

# APPENDIX "A"

## TRAFFIC CONTROL PLANS

TRAFFIC CONTROL PLANS

REVISION	BY	APPROVED	DATE	SAN DIEGO REGIONAL STANDARD - APPENDIX "A"	DWG. NO.
				TRAFFIC CONTROL PLANS	TC

# TRAFFIC CONTROL PLANS

## GENERAL INFORMATION

The Traffic Control Plans depicted in this Appendix are intended to supplement Part 6 "Temporary Traffic Control" of the 2003 Manual on Uniform Traffic Control Devices (MUTCD) and 2003 MUTCD California Supplement in providing guidance and information on preparing traffic control plans. Other references may also provide useful information on traffic control procedures. It should be understood that implementation of traffic control plans must conform with the latest revisions of Part 6 of the 2003 MUTCD and 2003 MUTCD California Supplement.

Part 6 of the MUTCD Manual "Temporary Traffic Control" are published by the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans). These manuals in combination are issued to provide the basic standards for uniform types of warning signs, lights, and other devices to be placed upon any public roadway or street by a person engaged in performing work which interferes with or endangers the safe movement of traffic flow upon such highway or street, in accordance with sections 21367 and 21400 of the California Vehicle Code.

It is the responsibility of the Contractor or Organization performing work on, or adjacent to, a roadway to install and maintain such devices which are necessary to provide safe passage for the traveling public through the work area and for the safety of the workers. Before work begins, traffic control plans for handling traffic through a construction or maintenance project shall be approved by the engineer of the public agency or authority having jurisdiction over the roadway.

Typical plans for intersections that are controlled by a traffic signal or a multi-way stop are not identified in this Appendix. These instructions require special attention in the preparation of traffic control plans. The approving agency should be notified prior to the preparation of traffic control plans when the work is in or near these intersections.

Special attention is also needed on the traffic control plans when the work areas affect bike lanes, sidewalks, pedestrian access, and curved or narrow roadways. Notification of the approving agency is desirable prior to the preparation of the plan when bicycles and pedestrian routes are affected by the work.

Nothing contained in this Appendix shall prevent local jurisdictions from modifying, changing, or adopting new specifications deemed necessary. The text and typical drawings in this Appendix are not a legal standard. Criteria for position, location, and use of traffic control devices is furnished solely for the purpose of guidance and information to assist in the preparation of traffic control plans.

Revision	By	Approved	Date	APPENDIX "A"	
DRAWING	CRH		4/06	SAN DIEGO REGIONAL STANDARD	
ORIGINAL		<i>[Signature]</i>	4/27/06	TRAFFIC CONTROL PLANS	
				GENERAL INFORMATION	
				DRAWING NUMBER	TC-1

# TRAFFIC CONTROL PLANS

## TABLE OF CONTENTS

- TC-1 General Information
- TC-2 Table of Contents
- TC-3A Typical Construction Signs
- TC-3B Typical Construction Signs
- TC-3C Typical Construction Signs
- TC-3D Typical Construction Signs
- TC-4 Device Spacing Tables
- TC-5 Traffic Control Plan Cover Sheet
- TC-6 Side of the Road - Two Lane TC without Centerline
- TC-7 Side of the Road - Two Lane TC with Centerline
- TC-8 Center of Road - Two Lane TC
- TC-9 Side of Road - Two Lane TC with Flaggers
- TC-10 Side of Road - Multi-Lane TC with Centerline
- TC-11 Side of Road - Multi-Lane TC with Centerline
- TC-12 Center of Road - Multi-Lane TC with Centerline
- TC-13 Center of Road - Multi-Lane TC with Centerline
- TC-14 Side of Road - Multi-Lane TC with TWLTL
- TC-15 Center of Road - Multi-Lane TC with Centerline
- TC-16 Side of Road - Multi-Lane TC with TWLTL
- TC-17 Center of Road - Multi-Lane TC with TWLTL
- TC-18 Side of Road - Multi-Lane TC with TWLTL
- TC-19 Center of Road - Multi-Lane TC with TWLTL
- TC-20 Center of Road - Multi-Lane TC with Centerline
- TC-21 Side of Road - Multi-Lane TC with Raised Median
- TC-22 Center of Road - Multi-Lane TC with Raised Median
- TC-23 Side of Road - Intersection TC
- TC-24 Side of Road - Intersection TC
- TC-25 Center of Road - Intersection TC
- TC-26 Center of Road - Intersection TC
- TC-27 Center of Road - Intersection TC
- TC-28 Side of Road - Intersection TC
- TC-29 Center of Road - Intersection TC
- TC-30 Side of Road - Intersection TC
- TC-31 Center of Road - Intersection TC
- TC-32 Side of Road - Left Turn Intersection TC
- TC-33 Side of Road - Left Turn Intersection TC
- TC-34 Side of Road - Left Turn Intersection TC
- TC-35 Side of Road - Intersection TC
- TC-36 Side of Road - Right Turn Intersection TC
- TC-37 Side of Road - Right Turn Intersection TC
- TC-38 Side of Road - Right Turn Intersection TC
- TC-39 Side of Road - Right Turn Intersection TC
- TC-40 Side of Road - Bike Lane Closure
- TC-41 Side of Road - Typical Pedestrian Control Signs
- TC-42 Side of Road - Multi-Lane Roadway with Raised Medians
- TC-43 Work within Intersection - Right Lane / Left Lane
- TC-44 Typical Shoulder Closure - Multi-Lane Roadway with Raised Median

Revision	By	Approved	Date
DRAWING	CRH		4/06
ORIGINAL		<i>[Signature]</i>	4/27/06

APPENDIX "A"  
SAN DIEGO REGIONAL STANDARD

---

TRAFFIC CONTROL PLANS

GENERAL INFORMATION

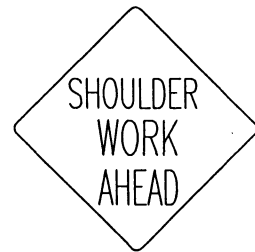
DRAWING NUMBER	TC-2
-------------------	------



W20-1



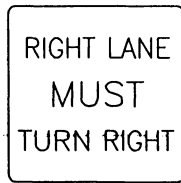
W20-4



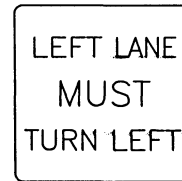
W21-5b



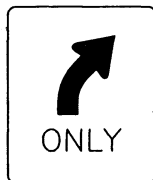
W3-4



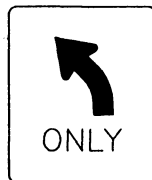
R3-7R



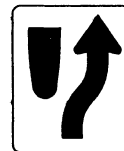
R3-7L



R3-5R



R3-5L



R4-7



R1-1



R3-1



R3-2



R3-4



R3-18

Revision	By	Approved	Date
DRAWING	CRH		4/06
ORIGINAL		<i>[Signature]</i>	4/27/06

APPENDIX "A"  
SAN DIEGO REGIONAL STANDARD

TYPICAL CONSTRUCTION SIGNS

DRAWING NUMBER TC-3A



W20-3



W20-5R



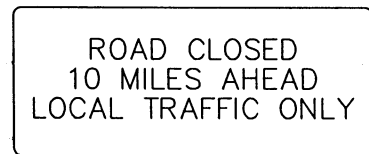
W20-5L



W20-2



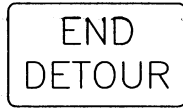
R11-2



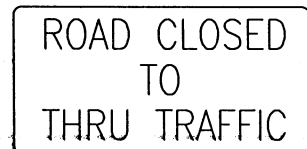
R11-3a



G20-2



M4-8a



R11-4



M4-10R



M4-10L

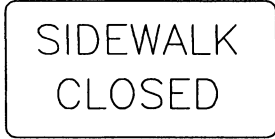


M4-8

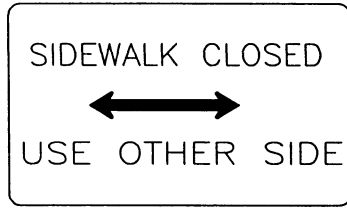
Revision	By	Approved	Date
DRAWING	CRH		4/06
ORIGINAL		<i>[Signature]</i>	4/27/06

APPENDIX "A"  
 SAN DIEGO REGIONAL STANDARD  
 TYPICAL CONSTRUCTION SIGNS

DRAWING NUMBER TC-3B



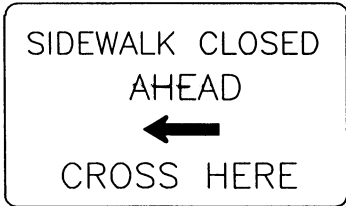
R9-9



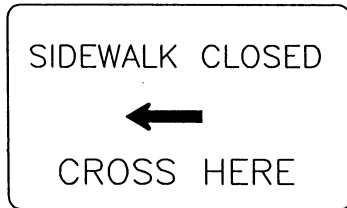
R9-10



R9-3a



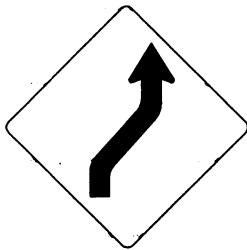
R9-11



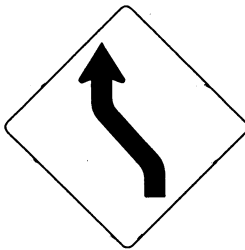
R9-11a



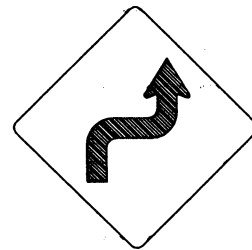
R4-7a



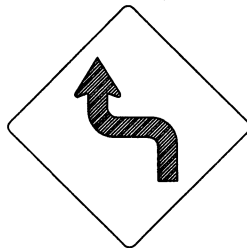
W1-4R



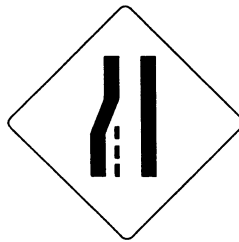
W1-4L



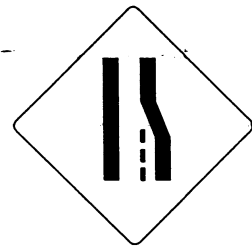
W1-3R



W1-3L



W4-2L



W4-2R

Revision	By	Approved	Date
DRAWING	CRH		4/06
ORIGINAL		<i>[Signature]</i>	4/27/06

APPENDIX "A"  
SAN DIEGO REGIONAL STANDARD

TYPICAL CONSTRUCTION SIGNS

DRAWING NUMBER TC-3C



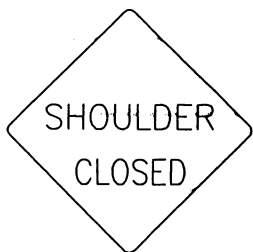
C12 (CA)



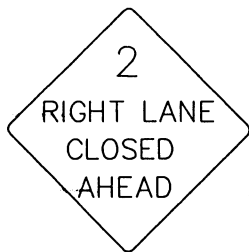
C27 (CA)



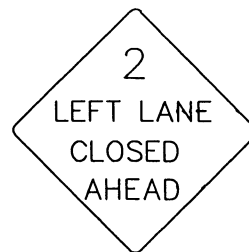
C30 (CA)



C30A (CA)



C20R (CA)



C20L (CA)



C9A (CA)



R26 (CA)



C28A (CA)



C28B (CA)

(FLAGGER PADDLES)

Revision	By	Approved	Date
DRAWING	CRH		4/06
ORIGINAL		<i>[Signature]</i>	4/27/06

APPENDIX "A"  
SAN DIEGO REGIONAL STANDARD

TYPICAL CONSTRUCTION SIGNS

DRAWING  
NUMBER

TC-3D

TABLE 1

RECOMMENDED SIGN SPACING FOR ADVANCE WARNING SIGN SERIES AND  
MINIMUM TAPER LENGTH

APPROACH SPEED (S) (MPH)	MINIMUM DISTANCE (FEET) BETWEEN SIGNS AND FROM LAST SIGN TO TAPER	MINIMUM TAPER LENGTHS (L) (FEET) FOR 12-FOOT LANE		
		L	1/2L	1/3L
25	150-200	125	65	45
30	200-300	180	90	60
35	250-400	245	125	85
40	350-500	320	160	110
45	500-750	540	270	180
50	500-1000	600	300	200
55+	500-1500	660	330	220

L for Merge Taper  
1/2L for Shift Taper  
1/3L for Shoulder Taper

TABLE 2

RECOMMENDED TAPER LENGTH AND MAXIMUM CHANNELIZER/CONE SPACING

APPROACH SPEED (S) (MPH)	BUFFER LENGTH (FEET)	MAX CONE SPACING		
		TAPER	TANGENT	CONFLICT(*)
25	55	25	50	10
30	85	30	60	15
35	120	35	70	15
40	170	40	80	20
45	220	45	90	20
50	280	50	100	25
55+	335+	55	100	25

(\*) Facing Opposing Traffic, Adjacent to Work Area  
or Conflicting with Existing Striping

NOTES:

Taper Formula

$L = S \times W$  for speeds greater than 40 mph

$L = \frac{-W \times S^2}{60}$  for speeds of 40 mph or less

Where:

L = Minimum length of taper (feet)

S = Approach Speed (mph) =  
Posted Speed Limit or  
off-peak 85th % speed  
prior to work starting  
or anticipated operating  
speed

W = Width of offset (feet)

DRAWING NUMBER	TC-4	APPENDIX "A" SAN DIEGO REGIONAL STANDARD DEVICE SPACING TABLES SIGN SPACING TABLE TAPER LENGTH AND CONE SPACING TABLE	Revision	By	Approved	Date
			DRAWING	CRH		4/06
			ORIGINAL		<i>[Signature]</i>	4/27/06



# TRAFFIC CONTROL PLAN/PERMIT & PERMIT EXTENSION

Public Utility or Company: \_\_\_\_\_ Project Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

24 Hour Local Phone: \_\_\_\_\_  
 Cellular: \_\_\_\_\_  
 Pager: \_\_\_\_\_  
 Fax: \_\_\_\_\_

Contractor/Subcontractor: \_\_\_\_\_ Project Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

24 Hour Local Phone: \_\_\_\_\_  
 Cellular: \_\_\_\_\_  
 Pager: \_\_\_\_\_  
 Fax: \_\_\_\_\_

Revision: \_\_\_\_\_  
 By: \_\_\_\_\_  
 Approved: \_\_\_\_\_  
 Date: 4/27/06

JOB LOCATION	BEGIN CROSS STREET	END CROSS STREET	PERMIT NO.
WORK HOURS FROM _____ A.M. TO _____ A.M. P.M. P.M.	SPEED LIMIT	WORK TO BE DONE	
START DATE	END DATE	1st WORK DATE EXTENSION FROM	TO NEW END DATE
		2nd WORK DATE EXTENSION FROM	TO NEW END DATE

## PERMIT WORK EXTENSIONS MUST BE OBTAINED BY THE END OF PERMIT DATE

**REQUIREMENTS: \***

1. The contractor is responsible for promptly restoring the road back to satisfactory condition which includes, but is not limited to, paving, striping, markings, signing, and loop detection.
2. The Agency reserves the right to observe these traffic control plans in operation and to make changes as field conditions warrant.
3. Trenches shall be back-filled or steel-plated during non-work hours. Steel plates shall have an asphaltic ramp on all edges, securely supported so they won't rock and a sign posted near the plates identifying the contractors name and 24 hour emergency telephone number.

**3. (cont.)**

- All dirt, dust, and debris shall be removed from the street at the end of each day and at the end of the job. The street shall be kept in a driveable condition at all times.
4. Any work that creates an undue safety risk or that creates severe congestion will be shut down by the agency.
5. A copy of all traffic requirements and traffic control plans issued by the Agency must be kept on the job site.
6. Approval of this plan does not constitute an official Permit. Contact the Agency for information on obtaining a permit.

7. All travel lanes will typically be a minimum of 12 feet wide, 14 feet if adjacent to bike lanes, unless otherwise specifically approved by the Agency.
8. Flashing arrow boards as required by the Agency.
9. Warning (W) series signs used in work zones shall be Black on an Orange background.
10. Cones and pylons shall have yellow reflectorized sleeves when placed along the centerline and white reflectorized sleeves along the outside shoulder.
11. If parking is allowed in the advance warning area, advance warning signs shall be mounted on high level devices.
12. All conflicting signs shall be covered

13. The contractor shall post tow-away/no parking signs twenty-four (24) hours in advance, with the day of week, date and work hours noted, and shall bag parking meters (where applicable).

The applicant is responsible for complete representation of the actual road conditions shown on this plan including, but not limited to, existing striping and marking, signing, sidewalks, and bike lanes.

APPLICANTS:  
 Name (print) \_\_\_\_\_  
 Address \_\_\_\_\_  
 Phone Number \_\_\_\_\_  
 Signature \_\_\_\_\_

Agent of:  
 Owner  
 Contractor  
 Sign/Barricade co.  
 Other \_\_\_\_\_

**THIS TRAFFIC CONTROL PLAN IS NOT VALID UNLESS AN APPLICABLE AGENCY PERMIT OR APPROVAL IS ATTACHED/AFFIXED.**

PERMIT APPROVED

By: \_\_\_\_\_  
 DATE: \_\_\_\_\_

\* SUBJECT TO LOCAL AGENCY REQUIREMENTS

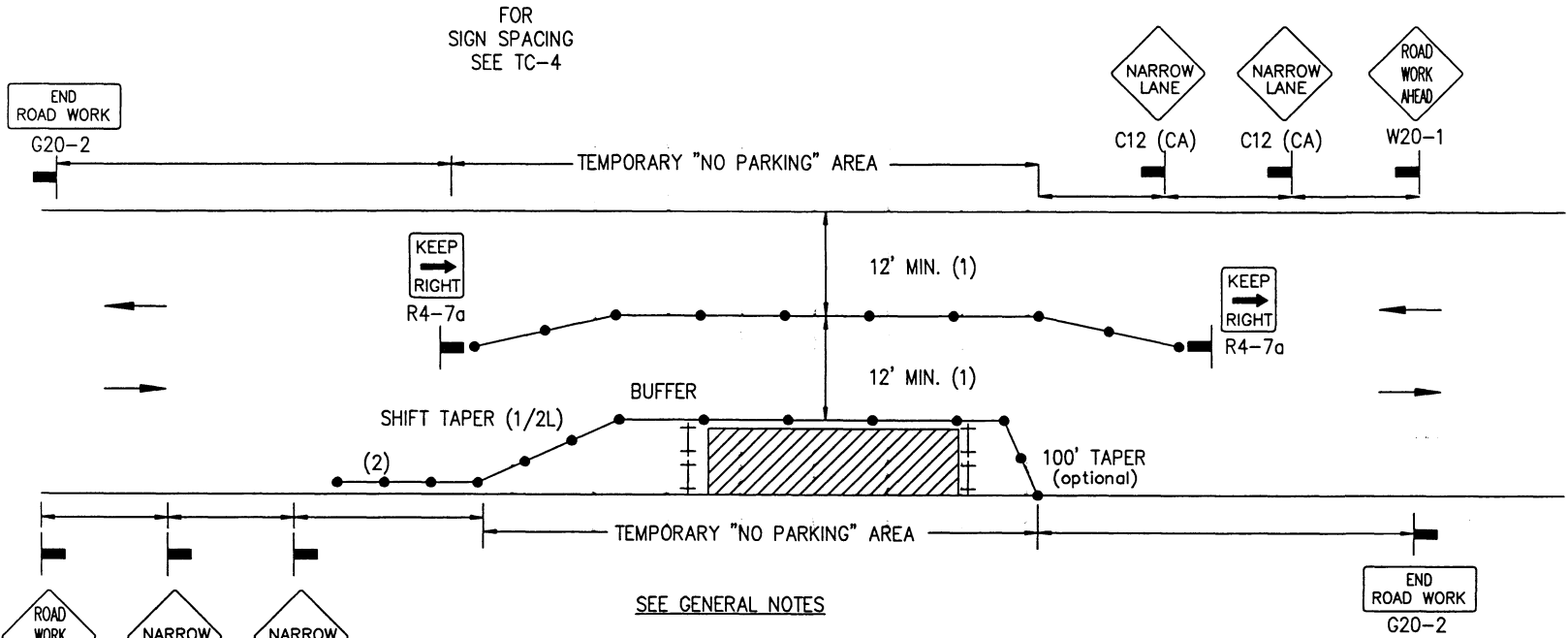
SEE ATTACHED SHEET(S) OR REFERENCED STANDARD DRAWING(S) THAT MAY BE APPLICABLE

APPENDIX "A"  
 SAN DIEGO REGIONAL STANDARD  
 TRAFFIC CONTROL PLAN  
 COVER SHEET

DRAWING NUMBER TC-5

DRAWING NUMBER TC-6

APPENDIX "A"  
 SAN DIEGO REGIONAL STANDARD  
 SIDE OF ROAD WORK AREA  
 TWO LANE TRAFFIC CONTROL WITHOUT CENTERLINE



SEE GENERAL NOTES

1. 14' MINIMUM ON ROADWAY WITH BIKE LANES
2. CONES OPTIONAL WHERE NO PARKING IS ALLOWED

LEGEND

- CONE
- ++ BARRICADE
- FLAGGER
- SIGN
- ▨ FLASHING ARROW SIGN
- ▨ WORK AREA
- TRAFFIC DIRECTION

AGENCY ENGINEER'S COMMENTS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

POSTED SPEED LIMIT	APPROACH SPEED	TAPER LENGTH	SPACING OF CONES	SIGN SPACING	BUFFER LENGTH

GENERAL NOTES

See TC-4 for sign spacing, spacing of cones, taper and buffer lengths  
 For hours of darkness, change cones to vertical barricades with steady burn lights.  
 This plan DOES NOT apply to signalized or multi-way stop intersections. Consult the local jurisdiction when preparing Traffic Control Plans near these intersections.  
 This plan MAY NOT apply when the work areas affect bike lanes, sidewalks, pedestrian access and curved or narrow roadways. Consult the approving agency when preparing the Traffic Control Plan or these areas.

Nothing contained on this drawing shall prevent local jurisdictions from modifying, changing or adopting new specifications deemed necessary. Criteria for position, location and use of Traffic Control Devices is solely for the purpose of guidance to assist in the set up of the Traffic Control Plans.

TC-5 is required for all Traffic Control Plans.

SUBMITTED BY:  
 NAME \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 PHONE \_\_\_\_\_

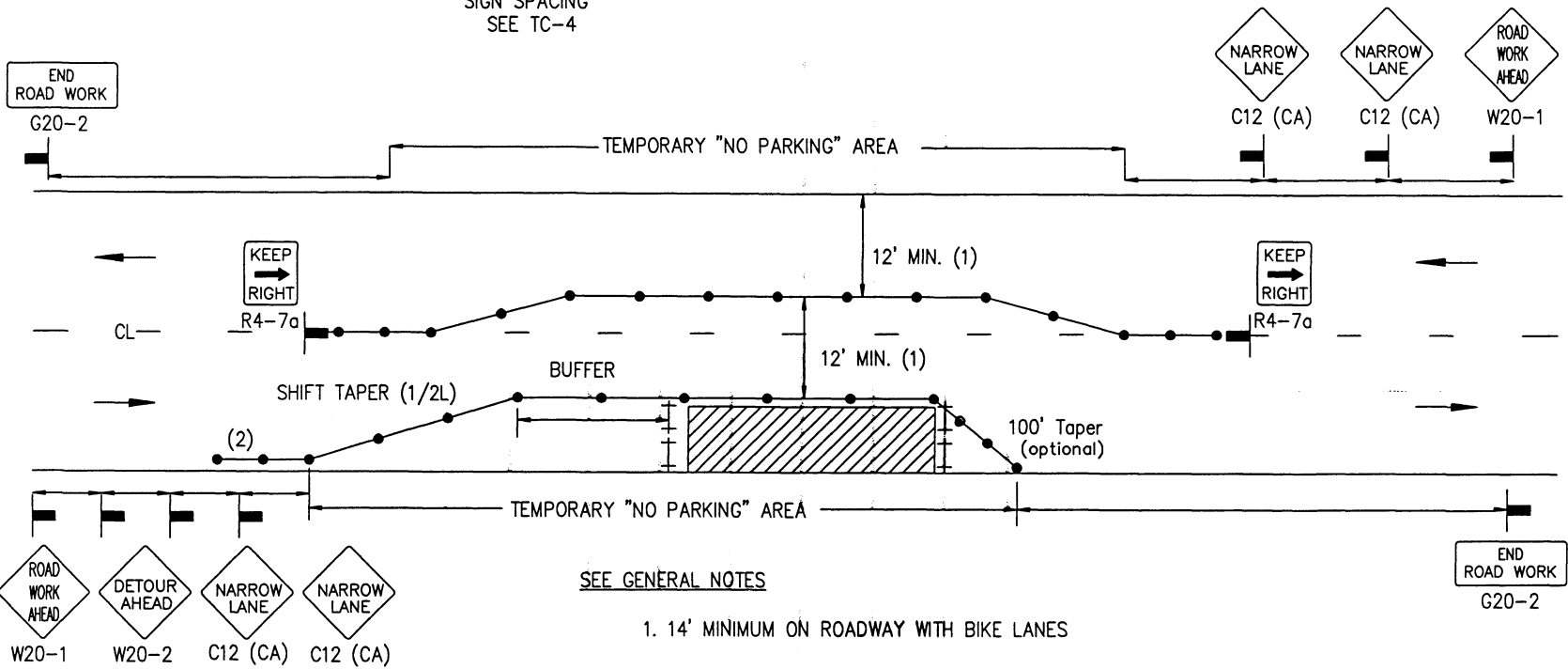
Revision	By	Approved	Date
ORIGINAL	CRH	<i>[Signature]</i>	4/27/06

AGENCY USE

APPLICANT USE

Revision	By	Approved	Date
DRAWING CRH			4/06
ORIGINAL			4/27/06

FOR  
SIGN SPACING  
SEE TC-4



SEE GENERAL NOTES

1. 14' MINIMUM ON ROADWAY WITH BIKE LANES
2. CONES OPTIONAL WHERE NO PARKING IS ALLOWED

LEGEND

- CONE    ++ BARRICADE    ■ FLAGGER    ▬ SIGN    ▨ FLASHING ARROW SIGN    ▨ WORK AREA    ⇄ TRAFFIC DIRECTION

AGENCY ENGINEER'S COMMENTS

---

---

---

---

---

---

---

---

SUBMITTED BY:

NAME \_\_\_\_\_  
 COMPANY \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 PHONE \_\_\_\_\_

POSTED SPEED LIMIT	APPROACH SPEED	TAPER LENGTH	SPACING OF CONES	SIGN SPACING	BUFFER LENGTH

GENERAL NOTES

See TC-4 for sign spacing, spacing of cones, and taper and buffer lengths  
 For hours of darkness, change cones to vertical barricades with steady burn lights.  
 This plan DOES NOT apply to signalized or multi-way stop intersections. Consult the local jurisdiction when preparing Traffic Control Plans near these intersections.

This plan MAY NOT apply when the work areas affect bike lanes, sidewalks, pedestrian access and curved or narrow roadways. Consult the approving agency when preparing the Traffic Control Plan or these areas.

Nothing contained on this drawing shall prevent local jurisdictions from modifying, changing or adopting new specifications deemed necessary. Criteria for position, location and use of Traffic Control Devices is solely for the purpose of guidance to assist in the set up of the Traffic Control Plans.

TC-5 is required for all Traffic Control Plans.

APPENDIX "A"  
 SAN DIEGO REGIONAL STANDARD  
 SIDE OF ROAD WORK AREA  
 TWO LANE TRAFFIC CONTROL WITH CENTERLINE

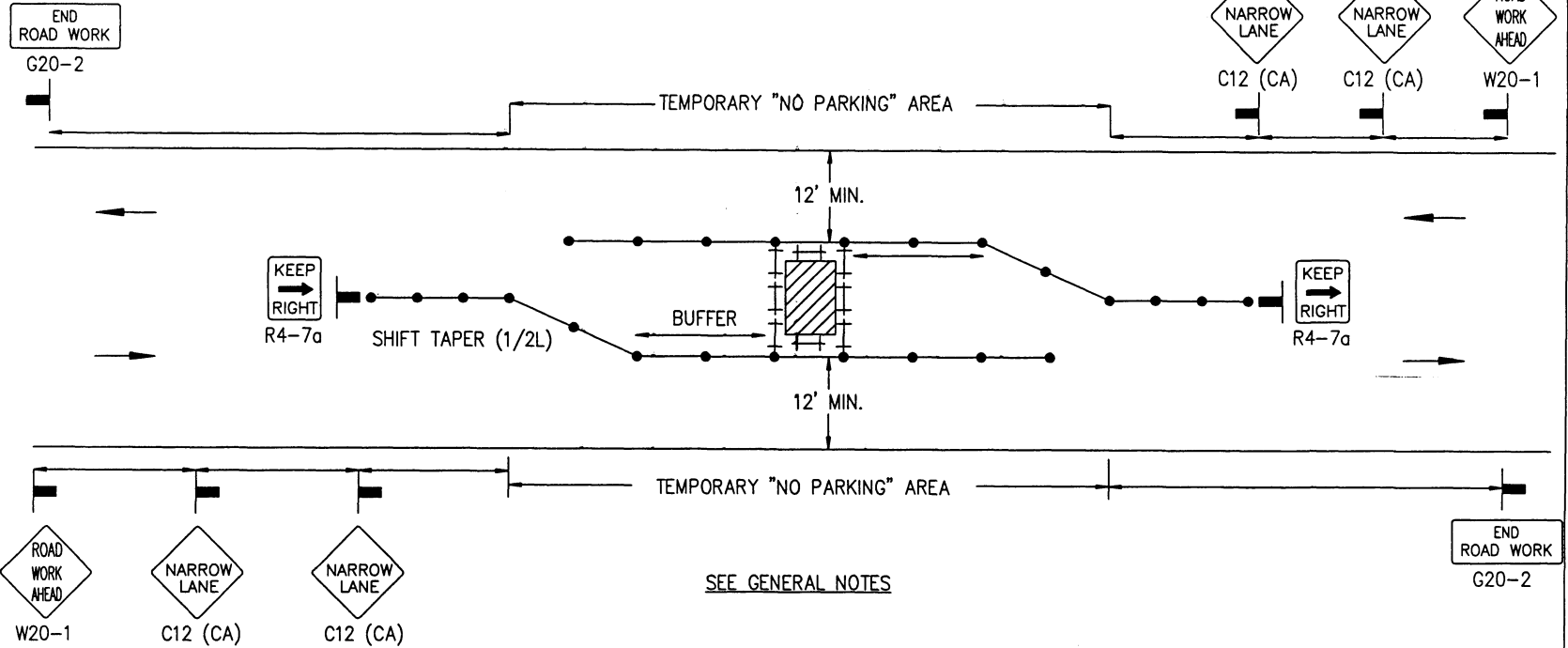
DRAWING NUMBER  
 TC-7

DRAWING NUMBER TC-8

CENTER OF ROAD WORK AREA  
TWO LANE TRAFFIC CONTROL

APPENDIX "A"  
SAN DIEGO REGIONAL STANDARD

FOR  
SIGN SPACING  
SEE TC-4



SEE GENERAL NOTES

LEGEND

- CONE    ++ BARRICADE    ■ FLAGGER    ▬ SIGN    ▨ FLASHING ARROW SIGN    ▨ WORK AREA    ⇄ TRAFFIC DIRECTION

AGENCY ENGINEER'S COMMENTS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

POSTED SPEED LIMIT	APPROACH SPEED	TAPER LENGTH	SPACING OF CONES	SIGN SPACING	BUFFER LENGTH

GENERAL NOTES

See TC-4 for sign spacing, spacing of cones, and taper and buffer lengths.  
For hours of darkness, change cones to vertical barricades with steady burn lights.  
This plan DOES NOT apply to signalized or multi-way stop intersections. Consult the local jurisdiction when preparing Traffic Control Plans near these intersections.  
This plan MAY NOT apply when the work areas affect bike lanes, sidewalks, pedestrian access and curved or narrow roadways. Consult the approving agency when preparing the Traffic Control Plan or these areas.  
Nothing contained on this drawing shall prevent local jurisdictions from modifying, changing or adopting new specifications deemed necessary. Criteria for position, location and use of Traffic Control Devices is solely for the purpose of guidance to assist in the set up of the Traffic Control Plans.  
TC-5 is required for all Traffic Control Plans.

SUBMITTED BY:

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
PHONE \_\_\_\_\_

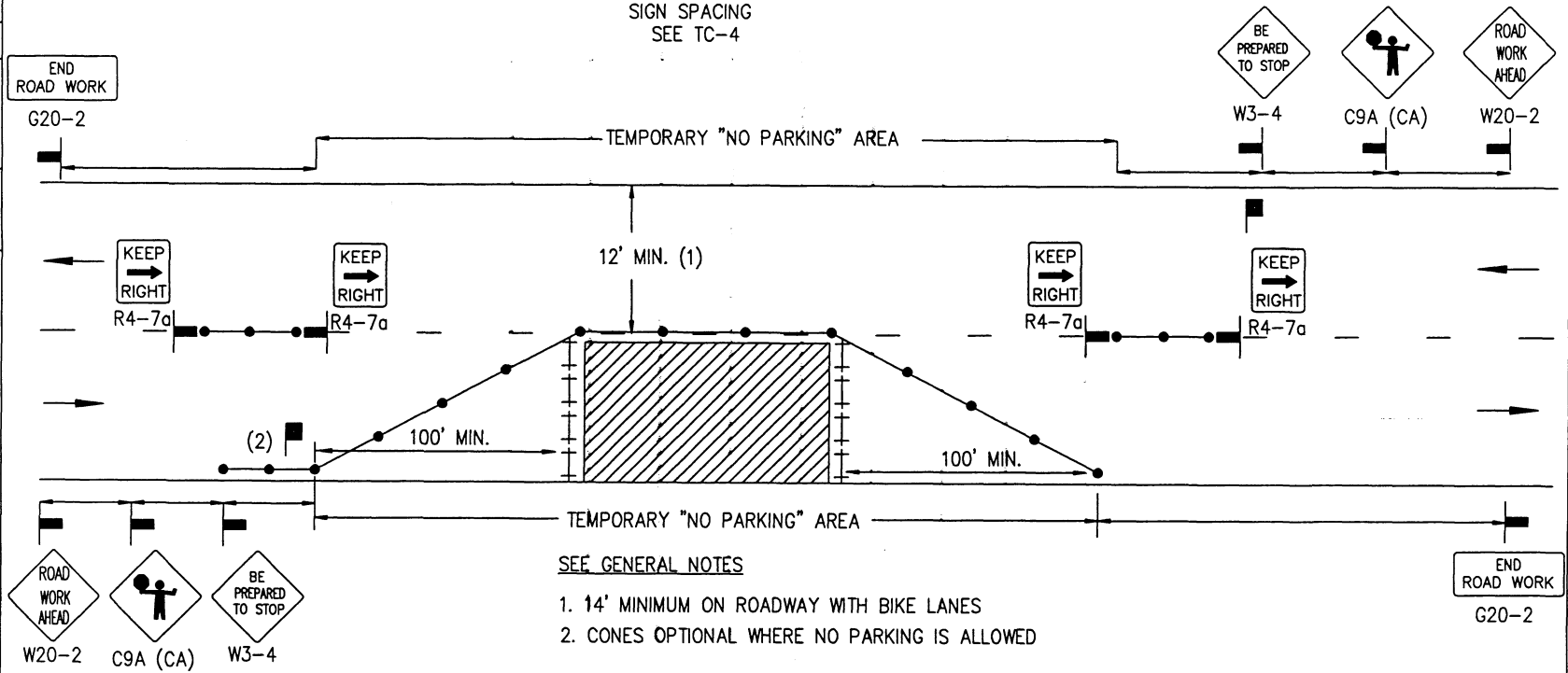
Revision	By	Approved	Date
ORIGINAL	CRH	<i>[Signature]</i>	4/27/06

AGENCY USE

APPLICANT USE

Revision	By	Approved	Date
DRAWING CRH			4/06
ORIGINAL			4/27/06

FOR  
SIGN SPACING  
SEE TC-4



SEE GENERAL NOTES

1. 14' MINIMUM ON ROADWAY WITH BIKE LANES
2. CONES OPTIONAL WHERE NO PARKING IS ALLOWED

EYE CONTACT MUST BE MAINTAINED BETWEEN FLAGGERS OR USE 2-WAY COMMUNICATION

**LEGEND**

- CONE
- ⊢ BARRICADE
- FLAGGER
- ▬ SIGN
- ⚡ FLASHING ARROW SIGN
- ▨ WORK AREA
- ↔ TRAFFIC DIRECTION

AGENCY ENGINEER'S COMMENTS

---

---

---

---

---

---

---

---

POSTED SPEED LIMIT	APPROACH SPEED	TAPER LENGTH	SPACING OF CONES	SIGN SPACING	BUFFER LENGTH

**GENERAL NOTES**

See TC-4 for sign spacing, spacing of cones, and taper and buffer lengths.  
For hours of darkness, change cones to vertical barricades with steady burn lights.  
This plan DOES NOT apply to signalized or multi-way stop intersections. Consult the local jurisdiction when preparing Traffic Control Plans near these intersections.  
This plan MAY NOT apply when the work areas affect bike lanes, sidewalks, pedestrian access and curved or narrow roadways. Consult the approving agency when preparing the Traffic Control Plan or these areas.  
Nothing contained on this drawing shall prevent local jurisdictions from modifying, changing or adopting new specifications deemed necessary. Criteria for position, location and use of Traffic Control Devices is solely for the purpose of guidance to assist in the set up of the Traffic Control Plans.  
TC-5 is required for all Traffic Control Plans.

SUBMITTED BY:

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

PHONE \_\_\_\_\_

AGENCY USE

APPLICANT USE

APPENDIX "A"  
SAN DIEGO REGIONAL STANDARD  
SIDE OF ROAD WORK AREA  
TWO LANE TRAFFIC CONTROL WITH FLAGGERS

DRAWING NUMBER  
TC-9