

11710 E TELEGRAPH ROAD + SANTAFE SPRINGS, CA 90670-3679 + WWW. SANTAFESPRINGS.ORG + (562) 868-0511 + (562) 868-8112

# DEPARTMENT OF PUBLIC WORKS

VIA EMAIL: johnny.bhullar@dot.ca.gov

March 16, 2022

California Department of Transportation Division of Safety Programs 1120 N Street Sacramento, CA 95814

Attention: Gurinderpal (Johnny) Bhullar, P.E., T.E. Division of Safety Programs

Project: Request to Experiment – Improved Temporary Traffic Delineation

Dear Gurinderpal Bhullar:

In accordance with the 2014 CA Manual of Uniform Traffic Control Devices (MUTCD), the City of Santa Fe Springs is applying for a Request to experiment for the implementation of improved temporary traffic delineation for use in construction work zones.

Enclosed is the description of the proposal that further details the use of the traffic delineation approach we are proposing. We would like to request an opportunity to present our proposal with the California Traffic Control Device Committee (CTCDC).

Additionally, we are aware the initial proposal was presented to you and your team back in June of 2021 by DC Engineering Group. Your feedback from the discussion has been addressed.

Please review the enclosed information and let me know if you have any questions.

Very truly yours,

Noe Negrete Director of Public Works

NN/vjd

ANNETTE RODRIGUEZ, MAYOR & JOE ANGEL ZAMORA, MAYOR PRO TEM CITY COUNCIL JAY SARNO & JOHN M. MORA & JUANITA TRUJILLO CITY MANAGER RAYMOND R. CRUZ

# **Request to Experiment**

# Requesting Party – City of Santa Fe Springs, CA California Traffic Control Devices Committee (CTCDC)

The City of Santa Fe Springs is requesting permission to experiment with a traffic control system to improve the safe movement of travel in work zones. The current temporary traffic control devices lack in awareness and consistency from normal highway situations. We will explain and convey our proposed approach through the update of the temporary traffic control typical application as shown in <u>Attachment A</u> and further conveyed in <u>Attachment B</u>.

# As specified in the CA MUTCD Section 6B.01, paragraph 7.1A

"The basic safety principles governing the design of permanent roadways and road sides should also govern the design of TTC zones. The goal should be to route road users thru such zones using roadway geometrics, roadside features, and TTC devices as nearly as possible comparable to those of normal highway situations."

With many years in traffic engineering and traffic control implementation, we have encountered real world situations where a need to improve the current standards has been warranted. We have attached **Attachment A** which reflects the proposed improvements to a few of the current typical applications from the CA MUTCD. We have also attached **Attachment B** which further conveys the modifications proposed to improve the current traffic control devices to reflect normal highway conditions.

## Example

## Modified Typical Application – TA-105(CA)

The attached typical application in **Attachment A** has been modified to include the color-coding modifications that represent a system of temporary traffic control devices that is comparable to normal highway conditions. For example, cones, channelizing devices, or typical barricades originating from an existing left shoulder or double yellow line shall have **yellow** reflective bands/chevrons (day or night). Similarly, cones, channelizing devices, or typical barricades originating from a right shoulder or lane line shall have **white** reflective bands/chevrons (day or night). Lastly, cones, channelizing devices, or typical barricades within a road/lane closure shall have **red** reflecting bands/chevrons (day or night). It is our assessment through the interpretation of the CA MUTCD that temporary traffic control devices should reflect normal highway conditions as much as possible. Therefore, utilizing the proper color coding with temporary traffic control cones, channelizing devices, or typical barricades will more accurately depict the roadway conditions and improve the safe movement of travel through the work zones.

# Recommendation

We recommend to utilize our traffic control approach to study the benefits of the proposed improvements. The results of the experiment will be documented and gathered and supplied to the Caltrans team for evaluation.

Additionally, it is our assessment that these modifications are more in line with the normal roadway conditions and therefore, feel that they can be adopted with a standard change to the CA MUTCD without an experiment.

With roadway accidents and work zone fatalities on the rise nationally, as provided by FARS (Fatality Analysis Reporting System) and CRSS (Crash Reporting Sampling System) databases, we feel it is our responsibility to help mitigate this issue. We appreciate the opportunity to express our concerns and recommendations. We look forward to hearing from the team on a proposed path forward.

# Attachment "A"

### California MUTCD 2014 Edition

(FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

### Figure 6H-105 (CA). Lane Shift on Road With Low Traffic Volumes (TA-105 (CA))



# Attachment "B"

CHANNELIZING DEVICES INCLUDE CONES, TUBULAR MARKERS, CHANNELIZERS, PORTABLE DELINEATORS, VERTICAL PANELS, DRUMS, TYPE-I, TYPE-II, TYPE-III BARRICADES, AND LONGITUDINAL CHANNELIZING DEVICES.

WHEN IN USE TEMPORARY TRAFFIC CONTROL AND CHANNELIZING DEVICES SHALL HAVE RETROREFLECTIVE BANDS, SLEEVES, OR CHEVERONS AND SHALL CONFORM TO THAT OF THE PAVEMENT MARKINGS IT SUPPLEMENTS IN ITS DIRECTION OF TRAFFIC FLOW.

#### CURRENT STANDARDS



current standards when using 28" traffic cones at night must have 6" white retro-reflective collar and a 4" collar NEW



emulate roadway when channelizing from the left side of of yellow road marking NEW



use red<mark>and or lang</mark>d closed

## CURRENT STANDARDS WHITE FOR LEFT BANDS/CHEVERON CHANLIZATION

### California MUTCD 2014 Edition

(FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

Figure 6F-7. Channelizing Devices Retroreflective Retroreflective 18 inches MIN. Facing Bands Bands Retroreflective 2 inches traffic Bands 3 inches 2 inches to 6 inches 28 inches 31 MIN 3 inches 4 to 6 inches es MIN 36 inches MIN. Ni and/or freeway Day and low eed igh-speed roadway roadway (≤ 40 mpn (≥ 45 mph) DRUM **TUBULAR MARKERS** See Figure 6F-102(CA) Retroreflective 4 to 6 Bands inches MIN -8 to 12 inches 3 to 4 inches More than 1-6 inches 28 inches 36 inches MIN to 2 inches 36 inches 4 inches 18 inches MIN MAX 24 inches 45 MIN 36 inches MIN. Night and/or freeway Day and low-speed 12 inches MAX High-speed roadway roadway (≤ 40 mph) (≥ 45 mph) CONES VERTICAL PANEL 450 150 8 to 12 inches 8 to 12 inches 24 inches 36 36 MIN inches inches MIN MIN 24 inches MIN TYPE 1 BARRICADE \*\* TYPE 2 BARRICADE \*\* 24 inches 12 inches 5 ft 8 to 12 inches MIN 36 inches 8 inches MIN 4 ft MIN 45 TYPE 3 BARRICADE \*\* DIRECTION INDICATOR BARRICADE \*\*

\* Warning lights (optional)

\*\* Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces. Page 1107

## YELLOW FOR RIGHT BANDS/CHEVERON CHANILIZATION

### California MUTCD 2014 Edition

(FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

Figure 6F-7. Channelizing Devices Retroreflective Retroreflective 18 inches MIN Bands Facing Bands Retroreflective 2 inches 3 inches traffic Bands 2 inches o 6 inches 28 inches t 3 MIN 3 inches 4 to 6 inches hes MIN 36 inches MIN and/or freeway Day and low-speed Nic gh-speed roadway roadway (≤ 40 mp (≥ 45 mph) TUBULAR MARKERS DRUM See Figure 6F-102(CA) Retroreflective 4 to 6 Bands inches MIN -8 to-12 inches-3 to 4 inches More than 1-28 inches 6 inches 36 inches MIN. to 2 inches 4 inches 36 inches 18 inches MIN MAX 24 inches 45 MIN 36 inches MIN. Night and/or freeway Day and low-speed roadway (≤ 40 mph) High-speed roadway 12 inches MAX (≥ 45 mph) CONES VERTICAL PANEL 450 8 to 12 inches 8 to 12 inches 24 inches 36 36 MIN. inches inches MIN MIN. 24 inches MIN TYPE 1 BARRICADE \*\* TYPE 2 BARRICADE \*\* 24 45 nches inches 12 5 ft 8 to 12 inches 36 MIN inches MIN. 8 nches 4 ft MIN 45 TYPE 3 BARRICADE \*\* DIRECTION INDICATOR BARRICADE \*\*

\*\* Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.

## RED FOR RIGHT BANDS/CHEVERON ROAD/LANE CLOSED

### California MUTCD 2014 Edition

(FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

Figure 6F-7. Channelizing Devices Retroreflective Retroreflective 18 inches MIN. Facing Bands Bands Retroreflective traffic 2 inches Bands 3 inches 2 inches to 6 inches 28 inches 31 MIN 3 inches 4 to 6 inches MIN hes 36 inches MIN. and/or freeway Day and low-Ni beed roadway (≤ 40 mpr igh-speed roadway (≥ 45 mph) DRUM **TUBULAR MARKERS** See Figure 6F-102(CA) Retroreflective 4 to 6 Bands inches MIN -8 to 12 inches 3 to 4 inches 6 inches More than 1-28 inches 36 inches 2 inches MIN, to 36 inches 4 inches 18 inches MIN MAX 24 inches 45 MIN 36 inches MIN Night and/or freeway Day and low-speed 12 inches MAX High-speed roadway roadway (≤ 40 mph)  $(\geq 45 \text{ mph})$ CONES VERTICAL PANEL 45 45 8 to 12 inches 8 to 12 inches 24 inches 36 36 MIN inches inches MIN. MIN. 24 inches MIN TYPE 1 BARRICADE \*\* TYPE 2 BARRICADE \*\* 24 inches 2 inches 5 ft 8 to 12 inches 36 MIN inches MIN 8 inches 4 ft MIN 45 TYPE 3 BARRICADE \*\* DIRECTION INDICATOR BARRICADE \*\*

\* Warning lights (optional)

\*\* Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.