



CITY OF SAN MARCOS ENGINEERING DIVISION

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AN APPLICANT'S GUIDE TO PROCEDURES FOR:

TRAFFIC SIGNING & STRIPING NOTES (UPDATED SEPTEMBER 27, 2016)

GENERAL TRAFFIC NOTES: (These "General Traffic Notes" are not required if they are on the same sheet as the "IMPROVEMENT NOTES" as listed in the City's "Improvement Plan Check List" handout):

1. A traffic control plan, including the layout of construction warning and detour signs, shall be submitted to the Public Works Department for approval a minimum of (14) Calendar Days prior to the commencement of construction. Traffic control shall be implemented before any work is started.
2. Before excavating, the CONTRACTOR shall verify locations of underground facilities of the following utilities by contracting the Underground Service Alert at 1-800-227-2600:

AT&T
San Diego Gas & Electric
Vallecitos Water District
Cox Communications

TRAFFIC SIGNING NOTES:

1. Signing shall be the responsibility of the CONTRACTOR and shall be subject to City of San Marcos Public Works Department approval. All signs shall conform to the California Manual on Uniform Traffic Control Devices, latest edition
2. Sign posts:
 - a. shall be, Tubular break-away posts (Telspar or Unistrut), 1 3/4" galvanized steel or equal;
 - b. shall have seven feet (7') vertical clearance above finished grade for one sign mounting or six feet (6') for a two sign mounting;
 - c. shall have a maximum of two signs (with different meanings) on each side (maximum number of signs on both sides shall not exceed four).
 - d. shall be anchored a minimum of twenty-four inches (24") below finished grade in undisturbed soil and backfilled with native soil, decomposed granite, or sand.
 - e. located in the median, shall be set in an eight-inch diameter (8" ϕ) by twenty-four inch (24") (8" ϕ x 24") deep PVC sleeve and backfilled with native soil, decomposed granite, or sand to the top of the sleeve;
 - f. located in the sidewalk, a ten-inch diameter core (10" ϕ) shall be drilled. Backfill shall be four inches (4") of concrete above twenty inches (20") of native soil, decomposed granite or sand.

- g. shall be new (used posts are prohibited on new sign installations);
- h. shall be rejected if damaged, bent or splintered;
- i. locations shall be marked by CONTRACTOR and approved by the Public Works Director or his assignee prior to final placement.
- j. shall have a minimum of forty-eight inches (48") horizontal distance between post and back edge of sidewalk (ADA specification) for wheel chair access.
- k. shall be 2-7/8" aluminum posts for street name signs and STOP (R1-1) signs.
- l. shall be wrapped with duct tape around base of breakaway post below subgrade.

* Wood posts used for Class II or III barricades shall be painted white.

3. Signs:

- a. shall be aluminum and have reflectivity facing and message with an High Intensity design or better;
- b. shall have a minimum of twelve inches (12") horizontal clearance behind the curb face;
- c. thirty-six inches (36") wide shall be strapped on the back of the sign with sign strap hardware;
- d. larger than thirty-six inches (36") wide shall be set on two posts;
- e. shall be mounted on:
 - 1] new or existing street light standards shall use a 5/8-inch "band it" steel strapping with fasteners;
 - 2] aluminum posts shall use 2 7/8" post caps for single signs and 2 7/8" cross saddle for two signs;
- f. mounting on power/utility poles is prohibited.

4. Street name signs shall have 9-inch extruded aluminum blades, high intensity sheeting with 3M Blue Electrocute film, 6-inch Highway Gothic lettering with first letter in Capitals and the rest lower case, block address, and road designations.
5. Where an R4-7 sign and OM1-3 object marker sign are to be installed in a median width less than 42-inches, the R4-7 sign shall be mounted 7-feet vertically from the existing ground surface. The R4-7 sign shall be 18" x 24" and the OM1-3 object marker shall be 18" x 18". OM2-1H shall be installed behind OM1-3..
6. Where an R6-1 sign ("One Way") sign is to be installed in a median island, the R6-1 sign shall be mounted 18-inches vertically from the existing ground. If a landscaped planter is present and vegetation interferes with sign location, the R6-1 sign shall be mounted 4-feet vertically from the existing ground.
7. The CONTRACTOR shall notify the City of San Marcos' Public Works Department upon completion of signing.
8. Existing signs shall be salvaged and delivered to the Public Works Department located at 201 Mata Way.
9. STOP sign installation shall include the sign, post, stop bar, STOP legend and a minimum of 50' of double yellow centerline striping unless adjacent to median.
10. NO OUTLET signs shall be posted where there is no legal outlet when the street exceeds 800 feet or when the terminus of the roadway is not visible from the intersection.

11. Fluorescent Yellow Green (FYG) background colored signs shall be installed for all school area signs per the California Manual on Uniform Traffic Control Devices (MUTCD).

TRAFFIC STRIPING NOTES:

- 1.. All letter and word pavement marking stencils used within City limits shall generally conform to the Caltrans "Metric" specification, as provided by Hawkins Traffic Safety Supply.
2. All arrows, whether in turn lanes, bike lanes or otherwise, shall conform to the Caltrans, "2015 Standard Plan A24A" specification.
3. Symbols and Numerals: Symbols and numerals shall conform to Caltrans, "2015 Standard Plan A24C" specification. The City of San Marcos has designated the "Bike Lane Symbol with Person" (facing left to roadway) to be used in all bike lane applications. All other bike lane symbols shall be excluded. All bike lane symbols and speed limit legends shall be painted.
4. Striping alignment and layout, including "turkey-tracks," shall be the responsibility of the CONTRACTOR and is subject to the City of San Marcos Public Works Department approval prior to final installation.
5. Paint shall be applied under suitable weather conditions and per the paint manufacturers label recommendations for pavement and ambient temperature requirements. Paint shall not be applied if rain is forecasted within 24 hours.
6. Thinning of paint will not be allowed.
7. Section 84-3.02 "Materials" of the latest edition of the Caltrans Standard Specifications is amended to read as follows:

Paint for traffic stripes shall conform to the following Caltrans specifications:

Rapid Dry Water-borne, white and yellow 8010-42L-30 or 8010-61G-10 [low VOC (Volatile Organic Compound) and lead-based paints are prohibited].

Glass beads shall conform to Caltrans Standard Specification No. 8010-51J-22 (Type I - Moisture Proof).

Glass beads shall be applied when striping traffic lines or painting legends.

Information regarding traffic paint and glass beads may be obtained from the Caltrans Engineering Service Center, 5900 Folsum Blvd., Sacramento, CA 95819-4612; (916) 227-7000.

8. All striping shall include raised pavement markers (RPMs) per the appropriate California Manual on Uniform Traffic Control Devices details.
9. Raised pavement markers (RPMs) shall be ceramic or ABS (Acrylonitrile-Butadiene-Styrene) plastic. Approved RPM types are as follows:
 - a. Type A and AY ceramic - 4" ϕ (white or yellow);
 - b. 1 or 2-way reflective ABS - 4" x 4" square.

Minimum RPM thickness shall be 15 mils.

RPMs shall be affixed with machined applied hot bitumen or standard set epoxy (part A and B).

10. The CONTRACTOR shall remove all conflicting painted lines, markings and pavement legends by sand blasting within 24 hours of conflict. Grinding may be used if equipment and methodology is approved by the City. Sandblasting or grinding debris shall be removed as soon as possible but no later than before the end of each

work day. "Blacking out" of existing striping will not be allowed. Where traffic striping or pavement markings are to be removed by sandblasting or grinding, the pavement shall also be patched and slurry sealed (Type II Slurry) at the discretion of the City Inspector. The CONTRACTOR shall notify the City of San Marcos' Public Works Department upon completion of striping.

11. Two coats of paint shall be applied on new surfaces and one on existing surfaces.
12. Signalized intersections shall have marked pedestrian crosswalks. All crosswalks, limit lines, stop bars, pavement arrows, school legends, and pavement legends other than bicycle legends shall be installed with thermoplastic, unless otherwise noted on the plan.
13. All new or modified crosswalks shall be "Continental" style marked crosswalks with a limit bar setback of 4-feet minimum.
14. A minimum of 100 feet double yellow centerline shall be striped along all knuckles and horizontal curvatures with the radius of 100 feet or less. Red curb or "NO PARKING ANYTIME" signs shall be installed on the inside of the roadway curvature.
15. All CALTRANS Detail 40 and Detail 41 within the intersections shall be installed with thermoplastic, unless otherwise noted on the plans.
16. U-turns shall be restricted where less than 44 feet exists between the right lane line of the left turn lane and the face of curb for the opposing direction of travel for single left turn lanes, where less than 36 feet exists between the left edge of the inside left turn lane to the face of curb for the opposing direction of travel for dual turn lanes, or as required by the City Engineer.
17. Roundabout signage for one-lane, two-lane, and mini-roundabout types shall conform to Chapter 2B (Regulatory Signs, Barricades and Gates) of the 2014 CAMUTCD. Roundabout markings for one-lane, two-lane, and mini-roundabout types shall conform to Chapter 3C (Roundabout Markings) of the 2014 CAMUTCD.
18. If it is necessary or desirable to prohibit certain pedestrian movements at a traffic signal intersection, a pedestrian barrier shall be installed to prevent the pedestrian movements. The Contractor shall install a pedestrian barrier in conformance to the City of San Diego Pedestrian Barricade standard (SDE-103). If it not practical to install such a barrier, then the "NO PEDESTRIAN CROSSING (R9-3) signs shall be used.

Traffic Signing & Striping Notes

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