bill 64, Collier) that became effective on September 20, 1963. Where possible, state highways have retained their posted numbers, so that many existing black-on-white markers will remain in place for a while.

Confusion Possible

Some confusion on the part of drivers traveling reposted roads is expected for the next several months. The primary reason is the fact that automobile clubs and the commercial map-makers, whose products are dispensed by oil companies and others, could not note the new route numbers on maps printed prior to this time. Maps being prepared now will coincide with the new signs.

Another source of possible confusion stems from the fact that the federal government has designated some highways in California by numbers already in use by the State. The State immediately changed its numbers to avoid duplication. Again, maps now on drawing boards will note the changes.

Spade Design Retained

The new markers, like the old sign route shields, are in the shape of the spade used in the gold fields by California's 49er miners. Designed to last for many years, they are cut from aluminum. Their white numerals and translucent green background are developed through a reverse screening procedure. The combination is designed to retain a high degree of visibility at night and in hazy weather.

The colors were decided upon after a panel of engineers had checked various color combinations in over-the-road tests. Blue and gold were strong contenders but lost out when it was

discovered the gold had a tendency to appear muddy at night while the white and green retained their true hues.

With the advent of the white-on-green signs some long-familiar numbered routes are being lengthened (Route 1's southern terminus will be Capistrano Beach, Orange County, instead of Las Cruces, Santa Barbara County); some are being shortened (Route 99's new temporary terminus will be Los Angeles instead of the Mexican border at Calexico); and some will be eliminated (U.S. 399).

History of Route Markers

The black-and-white color combination was first adopted by the federal government in 1926 but the first route markers did not appear along California highways until January 1928. However, the Division of Highways was not assigned responsibility for signing highways until 1934, and during the intervening six years two major automobile clubs carried out the program at their own expense.

The California State Automobile Association placed signs in the 45 northern counties, and the Automobile Club of Southern California provided similar service in the 13 southern counties. This work was undertaken along U.S. highways, state highways, county roads and city streets.

The first road to be marked in the north was U.S. 40 from Berkeley to the Nevada state line. In the south, U.S. 101 from Los Angeles to San Diego was marked at the same time. The black-on-white signs were rectangular in shape.

A short time after the automobile clubs began installing signs, the American Association of Highway Officials published the *Manual on Uniform Traffic Control Devices*. The manual established standards in the marking and positioning of U.S. route markers. When the Division of Highways undertook the responsibility of signing highways, it was decided to examine the routes signed by the auto clubs

and bring their signing to conformance with AASHO standards.

Because U.S. highway markers were not appropriate for marking state routes, Division of Highways engineers met with representatives of the two automobile clubs to adopt a route marker for state highways. After examining a wide range of suggested designs, the group selected the "bear shield" which resembled a miner's spade and displayed a grizzly bear taken from the California Bear Flag.

Numbering Systems Vary

As the state highway network grew and existing roads became longer, each new segment was given its own number by the Legislature then in session. As a result, some state highways acquired as many as 13 different legislative route numbers along the way. To minimize these complications for the motorist, the Division of Highways established the state sign route system that identified each road from one end to the other by a single number. This system supplemented the U.S. shield numbers which are assigned by the federal government on the recommendation of AASHO.

The new system parallels the sign route method in that one road calls for only one number when possible.

Sign Installation Schedule

Some of the new route signs are already in place, and Division of Highways plans call for almost all those which will identify the renumbered highways to be installed by July 1, 1964.

More signs will be posted during the next two or three years. Damage and age will necessitate future replacement of present black-on-white markers. And where highway construction is underway or will begin in the near future, state officials believe it impractical to post new signs along a right-of-way until construction is nearly complete.

Another important facet of the operation is the removal of black-and-white shields. In the past, portions

of many California highways have been marked with the shields of multiple routes because those particular stretches were incorporated into a combination of two or more state and federal highways. This practice, which complicated travel for unwary drivers unacquainted with the procedure, will almost be eliminated when the "one number equals one highway" project is complete.

Interstate Route Signs Differ

Routes that make up the California portion of the National System of Interstate and Defense Highways are locations where the new numbers will receive a prominent display but on red, white and blue shields instead of white on green. Typical examples are Interstate Route 80 between San Francisco and Reno (formerly U.S. 40), and Interstate Route 10 between Los Angeles and Indio (formerly U.S. 70, 99, and portions of 60).

These multilane full freeways and other interstate routes will proclaim their route numbers in red, white and blue on route signs that resemble the federal shield. The variations in color and design will make any road that is part of the national interstate system easy to identify as such.

Not all the black-on-white federal shields will disappear from national highways in California, for the red, white and blue shields will mark only interstate routes. Those U.S. highways (U.S. 101, for example) which are not included in the national interstate system will retain their present black-on-white shields.

Nor will the blue-and-gold shields that identify county roads by letter and number be eliminated. The county networks were not included in the 1963 legislative act and therefore will retain their present identities and shields.

Renumbered State Highways

The following list includes all California state highways where new signs will be posted over any portion of their length prior to July 1, 1964.

Route 1—742 miles, from Interstate Route 5 at Capistrano Beach, Orange County, via San Luis Obispo, San Francisco and Jenner to Fernbridge, Humboldt County. Incorporates former U.S. 101 Alternate from Capis-

trano Beach, Orange County, to north of Oxnard, Ventura County.

Route 2—89 miles, from Route 1 in Santa Monica to Route 138 near Cajon (north of San Bernardino). Incorporates portion of former U.S. 66 between Santa Monica and Pasadena.

Route 4—209 miles, from Interstate Route 80 near Hercules, Contra Costa County, via Angels Camp, Calaveras County, to Route 89 at Woodfords, Alpine County. Incorporates former Route 24 from Concord, Contra Costa County, to Antioch Bridge, Contra Costa County.

Route 7—33 miles, from Route 11 (Harbor Freeway) in San Pedro, Los Angeles County, to Interstate Route 210 in Pasadena. Incorporates former Route 15 for length of Long Beach Freeway.

Route 11 (Harbor and Pasadena Freeways)—33 miles, from San Pedro, Los Angeles County, to Route 248 in Pasadena. Incorporates former U.S. 6 from San Pedro to Los Angeles and former U.S. 66 from Los Angeles to Pasadena.

Route 14—141 miles, from Route 1 northwest of Santa Monica to Route 395 near Inyokern, Kern County. Incorporates Antelope Valley Freeway and former U.S. 6 from junction with Route 395 at Tunnel Station (north of San Fernando, Los Angeles County) to near Inyokern. (Santa Monica to Tunnel Station not yet constructed.)

Route 26—56 miles, from Route 99 near Stockton to West Point, Calaveras County. Incorporates former Route 8 from near Stockton to Mokelumne Hill.

Route 29—107 miles, from Interstate Route 80 near Vallejo, via Calistoga, Napa County, to Route 20 near Upper Lake, Lake County. Incorporates former Route 53 from Middletown to Lower Lake, Lake County.

Route 33—315 miles, from Route 101 near Venture via Coalinga, Fresno County, to Interstate Route 205 near Tracy, San Joaquin County. Incorporates former U.S. 399 from Ventura to Taft, Kern County.

Route 35—52 miles, from Route 17 near Holy City (Santa Cruz—Santa Clara county lines to Route 280 in San Francisco). Incorporates former Route 5 from Saratoga Gap, Santa Clara County, to San Francisco.

Route 37—32 miles, from Route 17 near Nicasio, Marin County, to Interstate Route 80 north of Vallejo, Solano County. Incorporates former Route 48 from junction with Route 37 at Sears Point, Sonoma County, to junction with Interstate Route 80. (Novato to Nicasio not yet constructed.)

Route 38—59 miles, from Interstate Route 10 near Redlands, San Bernardino County, to Route 18 at west end of Big Bear Lake, San Bernardino County. Incorporates former portion of Route 18 from west end of Big Bear Lake to Big Bear City.

Route 41—188 miles, from Route 1 near Morro Bay, San Luis Obispo County, via Fresno to the south boundary of Yosemite National Park. Incorporates portion of U.S. 466 from near Morro Bay to Atascadero, San Luis Obispo County. (See Route 46.)

Route 46—119 miles, from Route 1 at Cambria, San Luis Obispo County, to Route 99 at Famosa north of Bakersfield. Incorporates portion of U.S. 466 from point near Shandon, San Luis Obispo County, to Famosa. (See Route 41.)

Route 58—240 miles, from Santa Margarita, San Luis Obispo County, via Bakersfield, to Interstate Route 15 near Barstow, San Bernardino County. Incorporates portion of U.S. 466 from point near Bakersfield to Barstow.

Route 69—44 miles, from junction with Route 198 (near Exeter), Tulare County, to Sequoia National Park (north of Badger). Replaces Route 65.

Route 70—182 miles, from Route 99 (about 4 miles southeast of Nicolaus), Sutter County, to Route 395 near Hallelujah Junction, Lassen County. Incorporates former Route 24 from near Sacramento to Marysville and U.S. 40 Alternate from Marysville to Hallelujah Junction.

Route 82 (El Camino Real)—57 miles, from Route 101 at Ford Road (south of San Jose), Santa Clara County, to San Francisco. Incorporates former portion of U.S. 101 from Ford Road to San Francisco.

Route 86—89 miles, from junction with Route 111 (east of Heber), Imperial County, to junction with Route 10 near Indio, Riverside County. In-

corporates former portion of U.S. 99 from near Heber to near Indio.

Route 91—63 miles, from Route 1 near Hermosa Beach, Los Angeles County, to Route 395 near Riverside, Riverside County. Incorporates former Route 14 from Hermosa Beach to Route 5, former portion U.S. 91 from near Route 5 to Route 395.

Route 111—129 miles, from Mexican border at Calexico, Imperial County, to Interstate Route 10 near Whitewater, Riverside County. Incorporates former portion of U.S. 99 from east of Heber, Imperial County, to Calexico, Imperial County.

Route 113—60 miles, from Route 12 northwest of Rio Vista, Solano County, to Route 99 south of Yuba City, Sutter County. Incorporates former U.S. 40 Alternate from Interstate Route 80 near Davis, Yolo County, to south of Yuba City.

Route 116—47 miles, from Route 1 near Jenner, Sonoma County, to Route 121 near Schellville, Sonoma County. Incorporates former portion of Route 12 from Jenner to Schellville.

Route 119—34 miles, from Route 33 in Taft, Kern County, to Route 99 at Greenfield, Kern County. Incorporates former portion of U.S. 399 from Taft to Greenfield.

Route 121—34 miles, from Route 37, Sonoma County, to Route 128 north of Napa, Napa County. Incorporates Route 37 from junction with Route 48 at Sears Point to junction with Route 128 north of Napa.

Route 138—113 miles, from Interstate Route 5 near Gorman, Los Angeles County, to Route 18 near Crestline, San Bernardino County. Incorporates former portion of Route 2 from its junction with Route 138 east of Wrightwood to junction with Route 18 near Crestline.

Route 154—32 miles, from Route 101 near Buellton, Santa Barbara County, via San Marcos Pass, to Route 101 near Santa Barbara. Incorporates former portion of Route 150 from Santa Ynez to Route 101 near Santa Barbara.

Route 160 (River Road)—61 miles, from Route 4 near Antioch, Contra Costa County, to Interstate Route 80

ILLUMINATED SIGNS WARN OF FOG, LOW VISIBILITY

Signs which can be illuminated to warn motorists to reduce their speed to variable maximums at times of limited visibility, such as fog, have been installed at a test site on the Elvas Freeway (U.S. 99E) in Sacramento.

Ultimately, six signs on this freeway segment between Arden Way and south of the American River Bridge will be used to carry out part of the intent of Senate Resolution No. 33 (1963 session).

In this resolution, the Highway Transportation Agency was asked to initiate a "study which will determine possible means of giving advance warning to drivers of motor vehicles of the need for greater alertness and caution when driving during periods of reduced visibility." A report of survey findings will be submitted to the Legislature early in 1965.

The signs, electrically powered and comparable to the familiar time and temperature signs, will be in effect whenever weather conditions warrant reduced speed limits. Traffic engineers from the State Division of Highways will operate the signs in cooperation with the California Highway Patrol,

near Sacramento. Incorporates former portion of Route 24 from Antioch to near Sacramento.

Route 175—38 miles, from Route 101 near Hopland, Mendocino County, to Route 29 near Middletown, Lake County. Incorporates former portion of Route 29 from Middletown, via Hobergs, to 5 miles south of Kelseyville.

Route 246—35 miles, from Surf, Santa Barbara County, to Route 154 near Santa Ynez, Santa Barbara County. Incorporates former portion of Route 154 from Surf to near Santa Ynez.

Route 299—307 miles, from Route 101 near Arcata, Humboldt County, to Nevada state line near Cedarville, Modoc County. Extends former U.S. 299 for 43 miles from Cedarville to the junction with Route 395 at Alturas, Modoc County.

and in turn survey their effectiveness in alerting the public to special hazards ahead.

The Senate resolution was enacted in an attempt to cope with accident statistics. Approximately 3 percent of automobile accidents in 1961 were attributed to conditions of reduced visibility. Moreover, 14 percent of 1961 accidents involving four or more cars happened under like conditions, and 1962 statistics showed that such accidents were increasing.

Variable speed signs are only one of the methods to be tested. Other devices and techniques being studied include increased patrol activity, concentrated public information dissemination, use of reflective wedge-shaped pavement markers, use of white shoulder stripings, and use of colored reflective shoulder and lane striping at on- and off-ramp locations.

State agencies involved in the study project are the Division of Highways, the California Highway Patrol, the Department of Motor Vehicles, and the Institute of Transportation and Traffic Engineering at the University of California's Richmond field office. The latter institution has made available their fog chamber for evaluating devices to be used in the study.

Hveem, Zube, Skog Win Emmons Award

Three Division of Highways engineers were recipients of the W. J. Emmons Award of the Association of Asphalt Paving Technologists.

They are F. N. Hveem, recently retired chief of the Materials and Research Department, Ernest Zube, supervising materials and research engineer, and John B. Skog, senior materials and research engineer.

The award was for the best paper presented at the 1963 meeting which was held in San Francisco.

Title of their paper was "Proposed New Tests and Specifications for Paving Grade Asphalts."

Zube and Skog also received honorable mention for a second paper presented at the same meeting.