

CITY OF MERCED
Planning Department

TO: Bicycle Advisory Commission
FROM: Bill King, Principal Planner
DATE: April 26, 2016
SUBJECT: Review of Draft City of Merced Standard Bikeway-Related Designs

At the February 23, 2016, Bicycle Advisory Commission meeting, Principal Architect John Sagin presented a report about the draft City of Merced Standard Bikeway-Related Designs. The Commission requested additional time to review and comment, to which Staff granted, noting that Commission comments can be provided at or before the regularly scheduled April 26, 2016, Bicycle Advisory Commission meeting.

Attachment

- A. Current City of Merced Standard Bikeway-Related Designs

Shared Roadway (no bikeway designation) - Most bicycle travel in the State now occurs on streets and highways without bikeway designations.

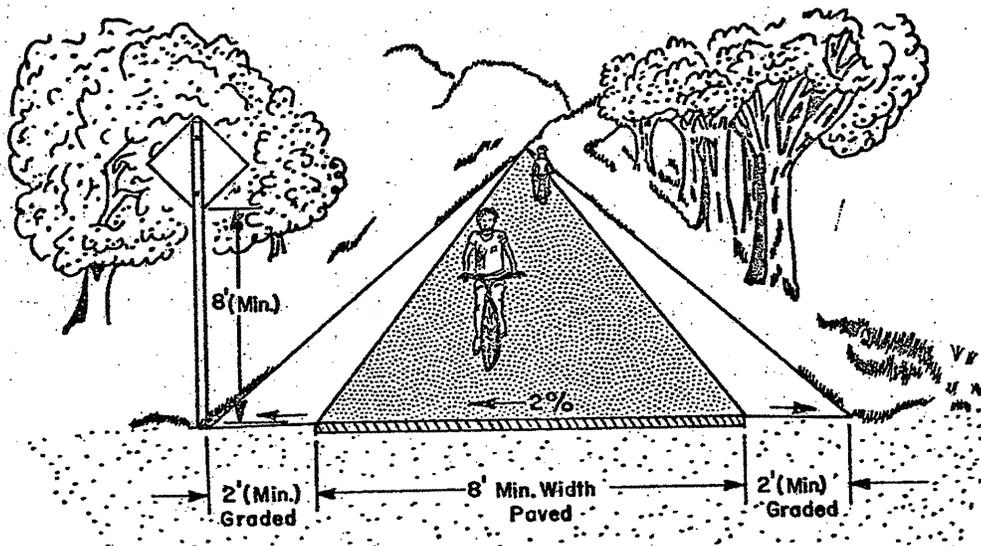
Class I Bikeway (bike path) - Bike paths used to serve corridors not served by streets and highways or where wide rights-of-way exist, permitting such facilities to be constructed away from the influence of parallel streets.

Class II Bikeway (bike lane) - Bike lanes are established along streets in corridors where there is significant bicycle demand, and where there are distinct needs that can be served by them.

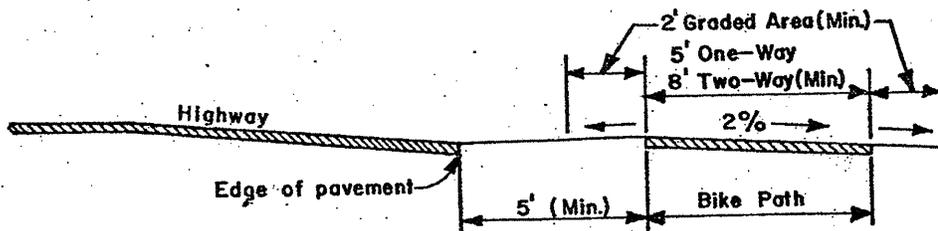
Class III Bikeway (bike route) - Bike routes are shared facilities which serve either to: (1) provide continuity to other bicycle facilities (usually Class II bikeways); or (2) to designate preferred routes through high-demand corridors.

All design data shall be based on CALTRANS "Planning & Design Criteria for Bikeways".

TWO-WAY BIKE PATH ON SEPARATED RIGHT-OF-WAY



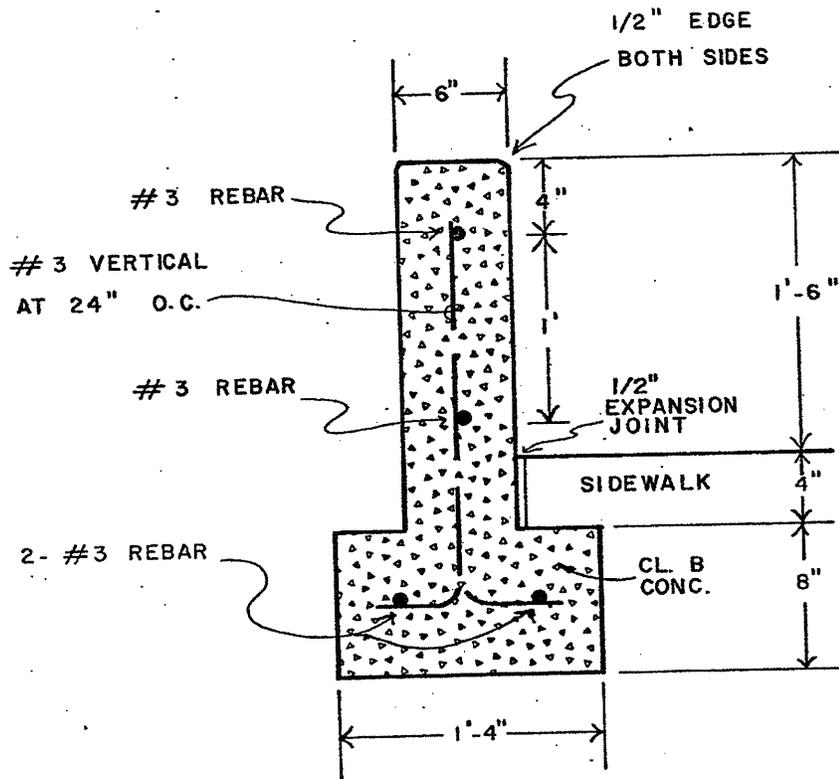
TYPICAL CROSS SECTION BIKE PATH ALONG HIGHWAY



ENGINEERING DEPARTMENT		CITY OF MERCED, CALIF	
Bikeway Designation and Details			BW-1 SHEET OF
DRAWN:	APPROVED BY:	DATE	
ENG.	<i>Heran M. Shoud</i>	<i>5/17/79</i>	
REVISED 4/21/80	CITY ENGINEER		

1. Minimum paved width for two-way bike path shall be 8 feet. Minimum paved width for one-way bike path shall be 5 feet. A minimum 2-foot wide graded area shall be provided adjacent to the pavement. A 3-foot graded area is recommended. The clear width on structures between railings shall be not less than 8 feet.
2. The vertical clearance to obstructions across the clear width of the path shall be a minimum of 8 feet.
3. A yellow centerline stripe may be used to separate opposing directions of travel: (1) where there is heavy use; (2) on curves with restricted sight distance; and, (3) where the path is unlighted and nighttime riding is expected.
4. Bike paths closer than 5 feet from the edge of a highway shall include a physical divider to prevent cars from encroaching onto the bikeway.
5. Installation of "speed bumps" or other similar surface obstructions, intended to cause bicyclists to slow down in advance of intersections, shall not be used.
6. The maximum grade rate required for bike paths is 5 percent.
7. A minimum pavement thickness of 2 inches of asphalt concrete over 4 inches of aggregate base is required. Type "A" or "B" asphalt concrete with 1/2-inch maximum aggregate and medium grading is required. Drive approach to bike paths shall be per D-1, width 8 feet and no lip at flow line.
8. The surface of a bike path shall have a 2 percent cross-slope.
9. It may be necessary to install barrier posts ("bollards") at entrances to bike paths to prevent motor vehicles from entering. Where more than one post is necessary, a 5-foot spacing should be used to permit passage of bicycle-towed trailers, adult tricycles and to assure adequate room for safe bicycle passage without dismounting. Barrier post installations should be designed so they are removable to permit entrance by emergency and service vehicles.
10. Uniform signs, markings and traffic control devices are mandatory, per Section 2376 of the Streets and Highway Code.
 - a. The R1 sign shall be used on a bike path where it intersects a highway, where conditions demand, in the standard position on the right of the bike path.
 - b. The R39 sign may be used where it intersects a highway, but where the STOP sign is not warranted.
 - c. The R44A sign may be used to identify a bike path and prohibit motor vehicles and motorized bicycles from entering the bike path.

ENGINEERING DEPARTMENT		CITY OF MERCED, CALIF	
CLASS I BIKEWAY REQUIREMENTS			BW-2
DRAWN:	APPROVED BY:	DATE	
ENG.	<i>Steven M. Stroud</i>	5-2-80	
REVISED	CITY ENGINEER		
			SHEET OF



VIBRATE CONCRETE
 CLASS 2 SURFACE FINISH

USE STD. SCG-4 FOR CONCRETE REQUIREMENTS

ENGINEERING DEPARTMENT

CITY OF MERCED, CALIF

Typical Wall - Cross Section (use with BW-3)

BW-4

DRAWN: J A M

APPROVED BY:

DATE

ENG.

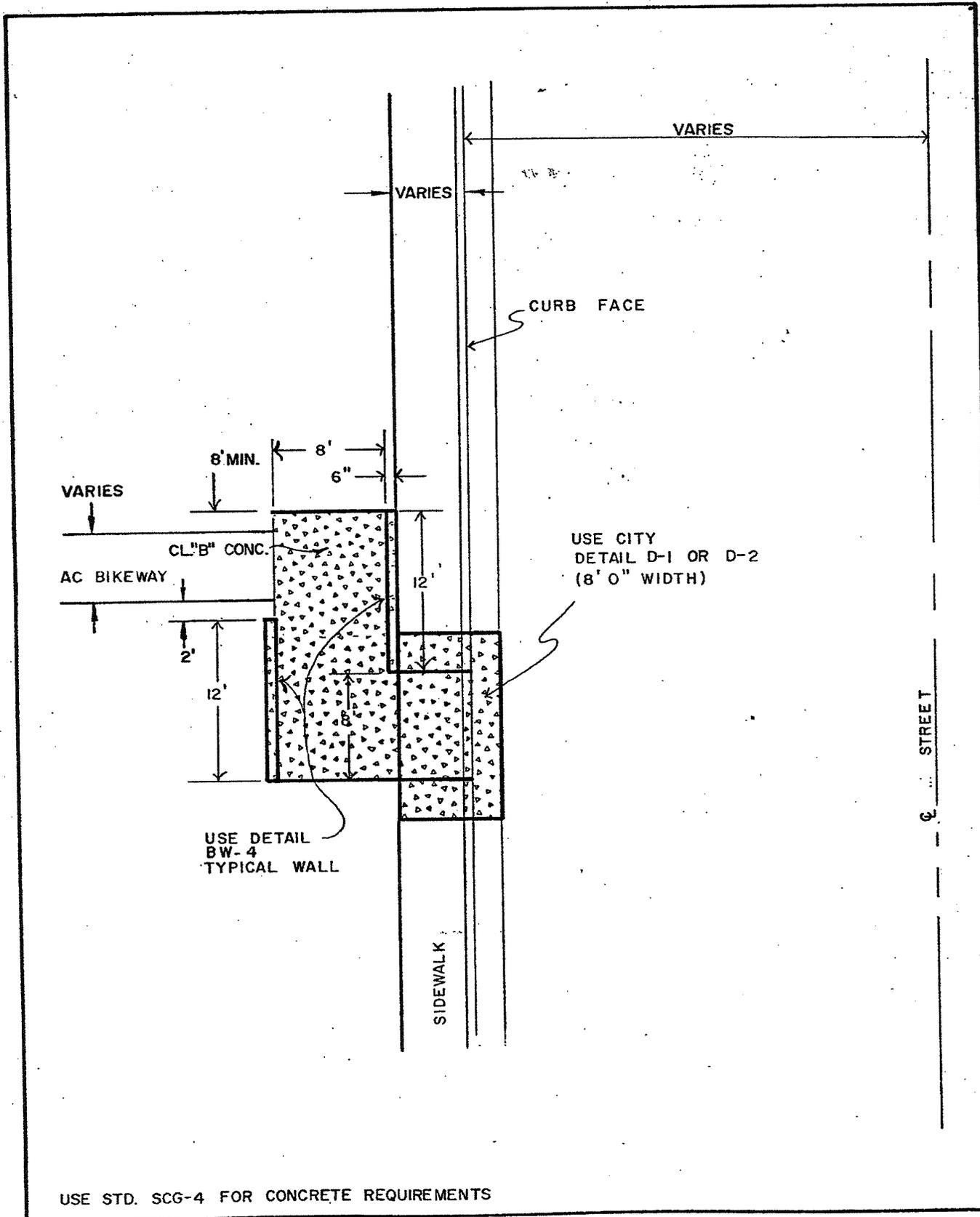
Steven M. Stroud
 CITY ENGINEER

6-2-80

REVISED 11/81

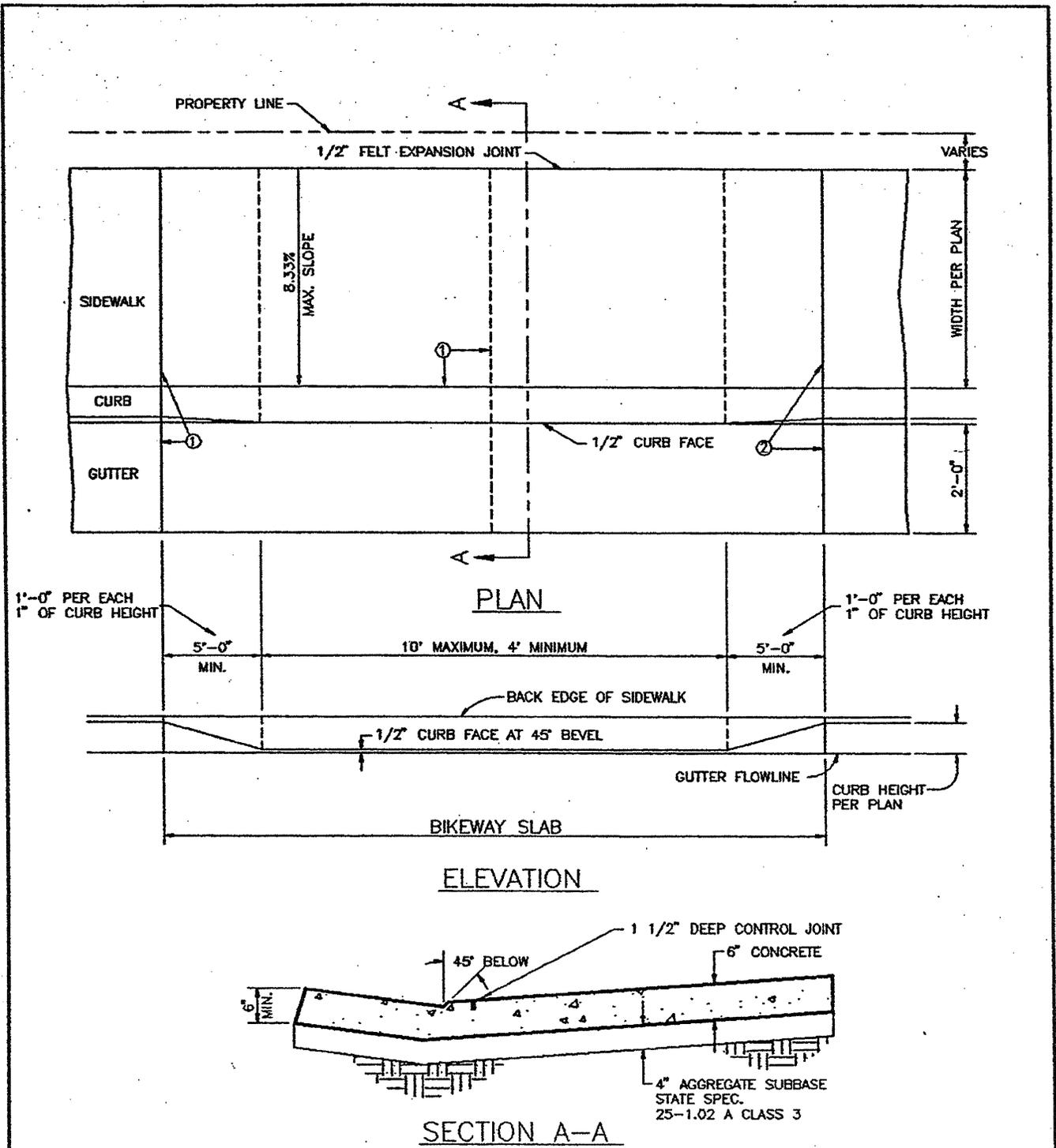
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OF



USE STD. SCG-4 FOR CONCRETE REQUIREMENTS

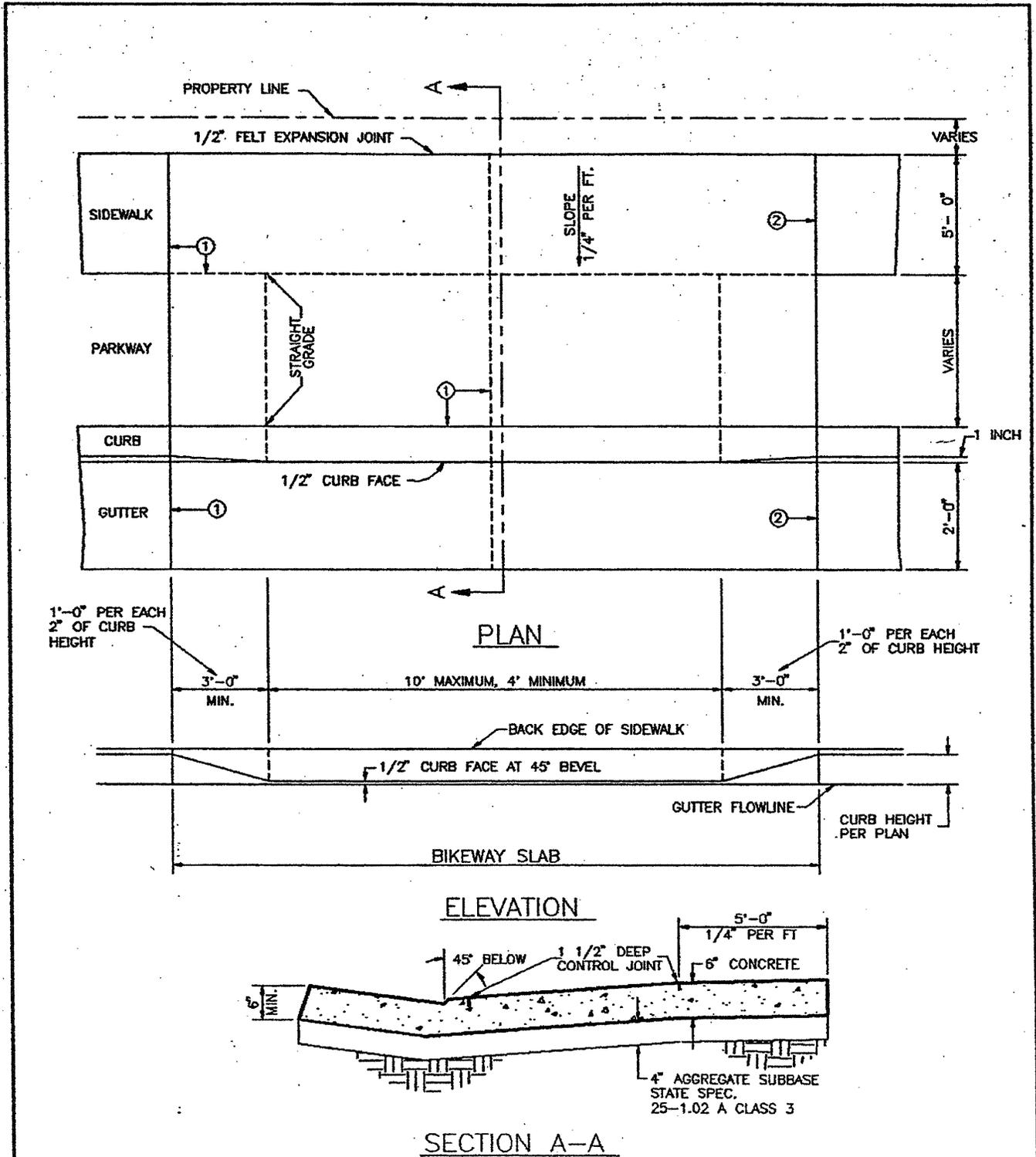
ENGINEERING DEPARTMENT		CITY OF MERCED, CALIF	
OFFSET BIKEWAY ACCESS			BW - 3
DRAWN: J A M ENG.	APPROVED BY: <i>Steve M. Stroud</i> CITY ENGINEER	DATE 6-2-80	
REVISED 11/81	SHEET OF		



NOTES:

- ① IN NEW CONSTRUCTION, PLACE 1 1/2" DEEP CONTROL JOINT EACH SIDE OF BIKE APPROACH AT BACK OF CURB LINE AND AT CENTERLINE OF APPROACH.
- ② IN EXISTING CURB, GUTTER, AND SIDEWALK, SAWCUT JOINT AT EACH SIDE OF BIKE APPROACH.

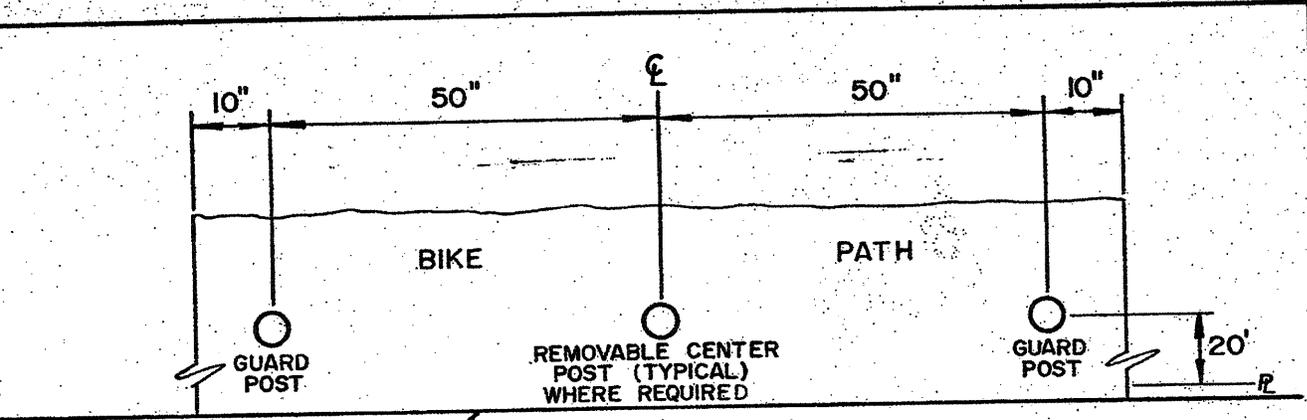
ENGINEERING DEPARTMENT		CITY OF MERCED, CA.	
BIKEWAY ACCESS APPROACH			BW-5
DRAWN: MP	APPROVED BY:	DATE	
ENG.	<i>Stuart M. Strauss</i>	12-12-94	
REVISED 9/94	CITY ENGINEER	SHEET OF	



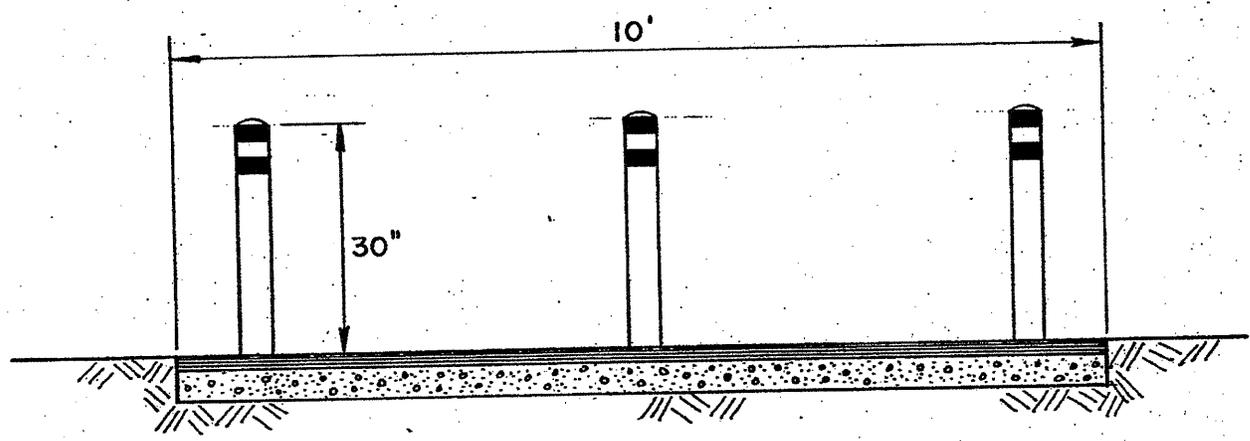
NOTES:

- ① IN NEW CONSTRUCTION, PLACE 1 1/2" DEEP CONTROL JOINT EACH SIDE OF BIKE APPROACH AT BACK OF CURB LINE AND AT CENTERLINE OF EACH APPROACH.
- ② IN EXISTING CURB, GUTTER AND SIDEWALK, SAWCUT JOINT AT EACH SIDE OF BIKE APPROACH.

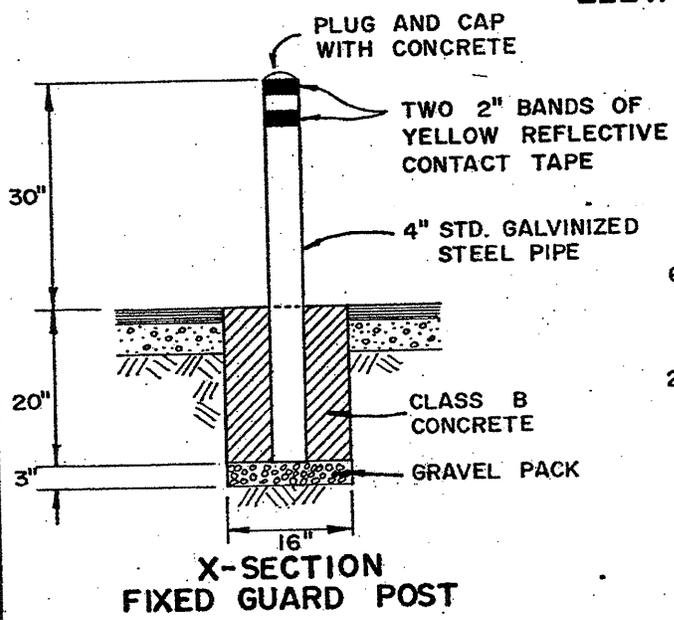
ENGINEERING DEPARTMENT		CITY OF MERCED, CA.	
BIKEWAY ACCESS APPROACH			BW-6
DRAWN: MP	APPROVED BY:	DATE	SHEET OF
ENG.	<i>Steve M. Howard</i>	12-12-94	
REVISED 9/94	CITY ENGINEER		



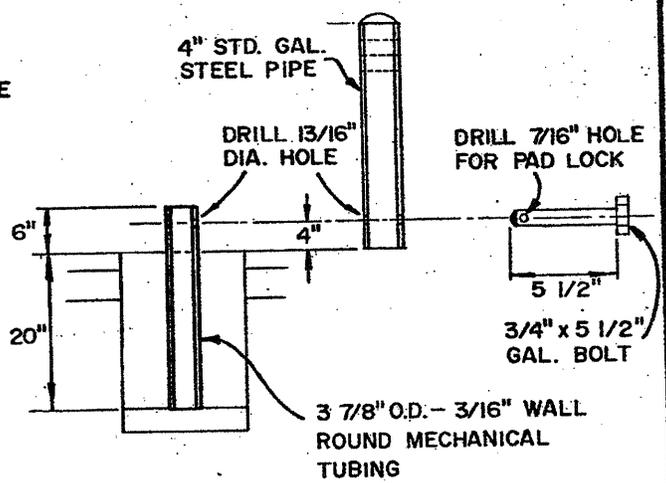
PLAN



ELEVATION

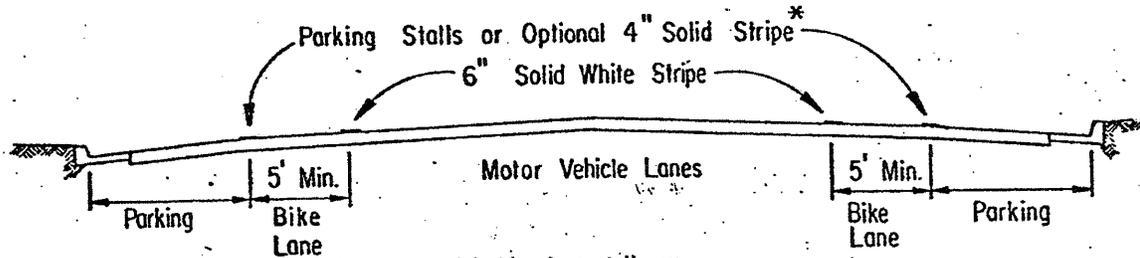


X-SECTION
FIXED GUARD POST



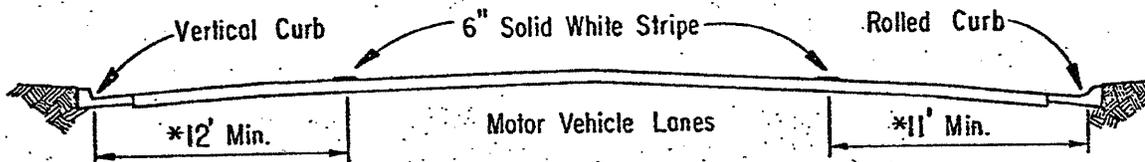
X-SECTION
REMOVABLE GUARD POST

ENGINEERING DEPARTMENT		CITY OF MERCED, CALIF	
BIKEWAY BARRIER			BW-7
DRAWN: <i>R.</i>	APPROVED BY: <i>Steve M. Stroud</i>	DATE <i>11-19-81</i>	
ENG.	CITY ENGINEER		
REVISED		SHEET	OF



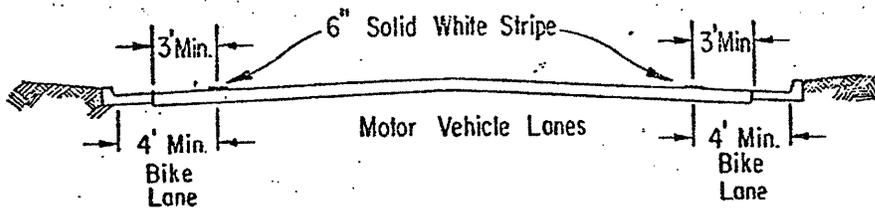
* The optional solid white stripe may be advisable where stalls are unnecessary (because parking is light) but there is concern that motorists may misconstrue the bike lane to be a traffic lane.

(A) STRIPED PARKING

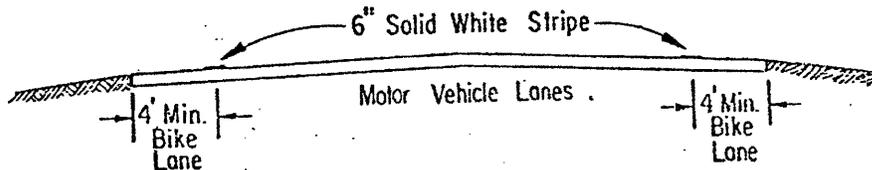


* 13' is recommended where there is substantial parking or turnover of parked cars is high (e.g. commercial areas).

(B) PARKING PERMITTED WITHOUT PARKING STRIPE OR STALL



(C) PARKING PROHIBITED



(D) TYPICAL ROADWAY IN OUTLYING AREAS

DEPARTMENT OF PUBLIC WORKS		CITY OF MERCED, CALIF	
TYPICAL BIKE LANE CROSS SECTIONS			
DRAWN:	APPROVED BY:	DATE	BW - 8
ENG.	<i>Harold M. Stroud</i>	6-4-82	
REVISED	CITY ENGINEER		
			SHEET OF