2023

County Road Standards

COUNTY ROAD STANDARDS

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EXPRESSWAYS

GENERAL PLAN HIGHWAYS

STREETS / FRONTAGE ROADS

MEDIANS

ROADWAY DESIGN

BRIDGES

RURAL ROADS

CURBS, GUTTERS AND DRIVEWAYS

DRAINAGE

COUNTY ROAD STANDARDS

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A

AB	AGGREGATE BASE
ABBR	ABBREVIATION
ABN	ABANDON
AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
ADA	AMERICANS WITH DISABILITIES ACT
AHD	AHEAD
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERE
APPROX	APPROXIMATE
ARHM	ASPHALT-RUBBER-HOT-MIX
AS	AGGREGATE SUBBASE
AST	ABOVE-GROUND STORAGE TANK
ATC	ADVANCED TRANSPORTATION CONTROLLER
AVE	AVENUE
@	AT

B

BC	BEGIN HORIZONTAL CURVE
BCR	BEGIN CURB RETURN
BEG	BEGIN
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BMP	BEST MANAGEMENT PRACTICE
BOS	BOARD OF SUPERVISORS
BOT	BOTTOM
BOW	BACK OF WALK
BR	BRIDGE
BRG	BEARING
BVC	BEGIN VERTICAL CURVE

C

C/G	CURB AND GUTTER
CAB	CRUSHED AGGREGATE BASE
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CBC	CATCH BASIN CLEANOUT
CBI	CATCH BASIN INSERT
CF	CURB FACE
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CLR	CLEAR, CLEARANCE
CM	CULVERT MARKER
CMD	CRUSHED MISCELLANEOUS BASE
CONC	CONCRETE
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS
C.R.	CORNER RADIUS
CS	CROSS SLOPE
CULV	CULVERT
CV	CHECK VALVE
CW	CROSS WALK
℄	CENTERLINE

D

DET	DETAIL, DETOUR
D.F.	DOUGLAS FIR
DG	DECOMPOSED GRANITE
DI	DRAINAGE INLET
DIA	DIAMETER
DIST	DISTANCE
DR	DRIVE
DWY	DRIVEWAY

E

EC	END HORIZONTAL CURVE
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EGL	ENERGY GRADE LINE
EIR	ENVIRONMENTAL IMPACT RECORD
EL	ELEVATION
ELEV	ELEVATION
E/O	EAST OF
EP	EDGE OF PAVEMENT
EQUIV	EQUIVALENT
ES	EDGE OF PAVED SHOULDER
ETC	ETCETERA
ETW	EDGE OF TRAVELED WAY
EVC	END OF VERTICAL CURVE
EXIST, (E)	EXISTING
EXP	EXPANSION, EXPIRATION
EXPY	EXPRESSWAY

F

FEBT	FACING EASTBOUND TRAFFIC
FDY	FOUNDRY
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FNBT	FACING NORTHBOUND TRAFFIC
FS	FINISHED SURFACE
FSBT	FACING SOUTHBOUND TRAFFIC
FT	FEET
FTCD	FULL TRASH CAPTURE DEVICE
FWBT	FACING WESTBOUND TRAFFIC
FW	FACE OF WALL
FWY	FREEWAY

G

GA	GAUGE
GALV	GALVANIZED
GB	GRADE BREAK
GM	GAS METER
GR	GRADE
GS	GRADED SHOULDER
GTR	GUTTER

ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 3)

H

HGL	HYDRAULIC GRADE LINE
HMA	HOT MIX ASPHALT
HORIZ	HORIZONTAL
HPG	HIGH PRESSURE GAS
HW	HEADWALL
HWY	HIGHWAY

I

ID	INSIDE DIAMETER / IDENTIFICATION
IN	INCH
INV	INVERT
IP	IRON PIPE
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN

J

JS	JUNCTION STRUCTURE
JT	JOINT

L

L	LENGTH
LBS	POUNDS
LC	LOWER CASE
LF	LINEAR FOOT
LN	LANE
LOC	LOCATION
LOL	LAYOUT LINE
LONG	LONGITUDE
LONGIT	LONGITUDINAL
LP	LAMP POST
LS	LANSCAPING, LUMP SUM
LT	LEFT
LTT	LEFT TURN

M

MA	MAST ARM
MAINT	MAINTENANCE
MAX	MAXIMUM
MBGR	METAL BEAM GUARD RAILING
MED	MEDIAN
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILE MARKER
MOD	MODIFIED, MODIFY
MPH	MILES PER HOUR
MT	MOUNTAIN, MOUNT

N

N	NEUTRAL
NB	NORTHBOUND
No.	NUMBER
NOM	NOMINAL
N/O	NORTH OF
NTS	NOT TO SCALE

O

OC	OVERCROSSING, ON CENTER
OD	OUTSIDE DIAMTER
OG	ORIGINAL GROUND
OH	OVERHEAD

P

PB	PULL BOX
PEC	PHOTO ELECTRIC CELL
PED	PEDESTRIAN
PEU	PHOTO ELECTRIC UNIT
PD	PRIVATE DRAIN
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
PCC	PORTLAND CEMENT CONCRETE
POC	POINT OF HORIZONTAL CURVE, PEDESTRIAN OVERCROSSING
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PVMT	PAVEMENT

Q

QTY	QUANTITY

R

R	RADIUS
RC	REVERSE CURVE
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REAS	RUBBERIZED EMULSION ASPHAULT SLURRY
REINF	REINFORCEMENT
REL, RELOC	RELOCATE
REQ	REQUIRED
RET	RETAINING
REV	REVISED, REVISION
RPM	RAISED PAVEMENT MARKER
RR	RAILROAD
RS	RAMP SLOPE
RT	RIGHT
RTT	RIGHT TURN
RTE	ROUTE
RV	RECREATIONAL VEHICLES
RW	RETAINING WALL
R/W	RIGHT OF WAY

ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 3)

S

S	SOUTH
SALV	SALVAGE
SB	SOUTHBOUND
SCH, SCHED	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SEG	SUPER ENGINEERING GRADE
SEP	SEPARATION
SG	SUBGRADE
SHLD	SHOULDER
SHT	SHEET
S	STATION LINE
SGS	STREET & GUTTER SLOPE
SO	SOUTH OF
SPEC	SPECIFICATION
SR	STATE ROUTE
ST	STREET
STA	STATION
STD	STANDARD
STR	STRUCTURE, STRAIGHT
SURF	SURFACING
SW	SIDEWALK, SOUND WALL

T

TC	TOP OF CURB
TD	TOP OF DIKE
TEL	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRADE
TOT	TOTAL
TRANS	TRANSITION
TS	TRAFFIC SIGNAL, TRANSITION SLOPE
TV	TELEVISION
TYP	TYPICAL

U

UC	UNDERCROSSING, UPPER CASE
UD	UNDERDRAIN

V

VAR	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VOL	VOLUME

W

W	WEST
W/	WITH
WA	WIDTH A
WB	WESTBOUND
WHT	WHITE
W/O	WEST OF
WV	WATER VALVE
WW	WINGWALL

X

X SEC	CROSS SECTION
X-WALK	CROSSWALK
XING	CROSSING

Y

YR	YEAR
YRS	YEARS

MISCELLANEOUS

2:1	2 HORIZONTAL TO 1 VERTICAL

ACRONYMS AND ABBREVIATIONS (SHEET 3 OF 3)

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

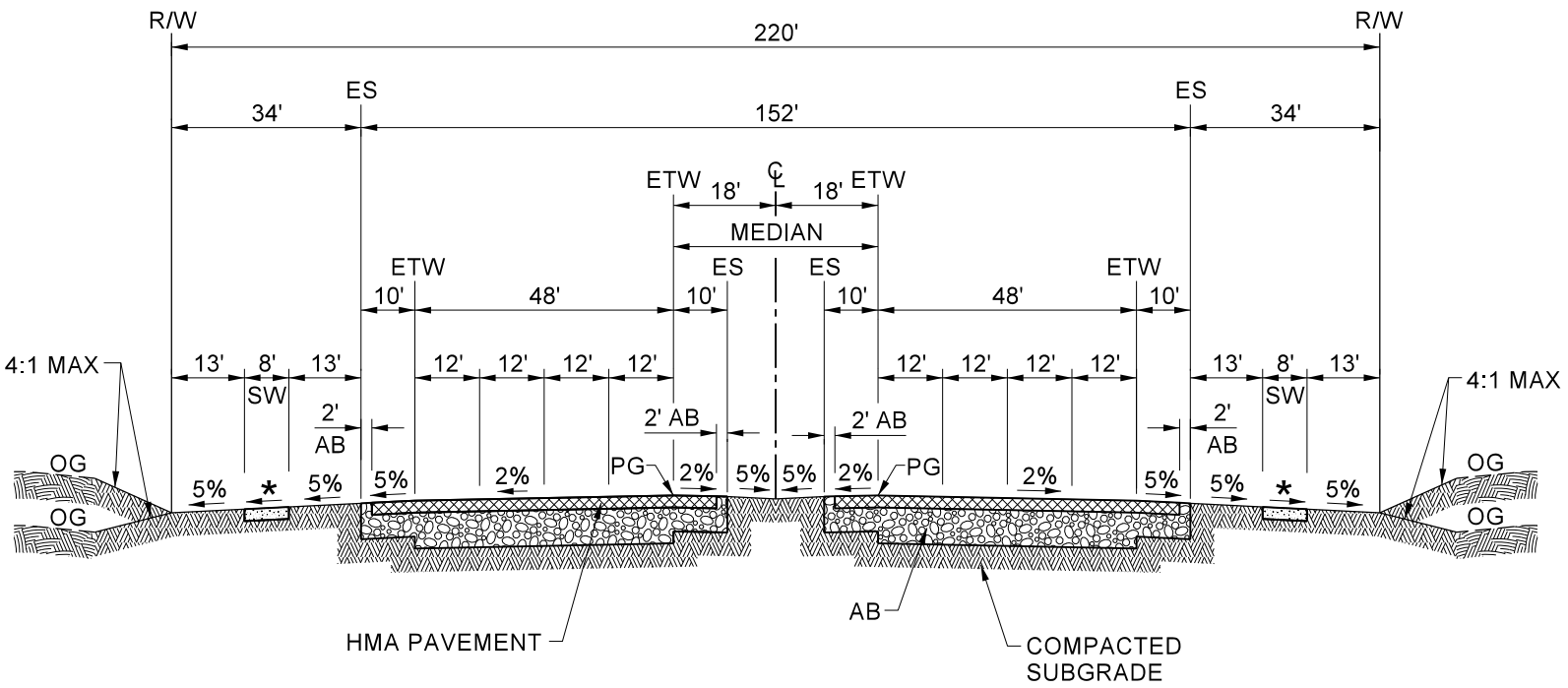
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



* CROSS SLOPE OF SIDEWALK SHALL BE 1.5%
(2.00% MAX AS-BUILT)

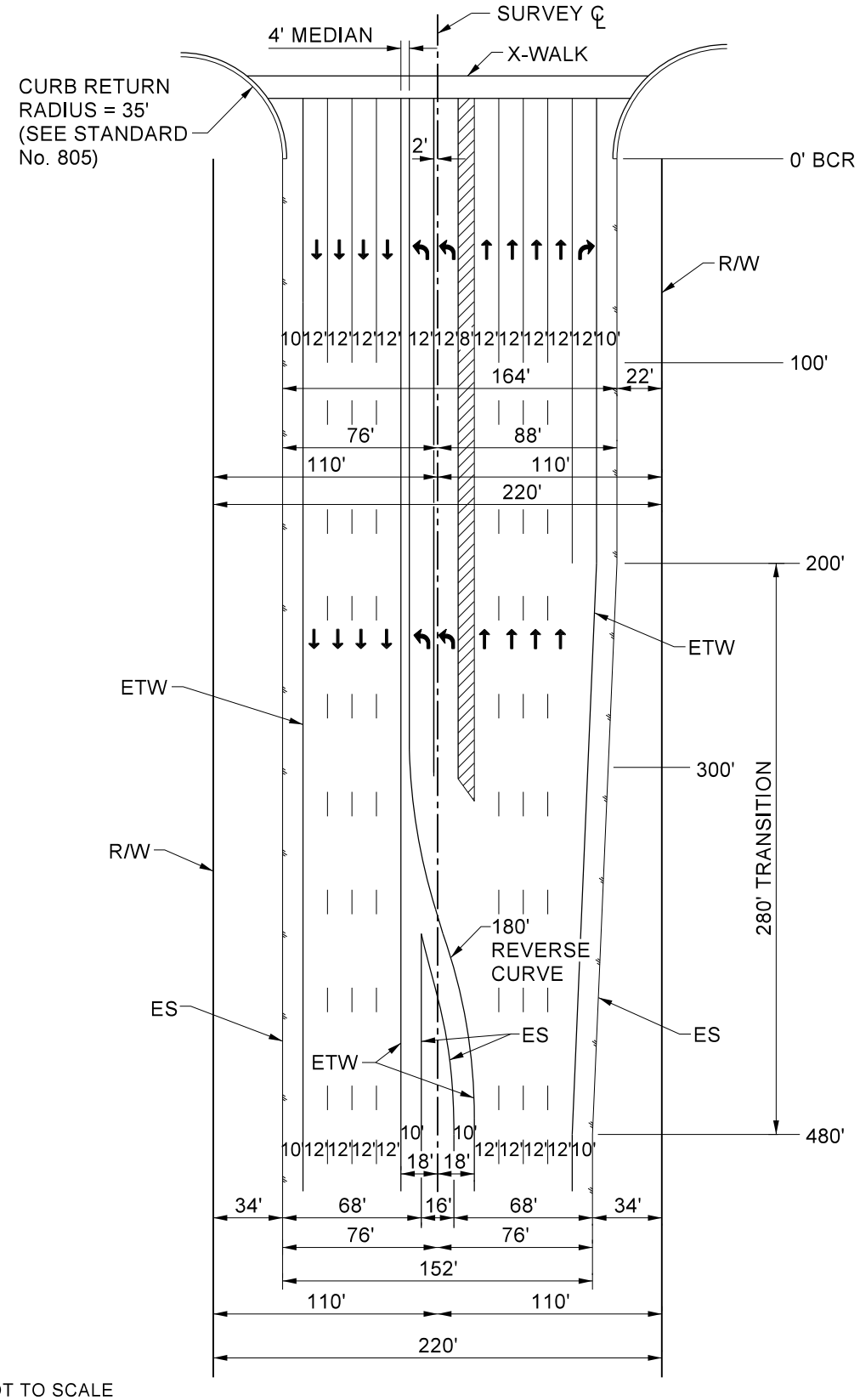
NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. IMPROVEMENTS TO STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS AND POLICIES. RIGHT OF WAY MAY VARY PER THE REQUIREMENTS OF CALTRANS POLICY.
4. SIDEWALKS SHALL BE IMPROVED AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION.
5. SEE SHEET 2 OF 2 FOR INTERSECTION CONFIGURATION AND TRANSITION.

COUNTY OF RIVERSIDE

8-LANE EXPRESSWAY
152' IMPROVEMENT
(220' R/W)

STANDARD No. 81 (1 OF 2)



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Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

8-LANE EXPRESSWAY
152' IMPROVEMENT
(220' R/W)

STANDARD No. 81 (2 OF 2)

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5%
(2.00% MAX AS-BUILT)

NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. SEE STANDARD No. 113 FOR LANDSCAPED MEDIAN REQUIREMENTS, INCLUDING MEDIAN CURB.
4. IMPROVEMENTS TO STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS AND POLICIES. RIGHT OF WAY MAY VARY PER THE REQUIREMENTS OF CALTRANS POLICY.
5. SEE SHEET 2 OF 2 FOR INTERSECTION CONFIGURATION AND TRANSITION.

NOT TO SCALE

NOTE: THIS WAS NUMBERED STANDARD No. 86 PRIOR TO 2023

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

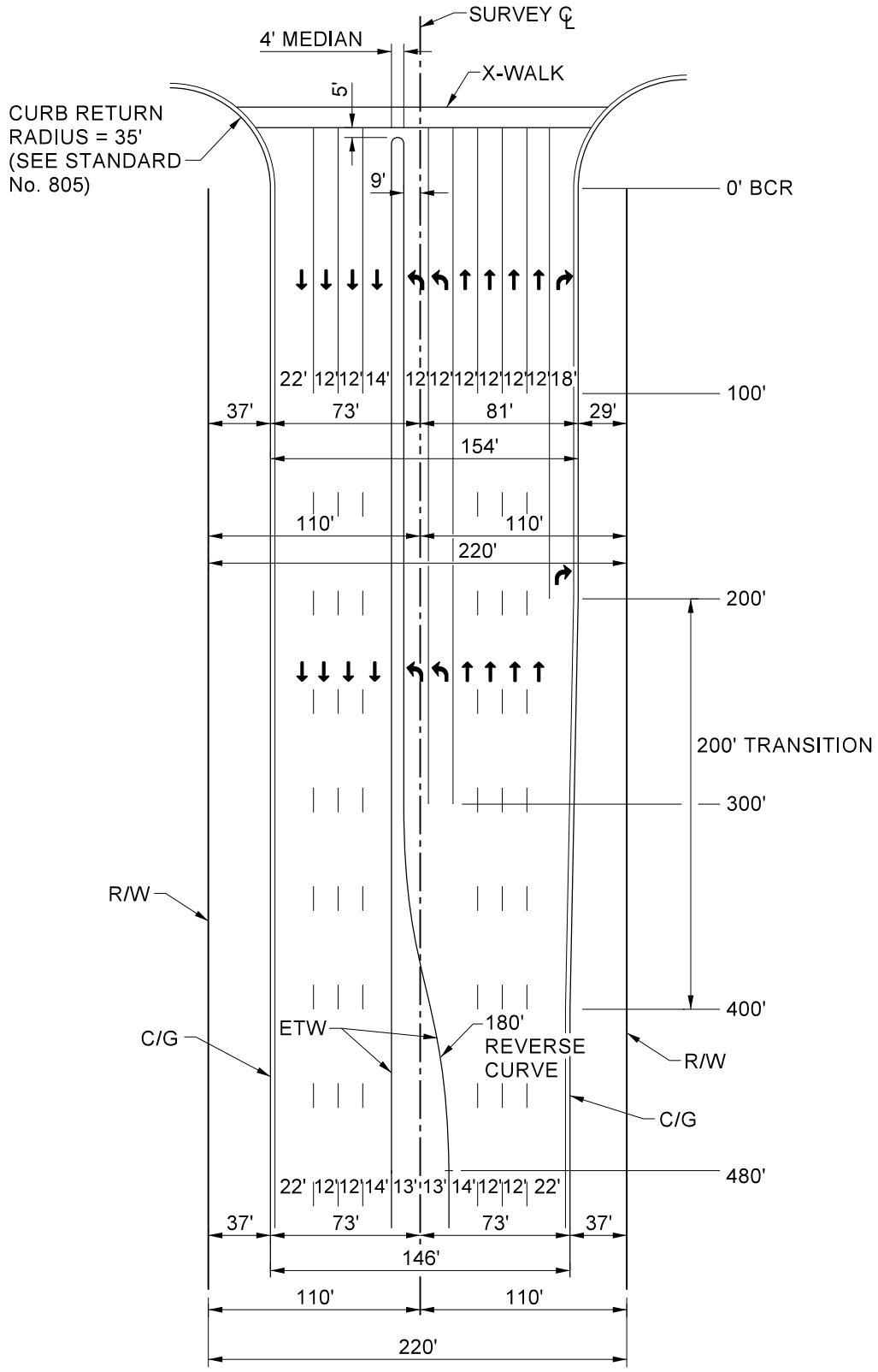
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

8-LANE EXPRESSWAY
146' IMPROVEMENT
(220' R/W)

STANDARD No. 82 (1 OF 2)



NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

8-LANE EXPRESSWAY
146' IMPROVEMENT
(220' R/W)

STANDARD No. 82 (2 OF 2)

TYPICAL CONFIGURATION FOR:
1. SR-74 FROM BRIGGS RD EAST TO SR-79 / WARREN RD

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. SEE STANDARD No. 113 FOR LANDSCAPED MEDIAN REQUIREMENTS, INCLUDING MEDIAN CURB.
4. IMPROVEMENTS TO STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS AND POLICIES. RIGHT OF WAY MAY VARY PER THE REQUIREMENTS OF CALTRANS POLICY.
5. SEE SHEET 2 OF 2 FOR INTERSECTION CONFIGURATION AND TRANSITION.

NOT TO SCALE

NOTE: THIS WAS NUMBERED STANDARD No. 87 PRIOR TO 2023

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MARK LANCASTER, P.E.

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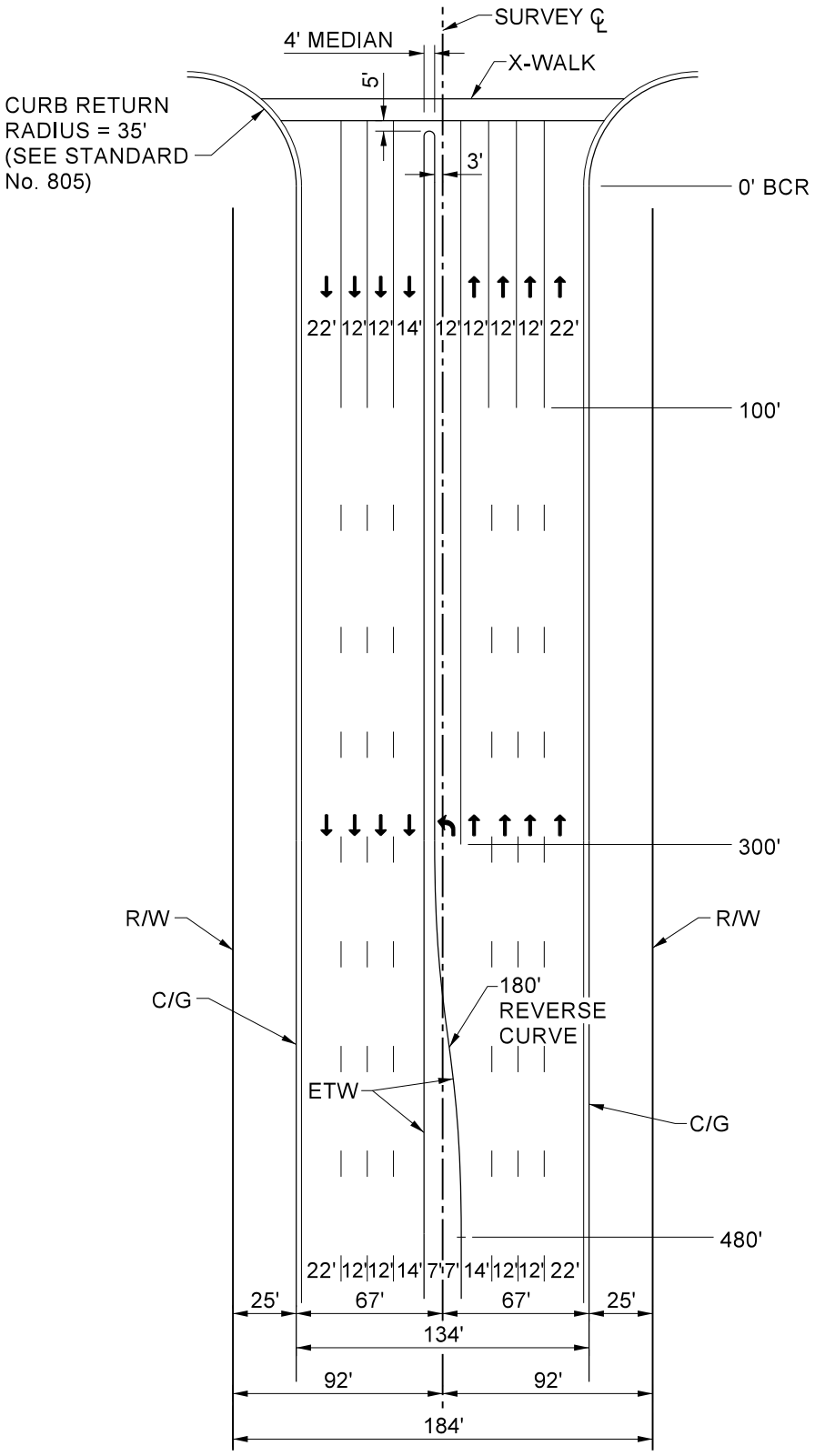
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

8-LANE EXPRESSWAY 134' IMPROVEMENT (184' R/W)

STANDARD No. 83 (1 OF 2)



TYPICAL CONFIGURATION FOR:
1. SR-74 FROM BRIGGS RD EAST TO SR-79 / WARREN RD

NOT TO SCALE

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MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

8-LANE EXPRESSWAY 134' IMPROVEMENT (184' R/W)

STANDARD No. 83 (2 OF 2)

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5%
(2.00% MAX AS-BUILT)

TYPICAL CONFIGURATION FOR:

1. WINCHESTER RD (SR 79)
   FROM 1/2 MILE NORTH OF
   KELLER RD, NORTH TO I-10
2. CAJALCO RD / RAMONA EXPY
   FROM I-15, EAST TO SR-74

NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. IMPROVEMENTS TO STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS AND POLICIES. RIGHT OF WAY MAY VARY PER THE REQUIREMENTS OF CALTRANS POLICY.
4. CONCRETE CURB, GUTTER, AND SIDEWALKS SHALL BE IMPROVED AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION.
5. SEE SHEET 2 OF 2 FOR INTERSECTION CONFIGURATION AND TRANSITION.

NOT TO SCALE

NOTE: THIS WAS NUMBERED STANDARD No. 82 PRIOR TO 2023

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MARK LANCASTER, P.E.

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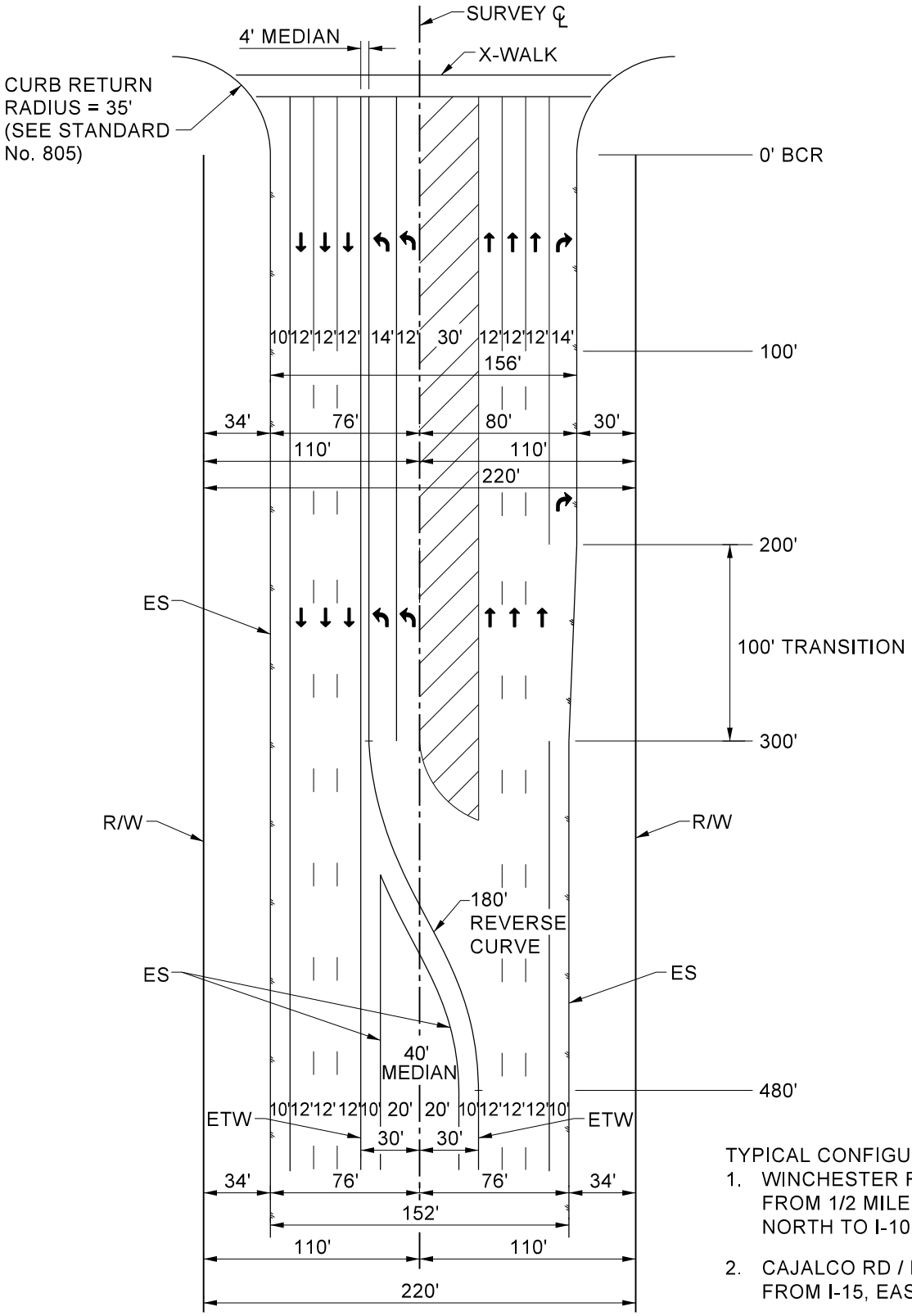
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

6-LANE EXPRESSWAY
152' IMPROVEMENT
(220' R/W)

STANDARD No. 84 (1 of 2)



TYPICAL CONFIGURATION FOR:

1. WINCHESTER RD (SR 79) FROM 1/2 MILE N/O KELLER RD, NORTH TO I-10
2. CAJALCO RD / RAMONA EXPY FROM I-15, EAST TO SR-74

NOT TO SCALE

NOTE: THIS WAS NUMBERED STANDARD No. 82 PRIOR TO 2023

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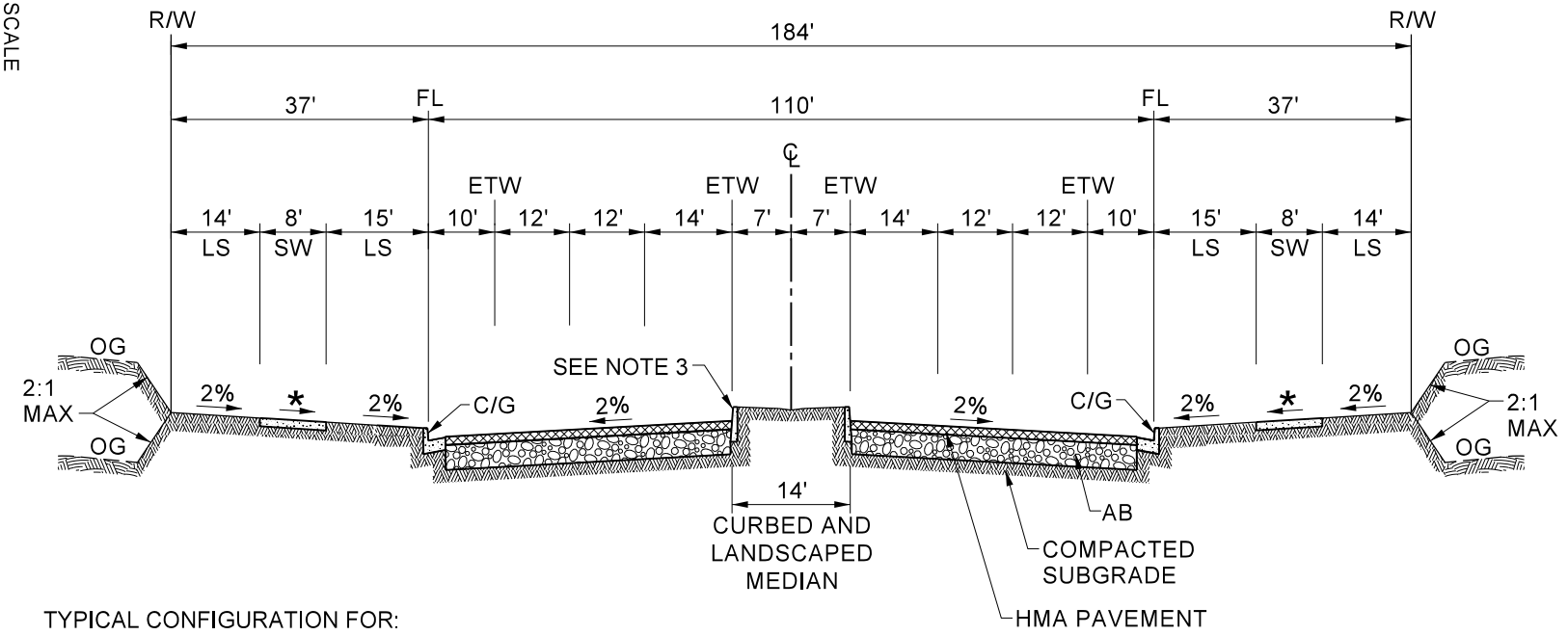
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

6-LANE EXPRESSWAY 152' IMPROVEMENT (220' R/W)

STANDARD No. 84 (2 of 2)



TYPICAL CONFIGURATION FOR:

1. WINCHESTER RD (SR 79)
   FROM I-15,
   NORTH TO 1/2 MILE NORTH OF KELLER RD

2. SR-74
   FROM I-15,
   EAST TO KEYSTONE DR
   (WESTERN CITY LIMITS OF PERRIS)

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5%
(2.00% MAX AS-BUILT)

NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. SEE STANDARD No. 113 FOR LANDSCAPED MEDIAN REQUIREMENTS, INCLUDING MEDIAN CURB.
4. IMPROVEMENTS TO STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS AND POLICIES. RIGHT OF WAY MAY VARY PER THE REQUIREMENTS OF CALTRANS POLICY.
5. SEE SHEET 2 OF 2 FOR INTERSECTION CONFIGURATION AND TRANSITION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

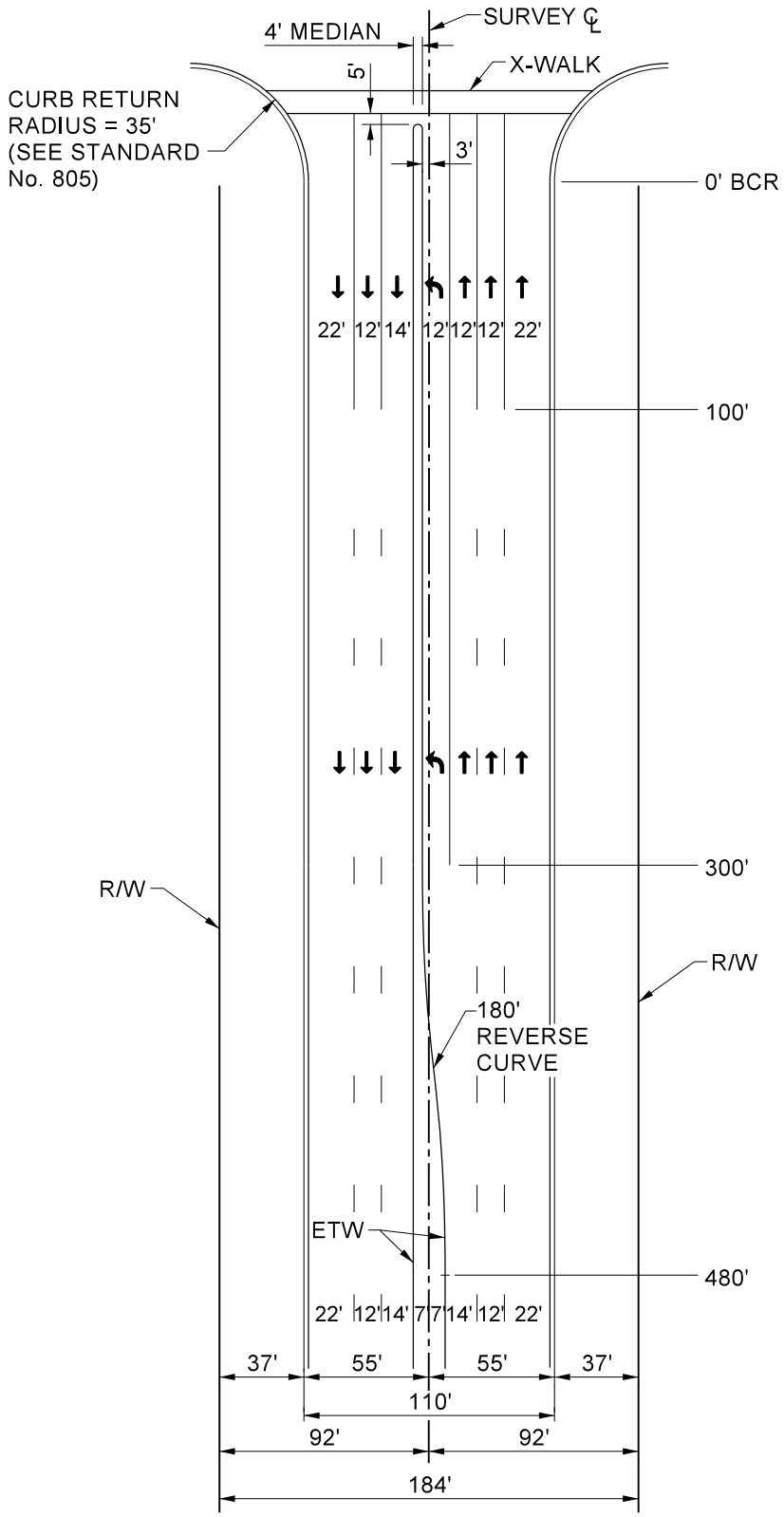
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

NOTE: THIS WAS NUMBERED STANDARD No. 83 PRIOR TO 2023

COUNTY OF RIVERSIDE

6-LANE EXPRESSWAY
110' IMPROVEMENT
(184' R/W)

STANDARD No. 85 (1 OF 2)



TYPICAL CONFIGURATION FOR:

1. WINCHESTER RD (SR 79) FROM I-15, NORTH TO 1/2 MILE N/O KELLER RD
2. SR-74 FROM I-15, EAST TO KEYSTONE DR (WESTERN CITY LIMITS OF PERRIS)

NOT TO SCALE

NOTE: THIS WAS NUMBERED STANDARD No. 83 PRIOR TO 2023

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER — MARK ALAN LANCASTER — C48048 — CIVIL — STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

6-LANE EXPRESSWAY 110' IMPROVEMENT (184' R/W)

STANDARD No. 85 (2 OF 2)

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5%
(2.00% MAX AS-BUILT)

TYPICAL CONFIGURATION FOR:
1. SR 79 (SOUTH) FROM 1200' EAST OF BUTTERFIELD STAGE RD EAST TO APPROX 500' EAST OF PAUBA RD

NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. SEE STANDARD No. 113 FOR LANDSCAPED MEDIAN REQUIREMENTS, INCLUDING MEDIAN CURB.
4. IMPROVEMENTS TO STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS AND POLICIES. RIGHT OF WAY MAY VARY PER THE REQUIREMENTS OF CALTRANS POLICY.
5. SEE SHEET 2 OF 2 FOR INTERSECTION CONFIGURATION AND TRANSITION.

NOT TO SCALE

NOTE: THIS WAS NUMBERED STANDARD No. 85 PRIOR TO 2023

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

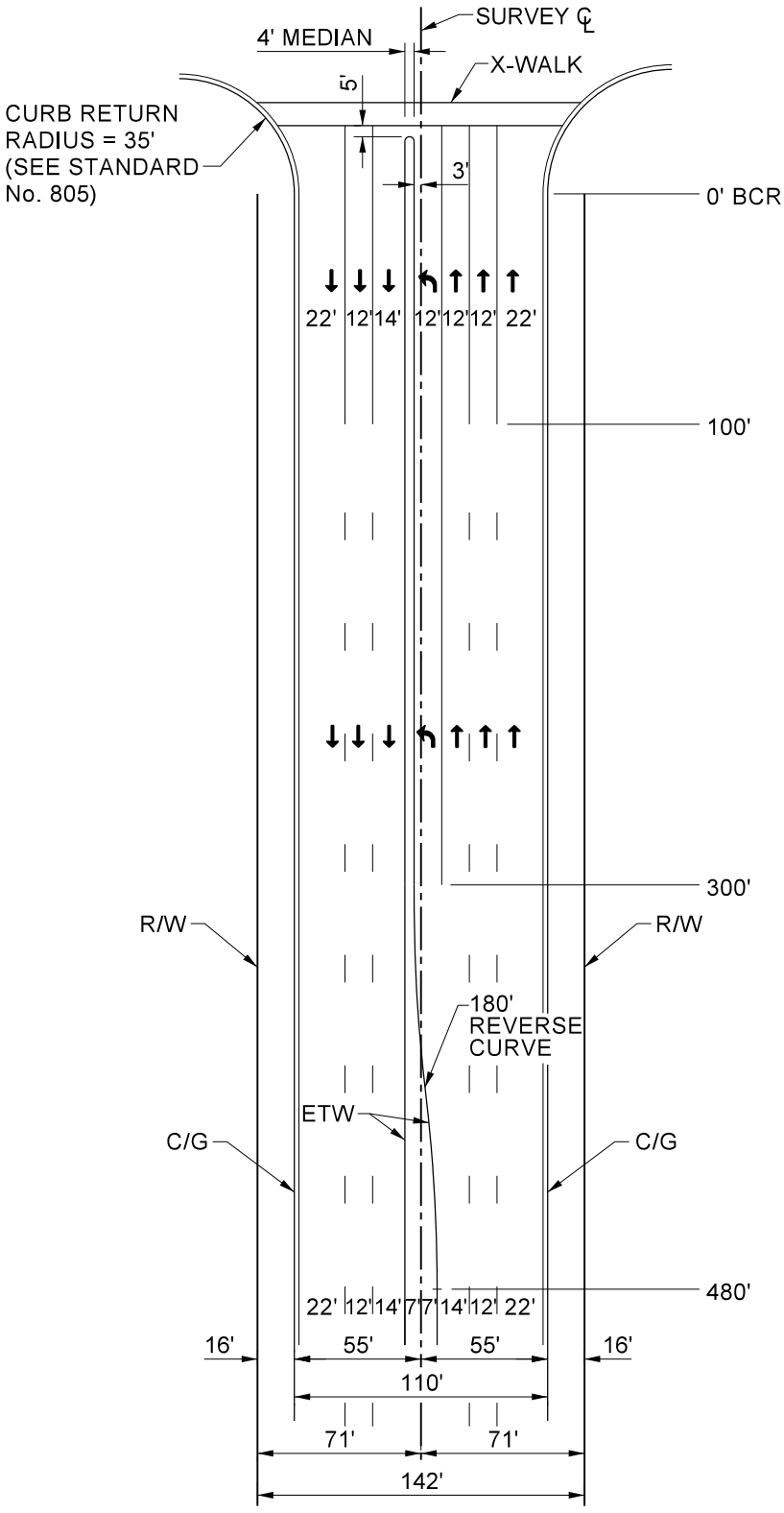
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

6-LANE EXPRESSWAY
110' IMPROVEMENT
(142' R/W)

STANDARD No. 86 (1 OF 2)



TYPICAL CONFIGURATION FOR:

1. SR 79 (SOUTH) FROM 1200' E/O BUTTERFIELD STAGE RD EAST TO APPROX 500' E/O PAUBA RD

NOT TO SCALE

NOTE: THIS WAS NUMBERED STANDARD No. 85 PRIOR TO 2023

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

6-LANE EXPRESSWAY 110' IMPROVEMENT (142' R/W)

STANDARD No. 86 (2 OF 2)

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

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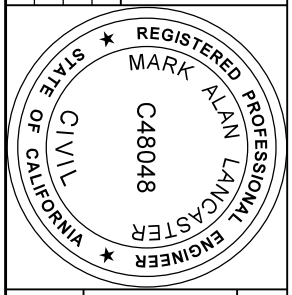
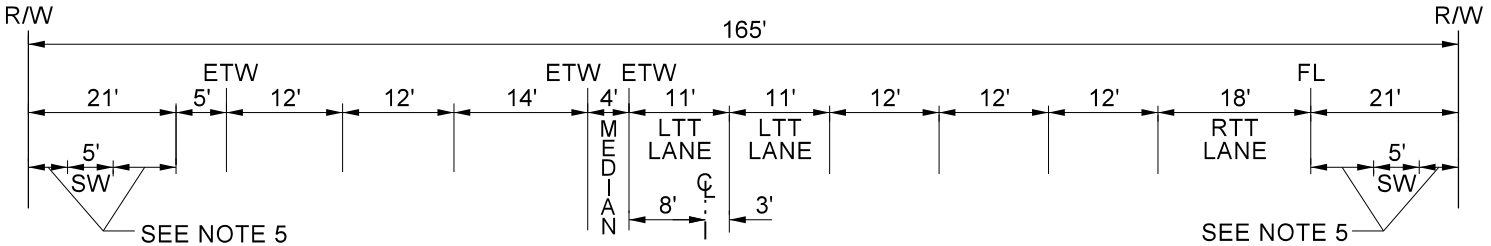
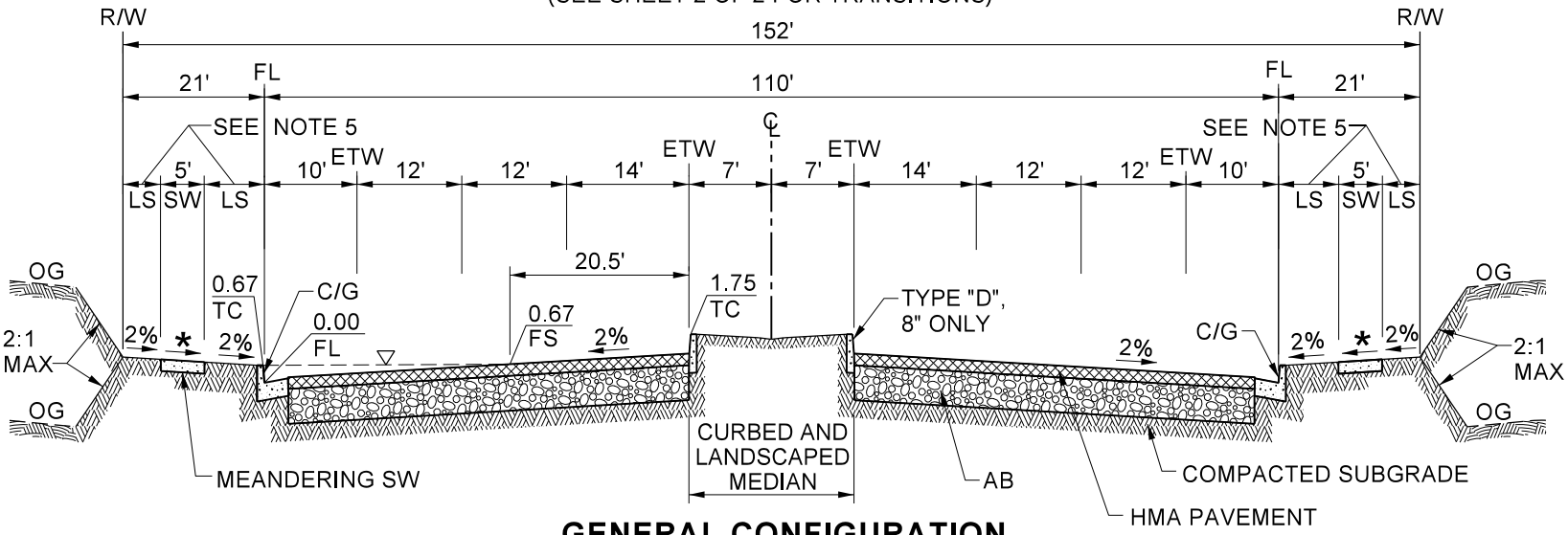




CONFIGURATION AT INTERSECTION

(SEE SHEET 2 OF 2 FOR TRANSITIONS)



GENERAL CONFIGURATION

NOTES:

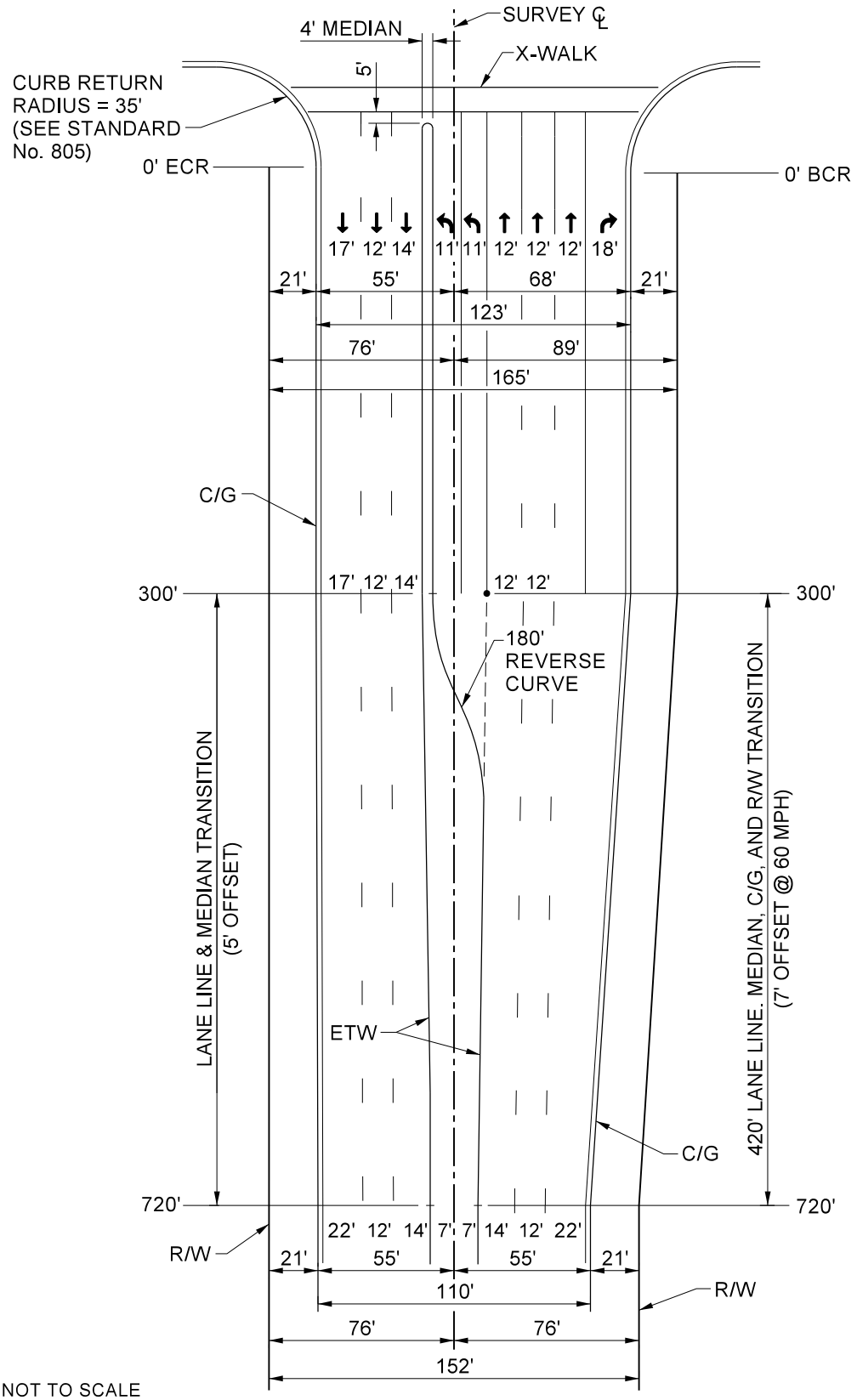
1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. SEE STANDARD No. 113 FOR LANDSCAPED MEDIAN REQUIREMENTS, INCLUDING MEDIAN CURB.
4. CURB AND GUTTER TO BE TYPE "A-8" (STANDARD No. 201). 6" CURB IS NOT ALLOWED.
5. DISTANCE FROM SIDEWALK TO R/W, AND FLOW LINE, VARIES. SEE STANDARD No. 404 FOR DETAILS OF MEANDERING SIDEWALK.
6. MAX WATER DEPTH FOR Q_{10} IS 0.67' TO PROVIDE MIN 12' DRY LANE.
7. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTHS CONSISTING OF A 7' HALF-MEDIAN, 12' PAVED LANE, AN 8' GRADED SHOULDER AND 3' BEYOND THE SHOULDER MAY BE REQUIRED FOR PART WIDTH IMPROVEMENTS WHEN, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT, AN ADDITIONAL LANE ON THE OPPOSITE SIDE OF THE CENTERLINE IS NEEDED.
8. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTH CONSISTING OF A 12' PAVED LANE MAY BE REQUIRED FOR THE RIGHT-TURN LANE WHEN THE PROJECT PROPOSES DIRECT ACCESS FROM THE GENERAL PLAN HIGHWAY, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT.

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

COUNTY OF RIVERSIDE

URBAN ARTERIAL HIGHWAY (152' R/W)

STANDARD No. 91 (1 OF 2)



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

URBAN ARTERIAL HIGHWAY (152' R/W)

STANDARD No. 91 (2 OF 2)

NOT TO SCALE

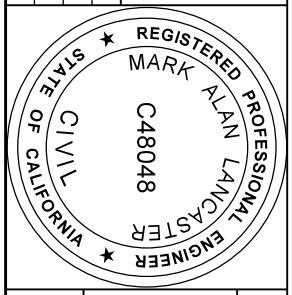
PREPARED UNDER THE SUPERVISION OF:

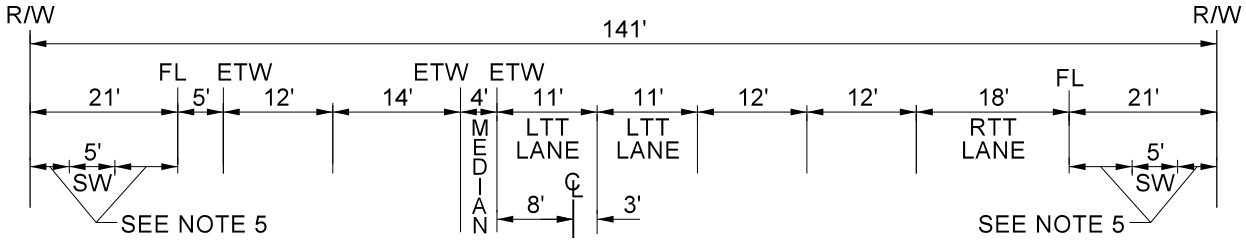
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

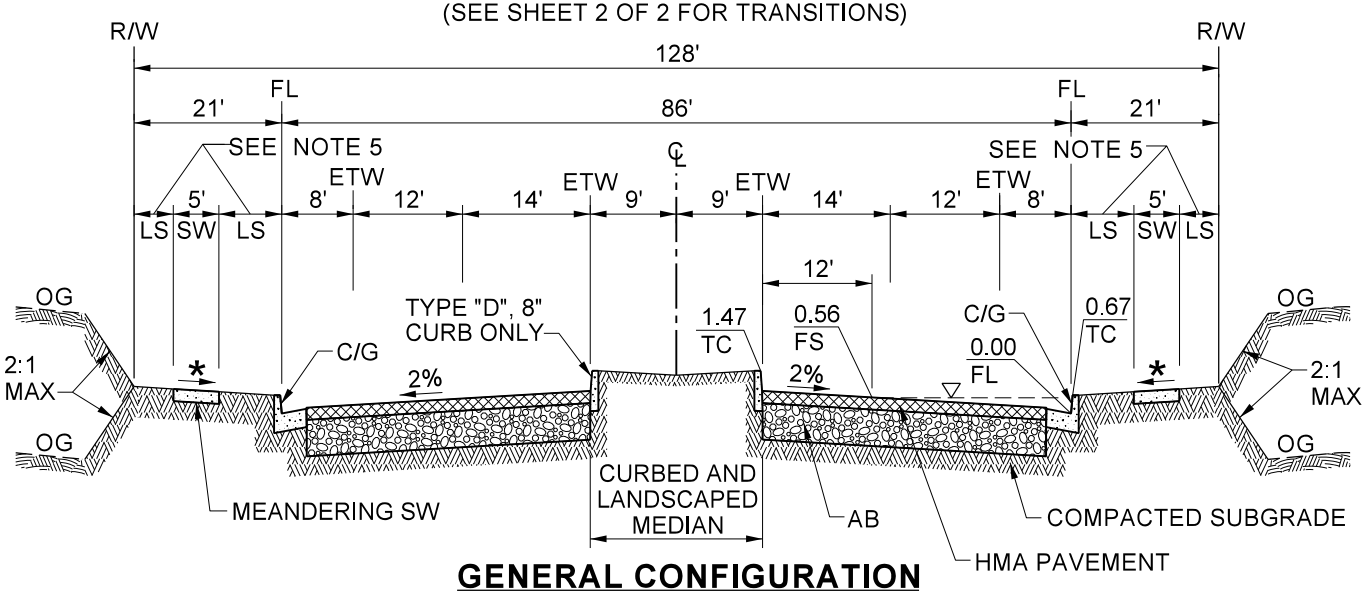
REVISION DESCRIPTION	MARK	DATE	APPROVED





CONFIGURATION AT INTERSECTION

(SEE SHEET 2 OF 2 FOR TRANSITIONS)



GENERAL CONFIGURATION

NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.

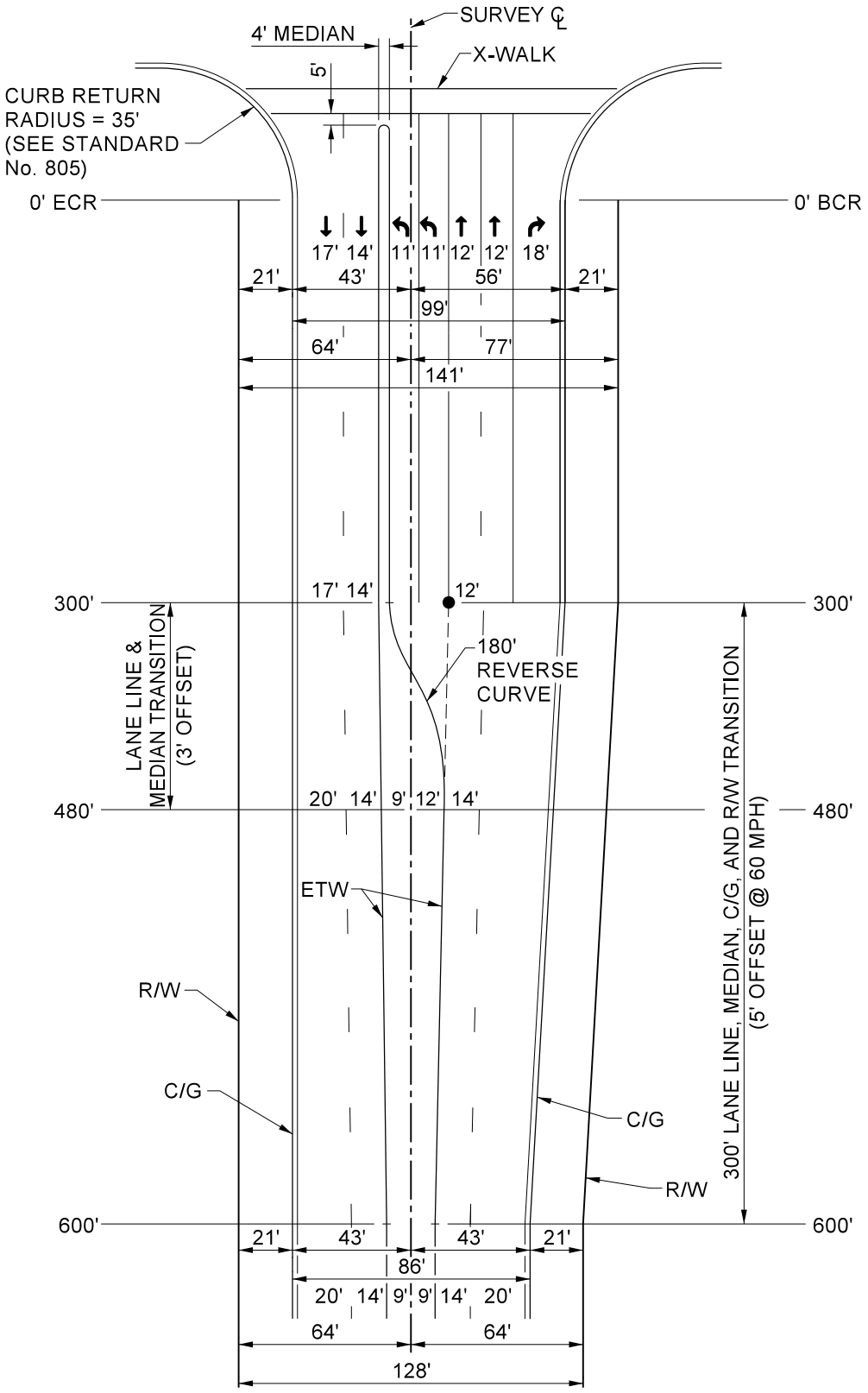
* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. SEE STANDARD No. 113 FOR LANDSCAPED MEDIAN REQUIREMENTS, INCLUDING MEDIAN CURB.
4. CURB AND GUTTER TO BE TYPE "A-8" (STANDARD No. 201). 6" CURB IS NOT ALLOWED.
5. DISTANCE FROM SIDEWALK TO R/W, AND FLOW LINE, VARIES. SEE STANDARD No. 404 FOR DETAILS OF MEANDERING SIDEWALK.
6. MAX WATER DEPTH FOR Q_{10} IS 0.56' TO PROVIDE MIN 12' DRY LANE.
7. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTHS CONSISTING OF A 9' HALF-MEDIAN, 12' PAVED LANE, AN 8' GRADED SHOULDER AND 3' BEYOND THE SHOULDER MAY BE REQUIRED FOR PART WIDTH IMPROVEMENTS WHEN, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT, AN ADDITIONAL LANE ON THE OPPOSITE SIDE OF THE CENTERLINE IS NEEDED.
8. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTH CONSISTING OF A 12' PAVED LANE MAY BE REQUIRED FOR THE RIGHT-TURN LANE WHEN THE PROJECT PROPOSES DIRECT ACCESS FROM THE GENERAL PLAN HIGHWAY, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT.

COUNTY OF RIVERSIDE

ARTERIAL HIGHWAY
(128' R/W)

STANDARD No. 92 (1 OF 2)



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

ARTERIAL HIGHWAY (128' R/W)

STANDARD No. 92 (2 OF 2)

NOT TO SCALE

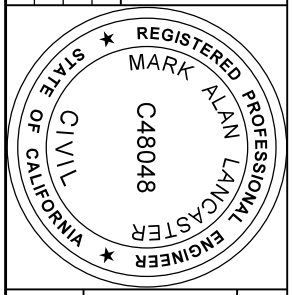
PREPARED UNDER THE SUPERVISION OF:

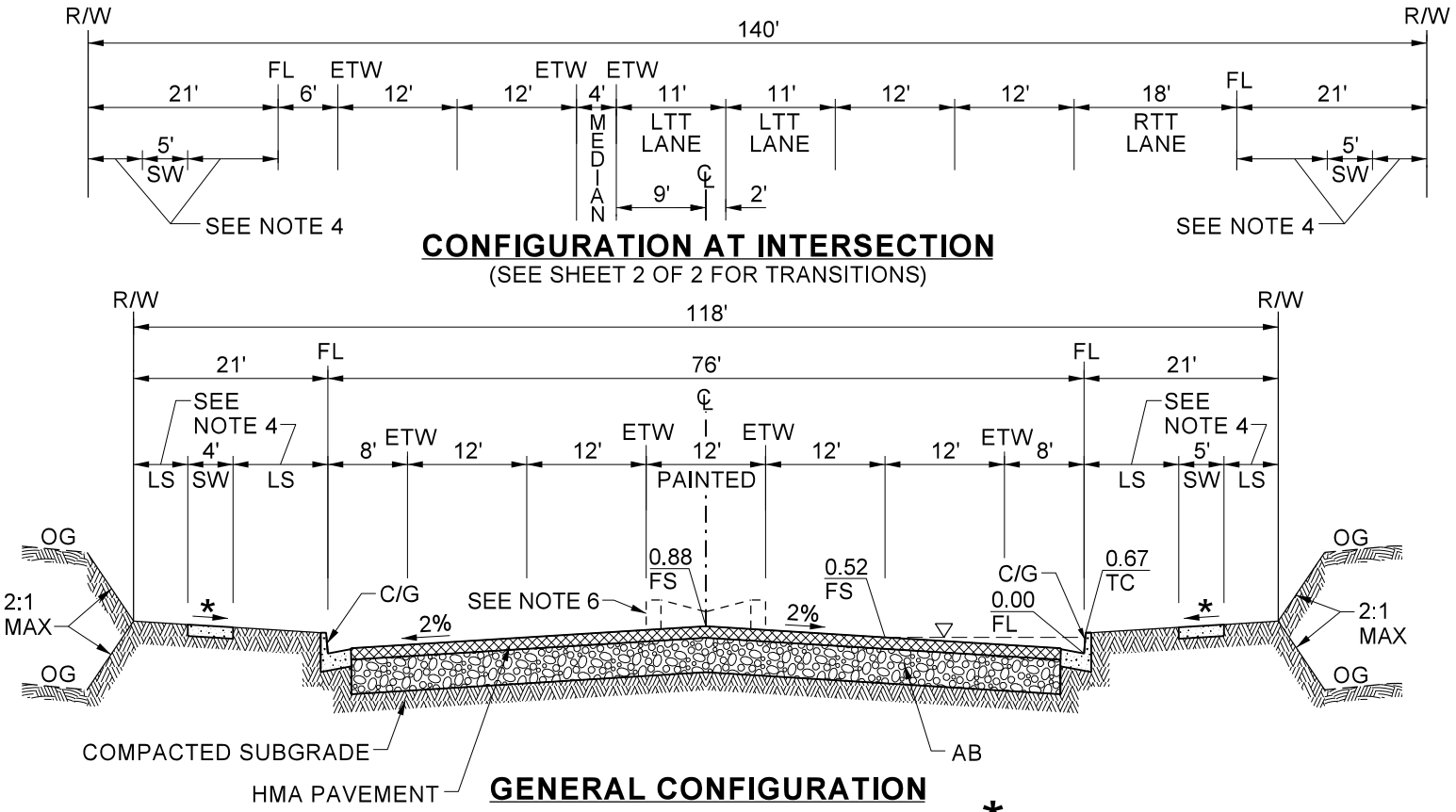
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED





* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

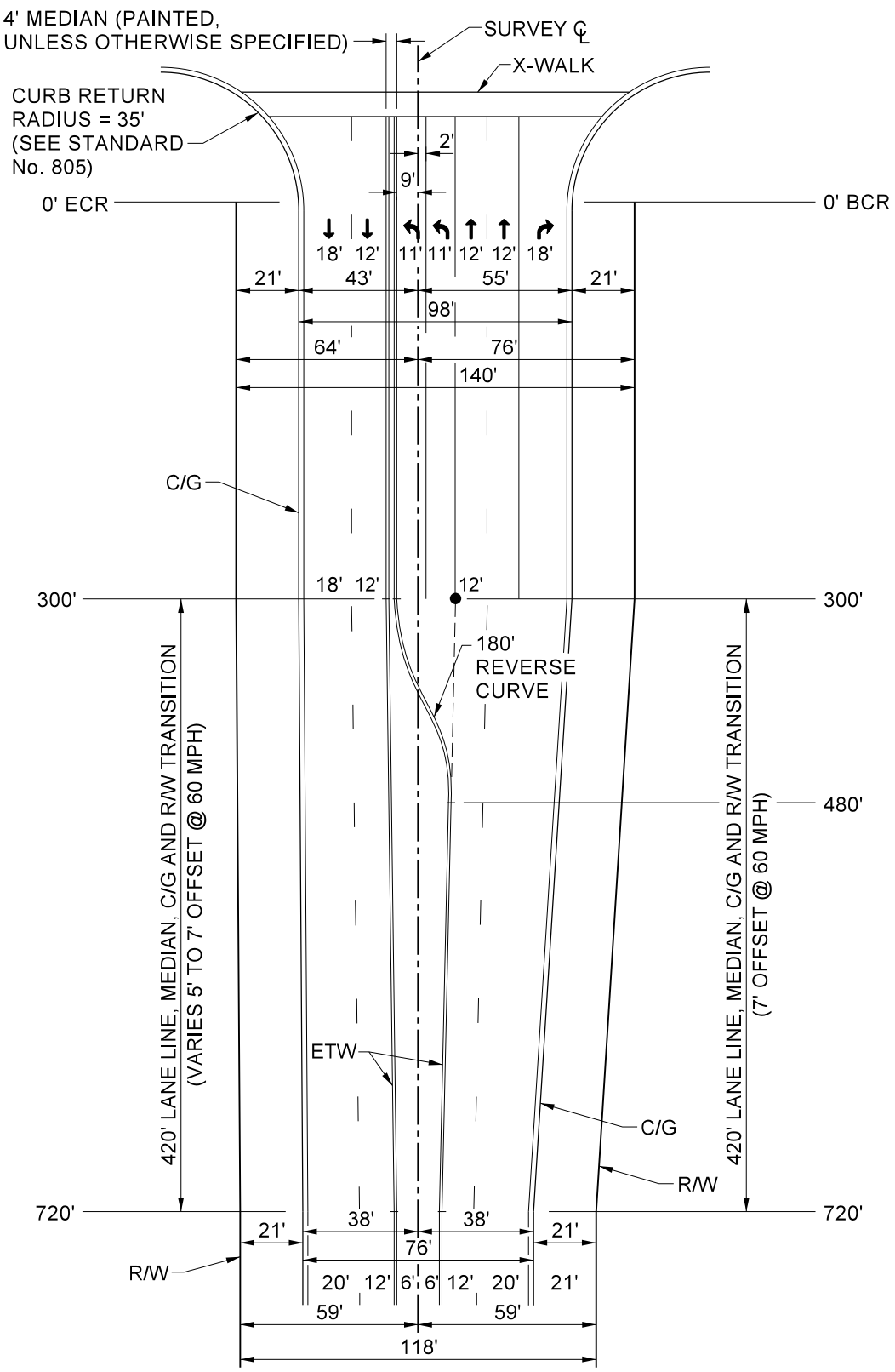
NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-8" (STANDARD No. 201). 6" CURB IS NOT ALLOWED.
4. DISTANCE FROM SIDEWALK TO R/W, AND FLOW LINE, VARIES. SEE STANDARD No. 404 FOR DETAILS OF MEANDERING SIDEWALK.
5. MAX WATER DEPTH FOR Q_{10} IS 0.52' TO PROVIDE MIN 12' DRY LANE.
6. A CURBED AND LANDSCAPED MEDIAN MAY BE REQUIRED.
7. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTHS CONSISTING OF A 6' HALF-WIDTH MEDIAN, 12' PAVED LANE, AN 8' GRADED SHOULDER AND 3' BEYOND THE SHOULDER MAY BE REQUIRED FOR PART WIDTH IMPROVEMENTS WHEN, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT, AN ADDITIONAL LANE ON THE OPPOSITE SIDE OF THE CENTERLINE IS NEEDED.
8. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTH CONSISTING OF A 12' PAVED LANE MAY BE REQUIRED FOR THE RIGHT-TURN LANE WHEN THE PROJECT PROPOSES DIRECT ACCESS FROM THE GENERAL PLAN HIGHWAY, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT.

COUNTY OF RIVERSIDE

MAJOR HIGHWAY
(118' R/W)

STANDARD No. 93 (1 OF 2)



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER — MARK ALAN LANCASTER — C48048 — CIVIL — STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

MAJOR HIGHWAY (118' R/W)

STANDARD No. 93 (2 OF 2)

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

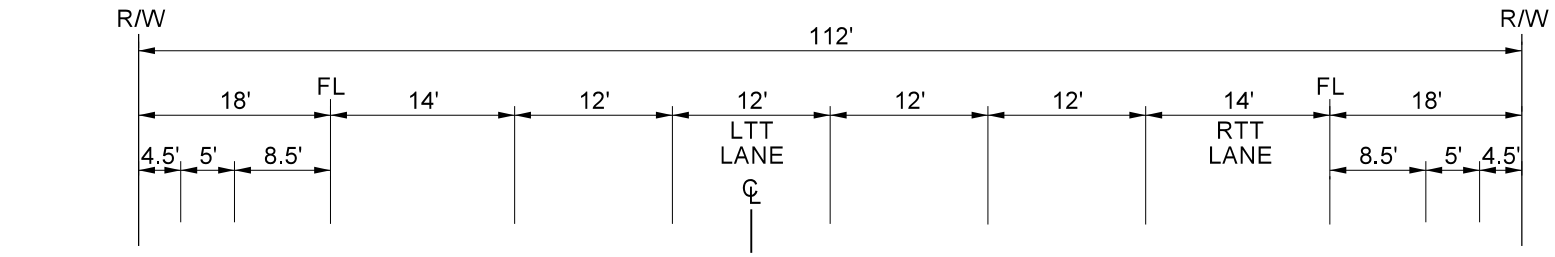
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

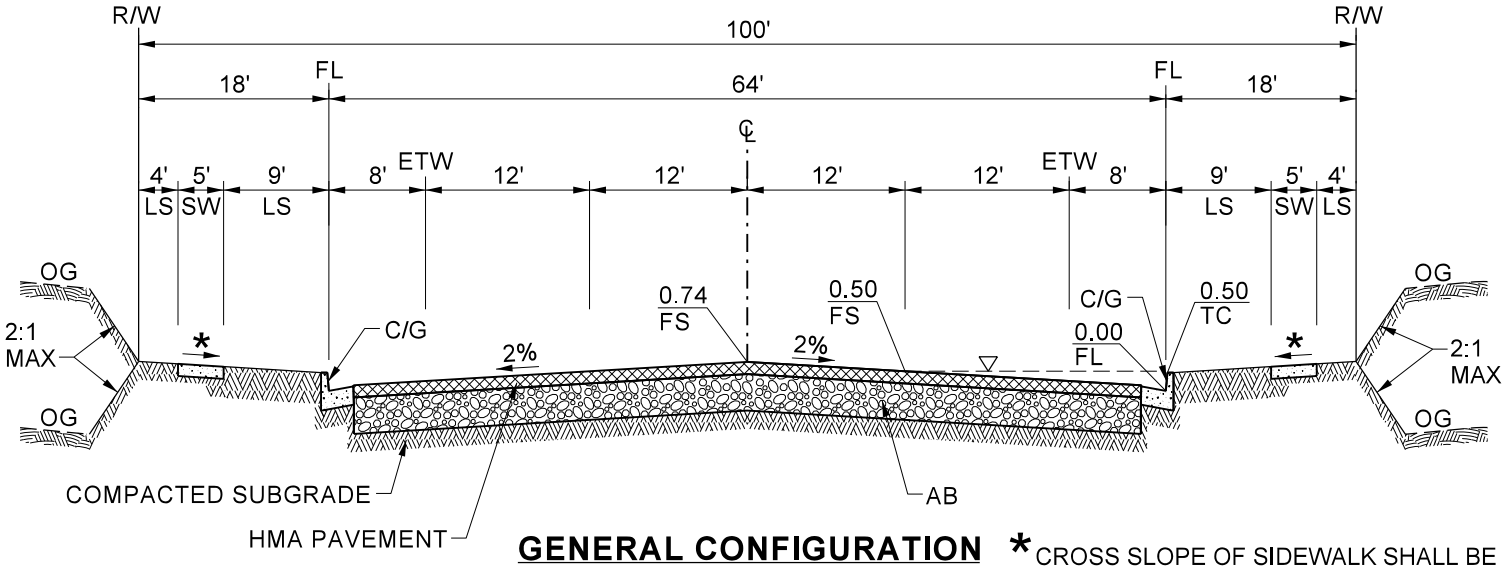
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



CONFIGURATION AT INTERSECTION

(SEE SHEET 2 OF 2 FOR TRANSITIONS)



GENERAL CONFIGURATION

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

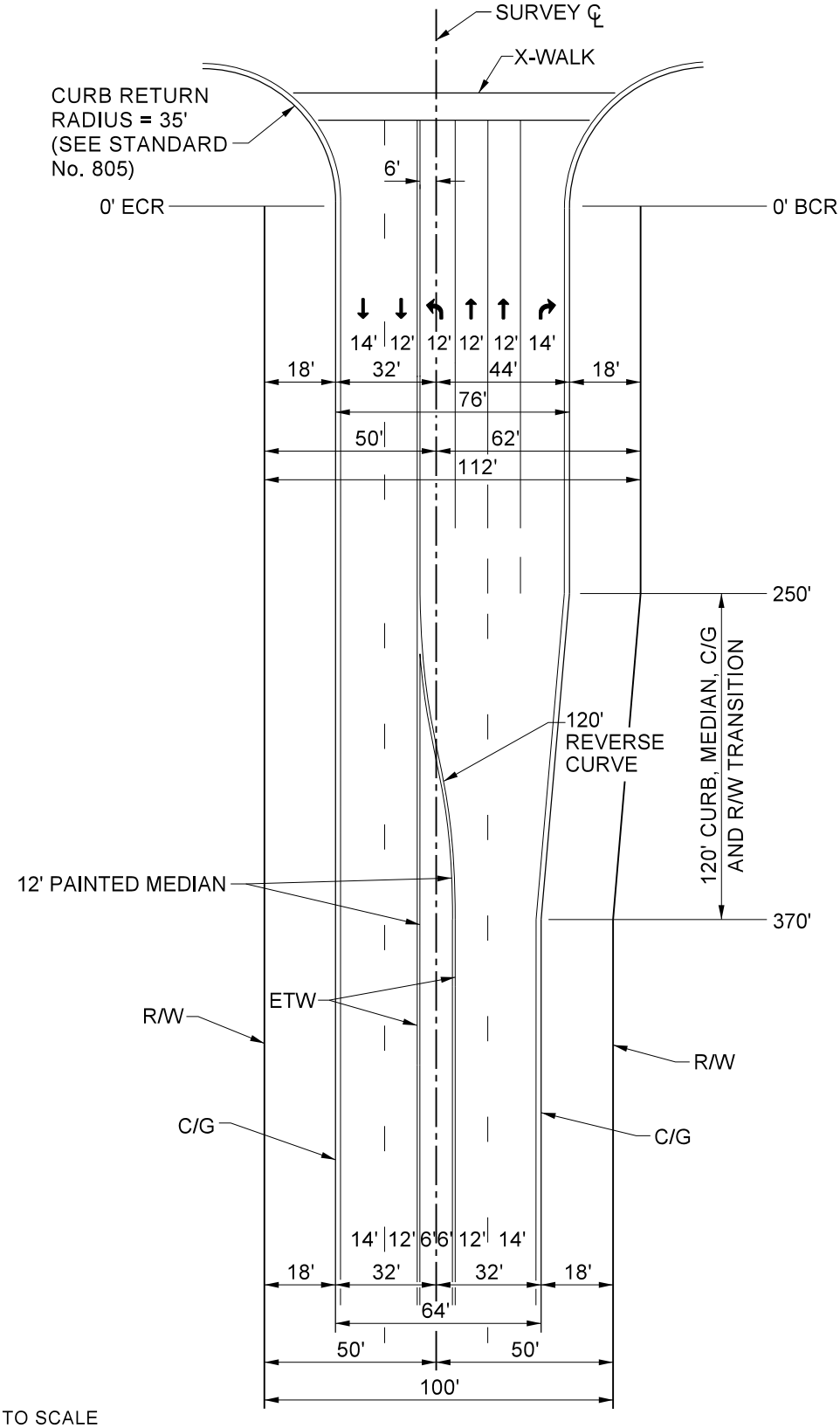
NOTES:

1. THICKNESS OF AB AND HMA (FOR SHOULDER, AND FOR TRAVELED WAY) TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
4. MAX WATER DEPTH FOR Q_{10} IS 0.50' TO PROVIDE MIN 12' DRY LANE.
5. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTHS CONSISTING OF A 12' PAVED LANE, AN 8' GRADED SHOULDER AND 3' BEYOND THE SHOULDER MAY BE REQUIRED FOR PART WIDTH IMPROVEMENTS WHEN, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT, AN ADDITIONAL LANE ON THE OPPOSITE SIDE OF THE CENTERLINE IS NEEDED.
6. ADDITIONAL IMPROVEMENTS AND RIGHT OF WAY WIDTH CONSISTING OF A 12' PAVED LANE MAY BE REQUIRED FOR THE RIGHT-TURN LANE WHEN THE PROJECT PROPOSES DIRECT ACCESS FROM THE GENERAL PLAN HIGHWAY, AS DETERMINED BY THE TRANSPORTATION DEPARTMENT.

COUNTY OF RIVERSIDE

SECONDARY HIGHWAY (100' R/W)

STANDARD No. 94 (1 OF 2)



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

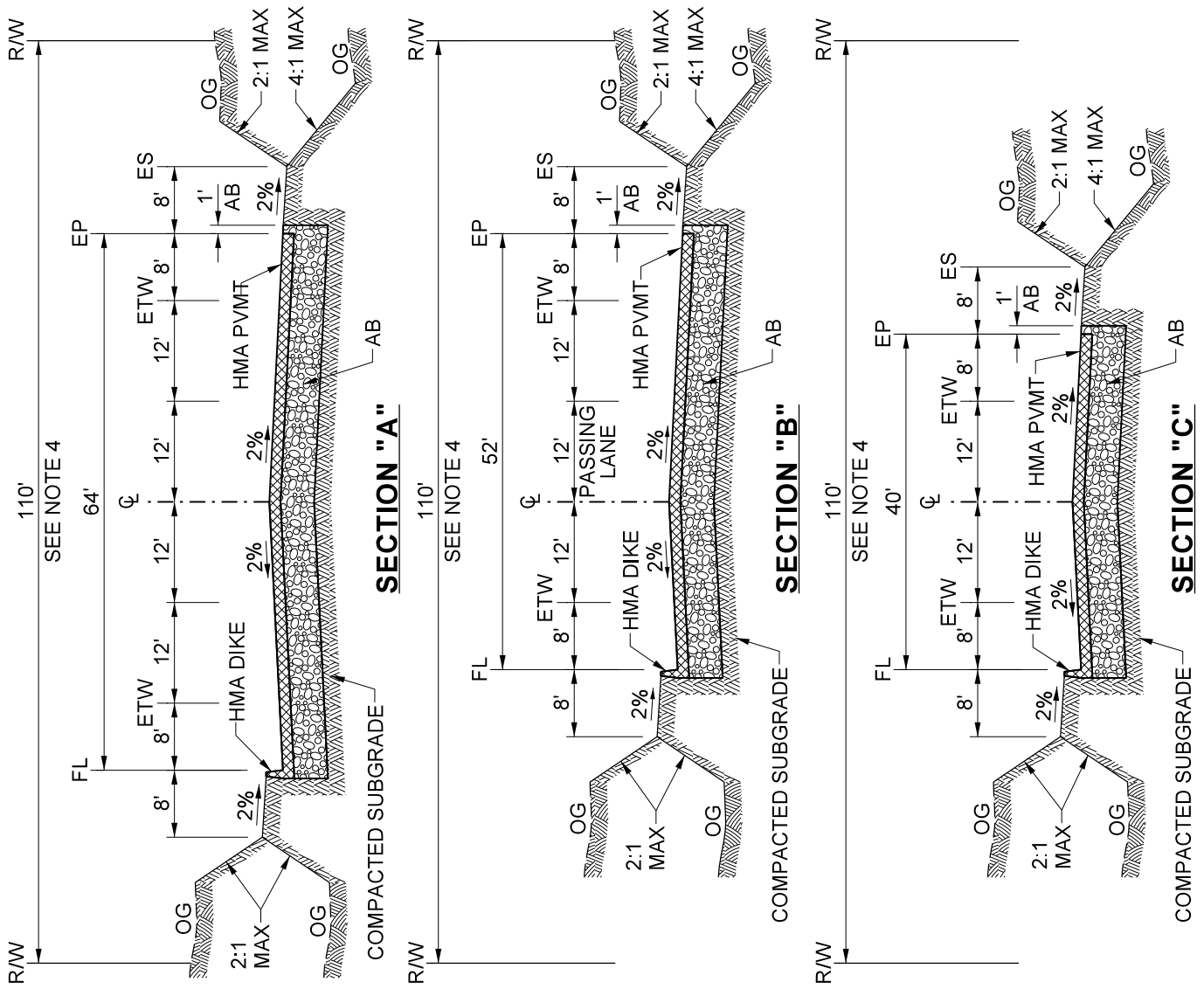
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SECONDARY HIGHWAY (100' R/W)

STANDARD No. 94 (2 OF 2)



NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. SEE STANDARD No. 212 FOR HMA DIKE DETAIL AND REQUIREMENTS. HMA DIKE MAY BE REQUIRED ON ONE OR BOTH SIDES.
4. CONCRETE CURB, GUTTER, AND SIDEWALK MAY BE REQUIRED AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

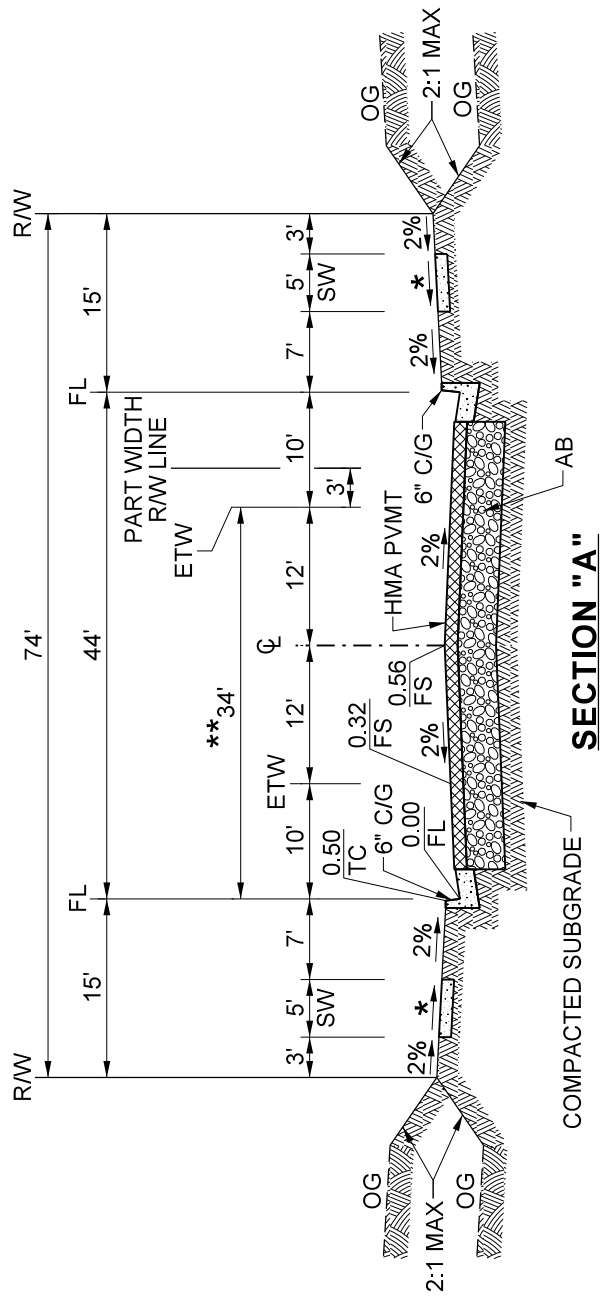
REVISION DESCRIPTION	MARK	DATE	APPROVED

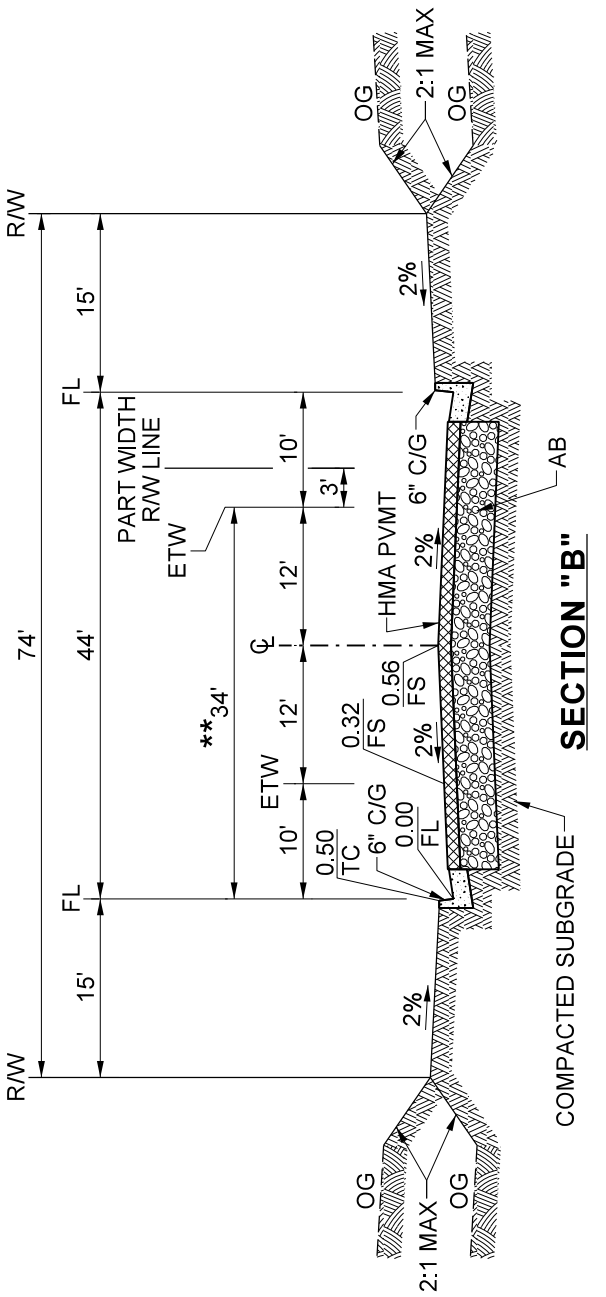
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

MOUNTAIN ARTERIAL HIGHWAY (110' R/W)

STANDARD No. 95





*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

**PART WIDTH STREET SECTION: 34' IMPROVEMENTS ON 52'

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
4. DIRECT RESIDENTIAL DRIVEWAY ACCESS PROHIBITED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

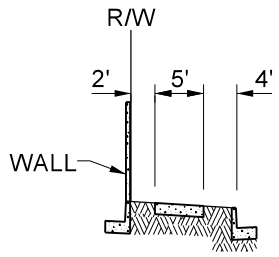
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

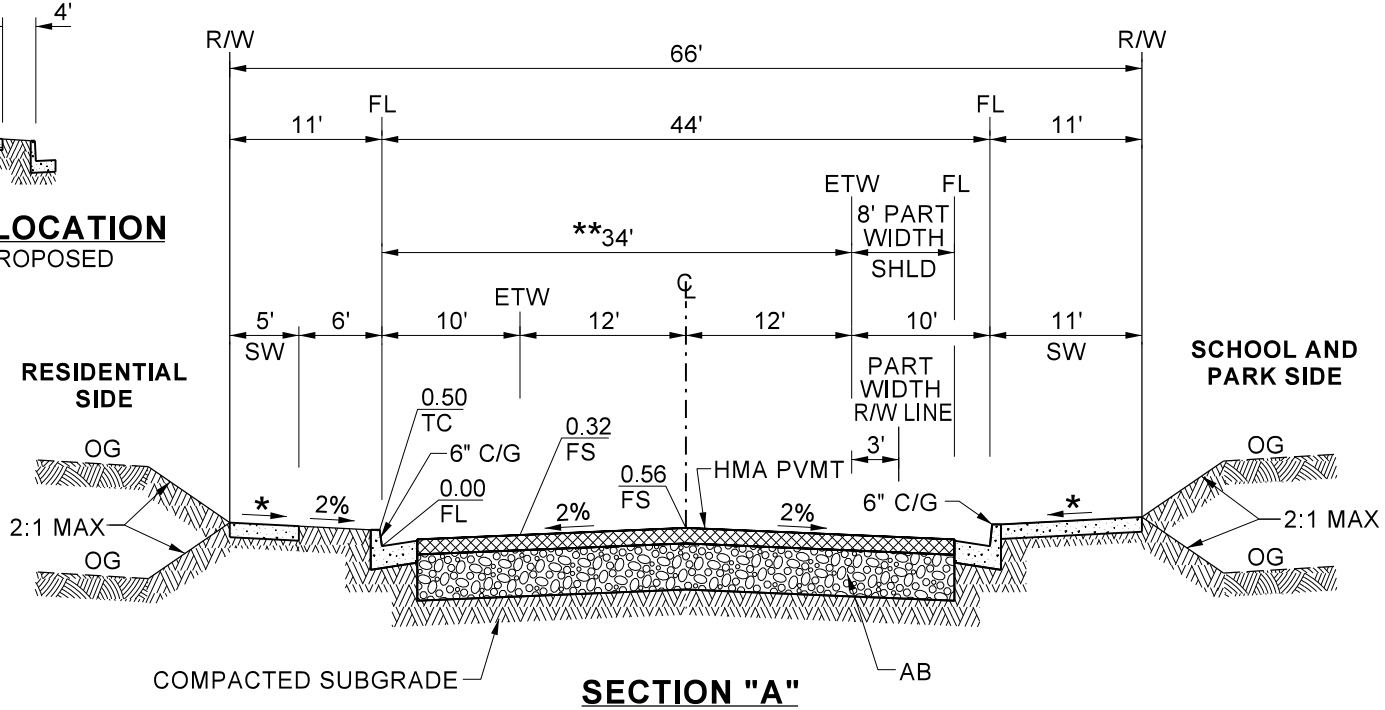
COLLECTOR STREET (NO ACCESS) (74' R/W)

STANDARD No. 103

NOT TO SCALE



SIDEWALK LOCATION
IF WALL IS PROPOSED



SECTION "A"

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

**PART-WIDTH STREET SECTION: 34' IMPROVEMENTS ON 48' R/W

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
4. THIS STANDARD MAY ALSO TERMINATE AT A CUL-DE-SAC IN INDUSTRIAL OR COMMERCIAL USE AREAS BUT SHALL NOT EXCEED 660 FEET IN LENGTH OF ROADWAY/STREET.
5. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS SECTION 16.04 OF THIS ORDINANCE.

PREPARED UNDER THE SUPERVISION OF:
Mark Lancaster
DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.
11/30/22
DATE

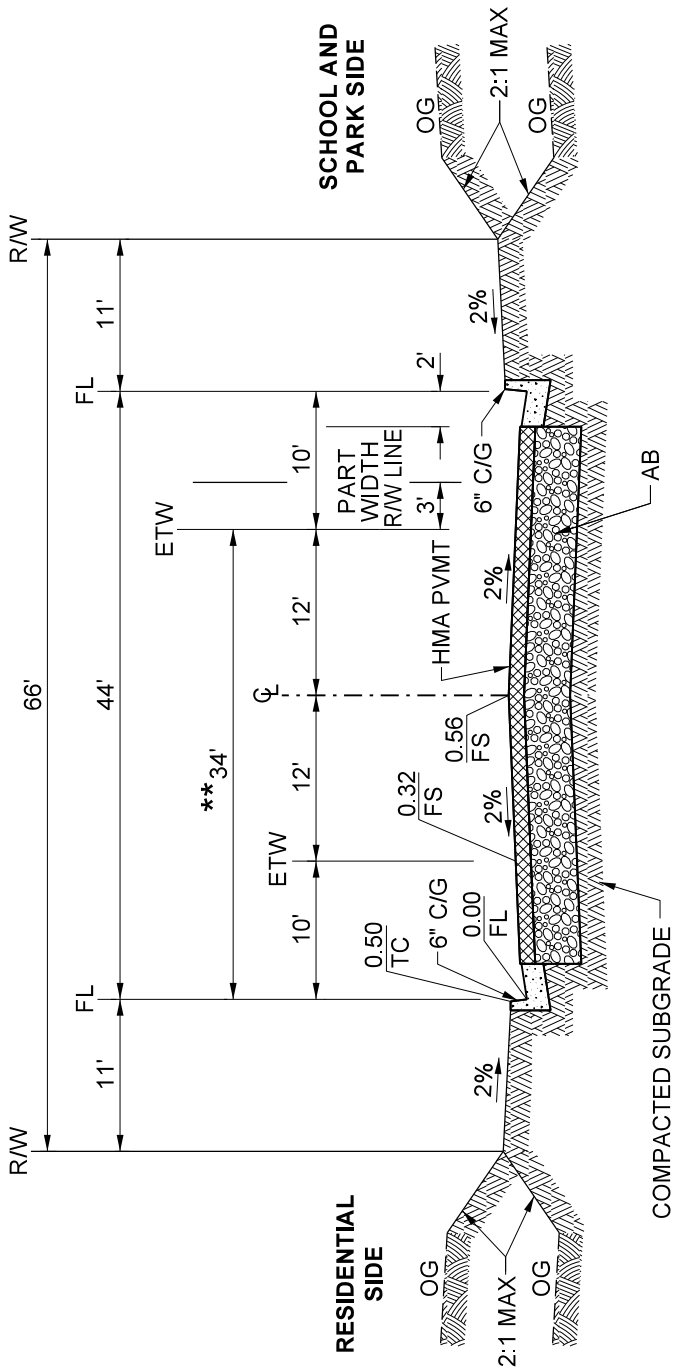
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

ENHANCED LOCAL STREET ADJACENT TO SCHOOL OR PARK (66' R/W)

STANDARD No. 104 (1 OF 2)



SECTION "B"

**PART-WIDTH STREET SECTION: 34' IMPROVEMENTS ON 48' R/W

NOTE:
IF WALL IS PROPOSED, SEE SHEET 1 FOR DETAILS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

ENHANCED LOCAL STREET ADJACENT TO SCHOOL OR PARK (66' R/W)

STANDARD No. 104 (2 OF 2)

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

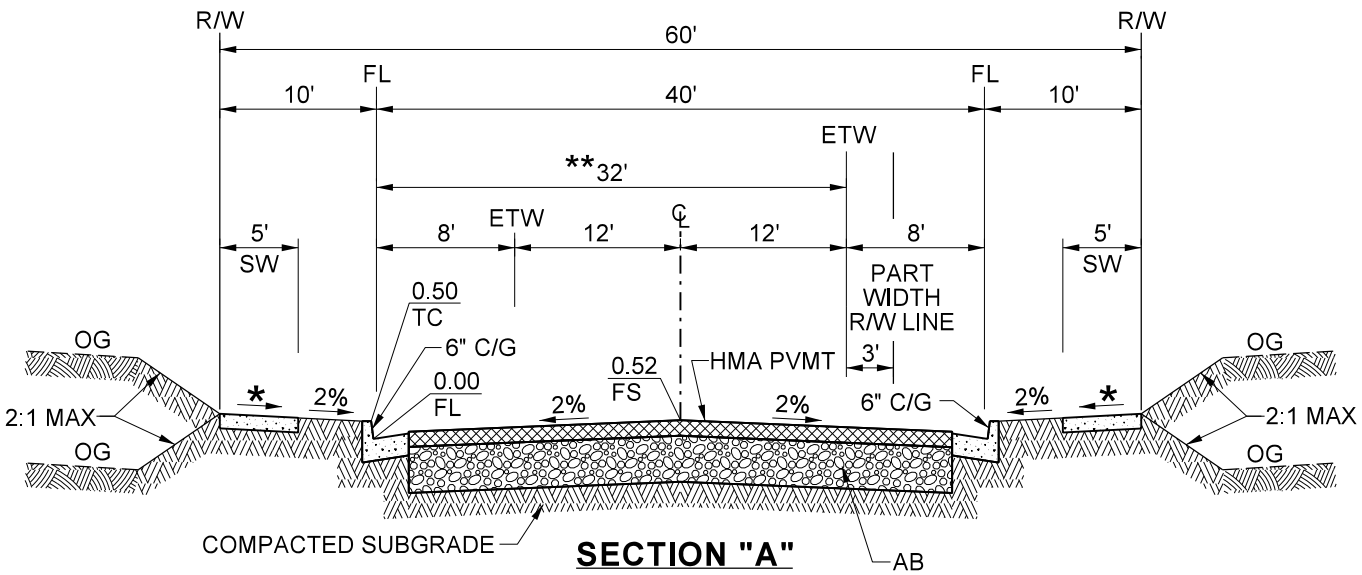
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

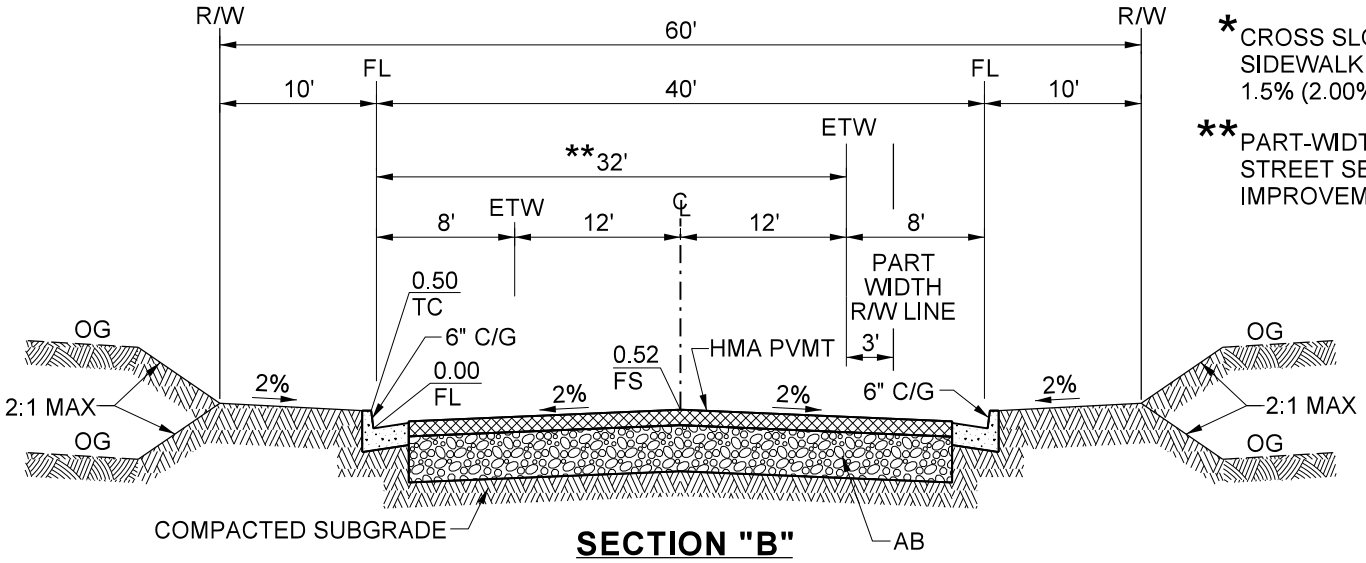
11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



SECTION "A"



SECTION "B"

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

** PART-WIDTH STREET SECTION: 32' IMPROVEMENTS ON 45' R/W

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
4. ROADWAY CROSS-SECTION LESS THAN 40 FT IN WIDTH IS LIMITED TO PARKING ON ONE SIDE OF THE STREET.

COUNTY OF RIVERSIDE

EXTERIOR & LOCAL STREET (60' R/W)

STANDARD No. 105A

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
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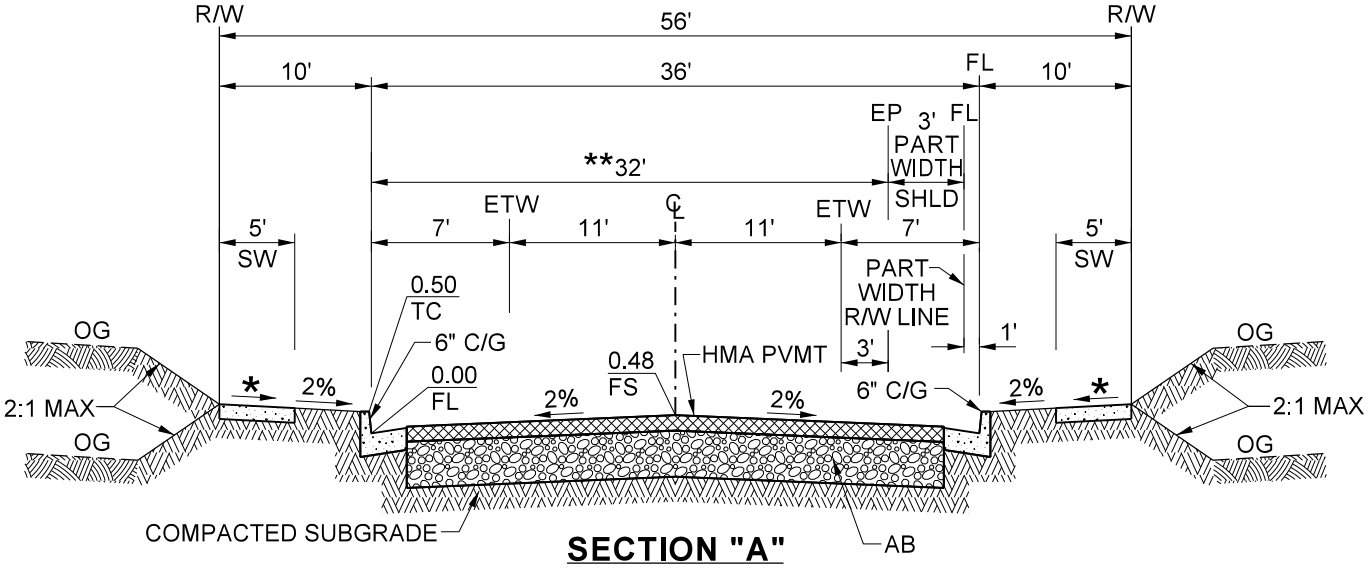
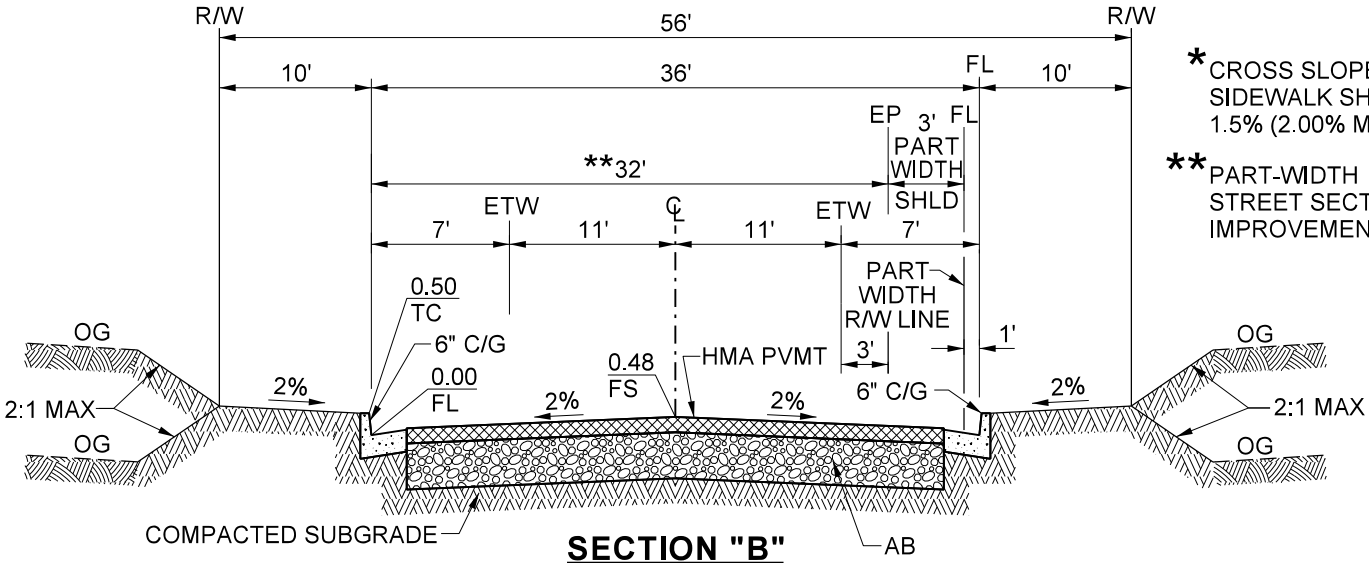
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



SECTION "A"



SECTION "B"

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

** PART-WIDTH STREET SECTION: 32' IMPROVEMENTS ON 45' R/W

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
4. FOR UNDERGROUND UTILITY LOCATIONS SEE STANDARD No. 817.
5. ROADWAY CROSS-SECTION LESS THAN 40 FT IN WIDTH IS LIMITED TO PARKING ON ONE SIDE OF THE STREET.

COUNTY OF RIVERSIDE

SHORT LOCAL STREET (56' R/W)

STANDARD No. 105B

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
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REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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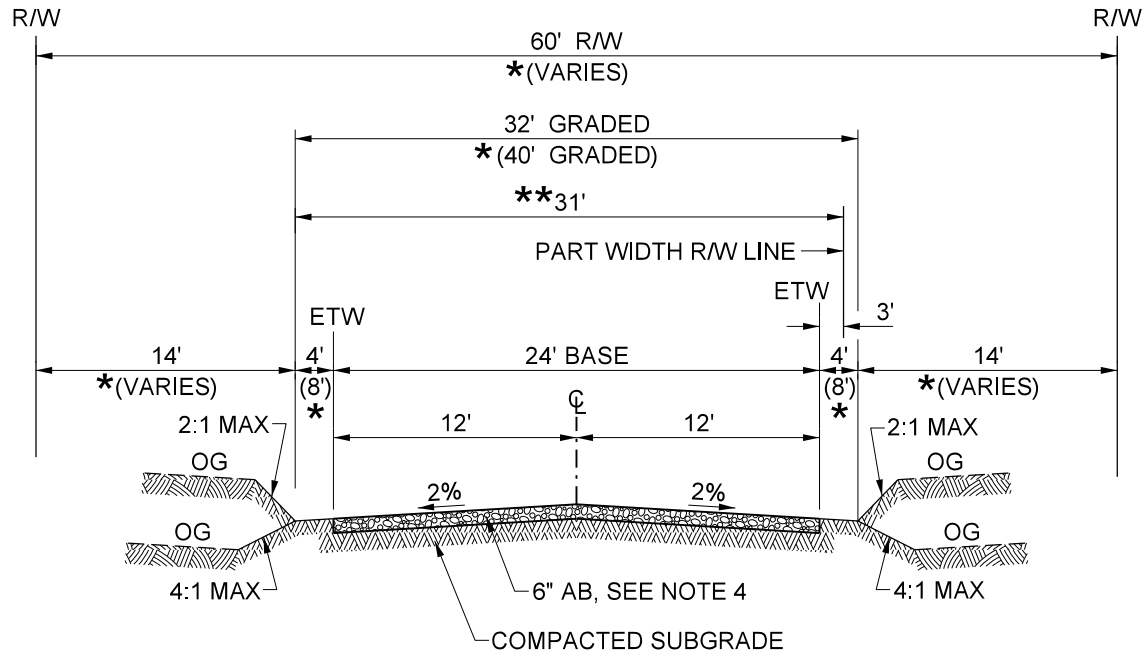
CIVIL
STATE OF CALIFORNIA



SECTION

*WHEN GENERAL PLAN HIGHWAY

**PART-WIDTH STREET SECTION: 24' AB / 31' GRADED / 45' R/W

NOTES:

1. THICKNESS OF AB TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. AB PER SPECIFICATIONS SECTION 10 OF THIS ORDINANCE.
3. SOIL STABILIZER TO BE APPLIED PER IMPROVEMENTS PLANS. THE GRADED ROAD SHALL BE TREATED WITH A DUST SUPPRESSANT THAT IS DESIGNED TO PROVIDE LONG LASTING CONTROL OF FUGITIVE DUST ON A DRIVEABLE SURFACE. SAID TREATMENT SHALL BE SUBMITTED DURING IMPROVEMENT PLAN CHECK AND APPROVED BY THE TRANSPORTATION DEPARTMENT. CHEMICAL DUST SUPPRESSANTS SHALL MEET ALL REQUIREMENTS OF STATE AND FEDERAL SAFETY AND ENVIRONMENTAL REGULATIONS.
4. AGGREGATE BASE TO BE OF CLASS 3 OR CLASS 4. THE USE OF EXISTING NATIVE MATERIAL MAY BE ALLOWED IF MEETS CLASS 3 OR 4 AGGREGATE BASE PER SPECIFICATION SECTION 10 OF THIS ORDINANCE.
5. GRADE ROADWAY AND SHOULDER AT 2.00%.
6. RELATIVE COMPACTION OF SUBGRADE AND BASE MATERIAL SHALL BE 95% MIN.

COUNTY OF RIVERSIDE

UNPAVED LOCAL ROAD/ UNPAVED ACCESS ROAD (60' R/W)

STANDARD No. 105C

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

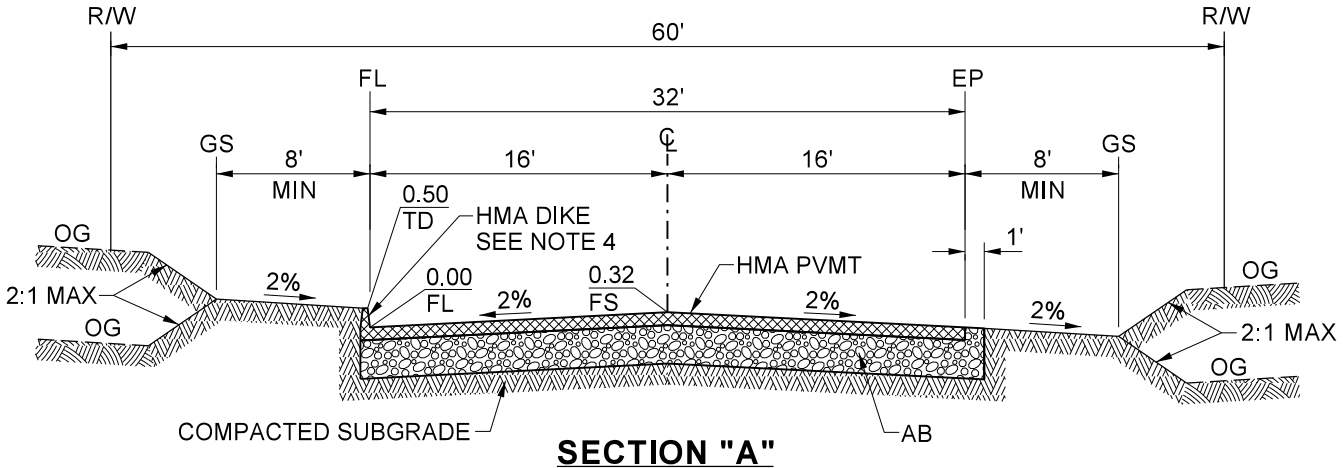
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

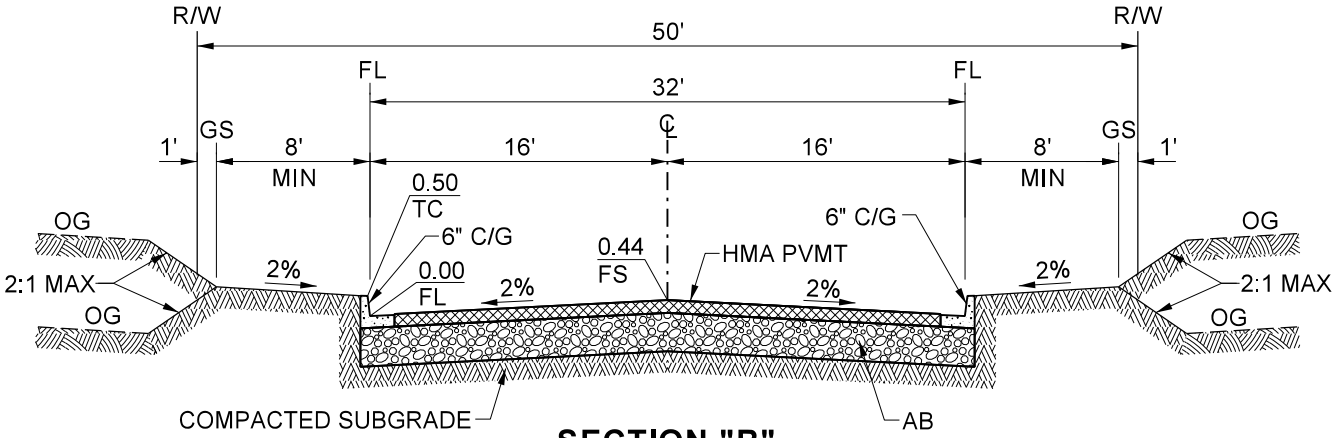
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



SECTION "A"

32' PAVED / 48' GRADED / 60' R/W



SECTION "B"

32' PAVED / 48' GRADED / 50' R/W

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE. FOR ACCESS ROADS, IF THE ULTIMATE ROAD CLASSIFICATION IS A GENERAL PLAN HIGHWAY, THE TRAFFIC INDEX REQUIREMENT IS 7.0.
3. SEE STANDARD No. 212 FOR HMA DIKE DETAIL AND REQUIREMENTS.
4. FOR ACCESS ROAD 6" HMA DIKE MAY BE REQUIRED ON ONE OR BOTH SIDES.
5. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
6. ROADWAY CROSS-SECTION LESS THAN 40 FT IN WIDTH IS LIMITED TO PARKING ON ONE SIDE OF THE STREET.

COUNTY OF RIVERSIDE

ACCESS ROAD, CONSTRAINED LOCAL STREET OR PRIVATE STREET (50'-60' R/W)

STANDARD No. 106

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

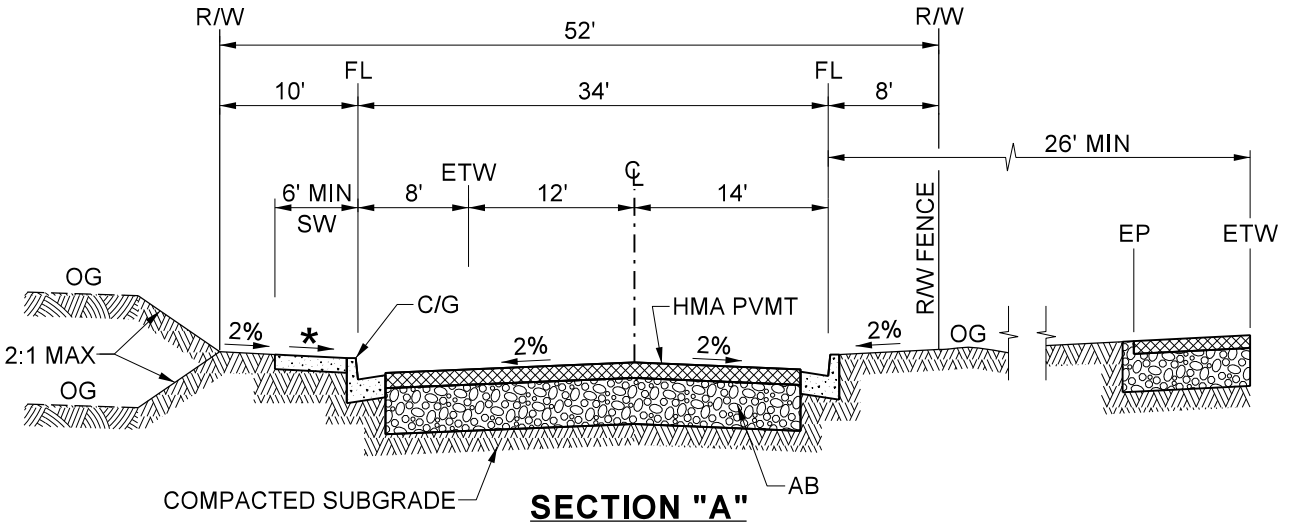
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

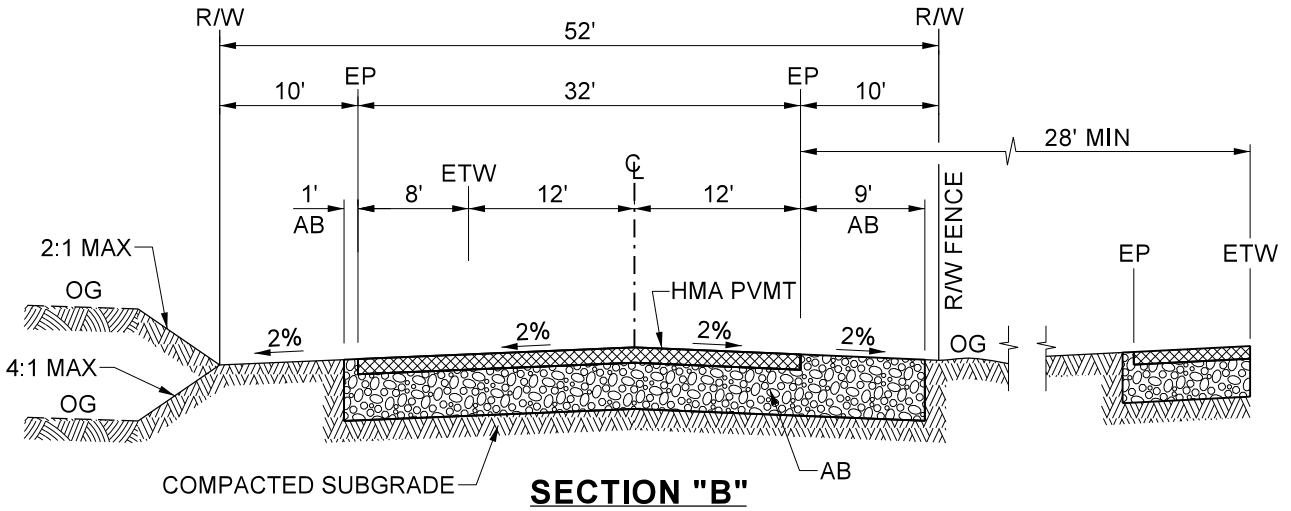
11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



SECTION "A"



SECTION "B"

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
4. ROADWAY CROSS-SECTION LESS THAN 40 FT IN WIDTH IS LIMITED TO PARKING ON ONE SIDE OF THE STREET.

COUNTY OF RIVERSIDE

LOCAL FRONTAGE ROAD (52' R/W)

STANDARD No. 107

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

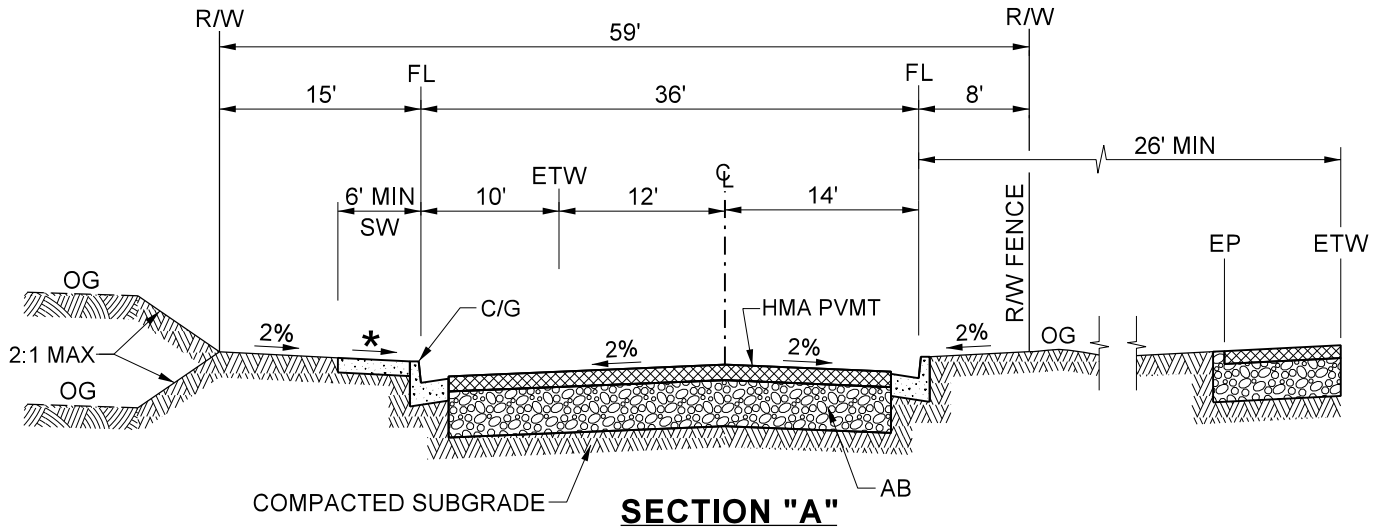
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

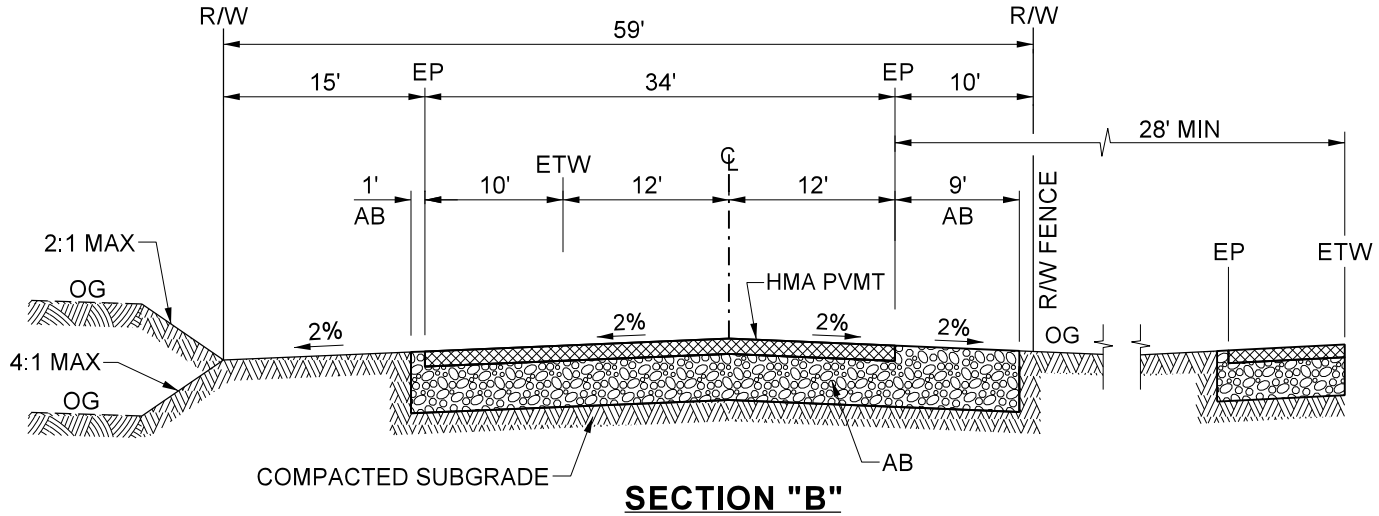
11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



SECTION "A"



SECTION "B"

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.
4. ROADWAY CROSS-SECTION LESS THAN 40 FT IN WIDTH IS LIMITED TO PARKING ON ONE SIDE OF THE STREET.

COUNTY OF RIVERSIDE

COLLECTOR FRONTAGE ROAD (59' R/W)

STANDARD No. 107A

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

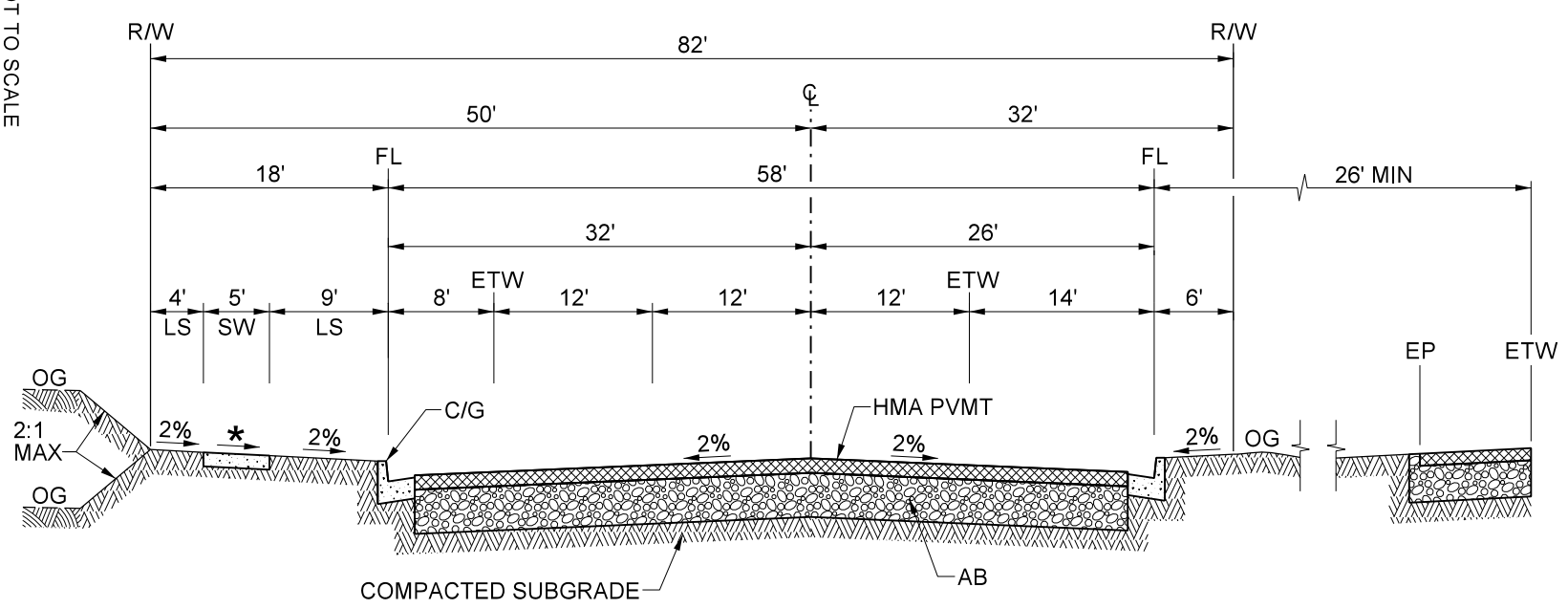
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



SECTION

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200). 8" CURB IS NOT ALLOWED.

COUNTY OF RIVERSIDE

SECONDARY FRONTAGE ROAD (82' R/W)

STANDARD No. 108

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

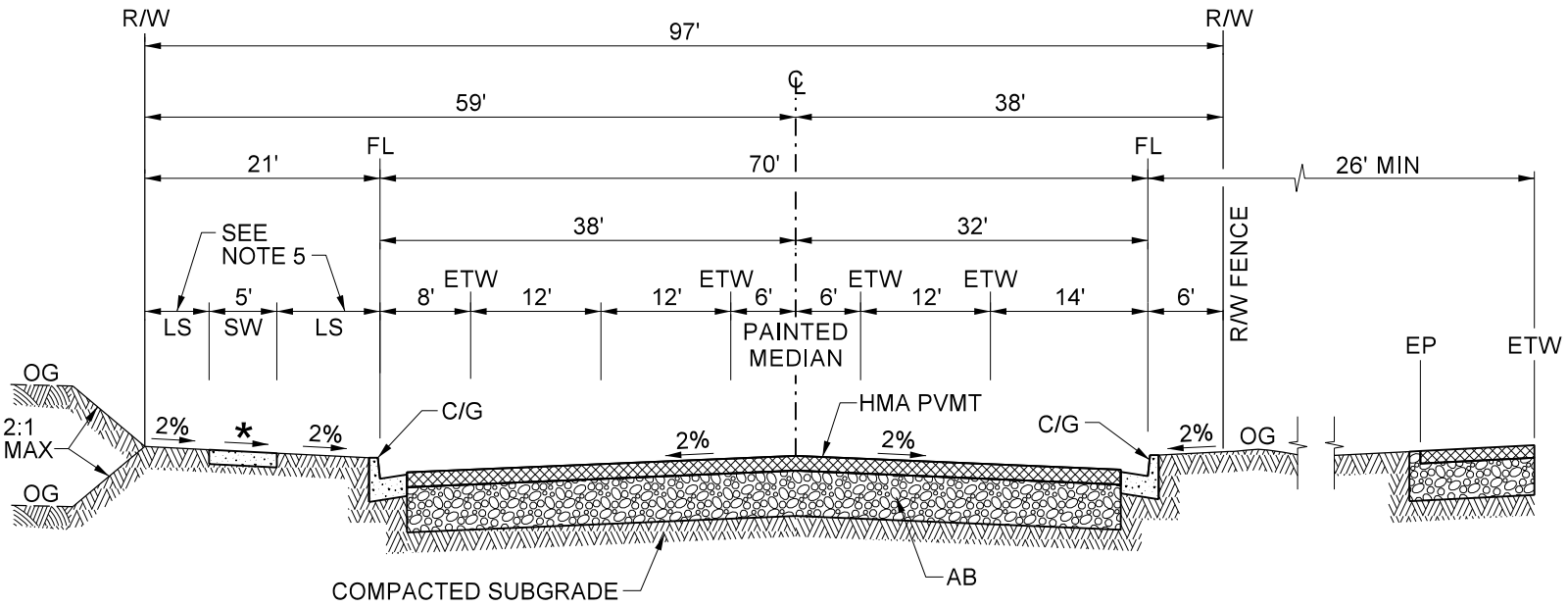
Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA



SECTION

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. CURB AND GUTTER TO BE TYPE "A-8" (STANDARD No. 201). 6" CURB IS NOT ALLOWED.
4. DISTANCE FROM SIDEWALK TO R/W, AND TO FLOWLINE, VARIES. SEE STANDARD No. 404 FOR DETAILS OF MEANDERING SIDEWALK.

COUNTY OF RIVERSIDE

MAJOR FRONTAGE ROAD (97' R/W)

STANDARD No. 109

SECTION

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

**PART-WIDTH STREET SECTION: 46' IMPROVEMENTS ON 60' R/W

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
3. ALL CURB AND GUTTER TO BE TYPE "A-6" (STANDARD No. 200) UNLESS OTHERWISE SPECIFIED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

INDUSTRIAL COLLECTOR STREET (78' R/W)

STANDARD No. 111

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

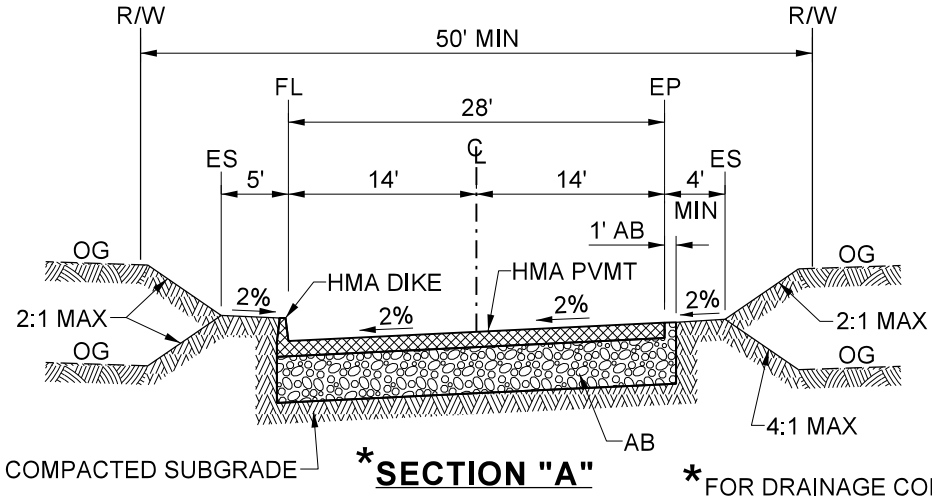
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

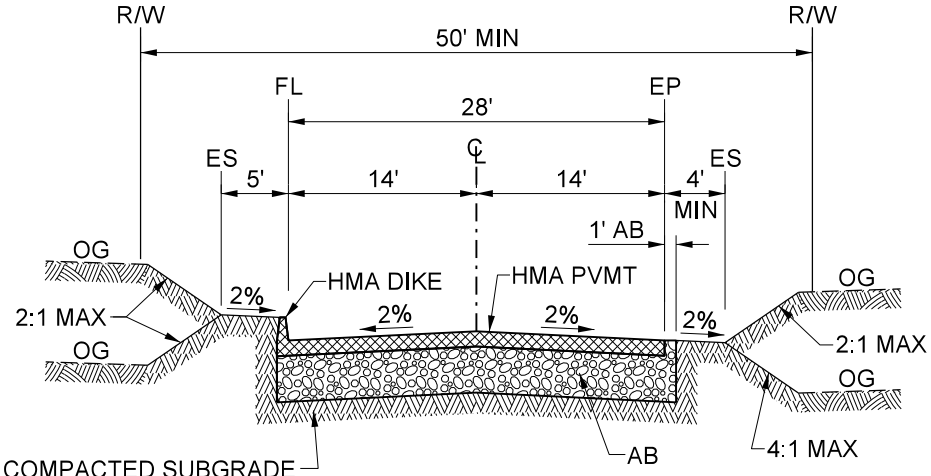
LOCAL MOUNTAIN RESIDENTIAL STREET (50' R/W)

STANDARD No. 112



***SECTION "A"**

*FOR DRAINAGE CONTROL AS APPROVED BY THE DIRECTOR OF TRANSPORTATION



SECTION "B"

NOTES:

1. THIS STANDARD APPLIES IN AREAS AT AN ELEVATION OF 5000 FEET OR HIGHER.
2. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
3. MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.
4. SEE STANDARD No. 212 FOR HMA DIKE DETAIL AND REQUIREMENTS. HMA DIKE MAY BE REQUIRED ON ONE OR BOTH SIDES.
5. GRADES SHALL NOT EXCEED 10%. GRADES UP TO 15% MAY BE APPROVED FOR DISTANCES NOT TO EXCEED 200'.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

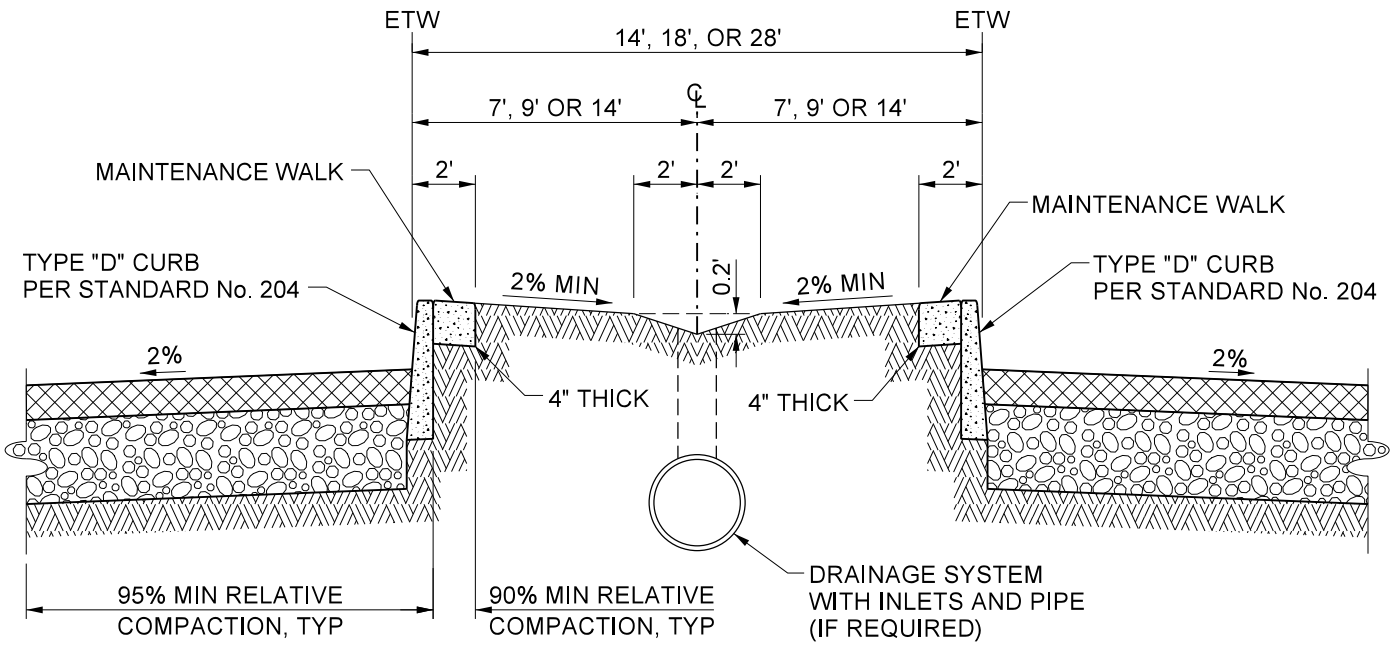
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

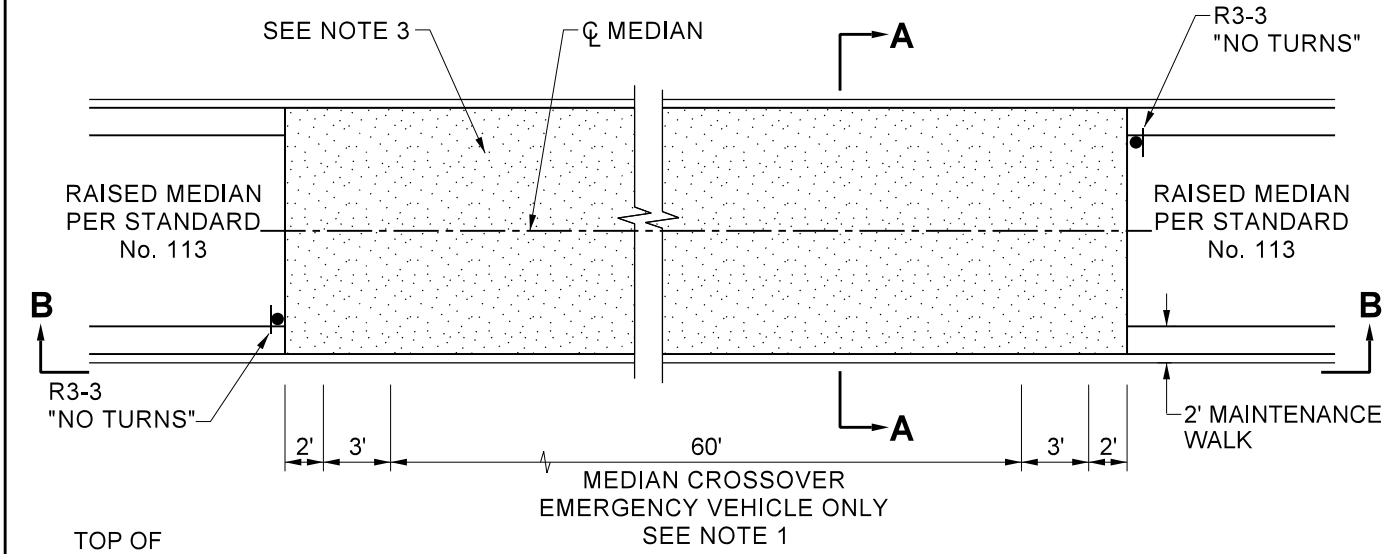
LANDSCAPED MEDIAN

STANDARD No. 113

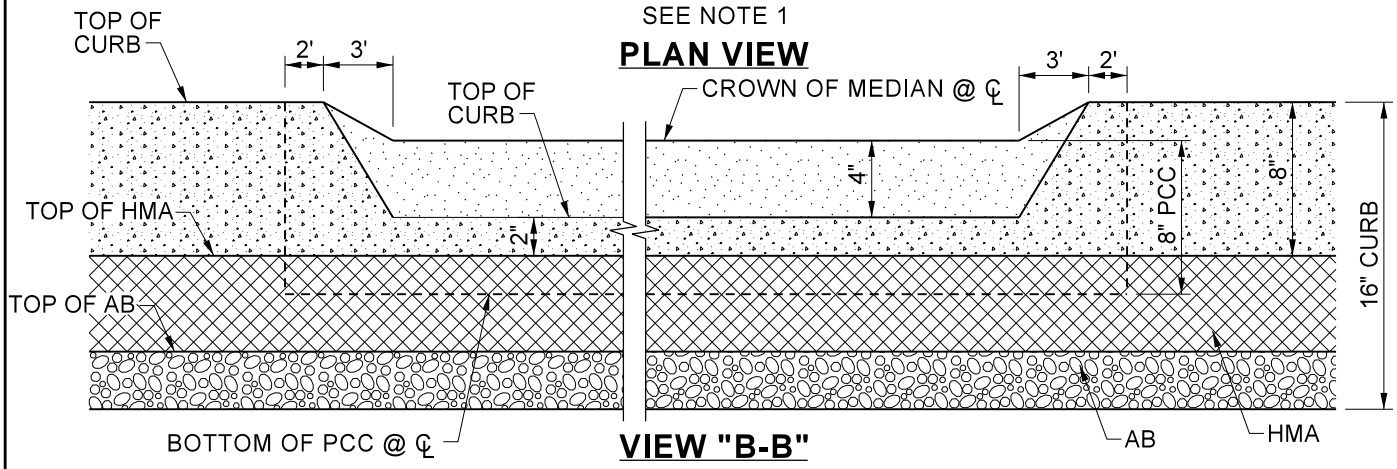


NOTES:

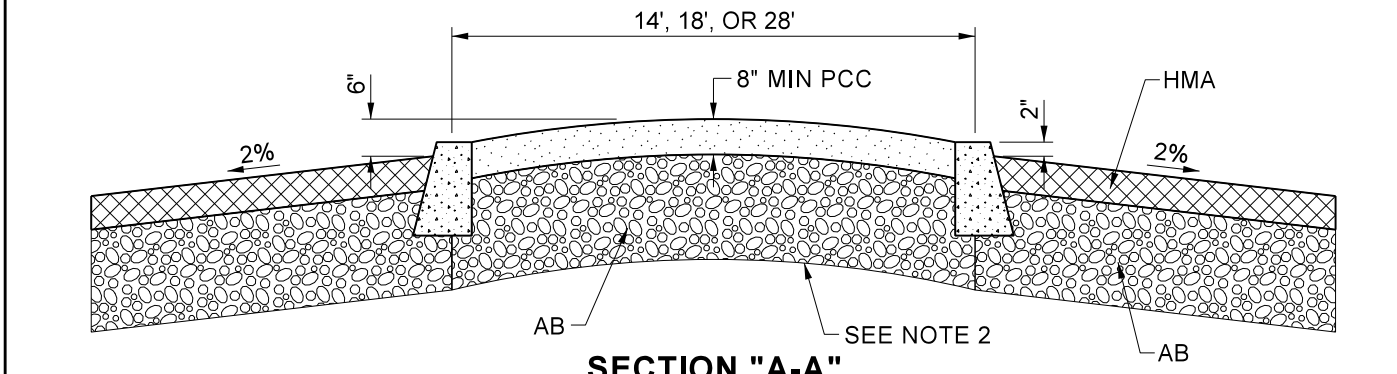
1. ALL LANDSCAPING AND IRRIGATION PLANS MUST BE APPROVED BY THE TRANSPORTATION DEPARTMENT.
2. CONTINUED MAINTENANCE OF PLANTED LANSCAPING MUST BE GUARANTEED THROUGH A MAINTENANCE DISTRICT OR OTHER COUNTY APPROVED MECHANISM.
3. ANY IRRIGATION MUST BE PROVIDED BY A DRIP SYSTEM.
4. INSTALL 8" CURB AND GUTTER (STANDARD No. 201) IN PLACE OF TYPE "D" CURB WHEN FLOW LINE IS AGAINST MEDIAN IN CONDITIONS OF SUPERELEVATION.
5. RELATIVE COMPACTION SHALL BE A MINIMUM OF 95% UNDER ROADWAY AND CURB (AND GUTTER) AND 90% UNDER MAINTENANCE WALKS.
6. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
7. PLACE WEAKEND PLANE AND EXPANSION JOINTS IN CURB (AND GUTTER) AND MAINTENANCE WALK PER STANDARD No. 205.



PLAN VIEW



VIEW "B-B"



SECTION "A-A"

NOTES:

1. 60' OR AS APPROVED BY THE FIRE AND TRANSPORTATION DEPARTMENTS.
2. DESIGN PCC AND AB SECTION FOR 60,000 LB, 2 AXLE VEHICLE.
3. RED STAMPED CONCRETE OR EQUAL AS APPROVED BY THE FIRE AND TRANSPORTATION DEPARTMENTS.
4. RELATIVE COMPACTION OF SUBGRADE UNDER ROADWAY, CURB AND CROSSOVER MEDIAN SHALL BE 95% MINIMUM.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CROSSOVER MEDIAN

STANDARD No. 113A

ROAD TYPE	STANDARD No.	TRAFFIC INDEX (f)	RIGHT-OF-WAY (h) (FT)	SURFACED WIDTH OR CURB TO CURB (FT)	MINIMUM RADII (HORIZ, FT) – PREDOMINANTLY FLAT	MINIMUM RADII (HORIZ, FT) – PREDOMINANTLY ROLLING	MINIMUM RADII (HORIZ, FT) – PREDOMINANTLY MOUNTAINOUS	MAXIMUM LONGITUDINAL GRADES (%) – FLAT	MAXIMUM LONGITUDINAL GRADES (%) – ROLLING	MAXIMUM LONGITUDINAL GRADES (%) – MOUNTAINOUS	PREFERRED DESIGN SPEEDS (MPH) – FLAT	PREFERRED DESIGN SPEEDS (MPH) – ROLLING	PREFERRED DESIGN SPEEDS (MPH) – MOUNTAINOUS	INTERSECTION INTERVALS (FT)	CURB RETURN RADIUS (FT)
EXPRESSWAY	81	11.0	220	SEE STD	3200	2400	AS APPROVED BY THE DIRECTOR OF TRANSPORTATION (R=150' MINIMUM)	3	6	-	65	60	AS APPROVED BY THE DIRECTOR OF TRANSPORTATION	2640 (d)	35
URBAN ARTERIAL HIGHWAY	91	10.0	152	110	2400	1900		3	6	-	60	55		1320 (d)	35
ARTERIAL HIGHWAY	92	9.5	128	86	2400	1900		3	6	9	60	55		1320 (e)	35
MOUNTAIN ARTERIAL HIGHWAY	95	9.5	110	SEE STD 95	-	1100		-	7	9	-	45		330 (e)	35
MAJOR HIGHWAY	93	9.0	118	76	1900	1400		3	6	9	55	50		660 (e)	35
SECONDARY HIGHWAY	94	8.5	100	64	1400	1100		3	6	9	50	45		330 (e)	35
INDUSTRIAL COLLECTOR STREET	111	8.0	78	56	850	600		4	8	12	40	35		200	35
COLLECTOR	103	7.0	74	44	600	450		4	8	12	35	30		200 (e)	(j)
ENHANCED LOCAL STREET AT SCHOOL OR PARK (g)	104	6.5	66	44	300	300		4	8	12	30	30		200 (g)	(j)
EXTERIOR & LOCAL STREET	105A	5.5	60	40	300	300		4	9	16	30	30		200	(j)
SHORT LOCAL	105B	5.5	56	36	300	300		4	9	16	30	30		200	(j)
ACCESS ROAD, CONSTRAINED LOCAL OR PRIVATE STREET	106	5.5 (i) MIN	50 (i)	32	300	300		4	9	16	30	30		N/A	(j)

NOT TO SCALE

FOR NOTES SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER — MARK ALAN LANCASTER — C48048 — CIVIL — STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

ROADWAY DESIGN REQUIREMENTS

STANDARD No. 114 (1 OF 2)

NOTES:

(a) MINIMUM PAVING THICKNESS PER SPECIFICATIONS SECTION 8.07 OF THIS ORDINANCE.

(b) ROADWAY DESIGN LESS THAN SHOWN REQUIRES TRANSPORTATION DEPARTMENT APPROVAL.

(c) PART-WIDTH STREET SECTIONS SHALL BE IMPROVED AND R/W CONVEYED AS SHOWN ON TYPICAL STREET SECTIONS.

(d) DIRECT ACCESS PROHIBITED.

(e) RESIDENTIAL ACCESS PROHIBITED. COMMERCIAL/INDUSTRIAL DRIVEWAY ACCESS AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION.

(f) FOR DEVELOPMENTS THAT HAVE A SIGNIFICANT AMOUNT OF TRUCK TRAFFIC, THE DEVELOPER MAY BE REQUIRED TO PERFORM A TRAFFIC ANALYSIS TO DETERMINE THE APPROPRIATE TRAFFIC INDEX FOR THE ROADWAY IMPROVEMENTS.

(g) MAY USE AS A CUL-DE-SAC IN INDUSTRIAL OR COMMERCIAL USE AREAS, INTERSECTION INTERVAL NOT TO EXCEED 660' IN LENGTH.

(h) ADDITIONAL R/W REQUIRED AT INTERSECTIONS TO ACCOMMODATE TURN LANES PER STANDARD No's. 81, 82, 84, 86 & 91-94. ADDITIONAL R/W MAY BE REQUIRED ON OPPOSITE SIDE OF INTERSECTION TO ALIGN THROUGH LANES.

(i) FOR ACCESS ROADS, IF THE ULTIMATE ROAD CLASSIFICATION IS A GENERAL PLAN HIGHWAY, THE TRAFFIC INDEX REQUIREMENT IS 7.0. THE MINIMUM R/W WIDTH FOR ACCESS ROADS IS 60 FEET.

(j) IF BOTH INTERSECTING STREETS HAVE A WIDTH LESS THAN STANDARD No. 111 (INDUSTRIAL COLLECTOR, 78' R/W), THEN THE CURB RETURN RADIUS WILL BE 25'. IF EITHER STREET HAS A WIDTH GREATER THAN OR EQUAL TO STANDARD No. 111 THEN THE CURB RETURN RADIUS WILL BE 35'. SEE STANDARD No. 805 CORNER CUTBACK R/W REQUIREMENTS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

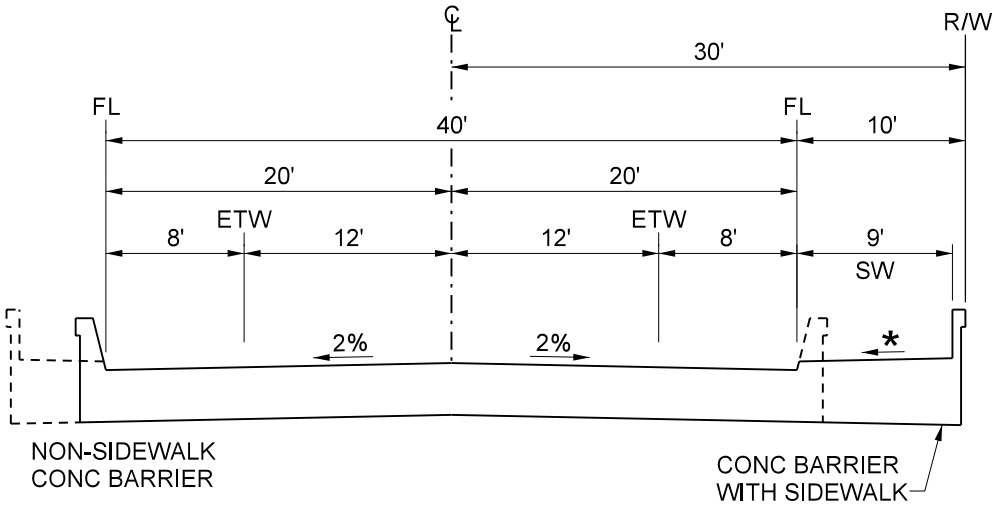
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

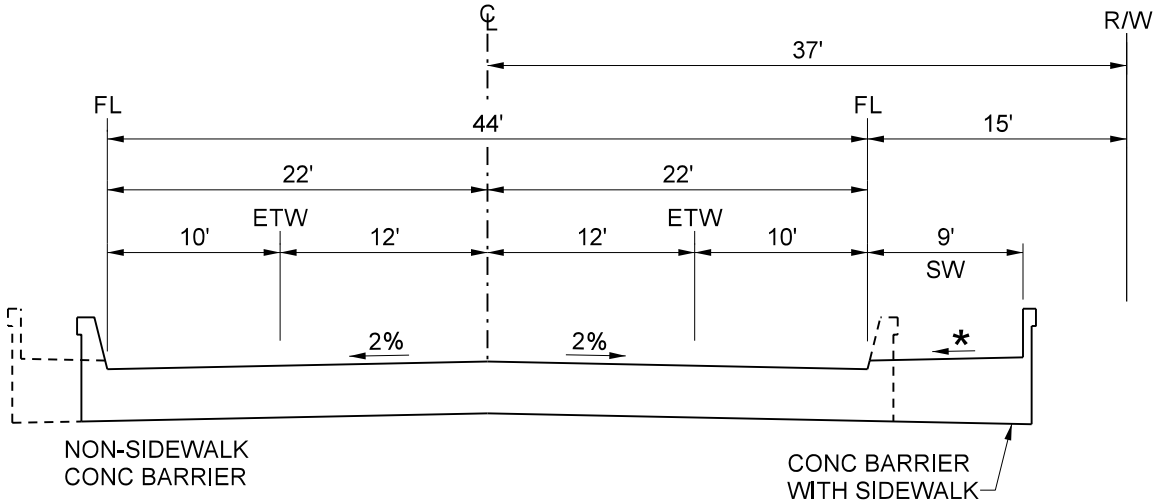
COUNTY OF RIVERSIDE

ROADWAY DESIGN REQUIREMENTS

STANDARD No. 114 (2 OF 2)



LOCAL STREET BRIDGE



COLLECTOR STREET BRIDGE

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. BRIDGE TYPE TO BE APPROVED BY THE TRANSPORTATION DEPARTMENT.
2. RAISED SIDEWALK TO BE PROVIDED. NON-SIDEWALK CONCRETE BARRIER TO BE USED ONLY IF APPROVED BY THE DIRECTOR OF TRANSPORTATION.
3. CONCRETE BARRIER SHALL BE TO CALTRANS STANDARDS OR AS APPROVED BY THE DIRECTOR OF TRANSPORTATION.
4. REFER TO COUNTY OF RIVERSIDE BRIDGE DESIGN MANUAL FOR ADDITIONAL INFORMATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

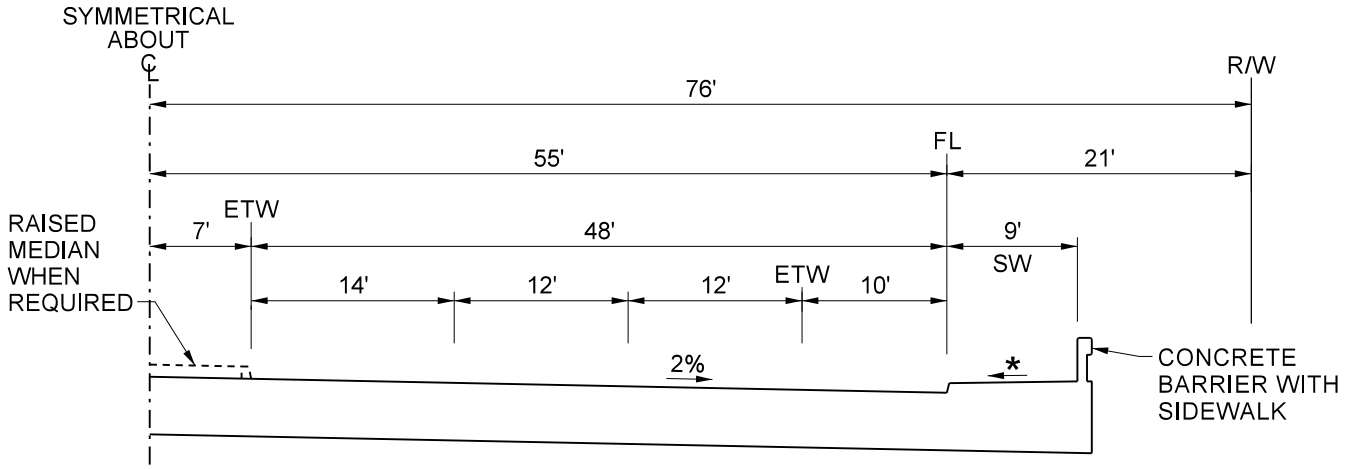
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

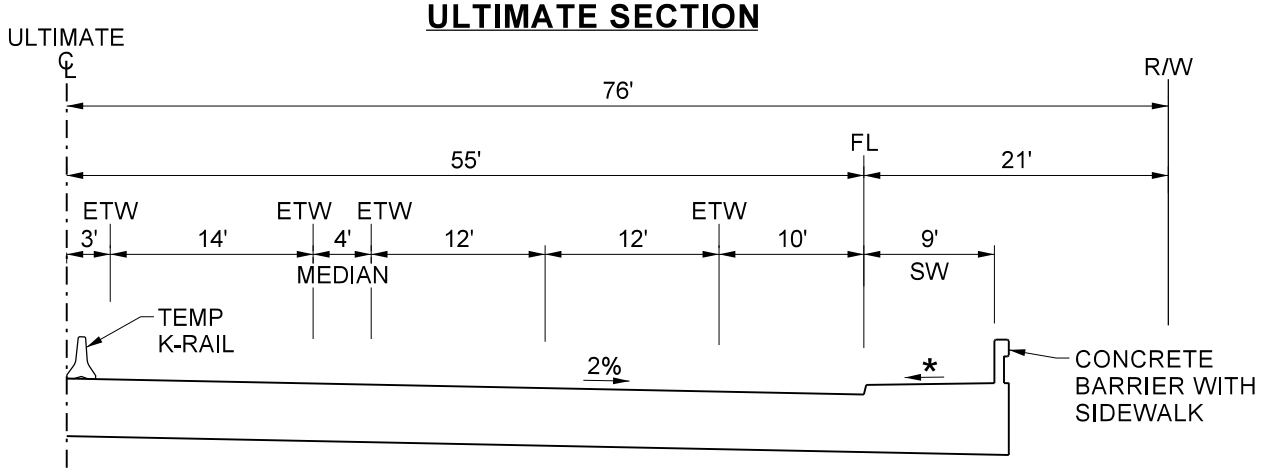
COUNTY OF RIVERSIDE

LOCAL AND COLLECTOR STREET BRIDGE

STANDARD No. 115



ULTIMATE SECTION



3 LANES

INTERIM STRIPING LAYOUT
(INITIAL PHASE)

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. ULTIMATE TYPICAL BRIDGE SECTIONS TO BE CONSISTENT WITH THE APPROACH ROAD SECTION AS APPROVED BY THE TRANSPORTATION DEPARTMENT.
2. BRIDGE TYPE TO BE APPROVED BY THE TRANSPORTATION DEPARTMENT.
3. CURBED MEDIAN TO BE USED ONLY WHEN APPROACHING HIGHWAY HAS A RAISED MEDIAN. MEDIAN WIDTH MAY VARY WITH RAISED CURB.
4. MEDIAN WIDTH SUBJECT TO VARIATION DEPENDING ON INTERSECTION PROXIMITY.
5. RAISED SIDEWALK TO BE PROVIDED. NON-SIDEWALK CONCRETE BARRIER TO BE USED ONLY IF APPROVED BY THE DIRECTOR OF TRANSPORTATION.
6. CONCRETE BARRIER SHALL BE TO CALTRANS STANDARDS OR AS APPROVED BY THE DIRECTOR OF TRANSPORTATION.
7. REFER TO COUNTY OF RIVERSIDE BRIDGE DESIGN MANUAL FOR ADDITIONAL INFORMATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION — DATE
MARK LANCASTER, P.E.

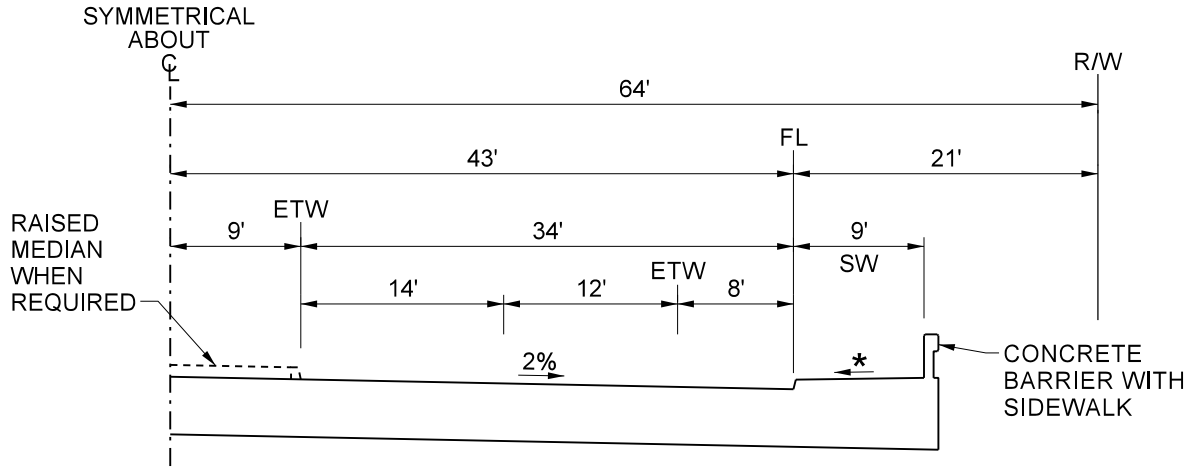
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

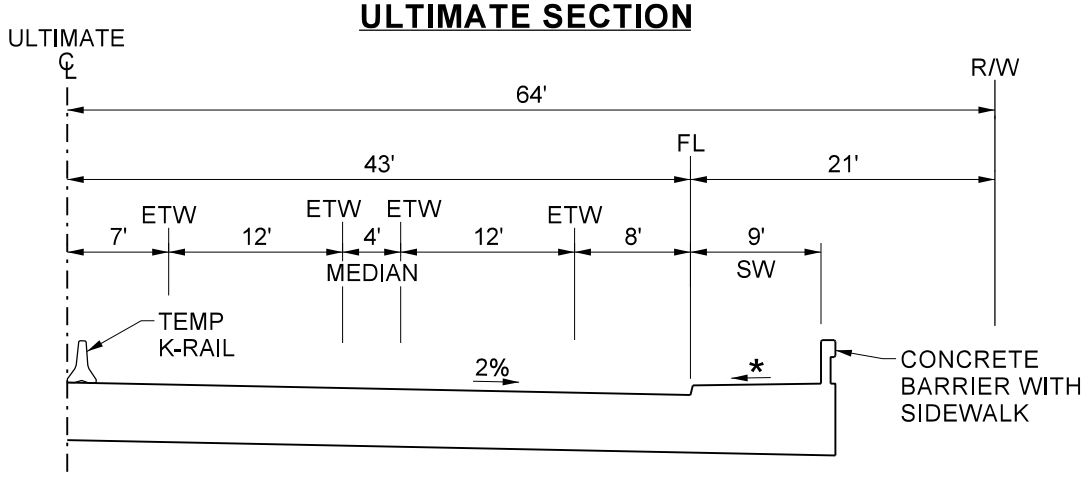
COUNTY OF RIVERSIDE

URBAN ARTERIAL HIGHWAY BRIDGE

STANDARD No. 116



ULTIMATE SECTION



2 LANES

INTERIM STRIPING LAYOUT
(INITIAL PHASE)

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. ULTIMATE TYPICAL BRIDGE SECTIONS TO BE CONSISTENT WITH THE APPROACH ROAD SECTION AS APPROVED BY THE TRANSPORTATION DEPARTMENT.
2. BRIDGE TYPE TO BE APPROVED BY THE TRANSPORTATION DEPARTMENT.
3. CURBED MEDIAN TO BE USED ONLY WHEN APPROACHING HIGHWAY HAS A RAISED MEDIAN. MEDIAN WIDTH MAY VARY WITH RAISED CURB.
4. MEDIAN WIDTH SUBJECT TO VARIATION DEPENDING ON INTERSECTION PROXIMITY.
5. RAISED SIDEWALK TO BE PROVIDED. NON-SIDEWALK CONCRETE BARRIER TO BE USED ONLY IF APPROVED BY THE DIRECTOR OF TRANSPORTATION.
6. CONCRETE BARRIER SHALL BE TO CALTRANS STANDARDS OR AS APPROVED BY THE DIRECTOR OF TRANSPORTATION.
7. REFER TO COUNTY OF RIVERSIDE BRIDGE DESIGN MANUAL FOR ADDITIONAL INFORMATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

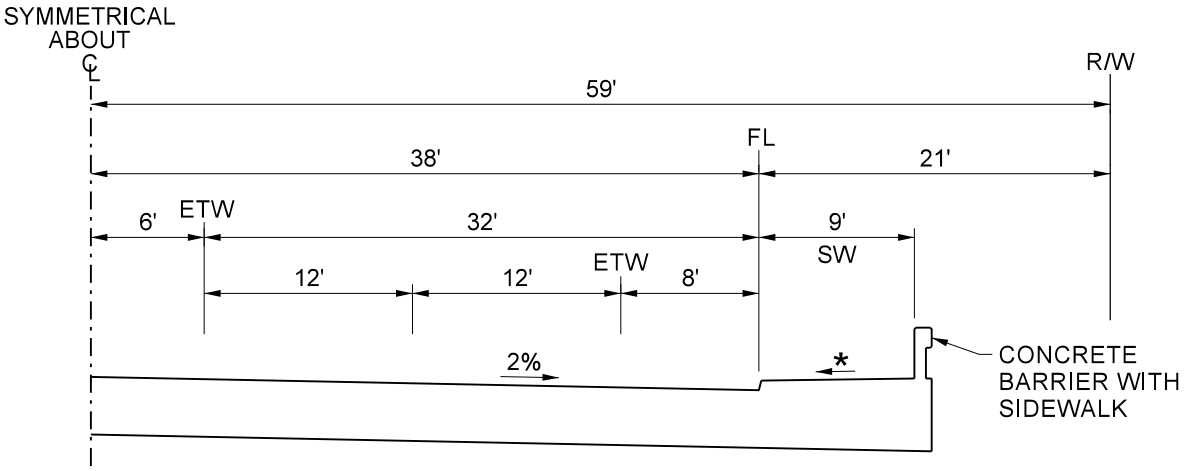
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

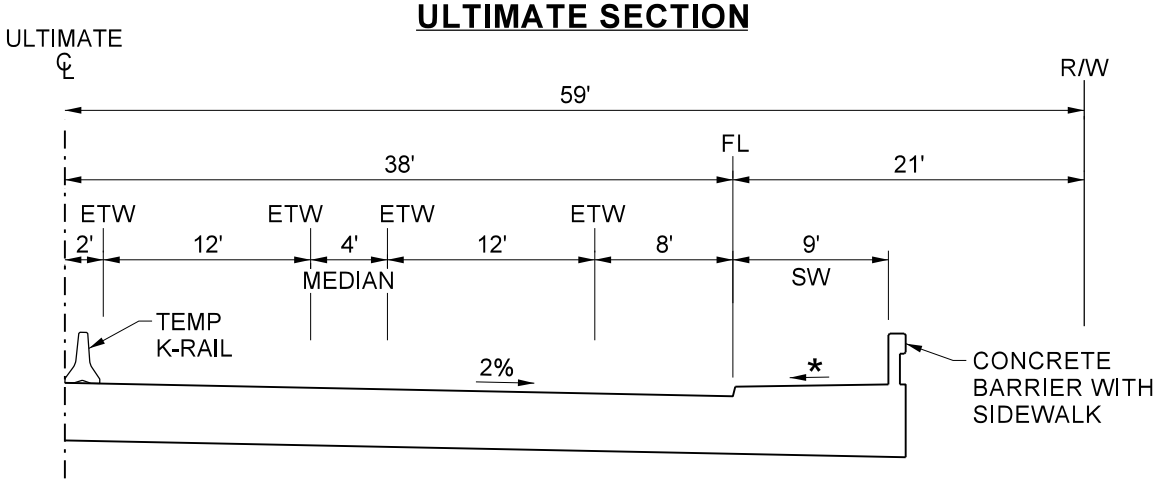
COUNTY OF RIVERSIDE

ARTERIAL HIGHWAY BRIDGE

STANDARD No. 117



ULTIMATE SECTION



2 LANES

INTERIM STRIPING LAYOUT
(INITIAL PHASE)

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. ULTIMATE TYPICAL BRIDGE SECTIONS TO BE CONSISTENT WITH THE APPROACH ROAD SECTION AS APPROVED BY THE TRANSPORTATION DEPARTMENT.
2. BRIDGE TYPE TO BE APPROVED BY THE TRANSPORTATION DEPARTMENT.
3. CURBED MEDIAN TO BE USED ONLY WHEN APPROACHING HIGHWAY HAS A RAISED MEDIAN. MEDIAN WIDTH MAY VARY WITH RAISED CURB.
4. MEDIAN WIDTH SUBJECT TO VARIATION DEPENDING ON INTERSECTION PROXIMITY.
5. RAISED SIDEWALK TO BE PROVIDED. NON-SIDEWALK CONCRETE BARRIER TO BE USED ONLY IF APPROVED BY THE DIRECTOR OF TRANSPORTATION.
6. CONCRETE BARRIER SHALL BE TO CALTRANS STANDARDS OR AS APPROVED BY THE DIRECTOR OF TRANSPORTATION.
7. REFER TO COUNTY OF RIVERSIDE BRIDGE DESIGN MANUAL FOR ADDITIONAL INFORMATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

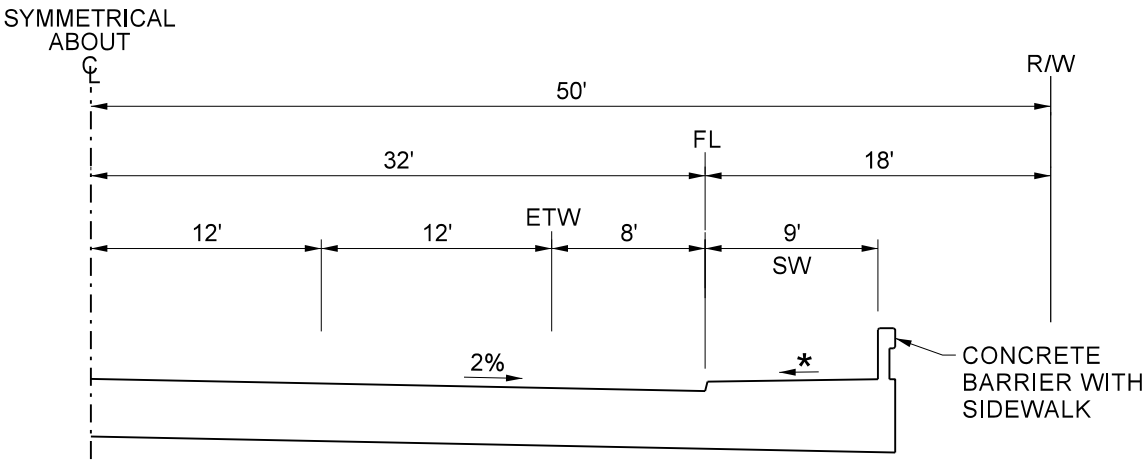
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

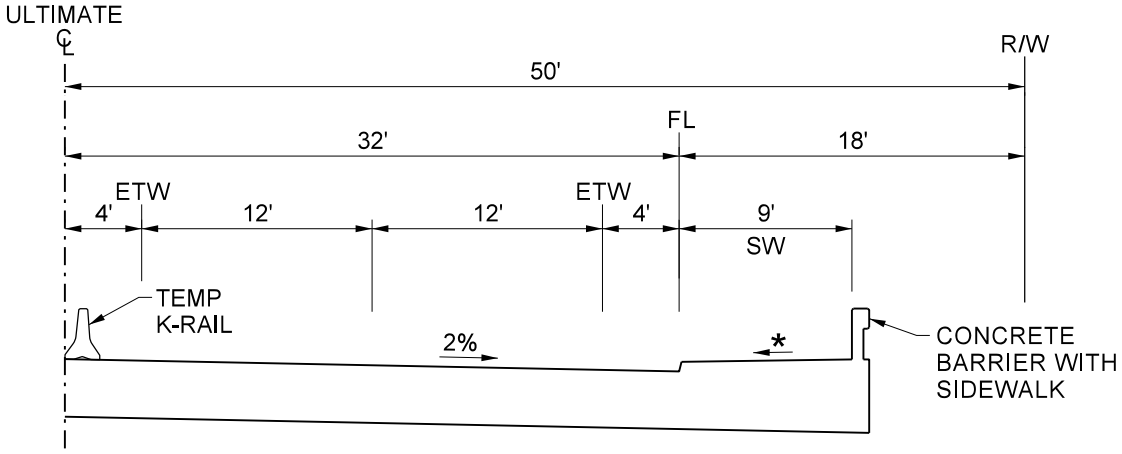
COUNTY OF RIVERSIDE

MAJOR HIGHWAY BRIDGE

STANDARD No. 118



ULTIMATE SECTION



2 LANES

INTERIM STRIPING LAYOUT
(INITIAL PHASE)

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. ULTIMATE TYPICAL BRIDGE SECTIONS TO BE CONSISTENT WITH THE APPROACH ROAD SECTION AS APPROVED BY THE TRANSPORTATION DEPARTMENT.
2. BRIDGE TYPE TO BE APPROVED BY THE TRANSPORTATION DEPARTMENT.
3. RAISED SIDEWALK TO BE PROVIDED. NON-SIDEWALK CONCRETE BARRIER TO BE USED ONLY IF APPROVED BY THE DIRECTOR OF TRANSPORTATION.
4. CONCRETE BARRIER SHALL BE TO CALTRANS STANDARDS OR AS APPROVED BY THE DIRECTOR OF TRANSPORTATION.
5. REFER TO COUNTY OF RIVERSIDE BRIDGE DESIGN MANUAL FOR ADDITIONAL INFORMATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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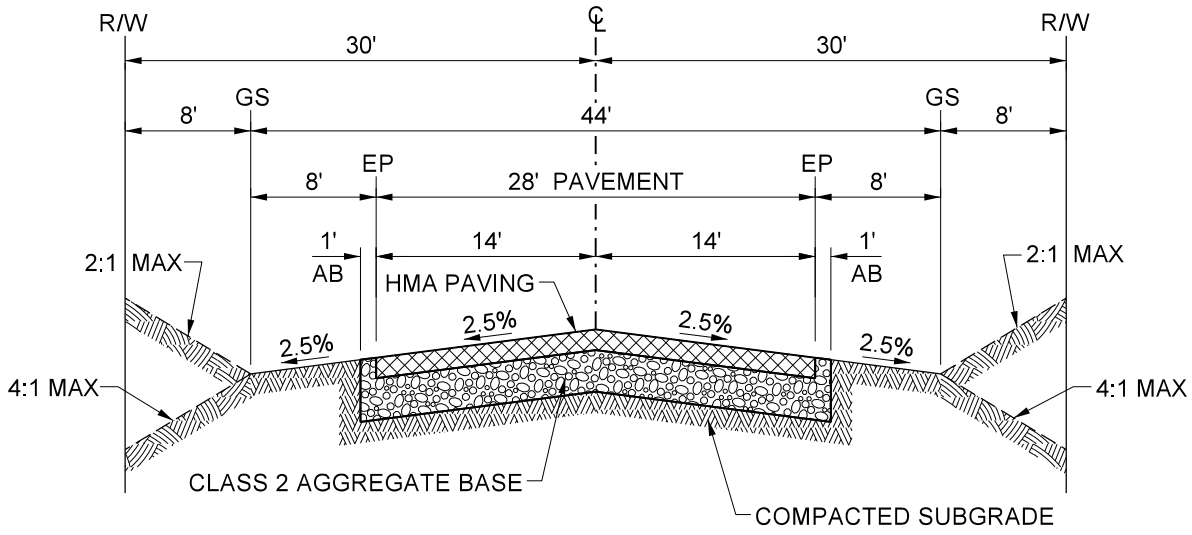
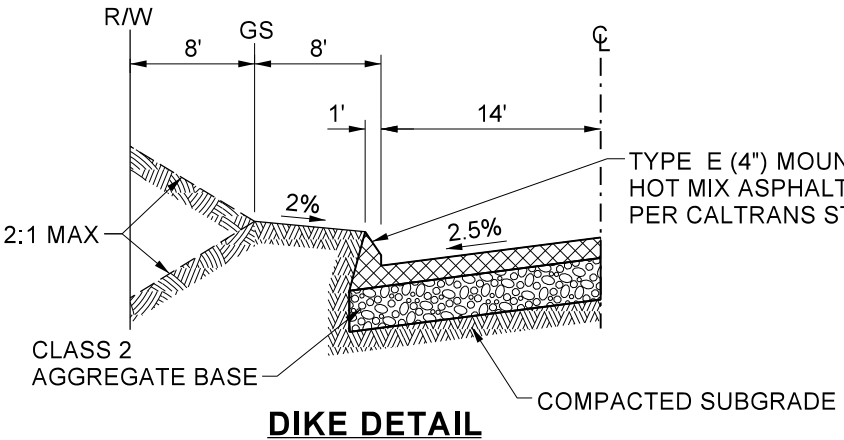
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SECONDARY HIGHWAY BRIDGE

STANDARD No. 119





DIKE DETAIL

SEE NOTE 3

SERVING 21 THROUGH 49 LOTS
1/2 ACRE GROSS MINIMUM LOT SIZE

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM THICKNESS FOR HMA IS 0.25'; FOR AGGREGATE BASE IS 0.50'.
3. TO CONTROL DRAINAGE, PREVENT EROSION OR IF THE ROADWAY GRADIENT IS 6% OR GREATER, MOUNTABLE HMA DIKES SHALL BE REQUIRED. MOUNTABLE HMA DIKES AND WIDER PAVEMENT MAY BE REQUIRED FOR SAFETY, DRAINAGE, AND/OR CONTINUITY AS DETERMINED BY THE TRANSPORTATION DEPARTMENT.
4. THIS RURAL ROAD STANDARD SHALL BE APPLICABLE IN THE FOLLOWING AREAS: LAKE MATHEWS COMMUNITY PLAN (CSA 128) AND COUNTY SERVICE AREAS NUMBERED 41, 86, 104, 105, 108, 117, 124, AND 149 OR IF CONDITIONED BY THE TRANSPORTATION DEPARTMENT.
5. THE MINIMUM RADII, MAXIMUM GRADE PERCENTAGE, INTERSECTION INTERVALS, AND ALL OTHER DESIGN STANDARDS EXCEPT PAVEMENT WIDTH AND R/W SHALL BE THE SAME AS THOSE FOR A "LOCAL STREET" AS REQUIRED BY STANDARD No. 114.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

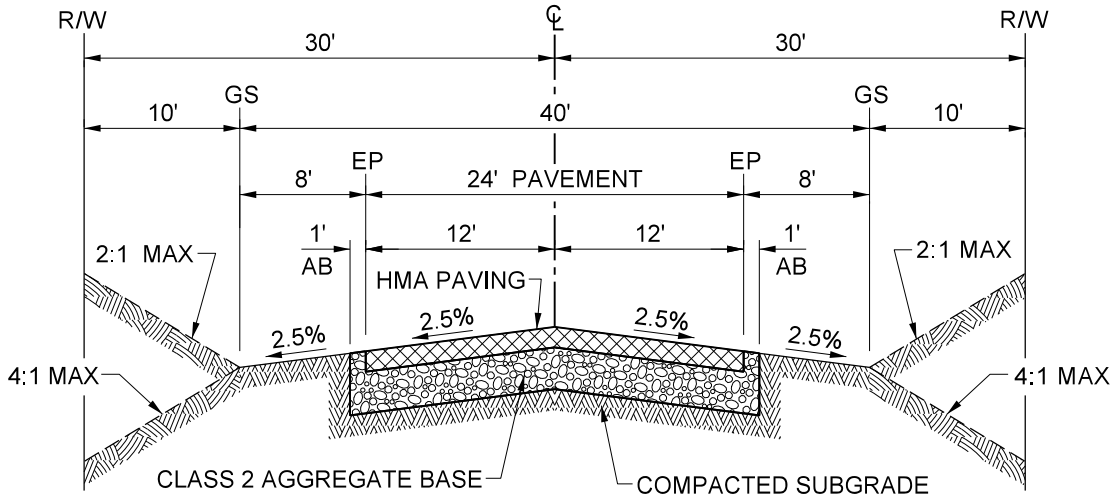
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

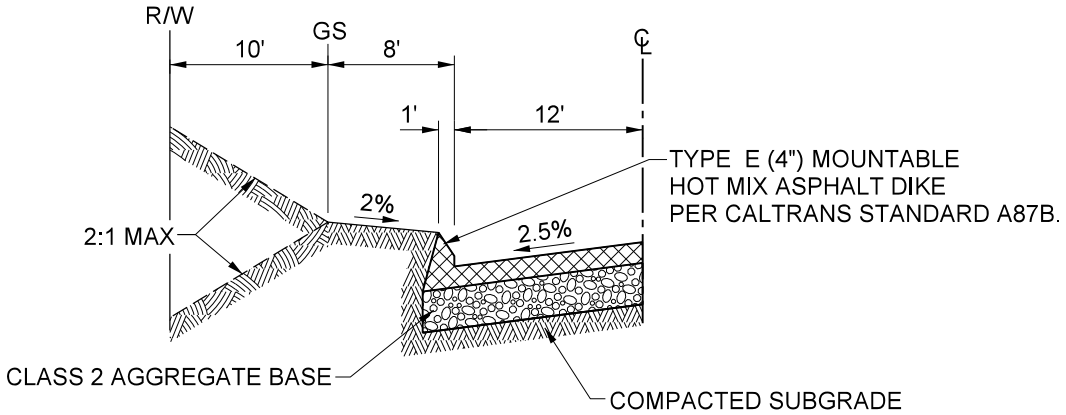
COUNTY OF RIVERSIDE

COLLECTOR RURAL ROAD (60' R/W)

(SEE NOTE 4)

STANDARD No. 136





DIKE DETAIL

SEE NOTE 3

SERVING 20 OR FEWER LOTS
2 ACRE GROSS MINIMUM LOT SIZE

NOTES:

1. THICKNESS OF AB AND HMA TO BE DETERMINED BY SOIL TEST AT TIME OF GRADING OPERATIONS.
2. MINIMUM THICKNESS FOR HMA IS 0.25'; FOR AGGREGATE BASE IS 0.50'.
3. TO CONTROL DRAINAGE, PREVENT EROSION OR IF THE ROADWAY GRADIENT IS 6% OR GREATER, MOUNTABLE HMA DIKES SHALL BE REQUIRED. MOUNTABLE HMA DIKES AND WIDER PAVEMENT MAY BE REQUIRED FOR SAFETY, DRAINAGE, AND/OR CONTINUITY AS DETERMINED BY THE TRANSPORTATION DEPARTMENT.
4. THIS RURAL ROAD STANDARD SHALL BE APPLICABLE IN THE FOLLOWING AREAS: LAKE MATHEWS COMMUNITY PLAN (CSA 128) AND COUNTY SERVICE AREAS NUMBERED 41, 86, 104, 105, 108, 117, 124, AND 149.
5. THE MINIMUM RADII, MAXIMUM GRADE PERCENTAGE, INTERSECTION INTERVALS, AND ALL OTHER DESIGN STANDARDS EXCEPT PAVEMENT WIDTH AND R/W SHALL BE THE SAME AS THOSE FOR A "LOCAL STREET" AS REQUIRED BY STANDARD No. 114.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

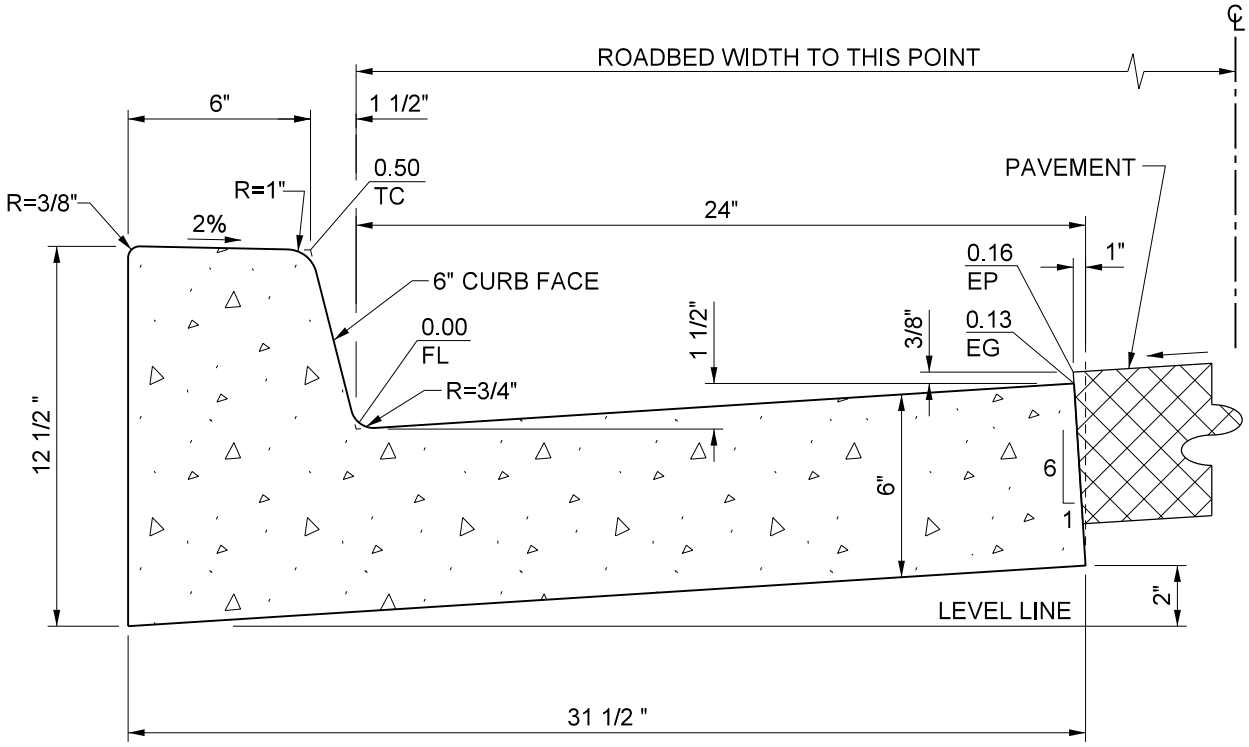
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

RESIDENTIAL RURAL ROAD (60' R/W)

(SEE NOTE 4)

STANDARD No. 138



MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD
1.601 CU FT / LF
1 CU YD = 16.86 LF

NOTES:

1. RELATIVE COMPACTION OF SUBGRADE UNDER CURB AND GUTTER SHALL BE 95% MINIMUM.
2. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

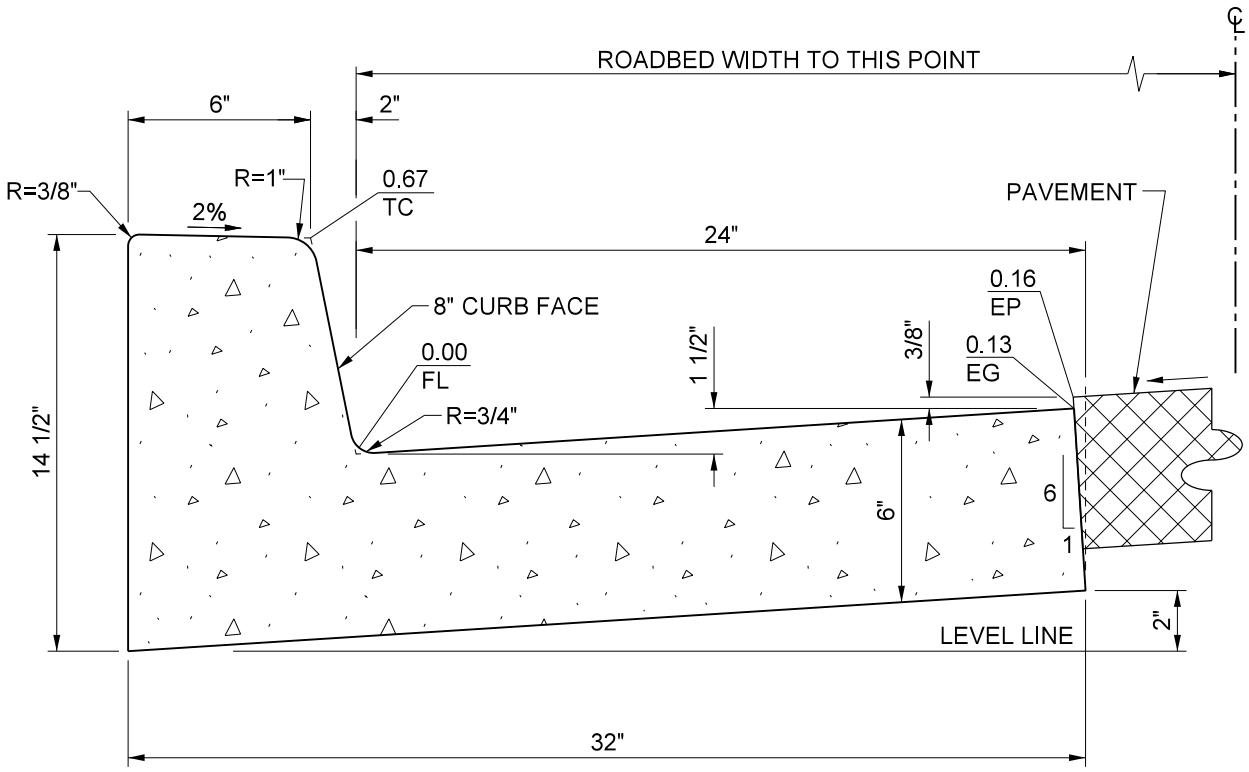
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TYPE A-6
CURB AND GUTTER
6" CURB FACE

STANDARD No. 200



MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD
1.73 CU FT / LF
1 CU YD = 15.60 LF

NOTES:

1. RELATIVE COMPACTION OF SUBGRADE UNDER CURB AND GUTTER SHALL BE 95% MINIMUM.
2. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

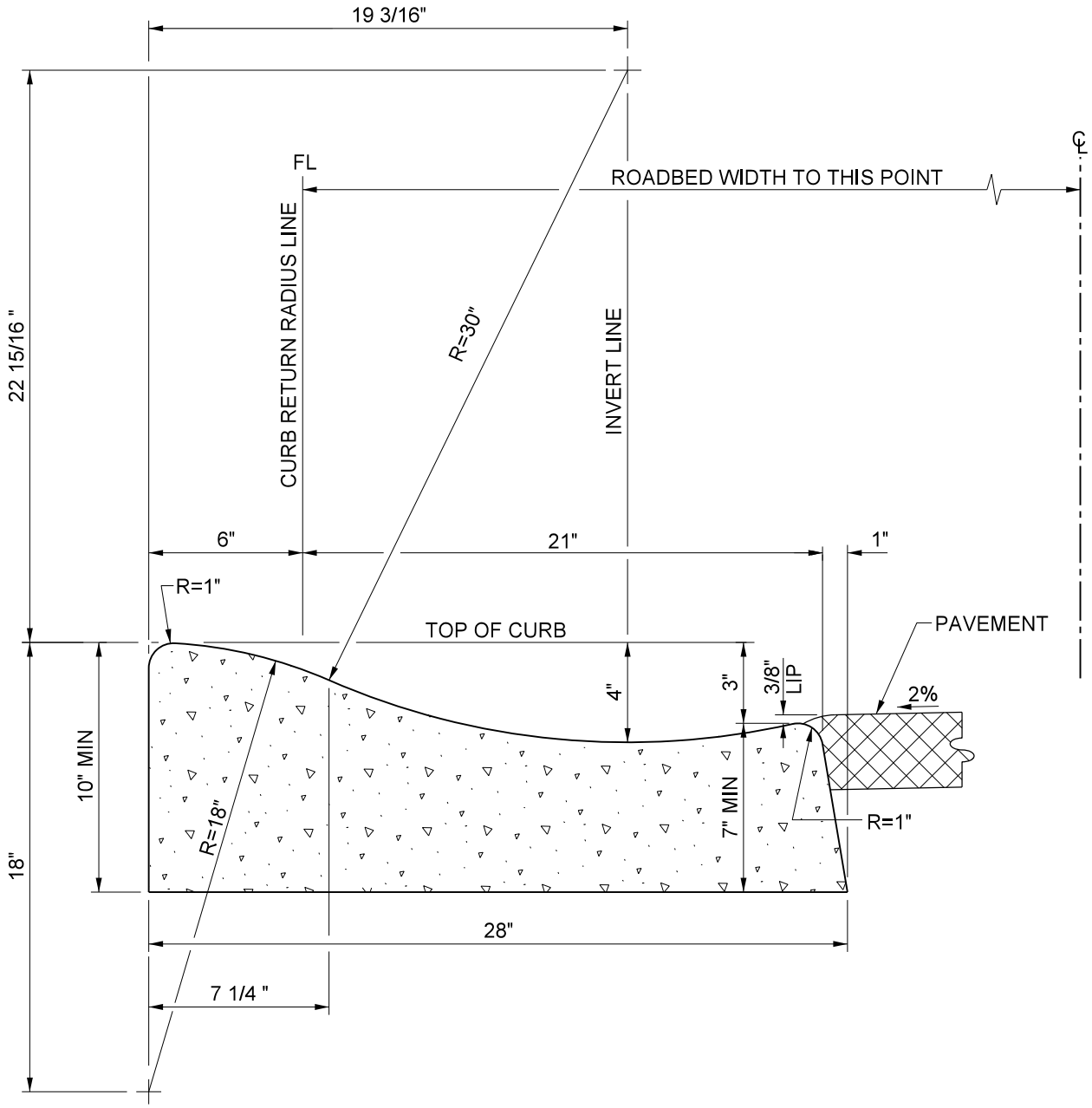
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TYPE A-8
CURB AND GUTTER
8" CURB FACE

STANDARD No. 201



MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD

1.418 CU FT / LF

1 CU YD = 19.05 LF

NOTES:

1. RELATIVE COMPACTION OF SUBGRADE UNDER CURB AND GUTTER SHALL BE 95% MINIMUM.
2. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

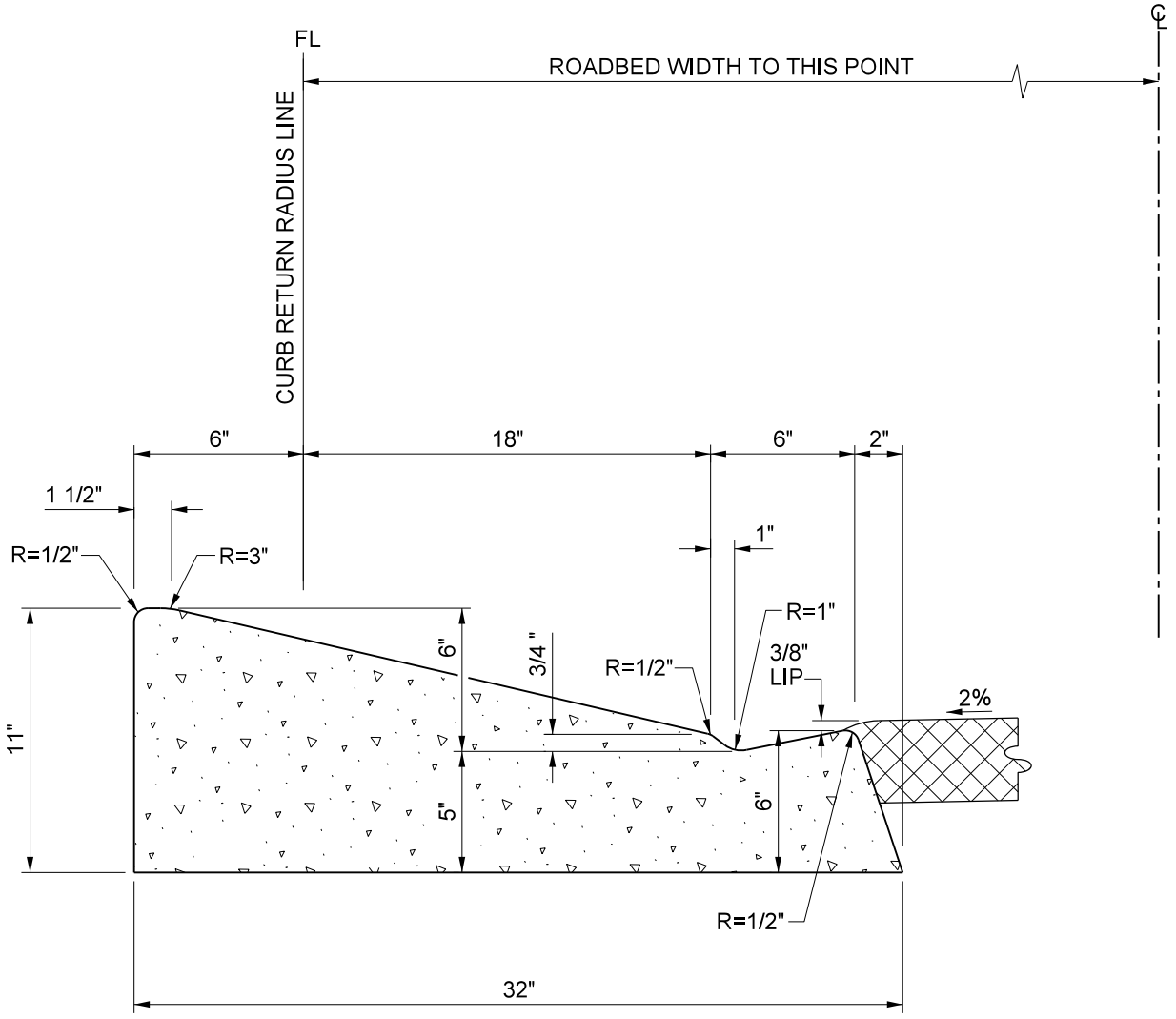
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TYPE "C" CURB ROLLED CURB

STANDARD No. 202



MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD
1.666 CU FT / LF
1 CU YD = 16.21 LF

NOTES:

1. RELATIVE COMPACTION OF SUBGRADE UNDER CURB AND GUTTER SHALL BE 95% MINIMUM.
2. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

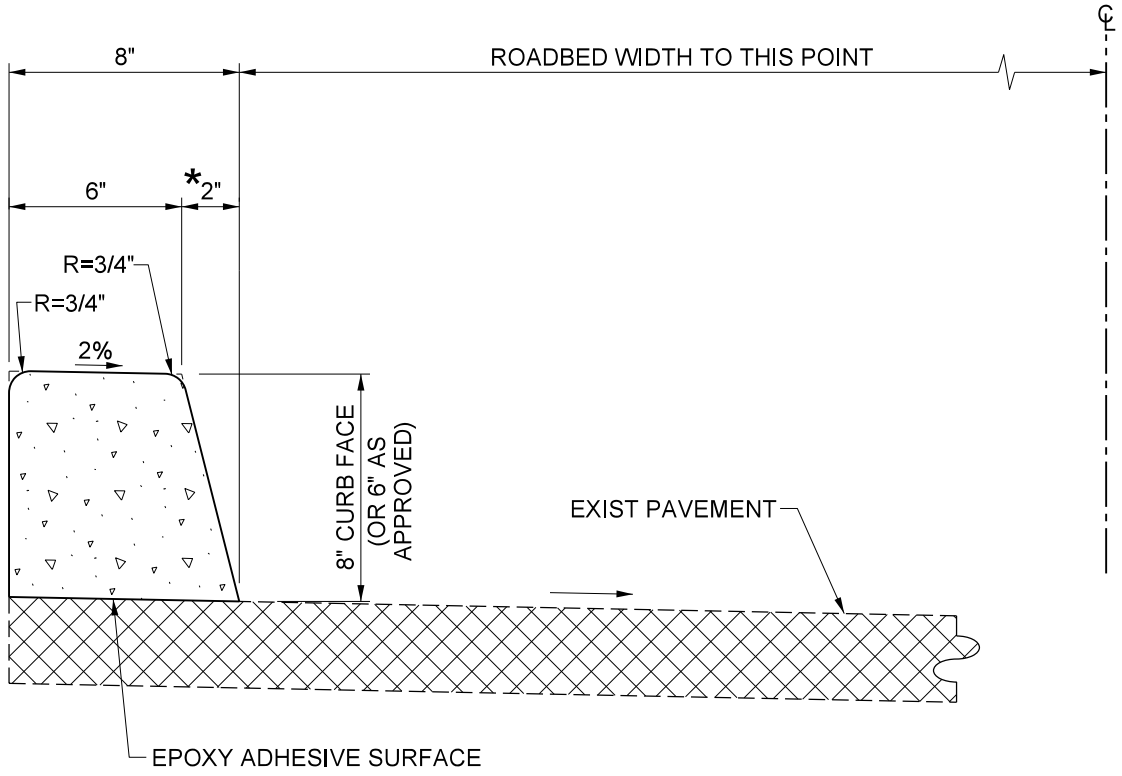
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TYPE "W" CURB
WEDGE CURB

STANDARD No. 202A



*1 1/2" FOR 6" CURB FACE

MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD
0.391 CU FT / LF
1 CU YD = 69.05 LF

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

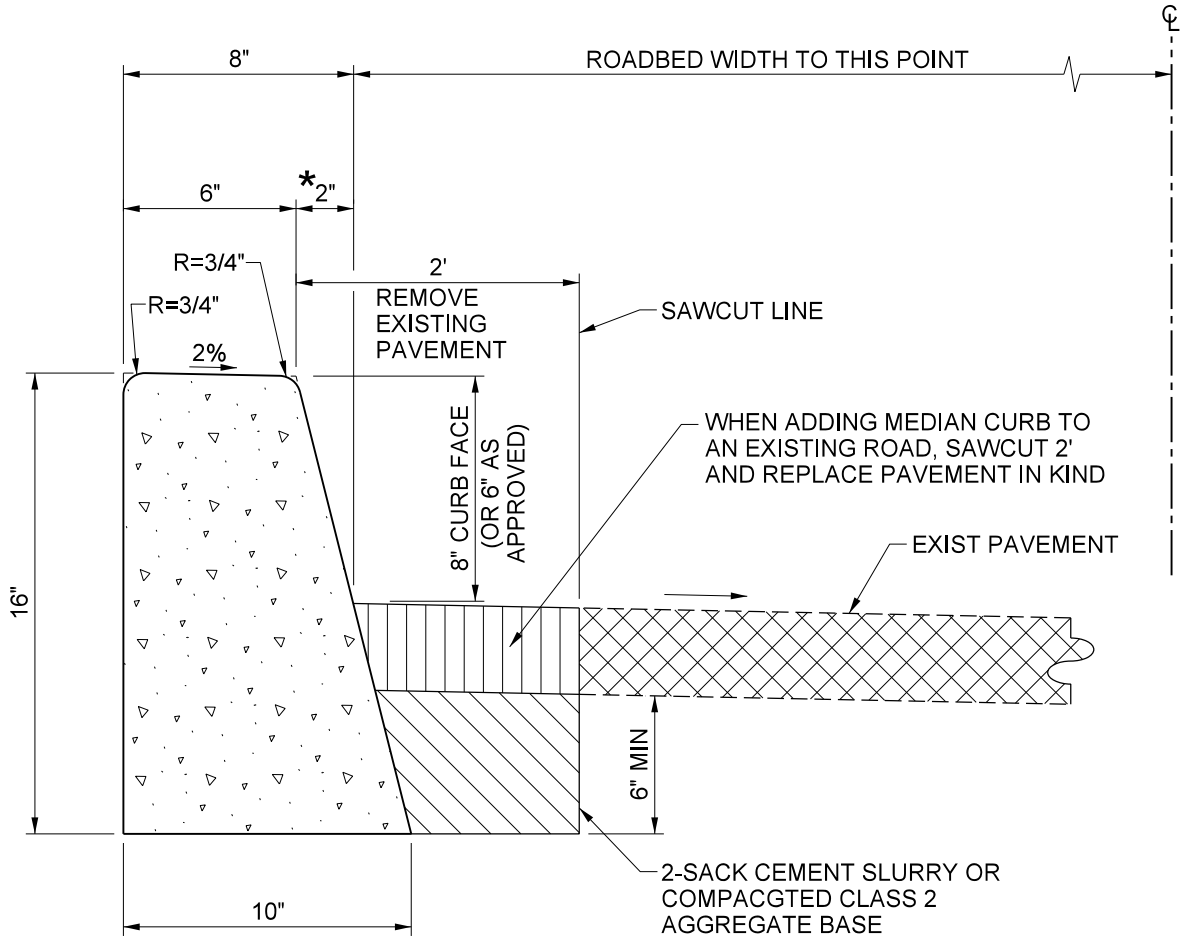
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TYPE "D-1" CURB ONLY ON EXISTING PAVEMENT

STANDARD No. 203



*1 1/2" FOR 6" CURB FACE

MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD
0.888 CU FT / LF
1 CU YD = 30.41 LF

NOTES:

1. RELATIVE COMPACTION OF SUBGRADE UNDER CURB AND GUTTER AND NEW PAVEMENT SHALL BE 95% MINIMUM.

2. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

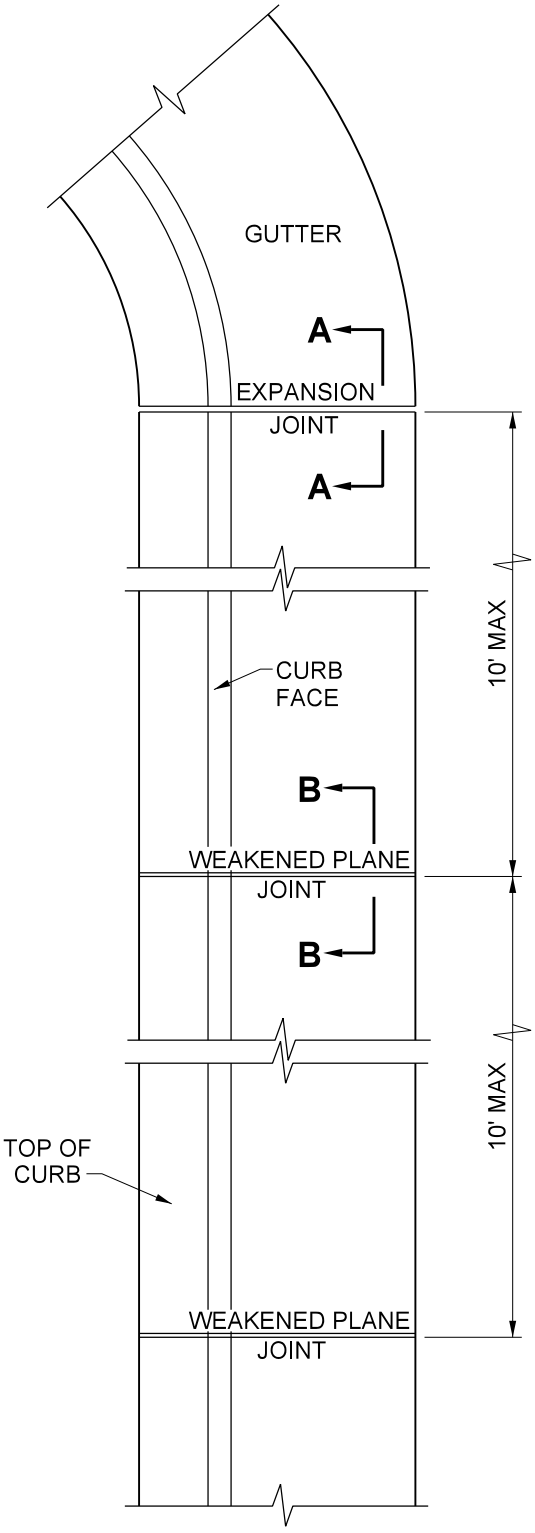
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

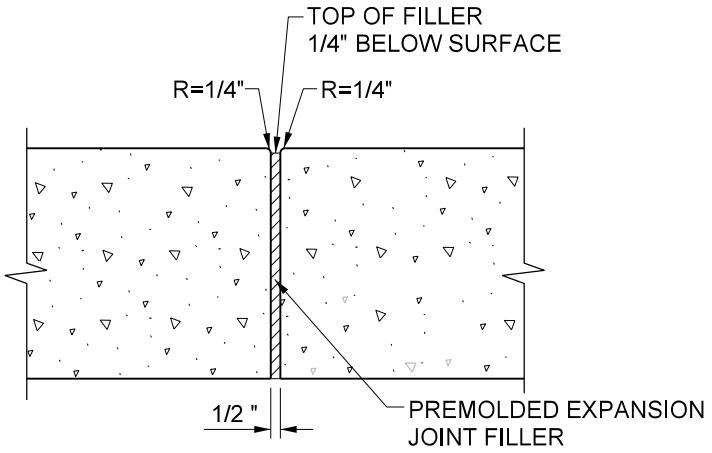
COUNTY OF RIVERSIDE

TYPE "D" CURB ONLY

STANDARD No. 204

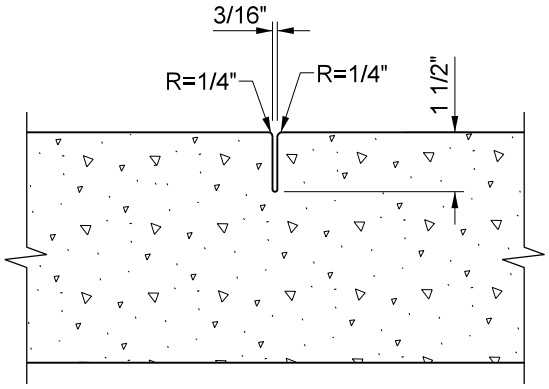


TYPICAL PLAN VIEW



SECTION "A-A"
EXPANSION JOINT

EXPANSION JOINTS TO BE INSTALLED
AT 50' INTERVALS AND AT ALL BC'S,
EC'S, CURB RETURNS, AND STRUCTURES.



SECTION "B-B"
WEAKENED PLANE JOINT

10' INTERVAL BETWEEN TRANSVERSE JOINTS
MAY BE VARIED TO ALLOW MATCHING OF
JOINTS IN ADJACENT EXISTING IMPROVEMENTS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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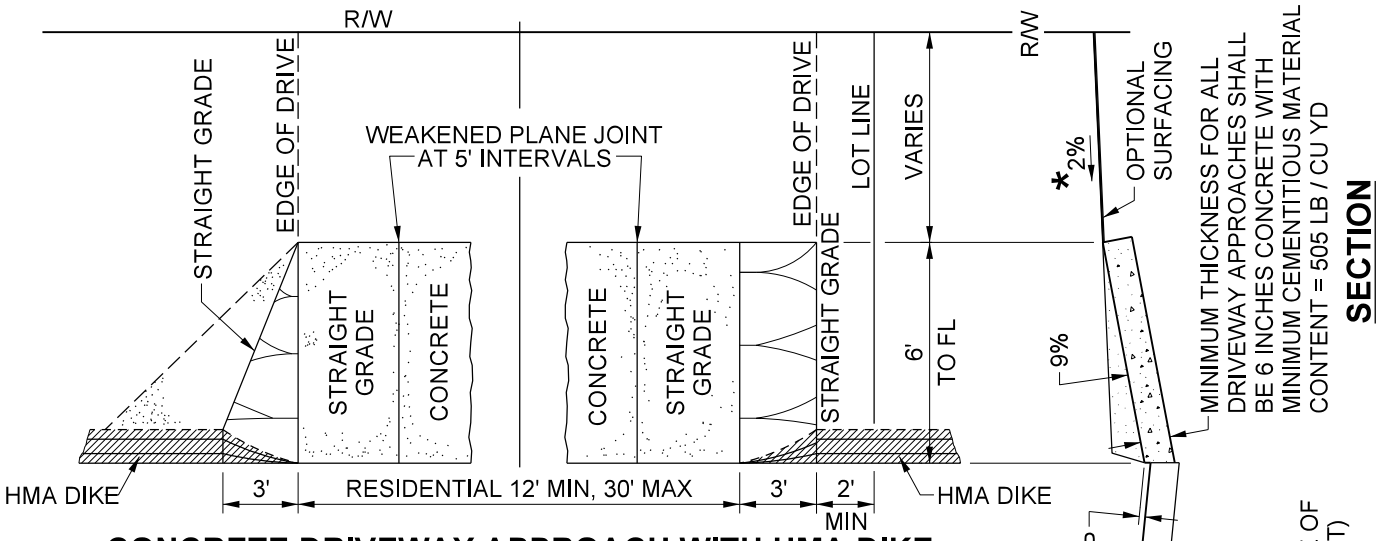
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

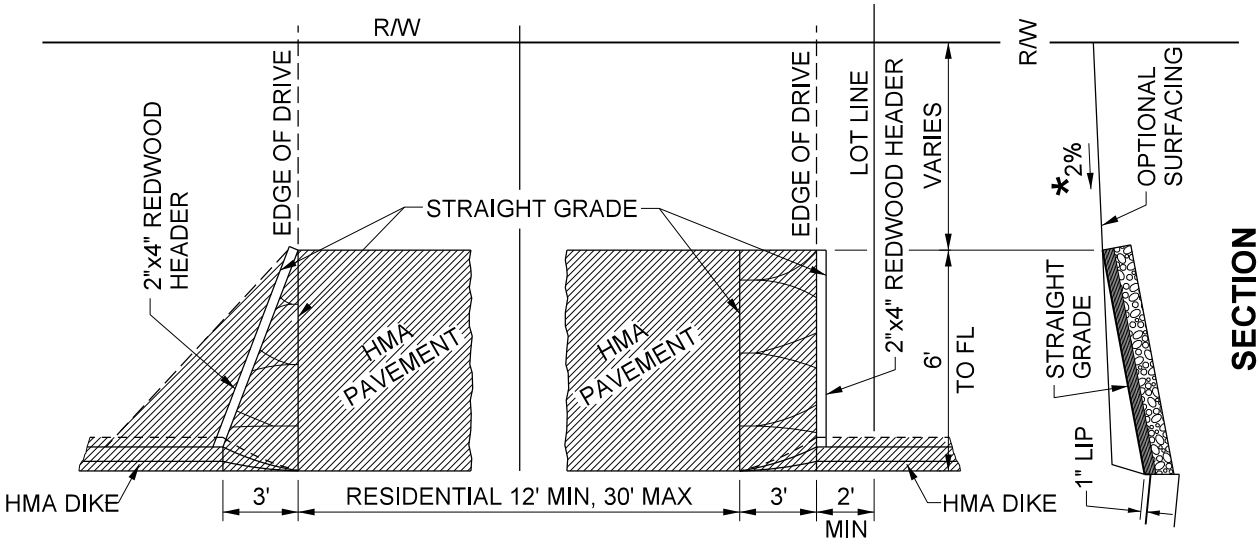
CURB AND GUTTER JOINTS

STANDARD No. 205



CONCRETE DRIVEWAY APPROACH WITH HMA DIKE

(NOT APPLICABLE TO INTERIM DIKE LOCATION)



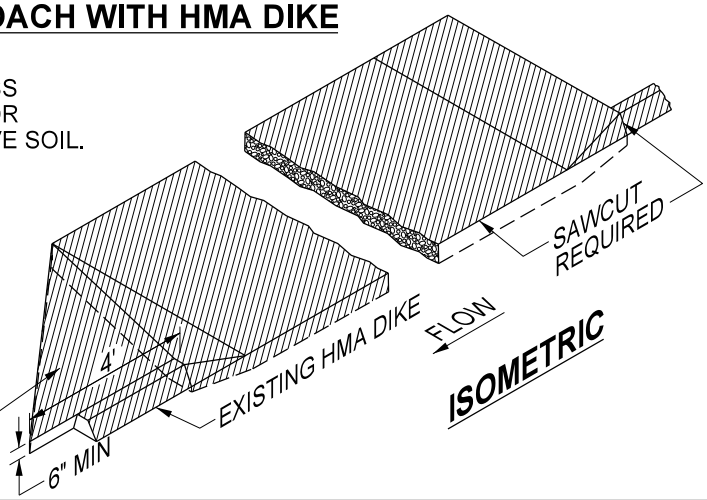
*IF SIDEWALK IS CONSTRUCTED CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

HOT MIX ASPHALT DRIVEWAY APPROACH WITH HMA DIKE

NOTES:

1. ALL CONSTRUCTION SHALL BE 2-1/2" MIN THICKNESS HOT MIX ASPHALT ON 4" MIN THICKNESS CLASS 2 OR CLASS 3 BASE, OR 3-1/2" THICKNESS HMA ON NATIVE SOIL.
2. 20' OF FULL HEIGHT DIKE REQUIRED BETWEEN DRIVEWAYS WITHIN ANY ONE PROPERTY UNLESS OTHERWISE PERMITTED.
3. RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAYS SHALL BE 95% MINIMUM.
4. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.

APRON TO BE CONSTRUCTED OF SAME MATERIAL AS DRIVEWAY WHEN STREET GRADIENT EXCEEDS 4%



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

RESIDENTIAL DRIVEWAY WITH HMA DIKE

STANDARD No. 206

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

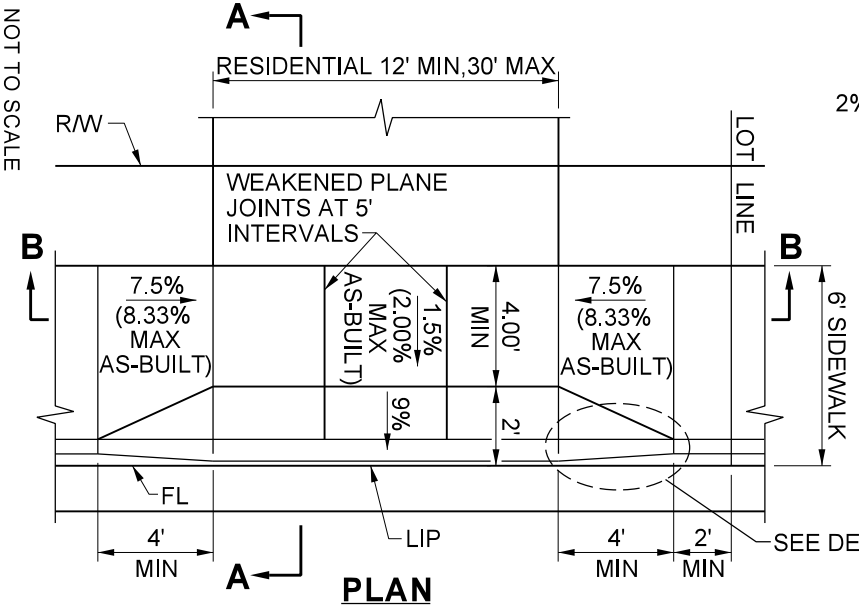
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

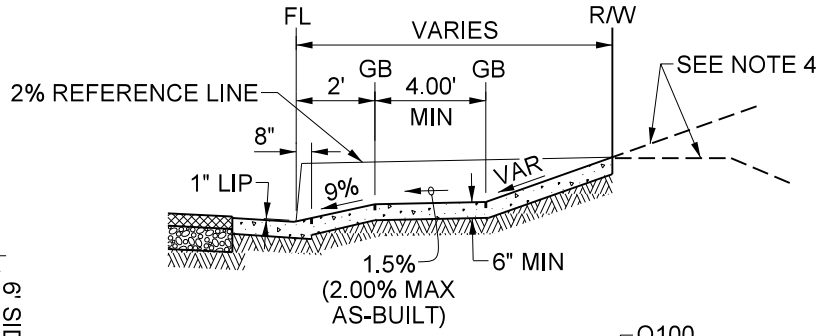
COUNTY OF RIVERSIDE

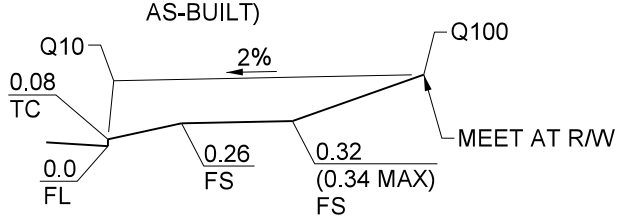
RESIDENTIAL DRIVE APPROACH WITH SIDEWALK AT CURB

STANDARD No. 207



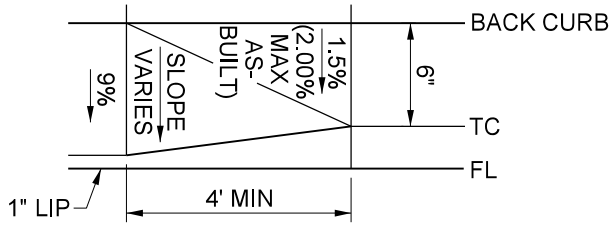
PLAN



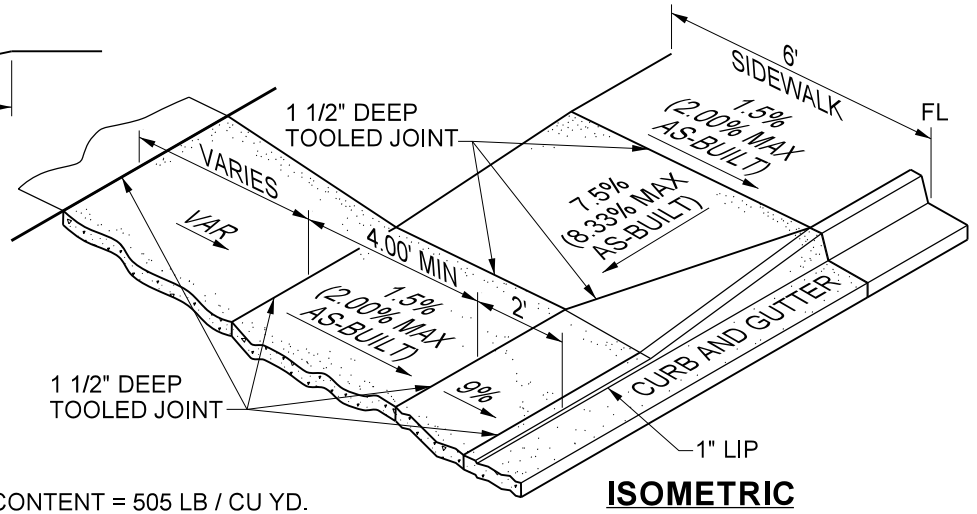


SECTION "A-A"

SECTION "B-B"



DETAIL 1

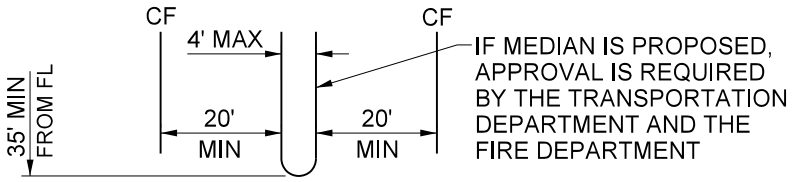


ISOMETRIC

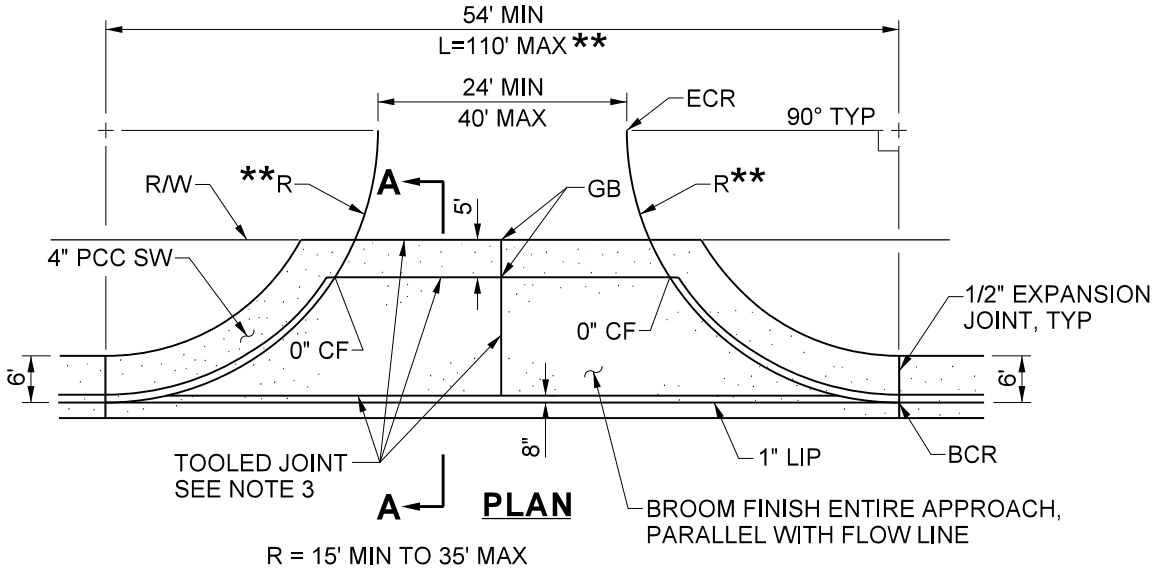
NOTES:

1. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.
2. 20' OF FULL-HEIGHT CURB REQUIRED BETWEEN DRIVEWAYS WITHIN ANY ONE PROPERTY FRONTAGE.
3. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
4. CONSTRUCT THE PROFILE GRADE OF THE PRIVATE ON-SITE DRIVEWAY SO THAT IT PROVIDES SMOOTH VEHICLE ACCESS OVER THE DRIVE APPROACH.
5. RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAYS SHALL BE 95% MINIMUM.

SEE STANDARD No. 213
FOR RESIDENTIAL DRIVEWAY
WITH SIDEWALK AT R/W

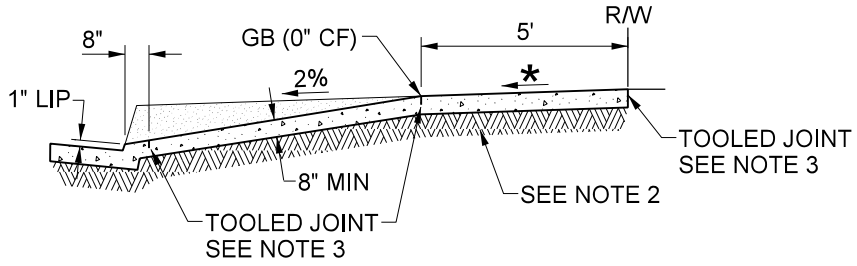


MEDIAN DETAIL



R = 15' MIN TO 35' MAX

** SERVICE ENTRANCES ONLY: L=140' MAX, R=50' MAX



SECTION "A-A"

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. DRIVEWAY APPROACH SHALL BE 8" CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.
2. RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAY APPROACH SHALL BE 95% MIN.
3. APPROACHES SHALL HAVE 1 1/2" DEEP 3/16" WIDE TOOLED JOINT AT CENTER OF APPROACH AND AS SHOWN HEREON. ALL OTHER SCORE LINES SHALL BE 10'-0" MAX OC.
4. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

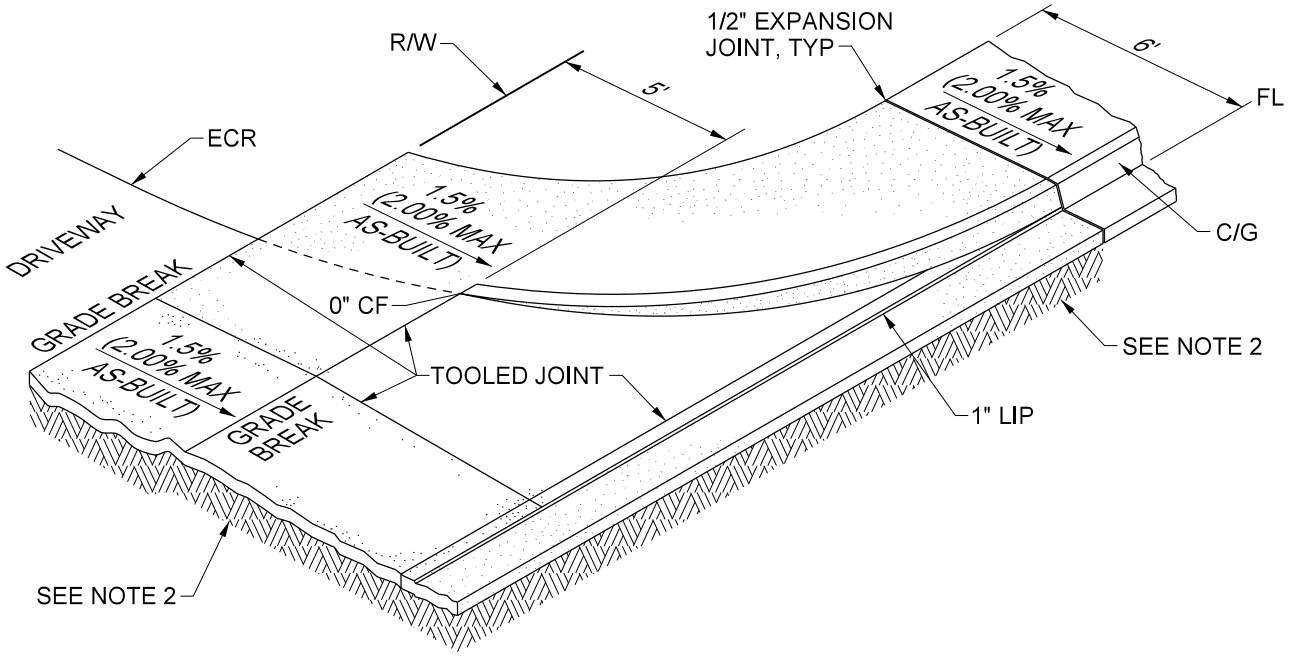
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

COMMERCIAL DRIVE APPROACH

(WITH SIDEWALK AT CURB)

STANDARD No. 207A (1 OF 4)



ISOMETRIC VIEW

NOT TO SCALE

FOR NOTES SEE SHEET 1

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

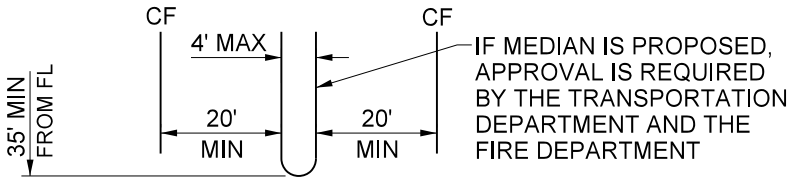
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

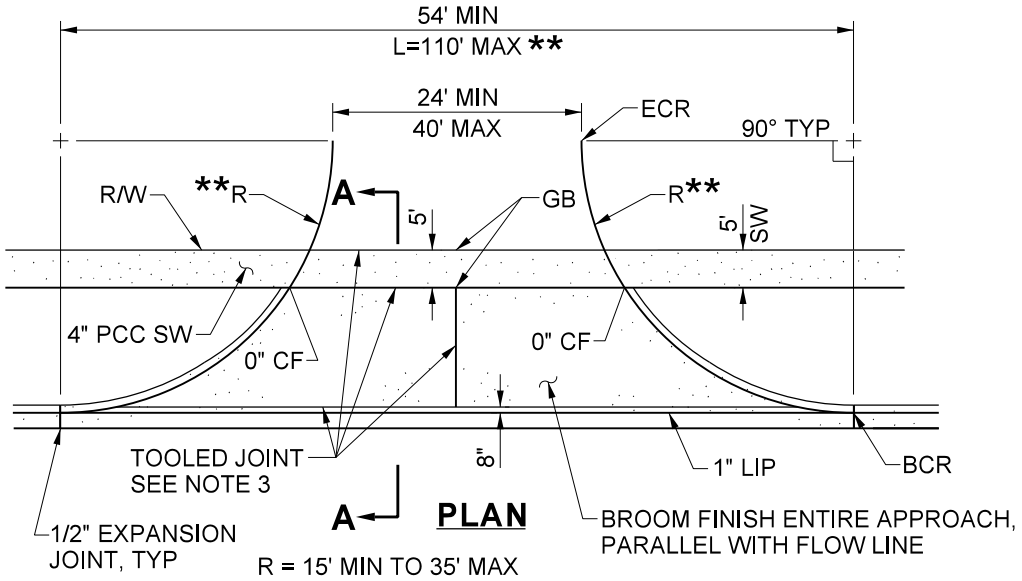
COMMERCIAL DRIVE APPROACH

(WITH SIDEWALK AT CURB)

STANDARD No. 207A (2 OF 4)

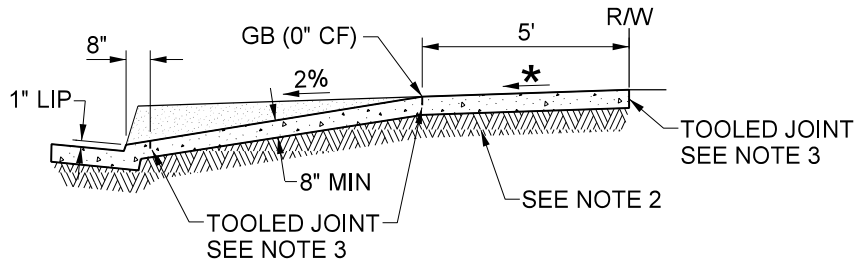


MEDIAN DETAIL



R = 15' MIN TO 35' MAX

** SERVICE ENTRANCES ONLY: L=140' MAX, R=50' MAX



SECTION "A-A"

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. DRIVEWAY APPROACH SHALL BE 8" CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.
2. RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAY APPROACH SHALL BE 95% MIN.
3. APPROACHES SHALL HAVE 1 1/2" DEEP 3/16" WIDE TOOLED JOINT AT CENTER OF APPROACH AND AS SHOWN HEREON. ALL OTHER SCORE LINES SHALL BE 10'-0" MAX OC.
4. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

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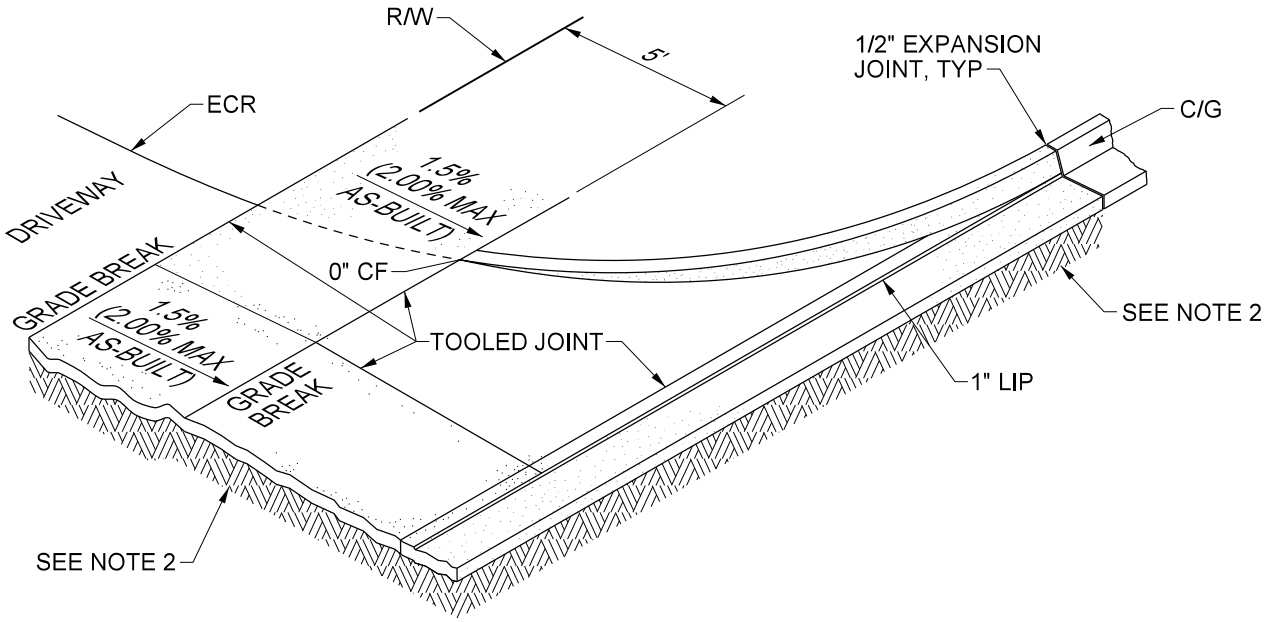
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

COMMERCIAL DRIVE APPROACH

(WITH SIDEWALK AT R/W)

STANDARD No. 207A (3 OF 4)



ISOMETRIC VIEW

NOT TO SCALE

FOR NOTES SEE SHEET 3

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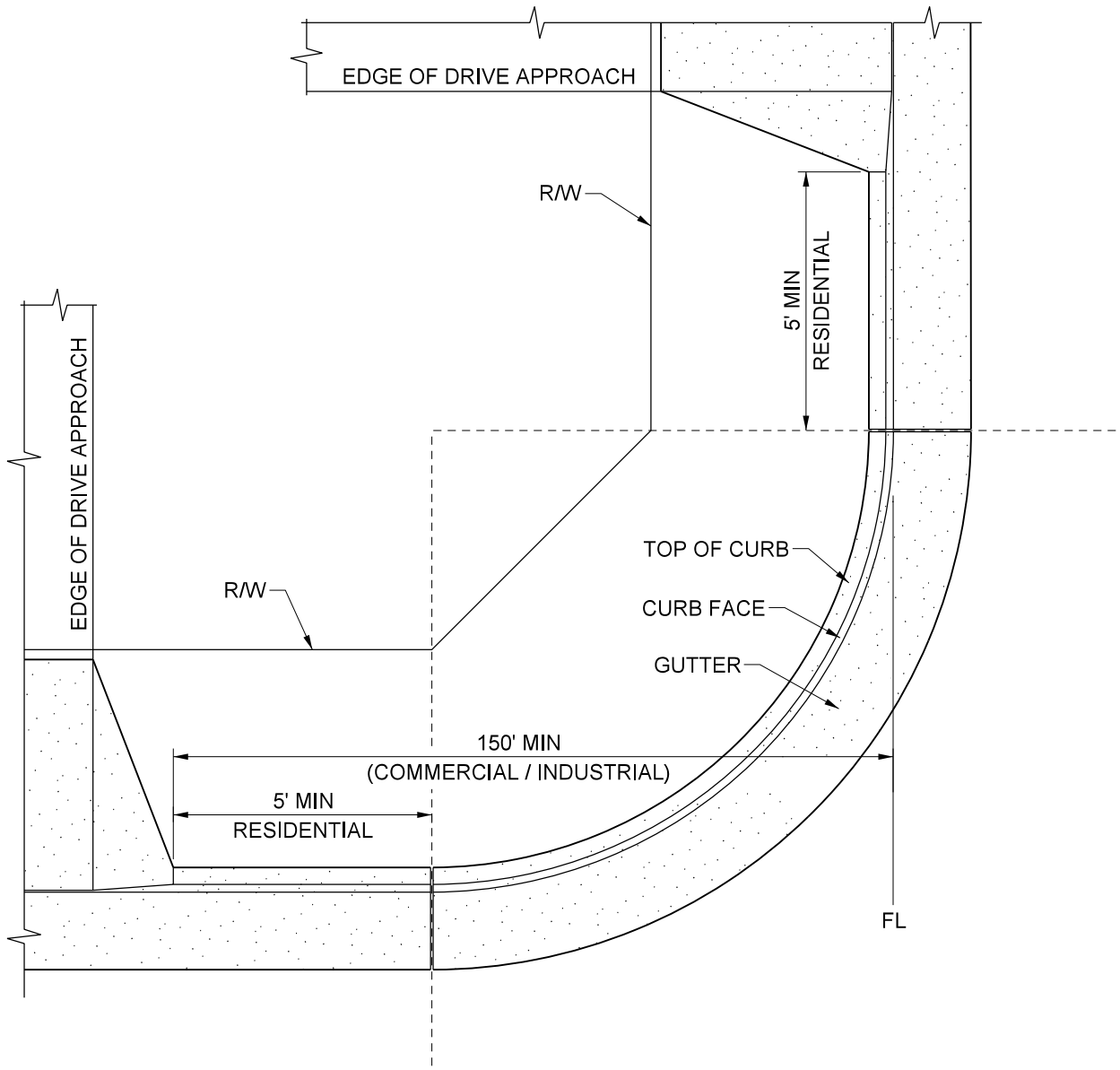
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

COMMERCIAL DRIVE APPROACH

(WITH SIDEWALK AT R/W)

STANDARD No. 207A (4 OF 4)



RESIDENTIAL ONLY:
NO PORTION OF ANY DRIVE APPROACH SHALL BE PERMITTED WITHIN 5' OF THE POINTS OF CURVATURE.

COMMERCIAL / INDUSTRIAL:
NO PORTION OF ANY DRIVE APPROACH SHALL BE PERMITTED WITHIN 150' OF THE FLOWLINE OF AN INTERSECTING STREET OR AS APPROVED BY THE DIRECTOR OF TRANSPORTATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

DRIVE APPROACH LOCATIONS AT INTERSECTION CURB RETURNS

STANDARD No. 208

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

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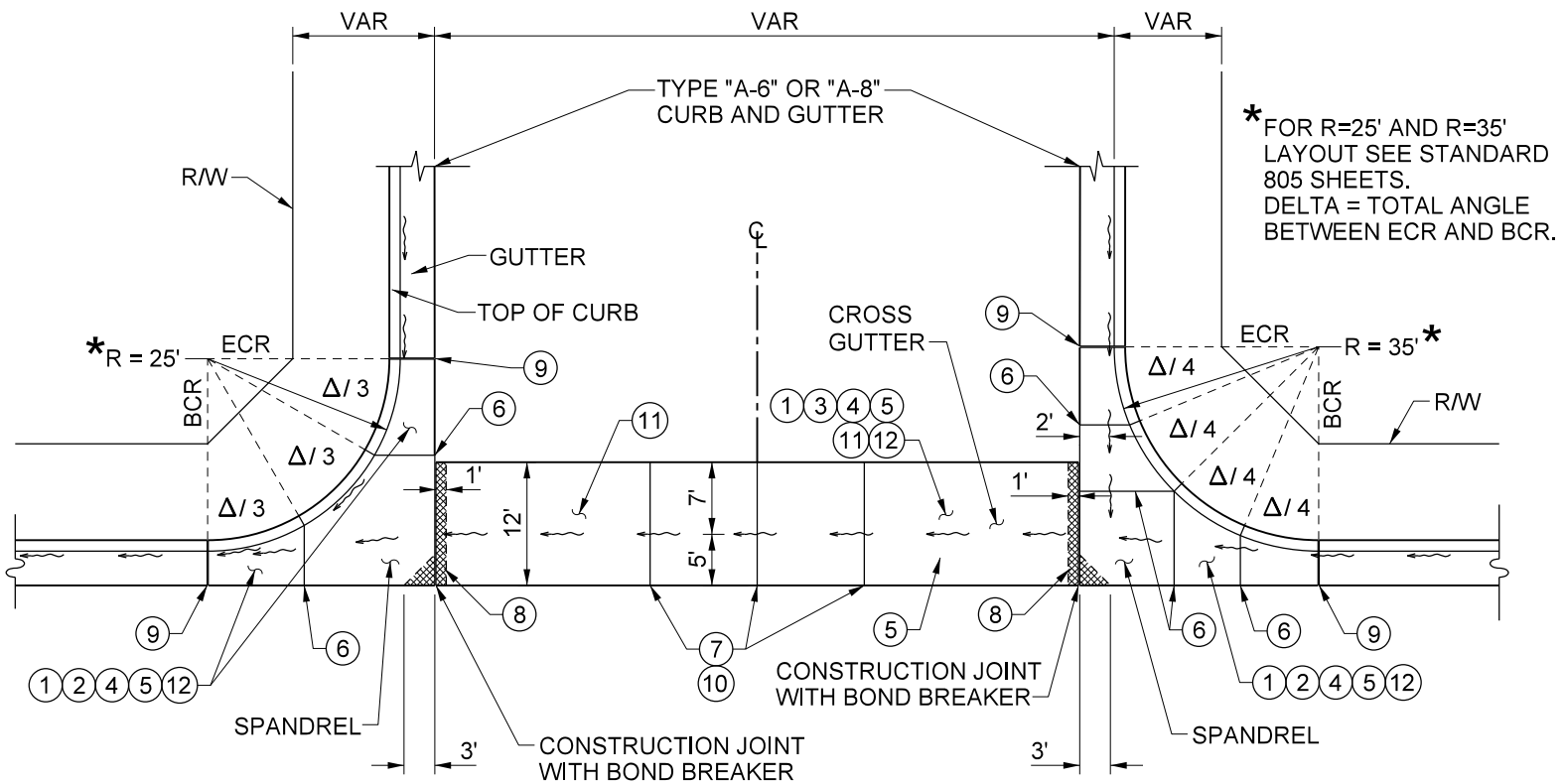
CIVIL
STATE OF CALIFORNIA



NOTES:

1. CROSS GUTTER AND SPANDREL FOR USE WITH TYPES "A-6" AND "A-8" CURB.
2. SPANDREL THICKNESS TO BE 8" MINIMUM.
3. CROSS GUTTER THICKNESS TO BE 8" MINIMUM.
4. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.
5. PLACE MIN 6" AB UNDER ENTIRE SPANDREL AND CROSS GUTTER AREA.
6. WEAKENED PLANE JOINTS TO BE CONSTRUCTED AT 1/3 POINTS ON 25' RADIUS SPANDRELS, AND AT 1/4 POINTS ON 35' RADIUS SPANDRELS.
7. CONSTRUCT WEAKENED PLANE JOINT(S) PER STANDARD No. 205 AT MIDPOINT OF CROSS GUTTERS LESS THAN 40' LONG, OR AT 1/3 POINTS OF CROSS GUTTERS OF 40' OR LONGER.
8. THIS PORTION OF SPANDREL AND CROSS GUTTER SHALL BE CONSTRUCTED WITH 12 INCH THICK, CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.
9. CONSTRUCT EXPANSION JOINT PER STANDARD No. 205.
10. CONSTRUCT WEAKENED PLANE JOINT PER STANDARD No. 205.
11. CONSTRUCT CROSS GUTTER PER TYPICAL SECTION ON SHEET 2.
12. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, SPECIAL CONSIDERATIONS ARE REQUIRED. SEE SPECIFICATIONS SECTION 16.04 OF THIS ORDINANCE.

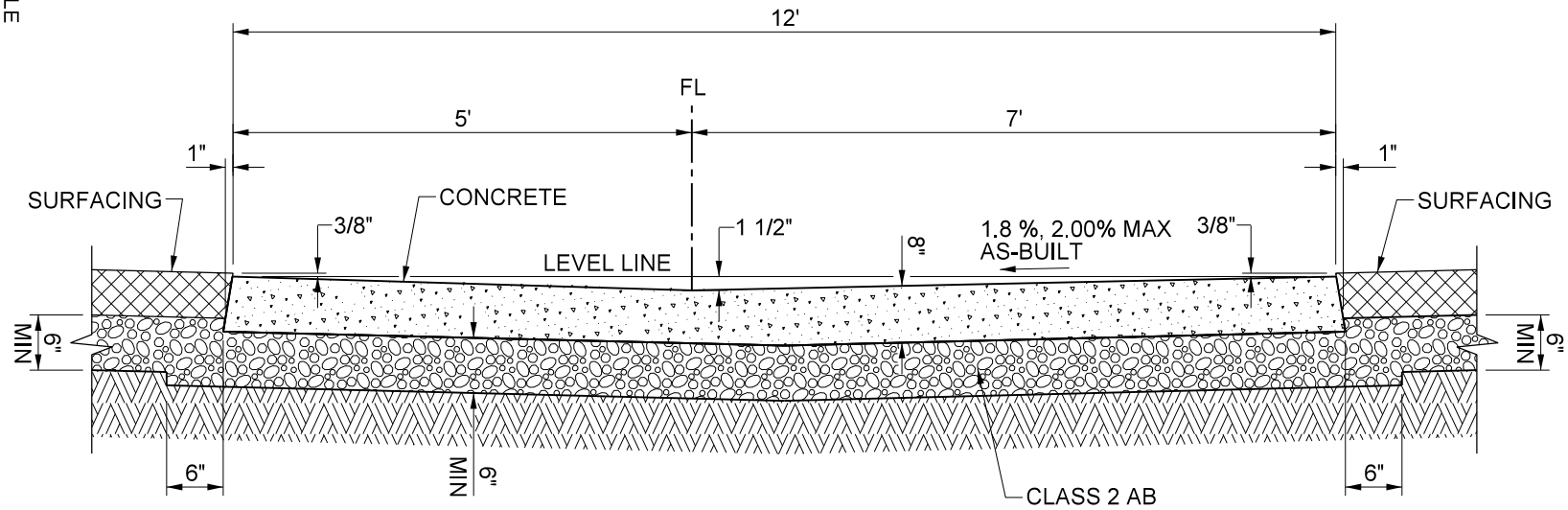
NOTE:
FOR PUBLIC WORKS PROJECTS, THE SIDEWALK AND CURB FROM BCR TO ECR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "CURB RAMP".

COUNTY OF RIVERSIDE

CROSS GUTTER AND SPANDREL (LAYOUT)

STANDARD No. 209 (1 OF 2)

NOT TO SCALE



CROSS GUTTER

NOTES:

1. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
2. RELATIVE COMPACTION OF SUBGRADE UNDER CROSS GUTTER AND SPANDREL SHALL BE 95% MINIMUM.
3. FOR PUBLIC WORKS PROJECTS, THE AB AND ALL REQUIRED MATERIAL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE.
4. CONCRETE FOR CROSS GUTTER AND SPANDREL SHALL HAVE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

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REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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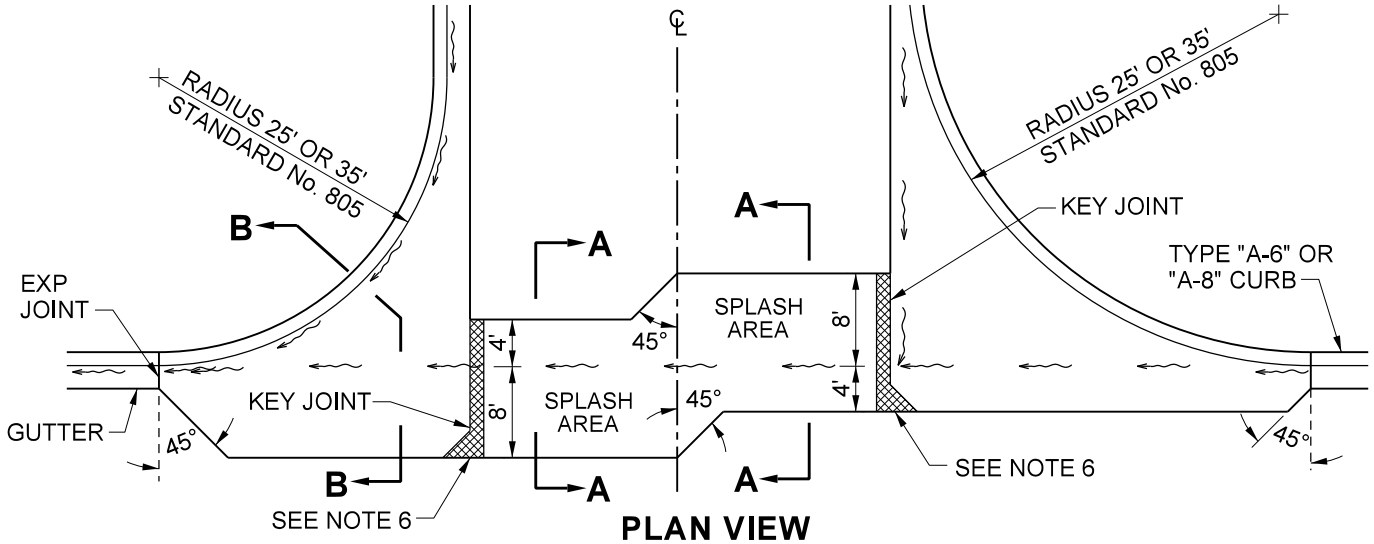
CIVIL
STATE OF CALIFORNIA

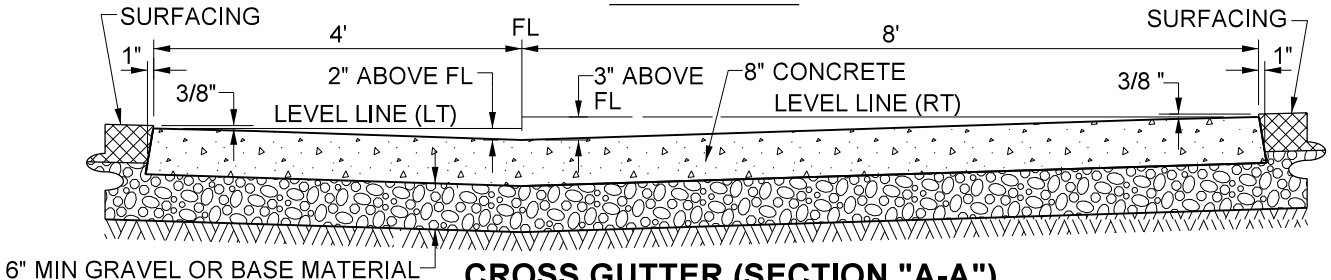
COUNTY OF RIVERSIDE

CROSS GUTTER AND SPANDREL (TYPICAL SECTION)

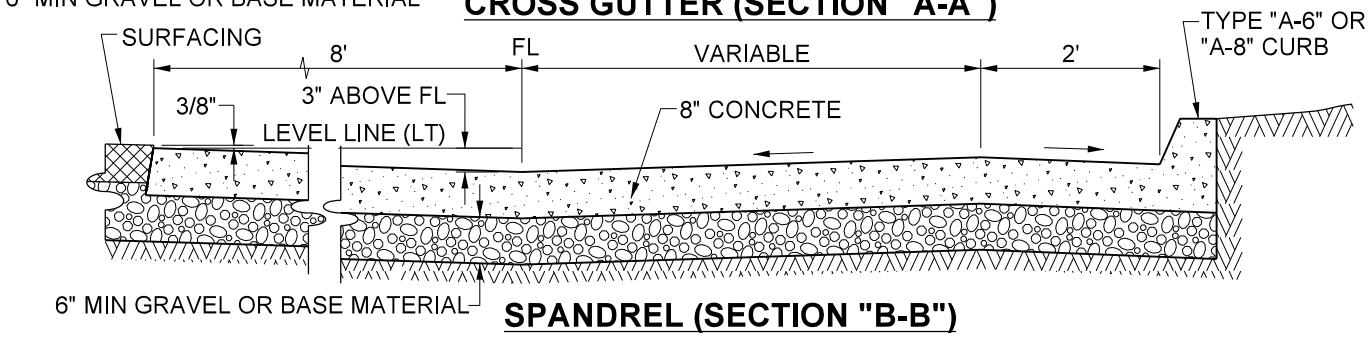
STANDARD No. 209 (2 OF 2)



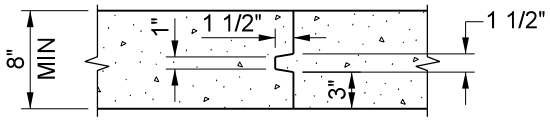
PLAN VIEW



CROSS GUTTER (SECTION "A-A")



SPANDREL (SECTION "B-B")



KEY JOINT (SECTION)

NOTES:

1. THIS CROSS GUTTER STANDARD TO BE CONSTRUCTED IN AREAS WHERE STREET GUTTERS HAVE CONSTANT OR FREQUENT FLOWS FROM LANDSCAPED PARKWAYS AND MEDIANS, GOLF COURSE, AND AGRICULTURAL RUNOFF OR WHEN GRADIENT IS LESS THAN 0.8%.
2. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
3. RELATIVE COMPACTION OF SUBGRADE UNDER ROADWAY, CURB AND CROSSOVER MEDIAN SHALL BE 95% MINIMUM.
4. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.
5. SEE STANDARD No. 209 FOR ADDITIONAL NOTES.
6. THIS PORTION OF SPANDREL AND CROSS GUTTER SHALL BE CONSTRUCTED WITH 12 INCH THICK, CONCRETE WITH MIN CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

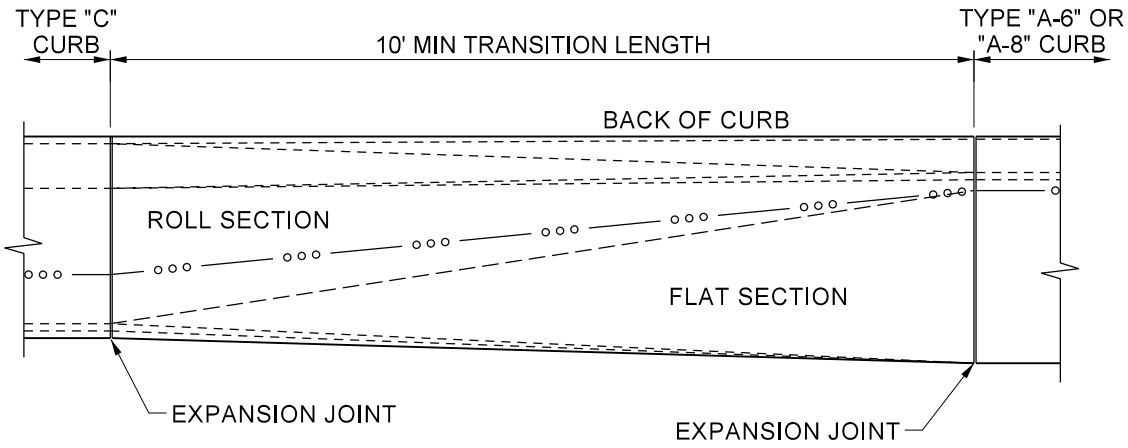
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

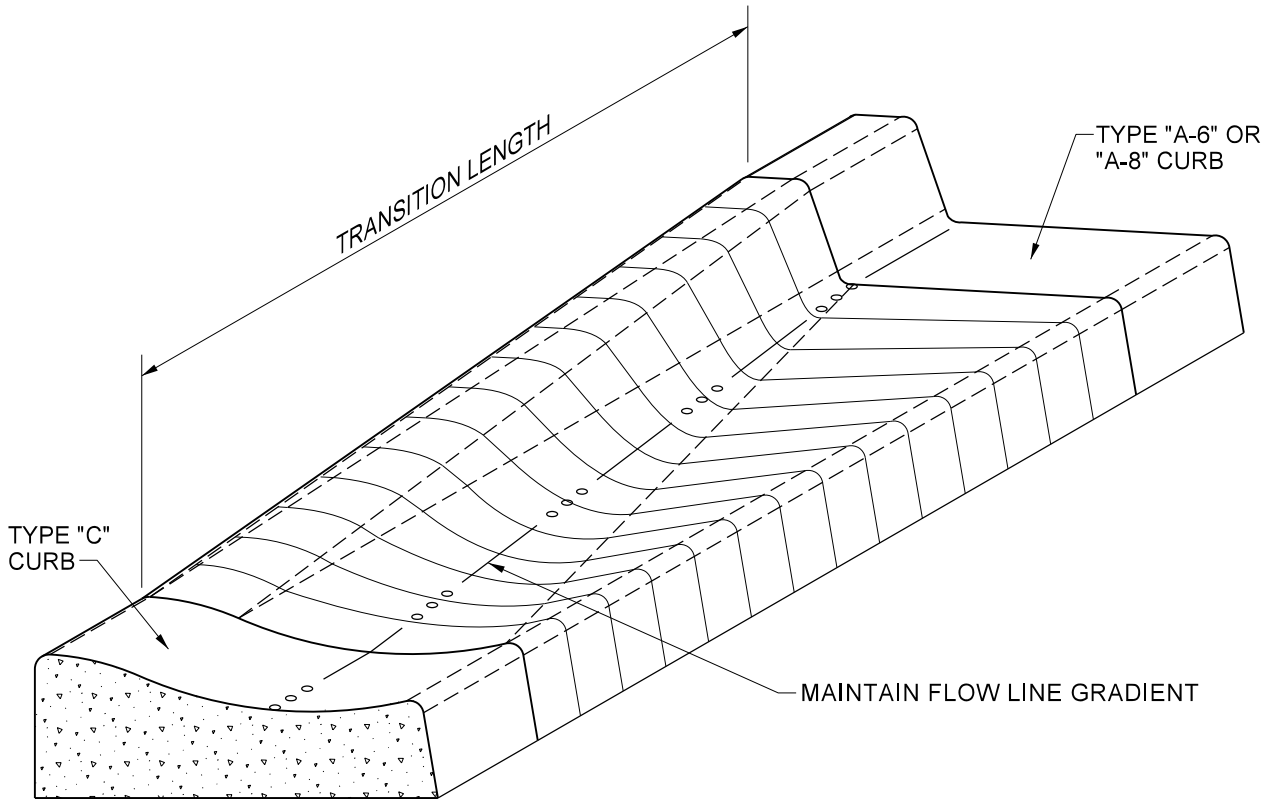
COUNTY OF RIVERSIDE

CROSS GUTTER AND SPANDREL WITH SPLASH AREA

STANDARD No. 210



PLAN VIEW



ISOMETRIC VIEW

MINIMUM CEMENTITIOUS MATERIAL
CONTENT = 505 LB / CU YD.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

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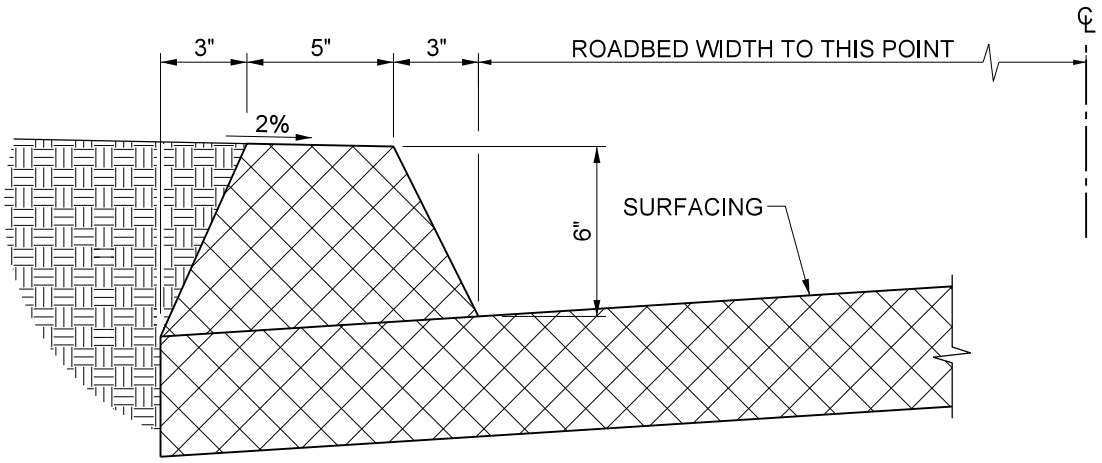
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

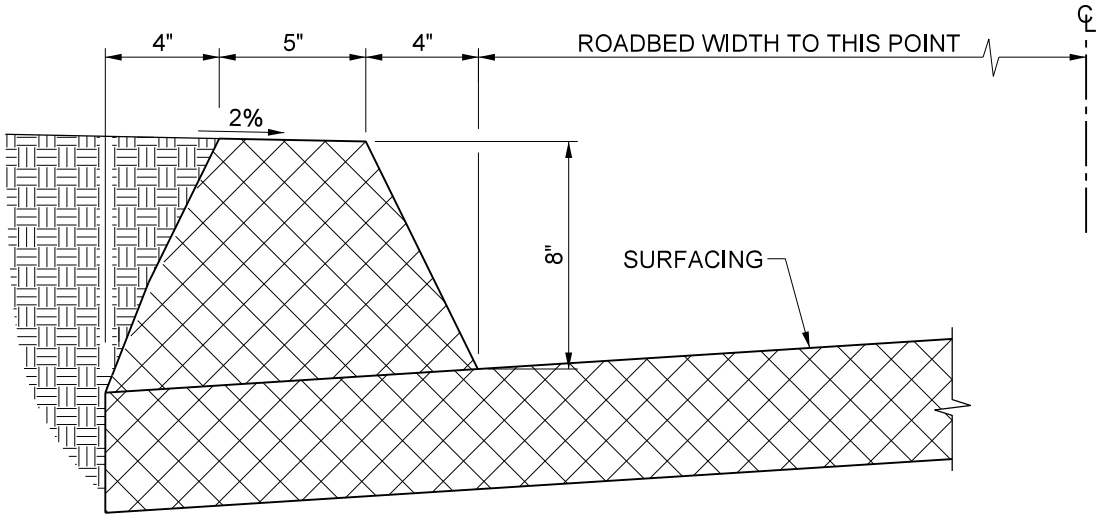
COUNTY OF RIVERSIDE

CURB TRANSITION

STANDARD No. 211



6" HMA DIKE



8" HMA DIKE

NOTE:

1. HMA DIKE REQUIRED WHERE FILL SLOPES ARE STEEPER THAN 4:1, MATERIAL IS SUSCEPTIBLE TO EROSION, OR WHERE ROADWAY GRADIENT EXCEEDS 3%.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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MARK ALAN LANCASTER
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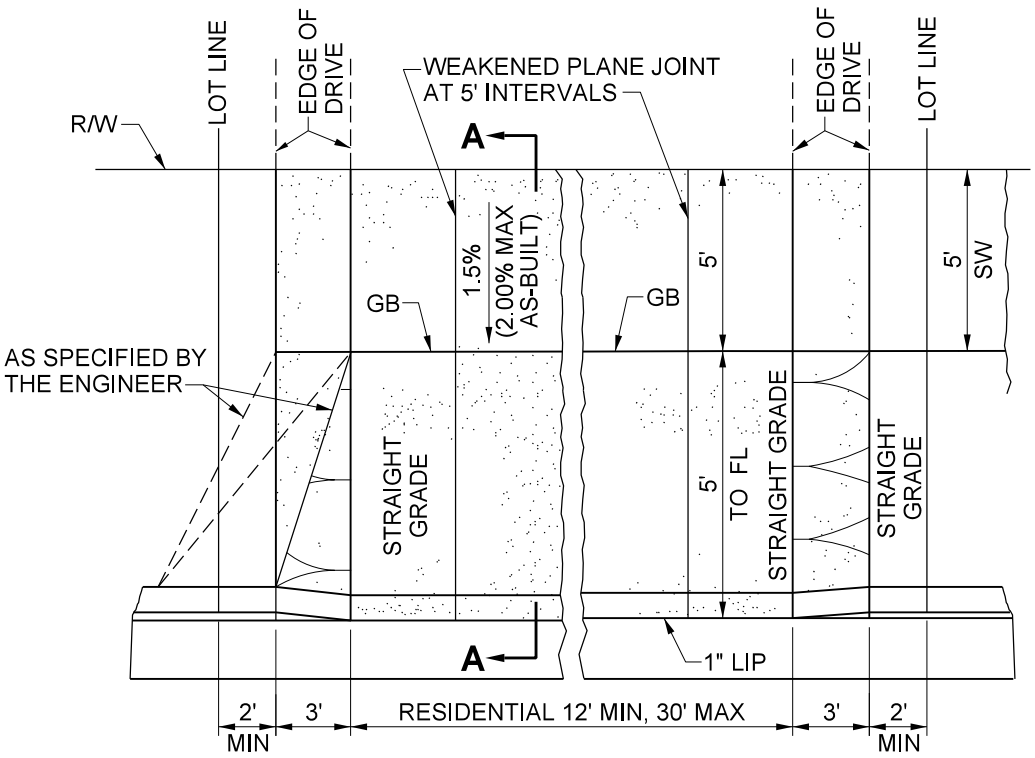
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

HOT MIX ASPHALT DIKES

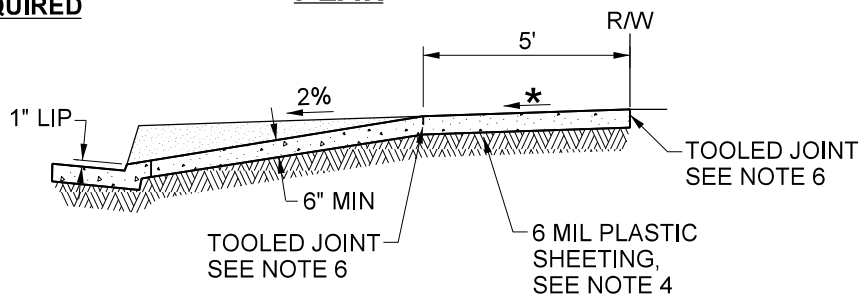
STANDARD No. 212



WHEN NO SIDEWALK EXISTS OR IS NOT REQUIRED

PLAN

WITH SIDEWALK



SECTION "A-A"

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)

NOTES:

1. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.
2. 20' OF FULL-HEIGHT CURB REQUIRED BETWEEN DRIVEWAYS WITHIN ANY ONE PROPERTY FRONTAGE.
3. ROOT BARRIERS ARE REQUIRED FOR ANY TREES PLANTED WITHIN THE STREET RIGHT OF WAY.
4. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
5. 8" CURB FACE NOT ALLOWED.
6. APPROACHES SHALL HAVE 1 1/2" DEEP 3/16" WIDE TOOLED JOINT AT CENTER OF APPROACH AND AS SHOWN HEREON. ALL OTHER SCORE LINES SHALL BE 10'-0" MAX OC.
7. RELATIVE COMPACTION OF SUBGRADE UNDER DRIVEWAY SHALL BE 95% MIN.

SEE STANDARD No. 207 FOR RESIDENTIAL DRIVEWAY WITH SIDEWALK AT CURB

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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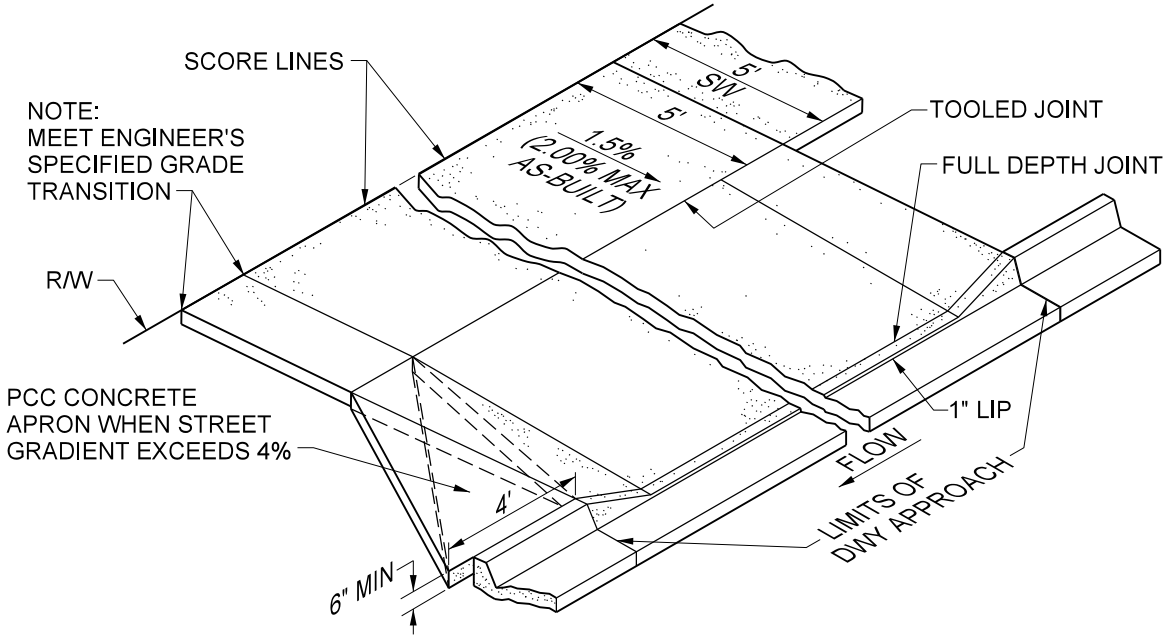
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

RESIDENTIAL DRIVEWAY APPROACH WITH SIDEWALK AT R/W

STANDARD No. 213 (1 OF 2)



ISOMETRIC VIEW

NOT TO SCALE

FOR NOTES SEE SHEET 1

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

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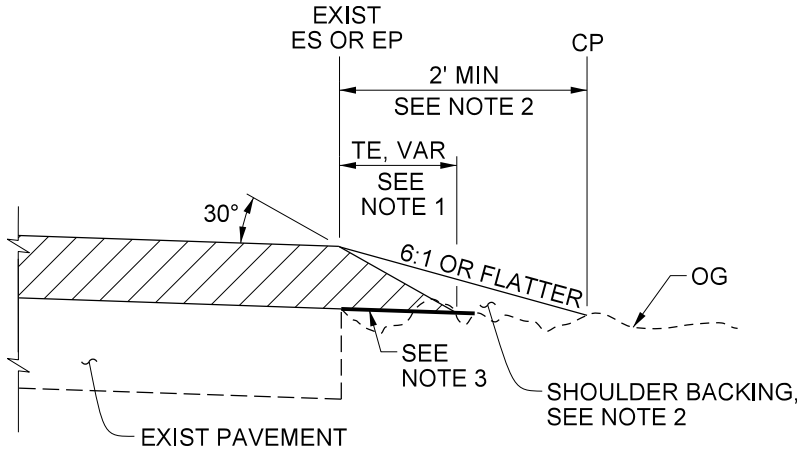
CIVIL
STATE OF CALIFORNIA

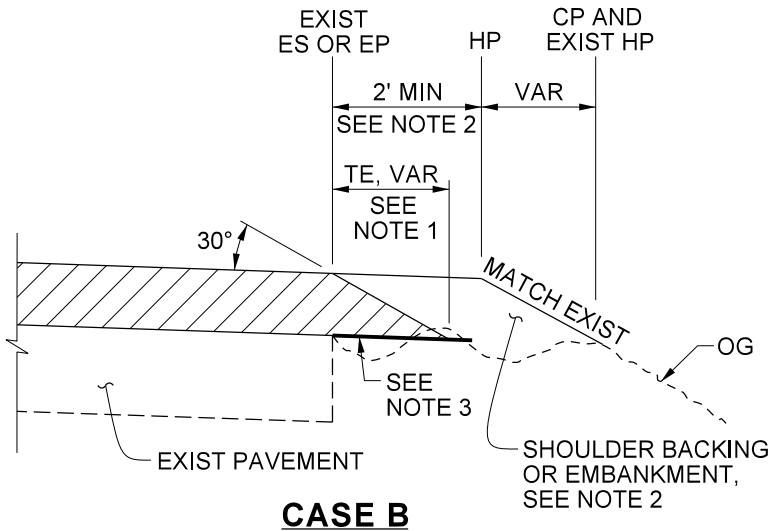
COUNTY OF RIVERSIDE

RESIDENTIAL DRIVEWAY APPROACH WITH SIDEWALK AT R/W

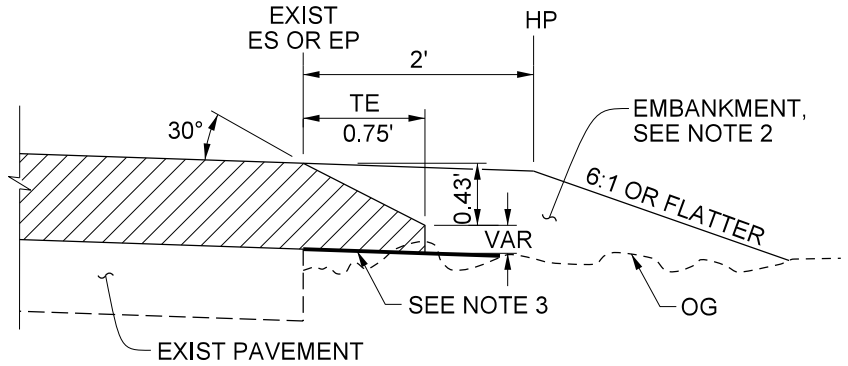
STANDARD No. 213 (2 OF 2)



CASE A
TAPERED EDGE



CASE B
TAPERED EDGE



DETAIL "A"
FOR HMA OVERLAY THICKNESS MORE THAN 0.43'.

LEGEND:

HMA OVERLAY

ABBREVIATIONS:

TE TAPERED EDGE

NOTES:

1. DETAILS SHOWN FOR HMA OVERLAY THICKNESS LESS THAN 0.43'. SEE DETAIL "A" FOR HMA OVERLAY THICKNESS MORE THAN 0.43' OR CONCRETE OVERLAY.
2. FOR LOCATIONS AND LIMITS OF SHOULDER BACKING OR EMBANKMENT SEE PROJECT PLANS.
3. GRADE EXISTING GROUND TO PLACE TAPERED EDGE. 1' MINIMUM WIDTH.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SAFETY EDGE

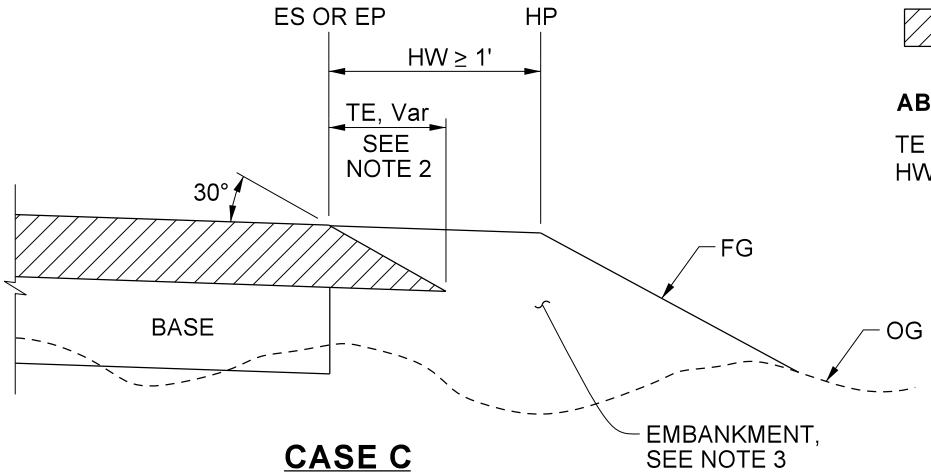
STANDARD No. 214 (1 OF 2)

LEGEND:

HMA OVERLAY

ABBREVIATIONS:

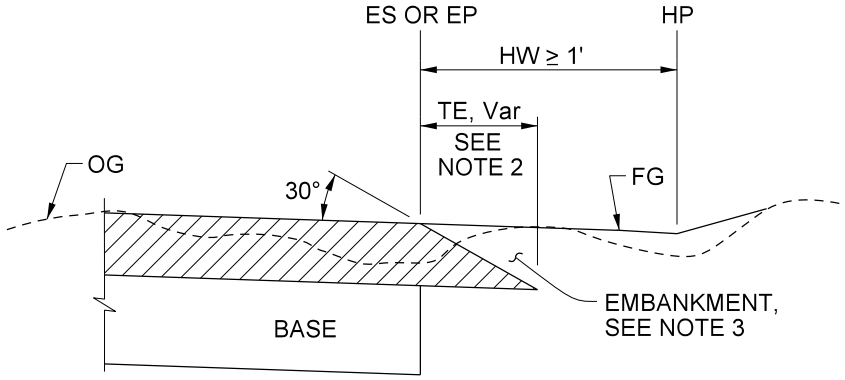
TE TAPERED EDGE
HW HINGE WIDTH, DISTANCE FROM EP TO HP



CASE C

TAPERED EDGE - FILL SECTION, HW ≥ 1'

FILL SECTION



CASE D

TAPERED EDGE - FILL SECTION, HW ≥ 1'

CUT SECTION

NOTES:

1. DETAILS SHOWN FOR HMA OVERLAY THICKNESS LESS THAN 0.43'. SEE DETAIL "A" FOR HMA OVERLAY THICKNESS MORE THAN 0.43' OR CONCRETE OVERLAY.

2. FOR LOCATIONS AND LIMITS OF SHOULDER BACKING OR EMBANKMENT SEE PROJECT PLANS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

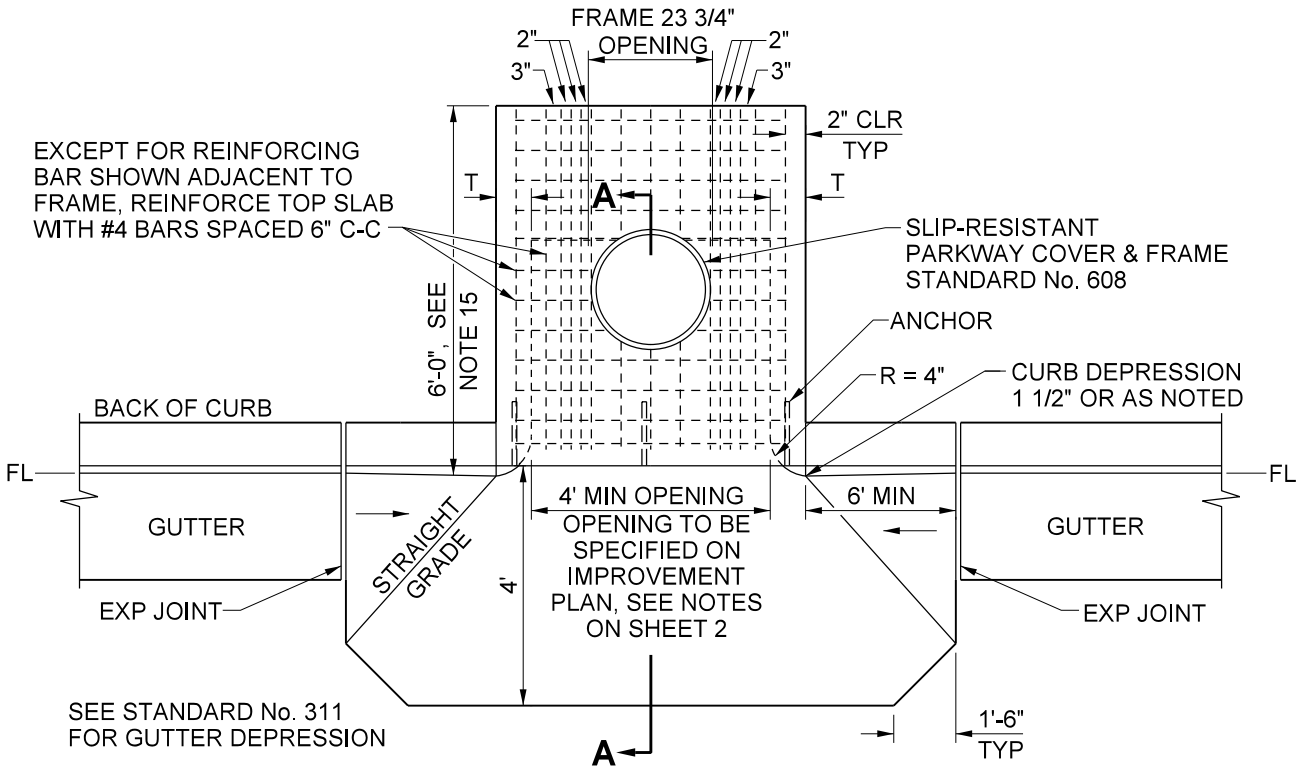
REVISION DESCRIPTION	MARK	DATE	APPROVED

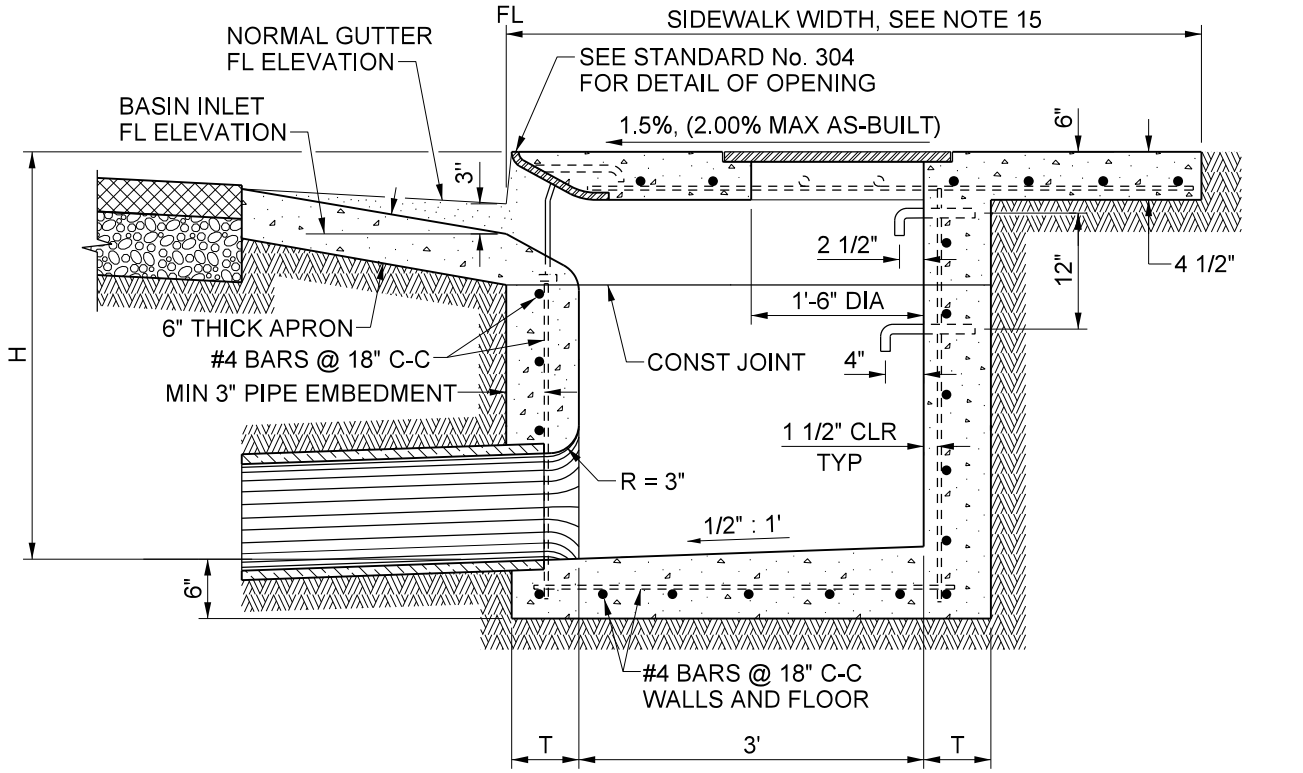
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SAFETY EDGE

STANDARD No. 214 (2 of 2)





SECTION "A-A"

NOT TO SCALE

FOR NOTES SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

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MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CURB INLET CATCH BASIN

STANDARD No. 300 (1 OF 2)

NOTES:

1. CONNECTION PIPES MAY BE PLACED ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.

2. CURVATURE OF THE LIP AND SIDEWALLS AT GUTTER OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.

3. DIMENSIONS:

   T = 6" IF H IS 8 FEET OR LESS.

   T = 8" IF H IS GREATER THAN 8 FEET AND LESS THAN 20 FEET.

   H = 3 FEET 6 INCHES, UNLESS OTHERWISE SPECIFIED.

4. FLOOR OF BASIN SHALL BE GIVEN A STEEL - TROWELLED FINISH.

5. MANHOLE SHALL BE PLACED AS SHOWN ON STANDARD No. 300, UNLESS NOTED DIFFERENTLY ON IMPROVEMENT PLANS.

6. OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.

7. OPENING SHALL BE 4'-0" MINIMUM UNLESS OTHERWISE SPECIFIED.

8. REINFORCING STEEL SHALL BE NO. 4 ROUND DEFORMED BARS AT 6" CENTERS IN TOP SLAB, AT 18" CENTERS IN SIDES AND FLOOR OF THE BOX.

9. 3/4 INCH PLAIN ROUND HOT-DIP GALVANIZED STEEL STEPS 16" WIDE (ALHAMBRA FDY. A-3325 OR EQUAL) ARE REQUIRED AS FOLLOWS:

   a. IF H IS 3.5 FEET OR LESS, NO STEPS ARE REQUIRED.

   b. IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5 FEET, INSTALL 1 STEP 16" ABOVE FLOOR OF THE BASIN.

   c. IF H IS MORE THAN 5 FEET, INSTALL STEPS 12 INCHES APART, WITH THE TOP STEP 6 INCHES BELOW THE SURFACE OF THE BASIN.

   d. ALL STEPS SHALL BE 4 INCHES FROM THE WALL, EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2 INCHES (CLEAR) FROM THE WALL, AND ANCHORED NOT LESS THAN 5 INCHES INTO THE WALL OF THE BASIN.

10. SURFACE OF ALL EXPOSED CONCRETE IN BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB AND WALL ADJACENT TO THE BASIN.

11. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD WHEN THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH A SIDEWALK. THE TOP OF THE BASIN SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING CONCRETE IN THE SIDEWALK WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD AND THE TOP OF THE CATCH BASIN PER SIDEWALK STANDARDS.

12. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

13. CATCH BASINS AND LOCAL DEPRESSIONS MAY NOT BE PLACED WITHIN PEDESTRIAN STREET CROSSINGS.

14. CATCH BASIN CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

15. TOP OF CATCH BASIN TO BE POURED MONOLITHIC WITH SIDEWALK.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

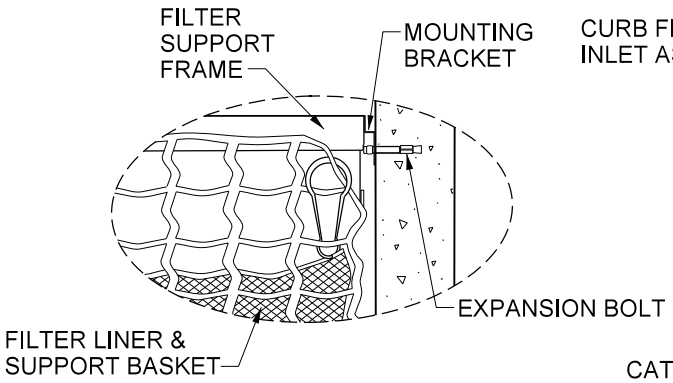
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

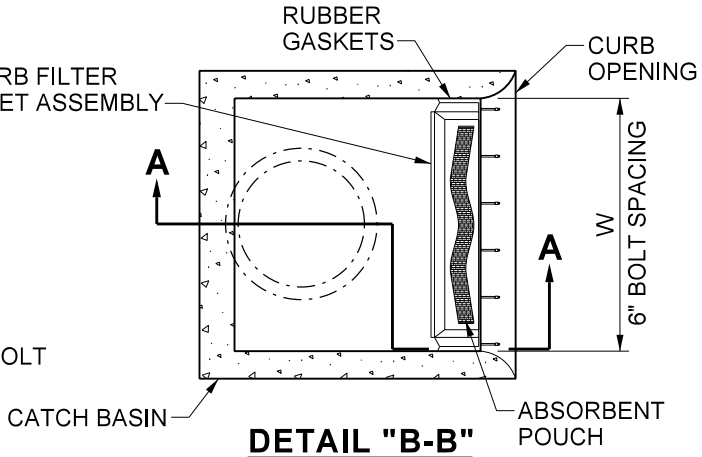
COUNTY OF RIVERSIDE

CURB INLET CATCH BASIN

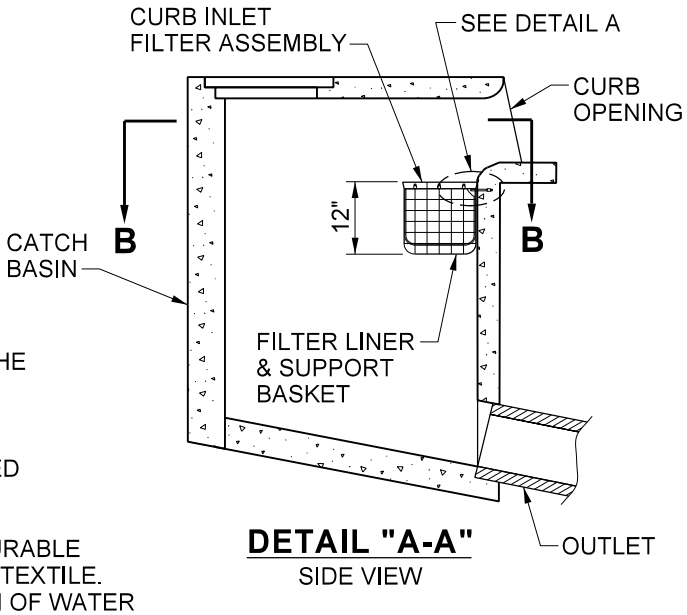
STANDARD No. 300 (2 OF 2)



DETAIL "A"
MOUNTING BRACKETS & EXPANSION BOLTS SEE NOTE 4



DETAIL "B-B"
TOP VIEW



DETAIL "A-A"
SIDE VIEW

NOTES:

1. FILTER INSERTS SHALL BE INSTALLED ACROSS THE ENTIRE WIDTH OF THE CURB OPENING, NO GAPS ALONG CURB OPENING SHALL BE PERMITTED.
2. FILTER SUPPORT FRAME SHALL BE CONSTRUCTED FROM STAINLESS STEEL TYPE 304.
3. FILTER LINER SHALL BE CONSTRUCTED FROM DURABLE POLYPROPYLENE, WOVEN, MONOFILAMENT, GEOTEXTILE. FILTER LINER SHALL NOT ALLOW THE RETENTION OF WATER BETWEEN STORM EVENTS. DRAINAGE SHALL BE OUT OF THE BOTTOM OF THE FOSSIL FILTER.
4. FILTER INSERT SHALL BE ATTACHED TO THE CATCH BASIN WITH STAINLESS STEEL EXPANSION ANCHOR BOLTS & WASHERS (3/8" x 2-1/2" MINIMUM LENGTH).
5. FILTER INSERTS SHALL BE AVAILABLE IN STANDARD LENGTHS OF 24", 30", 35", 42" & 48" AND MAY BE INSTALLED IN VARIOUS LENGTH COMBINATIONS (END TO END) TO FIT LENGTH OF NOTED CATCH BASIN.
6. FILTER INSERTS AND FILTER MEDIUM POUCHES MUST BE MAINTAINED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
7. FILTER INSERTS SHALL BE DESIGNED WITH A DEBRIS TRAP FOR THE RETENTION OF FLOATABLES AND COLLECTED SEDIMENTS.
8. FILTER INSERTS SHALL BE SUPPLIED WITH "CLIP-IN" FILTER POUCHES UTILIZING FILTER MEDIUM FOR THE COLLECTION AND RETENTION OF PETROLEUM HYDROCARBONS (OILS & GREASES).

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FOSSIL FILTER

STANDARD No. 300A

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

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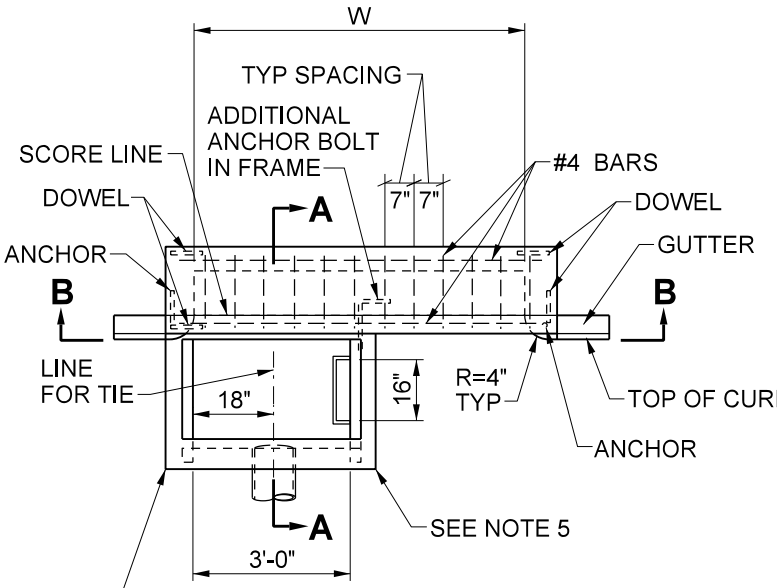
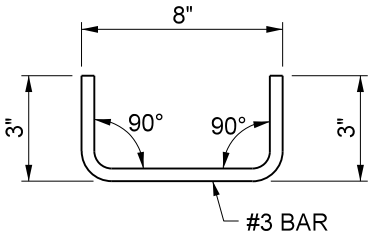
STATE OF CALIFORNIA

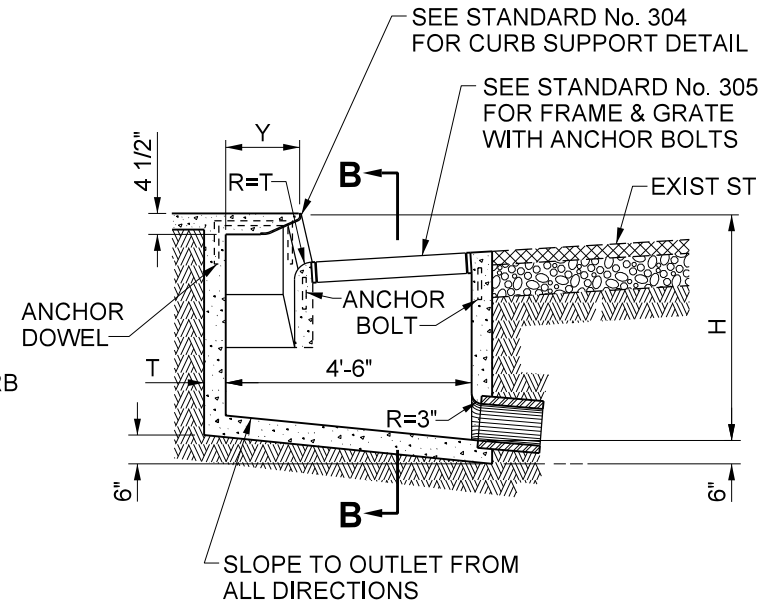


THE OUTER EDGES OF THE WALLS SHALL CONFORM TO THE STREET OR LOCAL DEPRESSION SURFACE. THE GRATE SHALL BE LAID IN THE PLANE OF THIS SURFACE, SEE STANDARD No. 312 CASE B FOR GUTTER DEPRESSION.

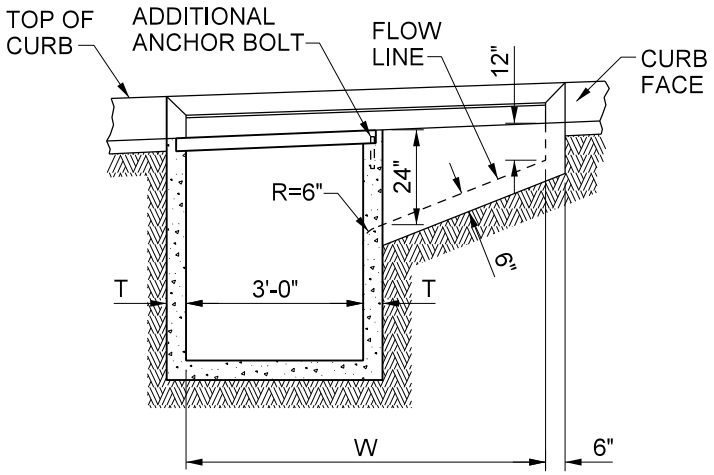
PLAN



DETAIL OF DOWEL



SECTION "A-A"



SECTION "B-B"

FOR NOTES SEE SHEET 2

COUNTY OF RIVERSIDE

COMBINATION INLET CATCH BASIN No. 1

STANDARD No. 301 (1 OF 2)

NOTES:

1. DIMENSIONS UNLESS OTHERWISE SPECIFIED *

Y	W	T	H
2'-3"	7' *	6" *	4'-6" *
		6"	5' OR LESS
		8"	5' TO 8'
		10"	8' OR GREATER

2. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

3. THE REINFORCING STEEL SHALL BE NUMBER 4 DEFORMED BARS. CLEARANCE SHALL BE 1 1/2" FROM THE BOTTOM OF THE SLAB.

4. THE SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM TO SLOPE, GRADE, COLOR, FINISH, AND SCORE IN THE EXISTING OR PROPOSED CURB AND WALK ADJACENT TO THE BASIN. THE BASIN FLOOR SHALL BE GIVEN A TIGHT WOOD FLOAT FINISH. CURVATURE OF THE LIP AND SIDEWALLS AT THE GUTTER OPENING SHALL NOT BE MADE BY PLASTERING. THE OUTLET PIPE SHALL BE TRIMMED TO FINAL SHAPE AND LENGTH BEFORE THE CONCRETE IS POURED.

5. 3/4 INCH PLAIN ROUND HOT-DIP GALVANIZED STEEL STEPS 16" WIDE (ALHAMBRA FDY. A-3325 OR EQUAL) ARE REQUIRED AS FOLLOWS:

   a. IF H IS 3.5 FEET OR LESS, NO STEPS ARE REQUIRED.

   b. IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5 FEET, INSTALL 1 STEP 16" ABOVE FLOOR OF THE BASIN.

   c. IF H IS MORE THAN 5 FEET, INSTALL STEPS 12 INCHES APART, WITH THE TOP STEP 6 INCHES BELOW THE SURFACE OF THE BASIN.

   d. ALL STEPS SHALL BE 4 INCHES FROM THE WALL, EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2 INCHES (CLEAR) FROM THE WALL, AND ANCHORED NOT LESS THAN 5 INCHES INTO THE WALL OF THE BASIN.

6. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

7. CATCH BASINS, GRATES AND LOCAL DEPRESSIONS MAY NOT BE PLACED WITHIN PEDESTRIAN STREET CROSSINGS. BICYCLE FRIENDLY GRATES SHALL BE USED IN BIKE LANES AND WITHIN ROADBED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

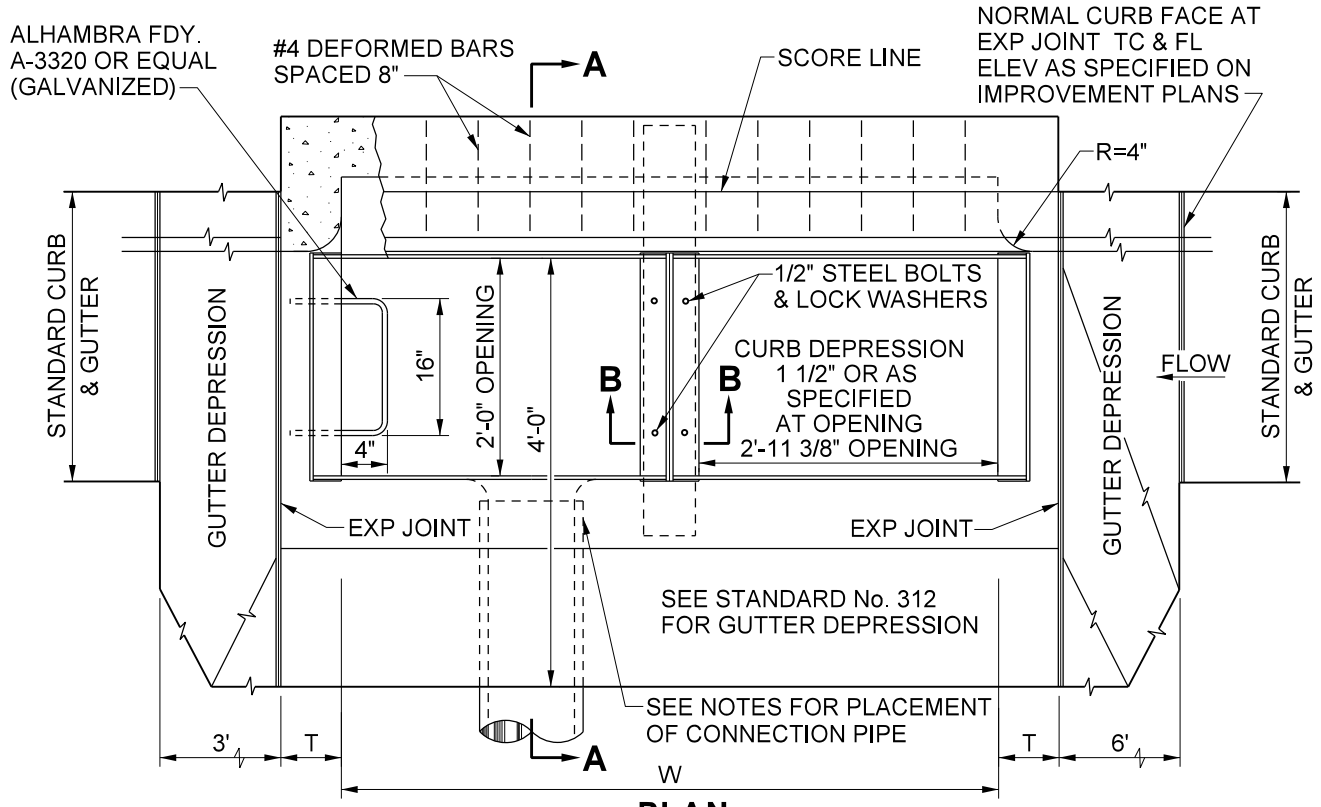
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

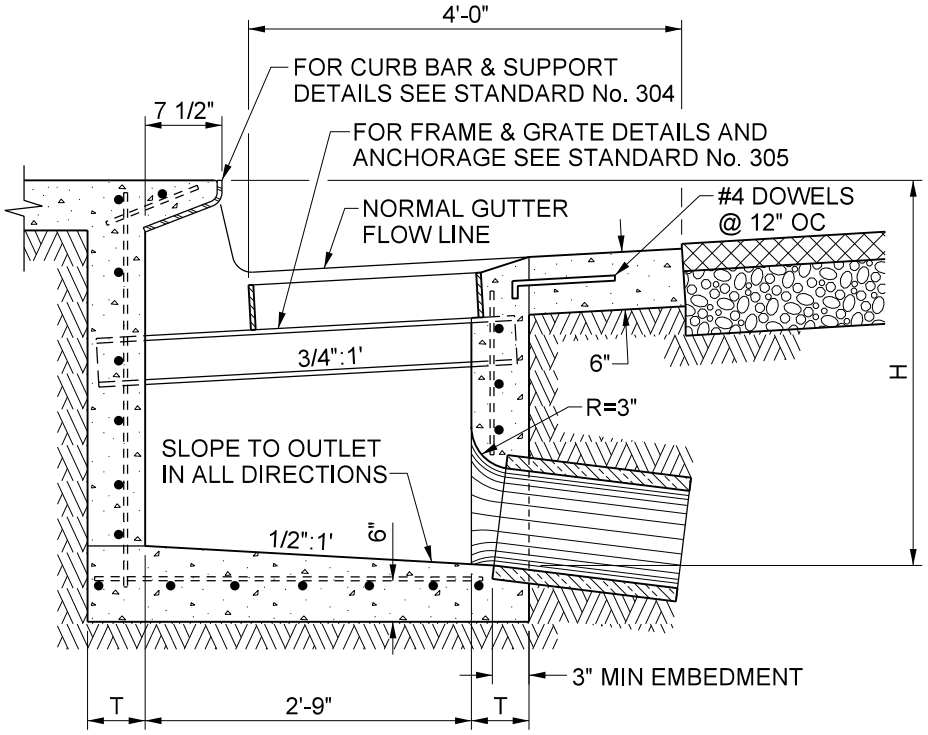
COUNTY OF RIVERSIDE

COMBINATION INLET CATCH BASIN No. 1

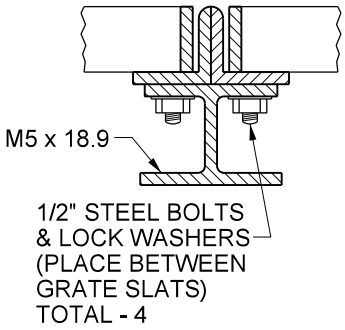
STANDARD No. 301 (2 OF 2)



PLAN



SECTION "A-A"



SECTION "B-B"

NOT TO SCALE

FOR NOTES SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
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CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

COMBINATION INLET CATCH BASIN No. 2

STANDARD No. 302 (1 OF 2)

NOTES:

1. BASIN SHALL HAVE ONE GRATE UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS.

2. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD. WHEN THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK, OR IS CONTIGUOUS TO SUCH A SIDEWALK, THE TOP OF THE BASIN SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING CONCRETE IN THE SIDEWALK WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD. THE TOP OF THE CATCH BASIN SHALL BE FINISHED PER SIDEWALK STANDARDS.

3. CONNECTION PIPES MAY BE PLACED IN ANY POSITION AROUND THE WALLS, PROVIDED THEY POINT IN THE PROPER DIRECTION AND THE POSITION IS OTHERWISE CONSISTENT WITH THE IMPROVEMENT PLAN.

4. CURVATURE OF THE END-WALLS AT CURB OPENING SHALL BE FORMED BY CURVED FORMS AND SHALL NOT BE MADE BY PLASTERING.

5. DIMENSIONS:
   GRATE SHALL BE PARALLEL TO PLANE OF GUTTER SLOPE 3/4" TO 1'-0".
   T = 6 INCHES IF H IS 8 FEET OR LESS.
   T = 8 INCHES IF H IS GREATER THAN 8 FEET AND LESS THAN 20 FEET.
   H = 3 FEET 6 INCHES, UNLESS OTHERWISE SPECIFIED ON IMPROVEMENT PLANS.
   W = 2 FEET 11 3/8 INCHES FOR ONE GRATE. ADD 3 FEET 5 3/8 INCHES FOR EACH ADDITIONAL GRATE.

6. EXPOSED SURFACES OF THE CATCH BASIN SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING IMPROVEMENTS ADJACENT TO THE BASIN. WHERE NO SIDEWALK EXISTS, THE TOP SHALL BE FINISHED TO CONFORM TO STANDARD SIDEWALK SLOPE AND FINISH. WHERE NO CURB EXISTS, THE BATTER OF EXPOSED END WALLS ABOVE THE STREET SURFACE SHALL CONFORM TO BATTER FOR STANDARD CURB.

7. FLOOR OF BASIN SHALL BE GIVEN A STEEL - TROWELLED FINISH.

8. OUTLET PIPE SHALL BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.

9. REINFORCING STEEL SHALL BE #4 DEFORMED BARS. CLEARANCE SHALL BE 1 1/2 INCHES FROM INSIDE OF BOX. SPACING IS AS SHOWN IN TOP SLAB AND AT 18 INCH CENTERS IN SIDES OF BOX.

10. SLOPE OF FLOOR PARALLEL WITH CURB SHALL BE 1 IN 12 UNLESS OTHERWISE SPECIFIED. SLOPE FLOOR FROM ALL DIRECTIONS TO THE OUTLET.

11. STEPS: 3/4 INCH PLAIN ROUND GALVANIZED STEEL STEPS (ALHAMBRA FDY. A-3325 OR EQUAL) ARE REQUIRED AS FOLLOWS:
    a. IF H IS 3.5 FEET OR LESS, NO STEPS ARE REQUIRED.
    b. IF H IS MORE THAN 3.5 FEET, AND NOT MORE THAN 5.0 FEET, INSTALL ONE STEP 16" ABOVE FLOOR OF BASIN.
    c. IF H IS MORE THAN 5.0 FEET, INSTALL STEPS 12 INCHES APART, WITH THE TOP STEP 6" BELOW THE TOP OF GRATE.
    d. ALL STEPS SHALL BE 4 INCHES CLEAR FROM THE WALL EXCEPT THE TOP STEP, WHICH SHALL BE 2 1/2 INCHES (CLEAR) FROM THE WALL AND ANCHORED NOT LESS THAN 5 INCHES IN WALL OF BASIN.

12. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

13. GRATE SHALL BE HOT DIPPED GALVANIZED.

14. CATCH BASINS, GRATES AND LOCAL DEPRESSIONS MAY NOT BE PLACED WITHIN PEDESTRIAN STREET CROSSINGS. BICYCLE FRIENDLY GRATES SHALL BE USED IN BIKE LANES AND WITHIN ROADBED.

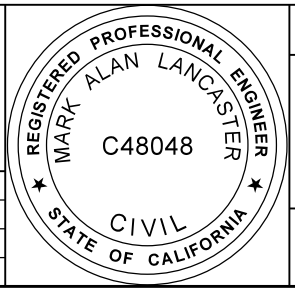
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

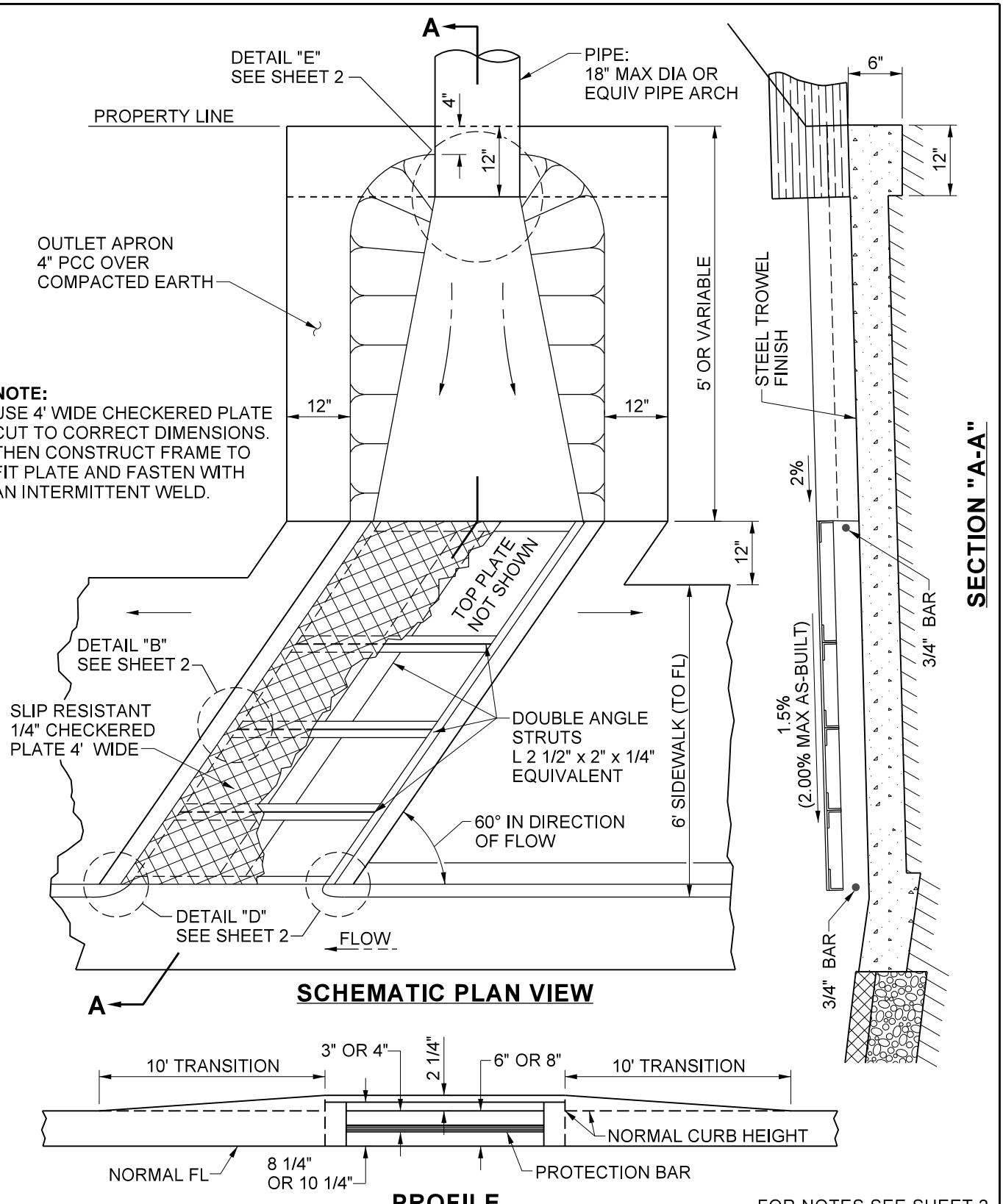
REVISION DESCRIPTION	MARK	DATE	APPROVED



COUNTY OF RIVERSIDE

COMBINATION INLET CATCH BASIN No. 2

STANDARD No. 302 (2 OF 2)



NOT TO SCALE

FOR NOTES SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

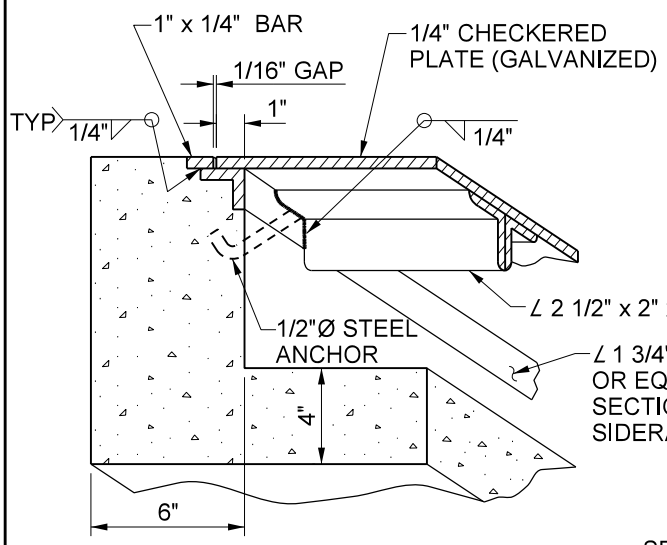
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

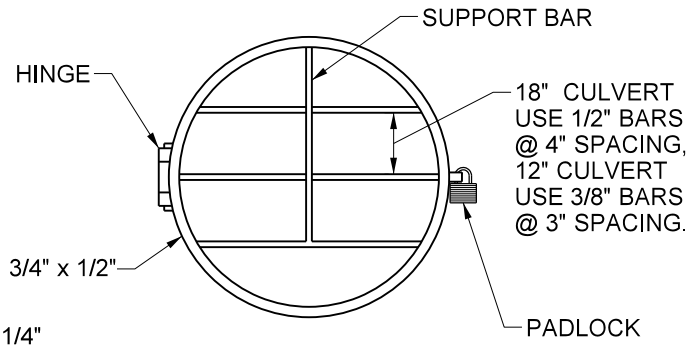
COUNTY OF RIVERSIDE

FLAT OUTLET DRAINAGE STRUCTURE

STANDARD No. 303 (1 OF 2)



DETAIL "B"



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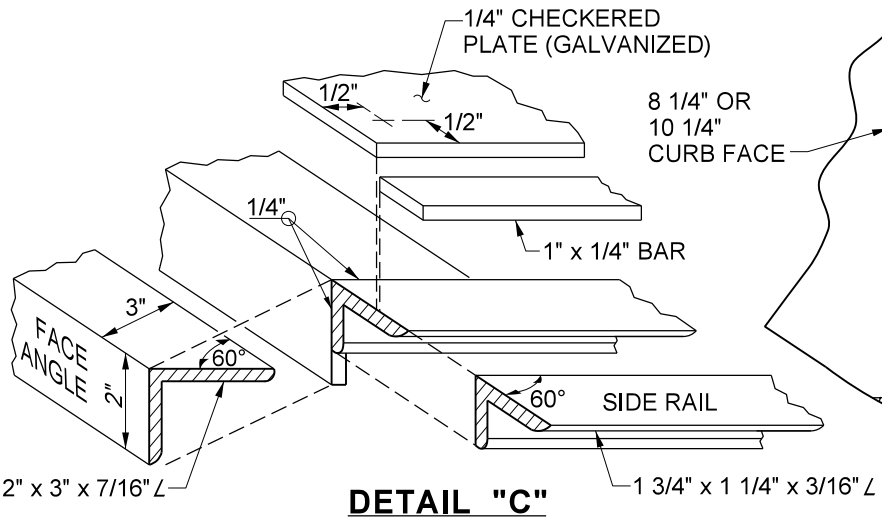
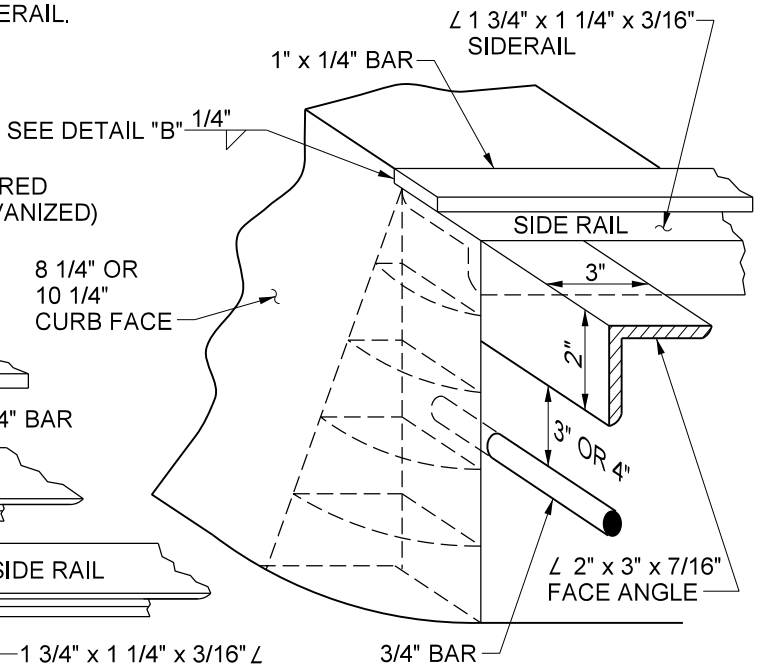


DETAIL "C"

1/2" STEEL ANCHOR NOT SHOWN
SEE DETAIL "B"



DETAIL "D"

NOTES:

1. FRAME AND GRATE SHALL BE CONSTRUCTED TO STANDARD SPECIFICATIONS OR OF EQUIVALENT STRUCTURAL STRENGTH AND WELDED TOGETHER WITH A 1/4" INTERMITTENT WELD AT ALL BREAKS, SEAMS, SECTIONS, JOINTS, ETC.
2. THE 1/4" CHECKERED PLATE SHALL BE FASTENED TO THE FRAME WITH AN INTERMITTENT WELD.
3. GRATE SHALL BE CONSTRUCTED TO STANDARD SPECIFICATIONS, WELDED AT ALL BREAKS, SECTIONS, ETC., HINGED TO DRAINAGE PIPE, AND SECURED WITH PADLOCK. GRATE NOT REQUIRED FOR CULVERTS SMALLER THAN 12".
4. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
5. ALL METAL SHALL BE HOT DIPPED GALVANIZED.
6. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

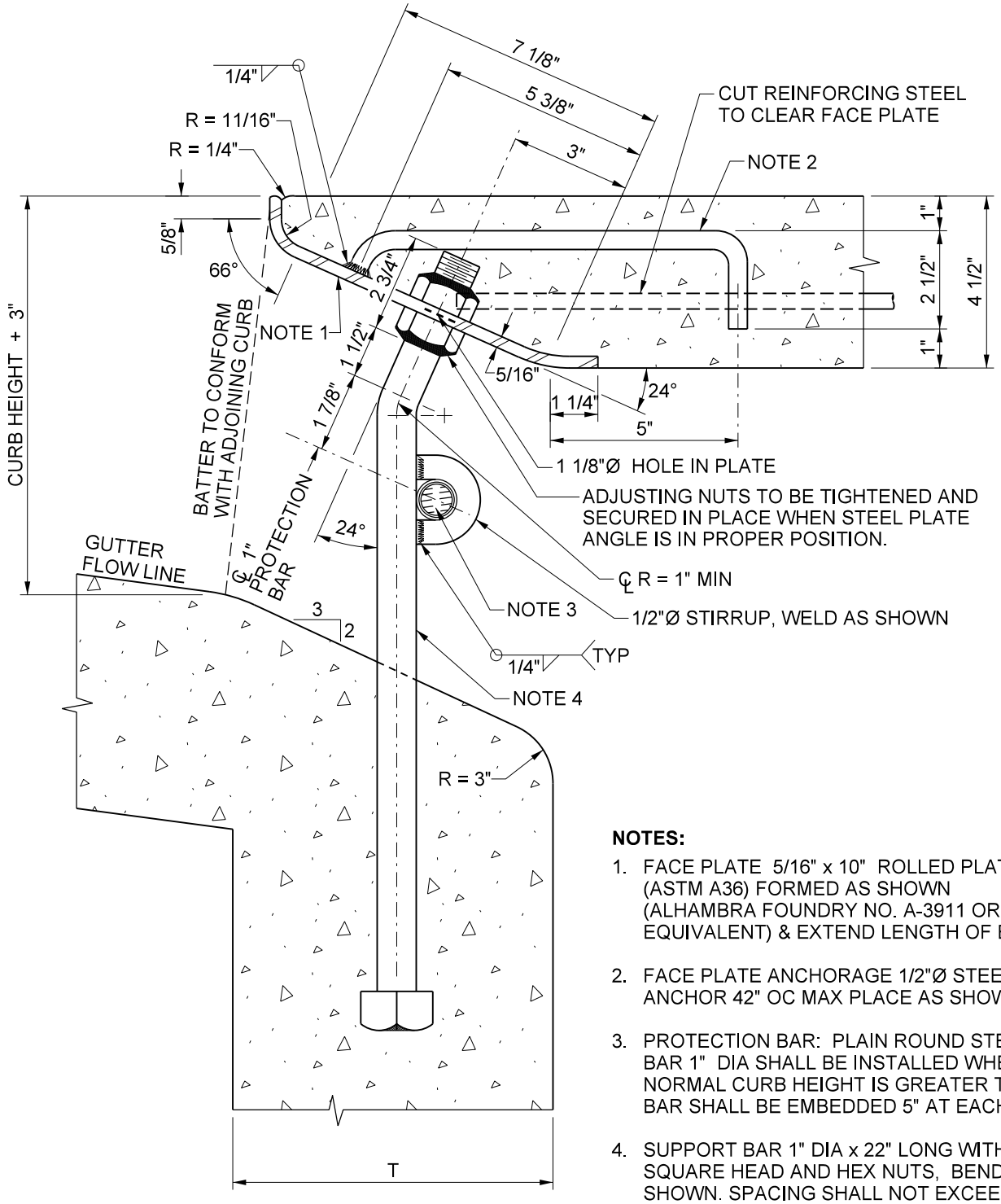
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FLAT OUTLET DRAINAGE STRUCTURE

STANDARD No. 303 (2 OF 2)



NOTES:

1. FACE PLATE 5/16" x 10" ROLLED PLATE (ASTM A36) FORMED AS SHOWN (ALHAMBRA FOUNDRY NO. A-3911 OR EQUIVALENT) & EXTEND LENGTH OF BOX.
2. FACE PLATE ANCHORAGE 1/2"Ø STEEL ANCHOR 42" OC MAX PLACE AS SHOWN.
3. PROTECTION BAR: PLAIN ROUND STEEL BAR 1" DIA SHALL BE INSTALLED WHEN NORMAL CURB HEIGHT IS GREATER THAN 6". BAR SHALL BE EMBEDDED 5" AT EACH END.
4. SUPPORT BAR 1" DIA x 22" LONG WITH SQUARE HEAD AND HEX NUTS, BEND AS SHOWN. SPACING SHALL NOT EXCEED 4 FEET.
5. ALL EXPOSED METAL PARTS SHALL BE HOT-DIP GALVANZIED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

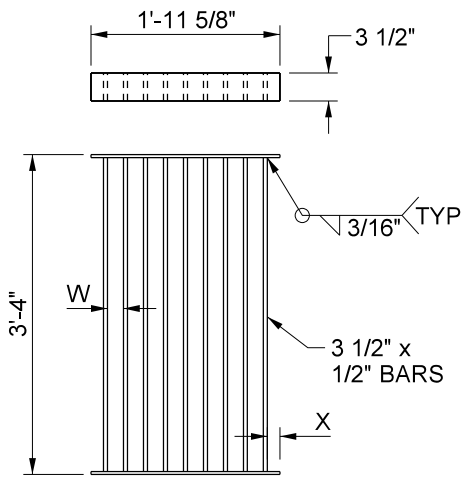
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

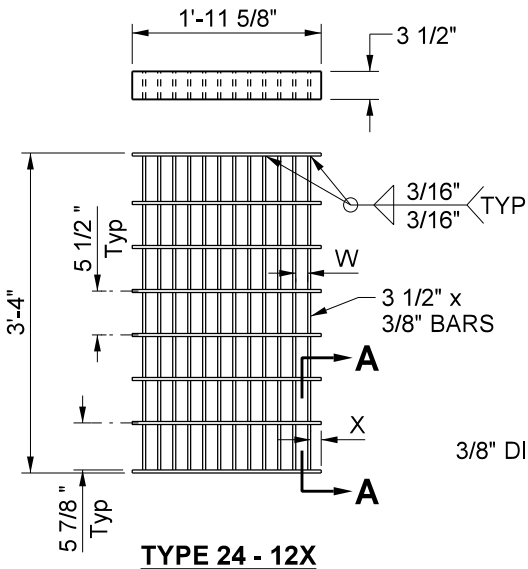
COUNTY OF RIVERSIDE

CURB SUPPORT DETAIL

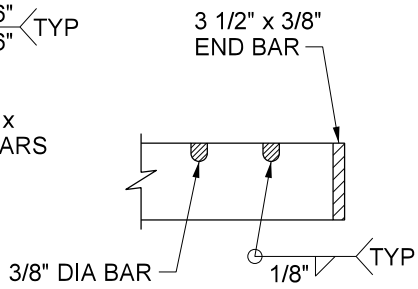
STANDARD No. 304



TYPE 24 - 9
WELDED GRATE

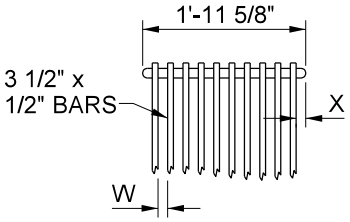


TYPE 24 - 12X
WELDED GRATE

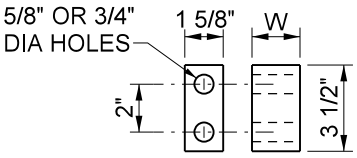


SECTION A-A

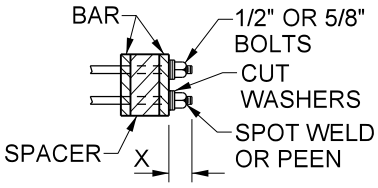
GRATE DETAILS
(SEE TABLE BELOW)



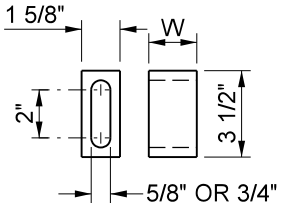
BOLTED END BLOCK



BAR SPACER



BOLTING DETAIL



ALTERNATIVE SPACER

ALTERNATIVE
BOLTED GRATE

TYPE	NO. BARS	" W "	" X "	GRATE OPEN AREA	USAGE
24 - 9	9	2"	1 9/16"	5.21 SqFt	USE IN LOCATIONS OFF THE ROADBED
24 -12X	12	1 1/2"	1 5/16"	4.91 SqFt	USE WITHIN THE ROADBED

NOT TO SCALE

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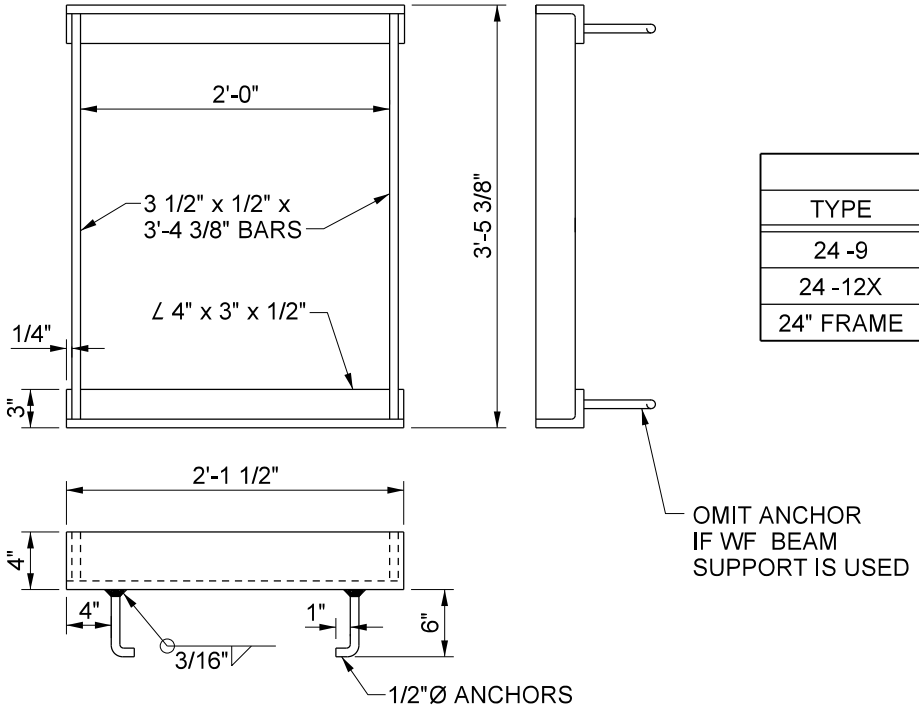
COUNTY OF RIVERSIDE

GRATE AND FRAME DETAIL

STANDARD No. 305 (1 OF 2)



WEIGHTS		
TYPE	WELDED	BOLTED
24 -9	200	230
24 -12X	258	286
24" FRAME	90	-

FRAME DETAILS

NOTES:

1. GRATE TYPE NUMBER REFERS TO WIDTH OF GRATE IN INCHES AND NUMBER OF BARS RESPECTIVELY.
2. CONTRACTOR HAS THE OPTION OF USING WELDED OR BOLTED GRATES.
3. ROUNDED TOP OF BARS OPTIONAL ON ALL GRATES.
4. GRATE SHALL BE PLACED SO THAT BARS ARE PARALLEL TO DIRECTION OF PRINCIPAL SURFACE FLOW.
5. GRATE AND FRAME SHALL BE HOT-DIP GALVANIZED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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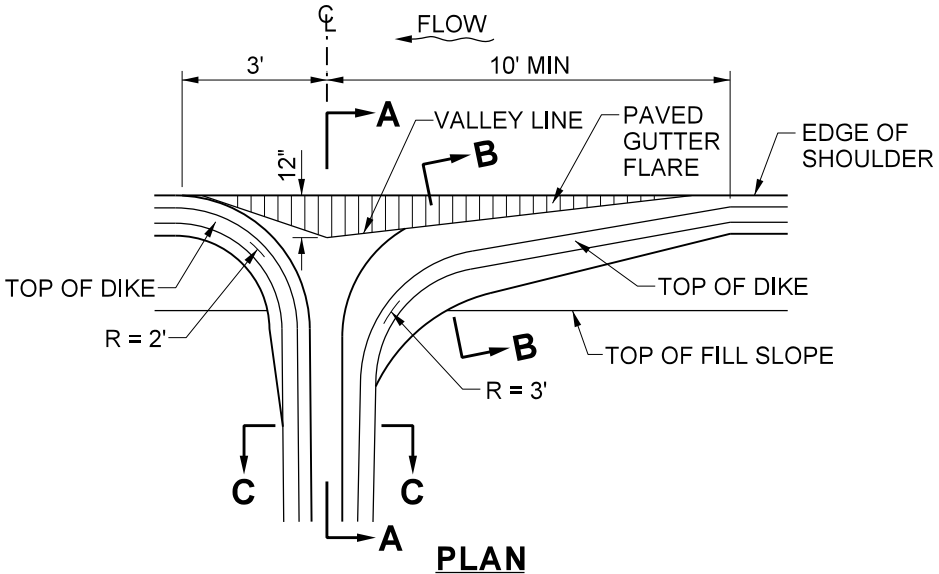
CIVIL
STATE OF CALIFORNIA

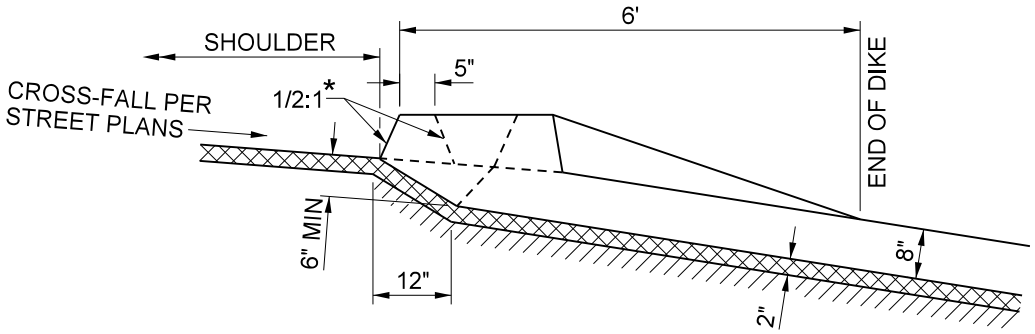
COUNTY OF RIVERSIDE

GRATE AND FRAME DETAIL

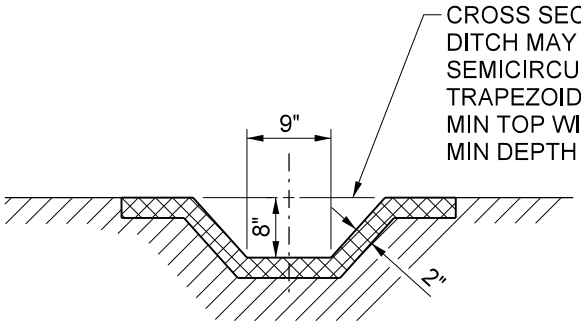
STANDARD No. 305 (2 OF 2)



PLAN

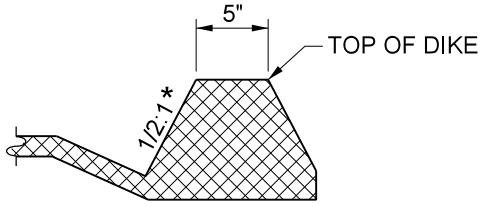


SECTION "A-A"



SECTION "C-C"

TO BE USED ON FILL SLOPES FLATTER THAN 4:1. USE MINIMUM 10' LENGTH OF GUTTER ON BOTH SIDES IN A SAG LOCATION. USE PIPE DOWNDRAINS FOR SLOPES STEEPER THAN 4:1 SLOPES



SECTION "B-B"

* 1/2:1 MAX, VARIES

NOT TO SCALE

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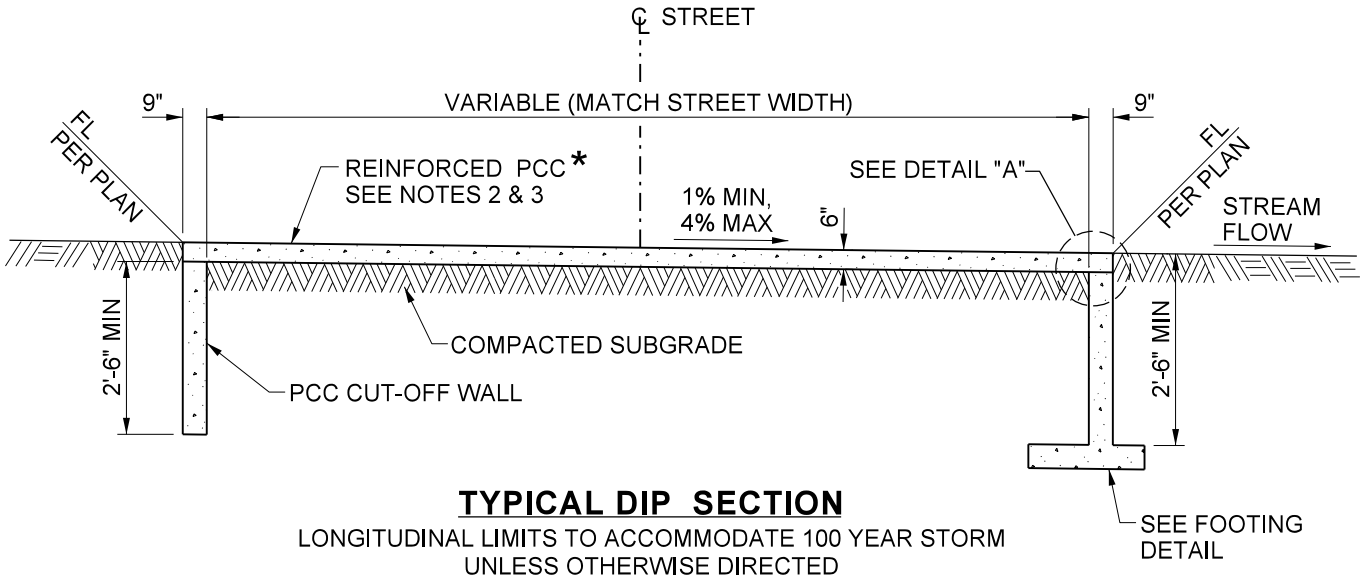
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

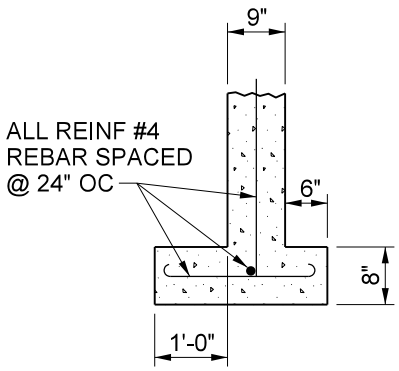
HOT MIX ASPHALT OVERSIDE DRAIN

STANDARD No. 306



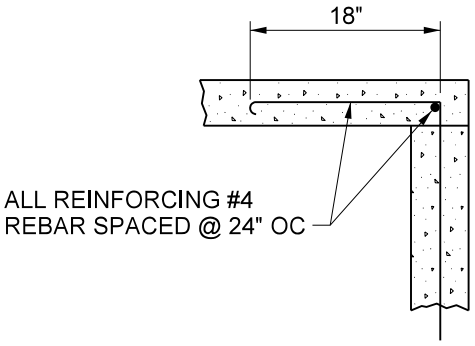
TYPICAL DIP SECTION

LONGITUDINAL LIMITS TO ACCOMMODATE 100 YEAR STORM
UNLESS OTHERWISE DIRECTED



FOOTING DETAIL

FOOTING AND DEPTH
OF CUT-OFF WALL TO
BE DETERMINED BY
SOIL INVESTIGATION.



DETAIL "A"

NOTES:

1. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
2. REINFORCING FOR PCC PAVEMENT TO CONSIST OF 6" x 6" x 10 GAUGE WIRE MESH.
3. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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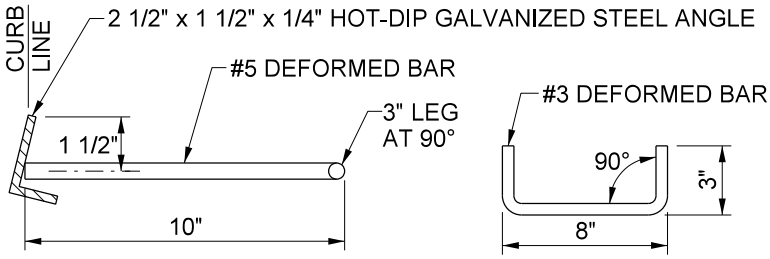
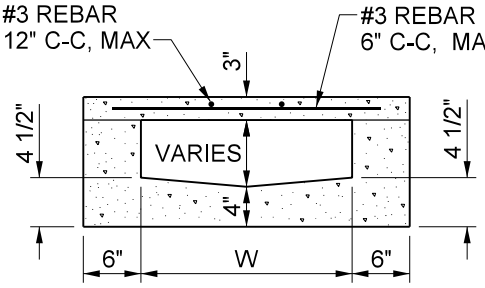
PCC DIP SECTION

STANDARD No. 307

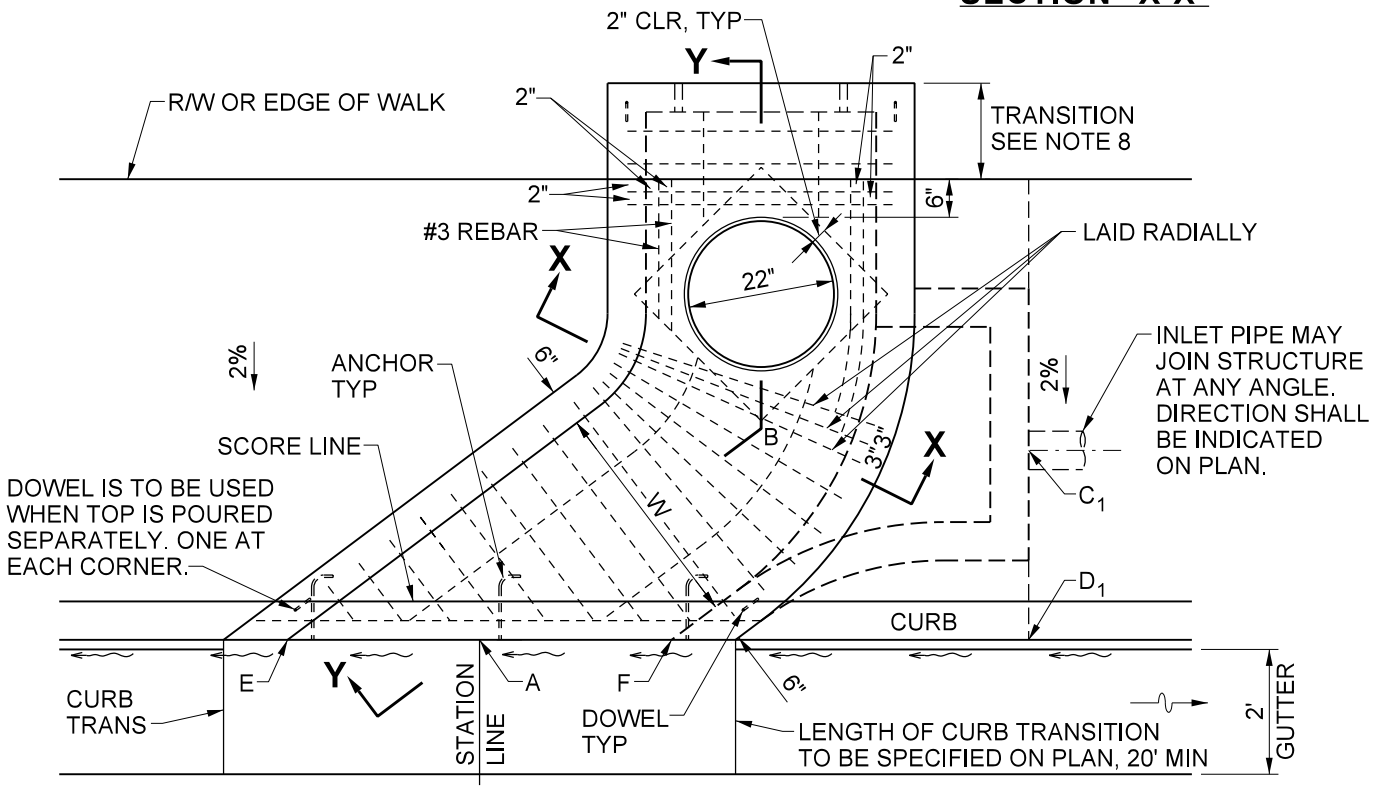


ANCHOR DETAIL

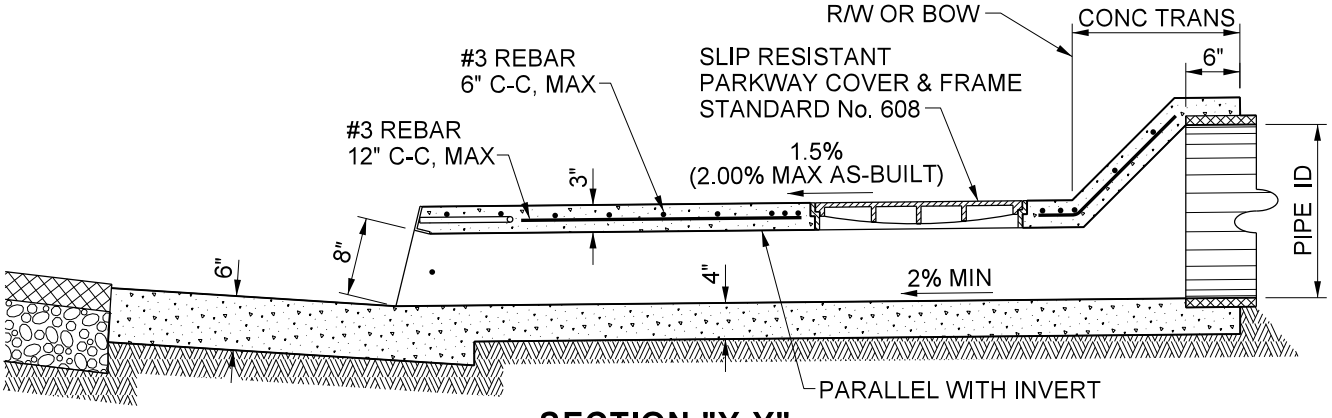
DOWEL DETAIL



SECTION "X-X"



TOP VIEW



SECTION "Y-Y"

NOT TO SCALE

FOR NOTES SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CURB OUTLET DRAIN

STANDARD No. 308 (1 OF 2)

NOTES:

1. WHEN STRUCTURE IS TO BE CONSTRUCTED WITHIN THE LIMITS OF A PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH SIDEWALK, THE TOP OF THE STRUCTURE SHALL BE POURED MONOLITHIC WITH THE SIDEWALK, USING THE SAME CLASS OF CONCRETE AS IN THE SIDEWALK.

2. DIMENSIONS SHALL BE AS FOLLOWS UNLESS OTHERWISE SPECIFIED ON THE PLAN:
   A - B = 5'
   C_1 - D_1 = 3'
   E - F = 5'
   W = 3'

3. FLOOR OF STRUCTURE SHALL BE GIVEN A STEEL-TROWELED FINISH AND CONSTRUCTED ON A STRAIGHT GRADE FROM BACK OF STRUCTURE TO GUTTER FLOW-LINE AT POINT A. THE V-SECTION SPECIFIED FOR INVERT SHALL EXTEND FROM PIPE OUTLET TO A POINT 3' FROM THE GUTTER, FROM WHICH POINT THE INVERT SHALL BE WARPED TO JOIN THE GUTTER FLOW-LINE AT THE STRUCTURE.

4. REINFORCING STEEL BARS SHALL BE 1" FROM BOTTOM OF THE SLAB.

5. SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO THE STRUCTURE.

6. CORRUGATED METAL FORMS SHALL NOT BE USED FOR SUPPORTING THE TOP SLAB.

7. TOP OF STRUCTURE SHALL SLOPE 2% TOWARD CURB EXCEPT WHEN OTHERWISE SHOWN ON PLAN OR TO FIT EXISTING SIDEWALK.

8. TRANSITION FROM PIPE TO STRUCTURE, IF REQUIRED, TO BE IN BACK OF SIDEWALK. DIMENSIONS OF TRANSITION SHALL BE SPECIFIED ON THE PLAN.

9. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

10. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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MARK ALAN LANCASTER
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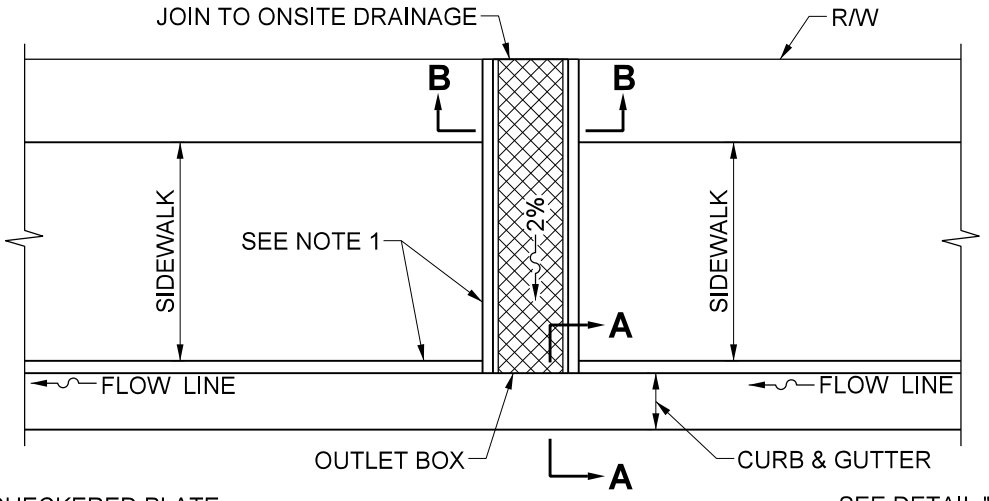
STATE OF CALIFORNIA

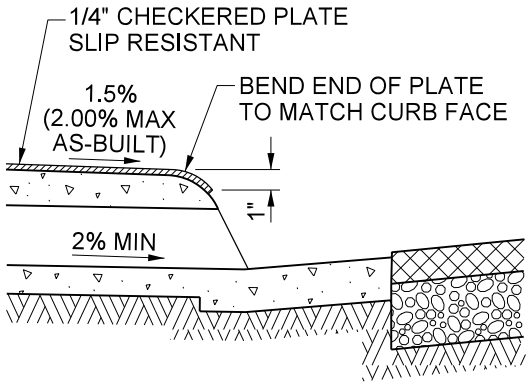
COUNTY OF RIVERSIDE

CURB OUTLET DRAIN

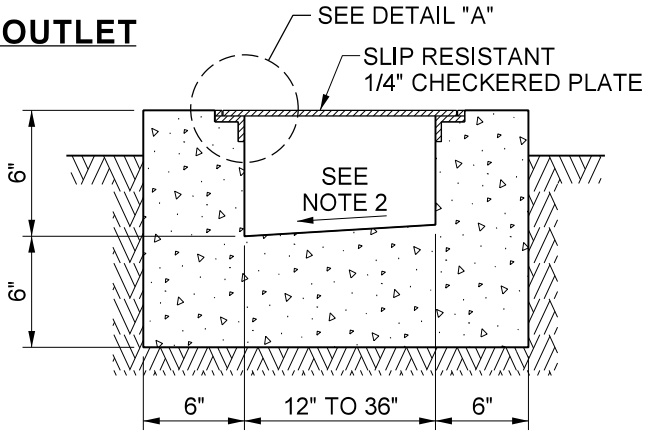
STANDARD No. 308 (2 OF 2)



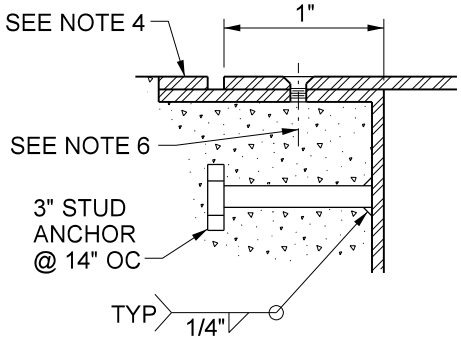
DRAIN OUTLET



SECTION "A-A"



SECTION "B-B"



DETAIL "A"

NOTES:

1. UNDER SIDEWALK DRAIN TO BE CONSTRUCTED PERPENDICULAR (90^) TO THE CURB ALIGNMENT. VARIATIONS FROM 90° REQUIRE THE APPROVAL OF THE DIRECTOR OF TRANSPORTATION.
2. SLOPE TO DRAIN TO ONE SIDE.
3. ALL EXPOSED METAL PARTS TO BE HOT-DIP GALVANIZED AFTER FABRICATION.
4. 1 1/2" x 1 1/2" x 1/4" "L" FRAME WITH 3/8" x 1/4" STEEL STRIP WELDED TO FRAME.
5. CHECKERED PLATE SHALL BE SLIP RESISTANT HOT-DIP GALVANIZED STEEL, MAXIMUM WIDTH 36".
6. FASTEN WITH 1/4" COARSE-THREAD COUNTERSINK STAINLESS STEEL SCREWS AT 12" OC.
7. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
8. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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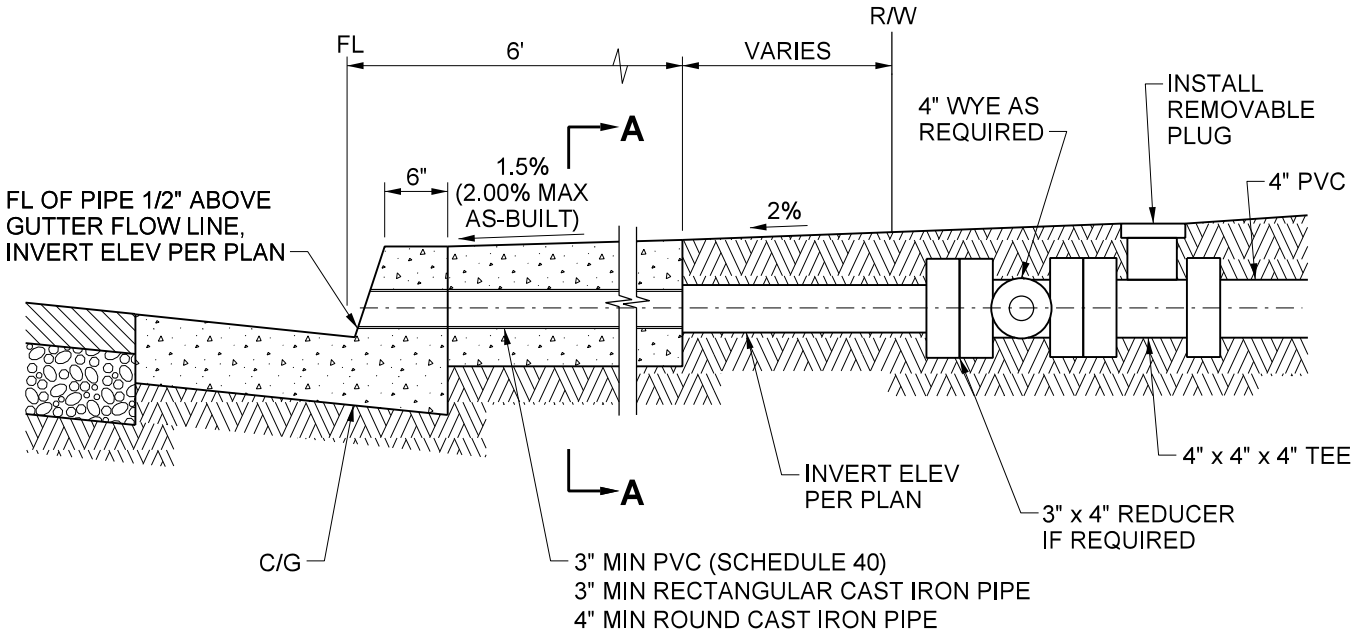
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

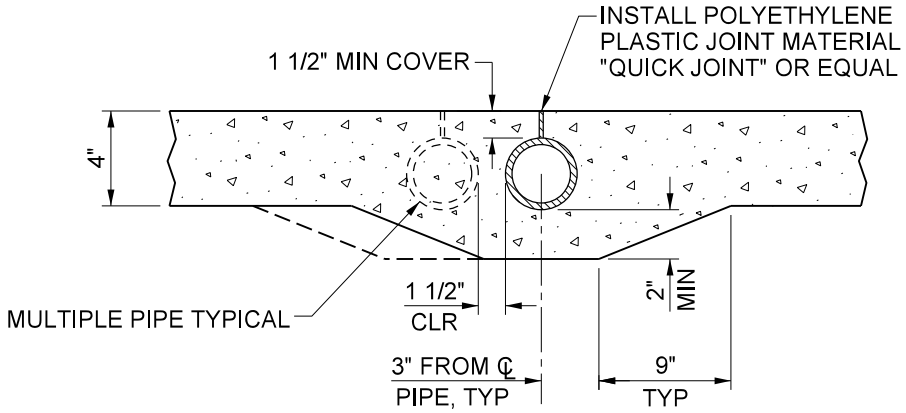
COUNTY OF RIVERSIDE

UNDER SIDEWALK DRAIN CAST IN PLACE

STANDARD No. 309



ELEVATION



SECTION "A-A"

CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

PRIVATE DRAIN THROUGH CURB

STANDARD No. 310

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

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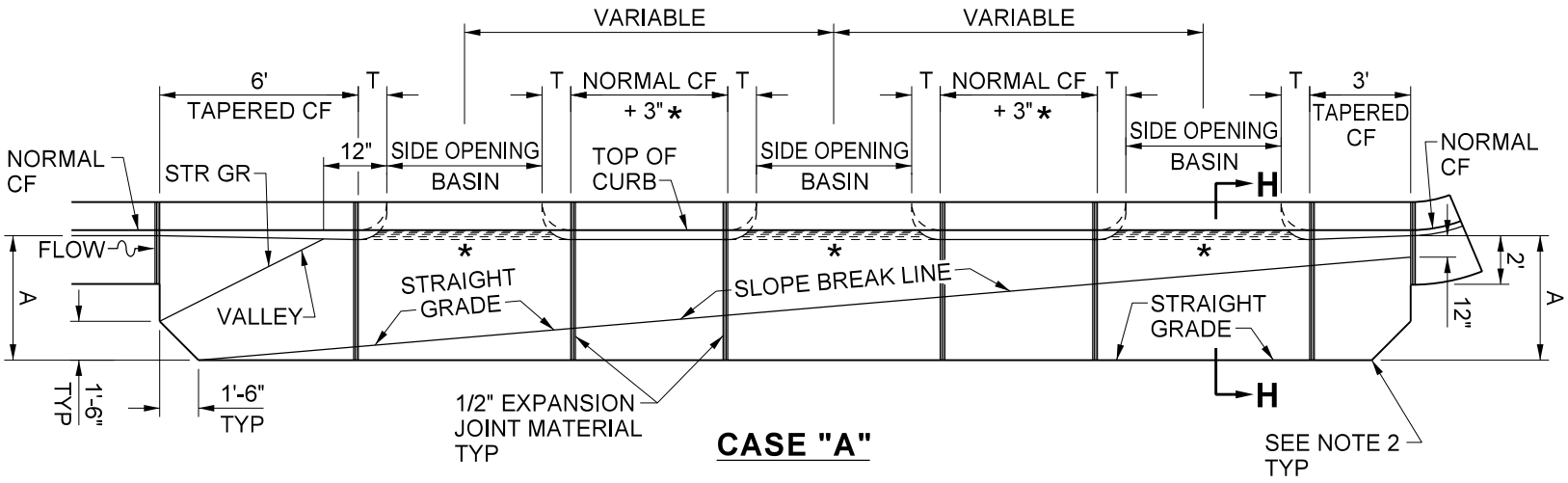
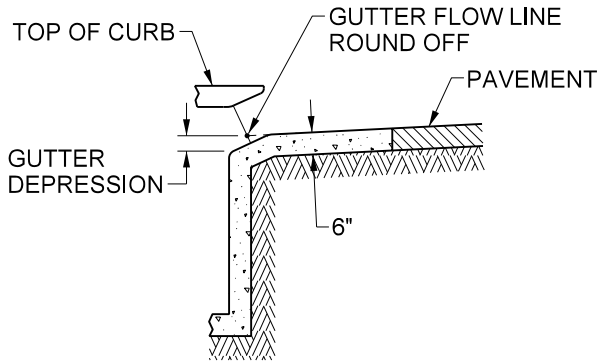
CIVIL
STATE OF CALIFORNIA



CASE "A"



SECTION "H-H"

NOTES:

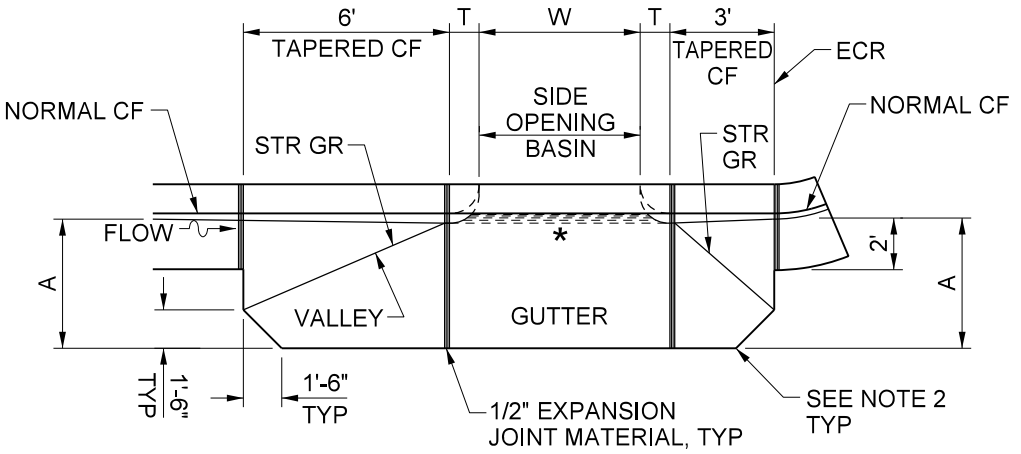
1. GUTTER DEPRESSION SHALL BE CASE B UNLESS OTHERWISE SPECIFIED ON PROJECT DRAWINGS.
2. ELEVATIONS OF OUTER CORNERS SHOWN ON PROJECT. IF NO ELEVATIONS ARE SPECIFIED, THE OUTER EDGE OF GUTTER DEPRESSION SHALL CONFORM TO FINISHED STREET SURFACE.
3. A = 4 FEET UNLESS OTHERWISE SPECIFIED.
   T = SEE STANDARD No. 300 DIMENSIONS.
   W = 4 FEET MIN, UNLESS OTHERWISE SPECIFIED.
4. WHERE NO CURB EXISTS, CURBS SHALL BE CONSTRUCTED BETWEEN ENDS OF GUTTER DEPRESSION. CURB SECTION SHALL CONFORM TO THAT OF CONTROLLING AGENCY.
5. DEPRESSION SHALL BE CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.
6. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

* CATCH BASIN OPENING = NORMAL CURB HEIGHT + 3 INCHES UNLESS OTHERWISE SPECIFIED.

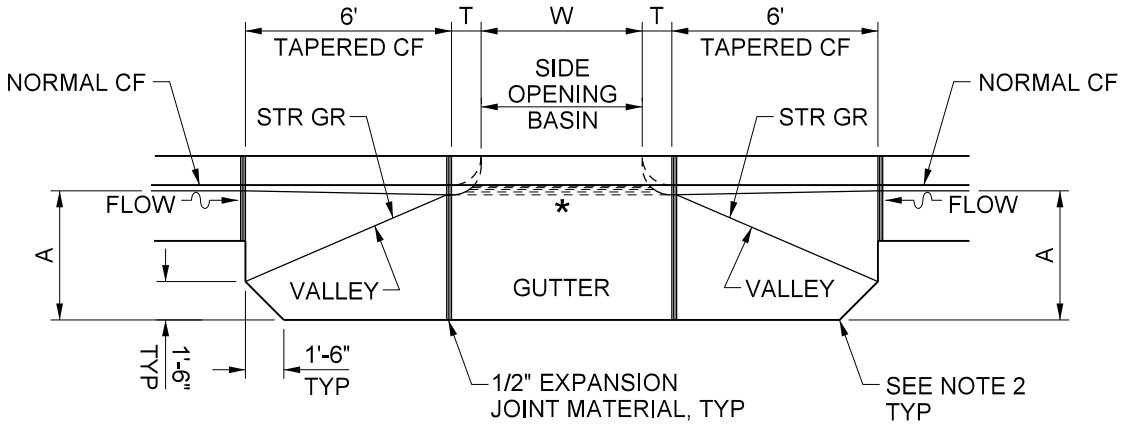
COUNTY OF RIVERSIDE

GUTTER DEPRESSION FOR CURB OPENING CATCH BASINS

STANDARD No. 311 (1 OF 2)



CASE "B"
(CONTINUOUS GRADE)



CASE "C"
(SAG)

NOT TO SCALE

FOR NOTES SEE SHEET 1

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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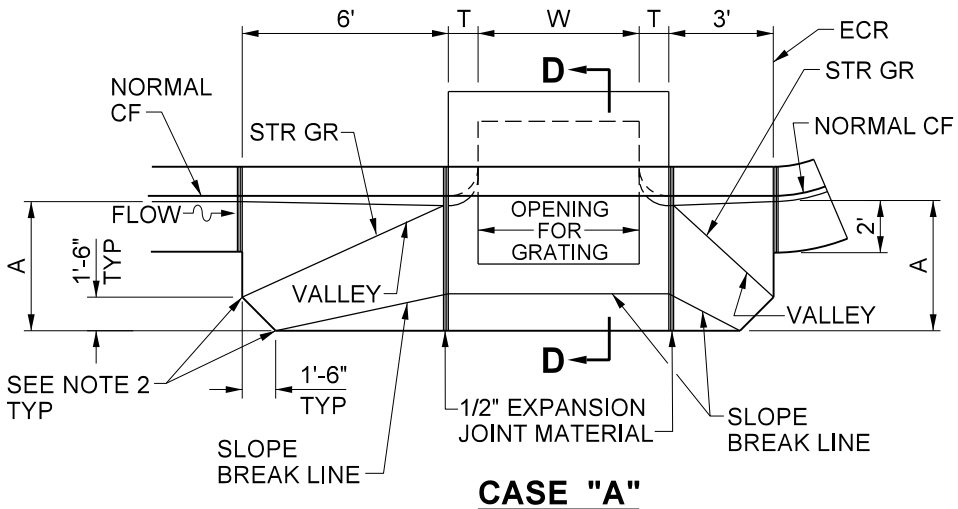
STATE OF CALIFORNIA

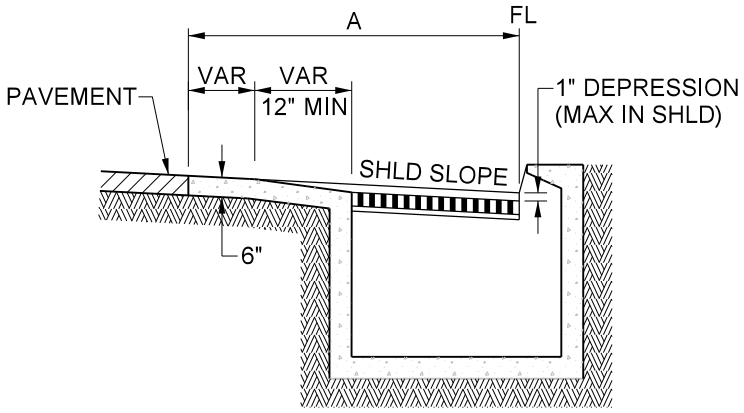
COUNTY OF RIVERSIDE

GUTTER DEPRESSION FOR CURB OPENING CATCH BASINS

STANDARD No. 311 (2 OF 2)



CASE "A"



SECTION "D-D"

NOTES:

1. GUTTER DEPRESSION SHALL BE:
   (A) CASE "A" SEE STANDARD No. 302 COMBINATION CATCH BASIN, UNLESS OTHERWISE SPECIFIED.
   (B) CASE "B" SEE STANDARD No. 301 COMBINATION INLET CATCH BASIN, UNLESS OTHERWISE SPECIFIED.

2. ELEVATIONS AT OUTER CORNERS SHOWN ON THE PROJECT DRAWINGS. IF NO ELEVATIONS ARE SPECIFIED THE OUTER EDGE OF THE GUTTER DEPRESSION SHALL CONFORM TO THE FINISHED STREET SURFACE.

3. A = 4' UNLESS OTHERWISE SPECIFIED
   T = SEE STANDARD No. 302 DIMENSIONS
   W = SEE STANDARD No. 302 DIMENSIONS

4. WHERE NO CURB EXISTS, CURB SHALL BE CONSTRUCTED BETWEEN ENDS OF GUTTER DEPRESSION. CURB SECTION SHALL CONFORM TO THAT OF CONTROLLING AGENCY.

5. DEPRESSION SHALL BE CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.

6. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION — DATE
MARK LANCASTER, P.E.

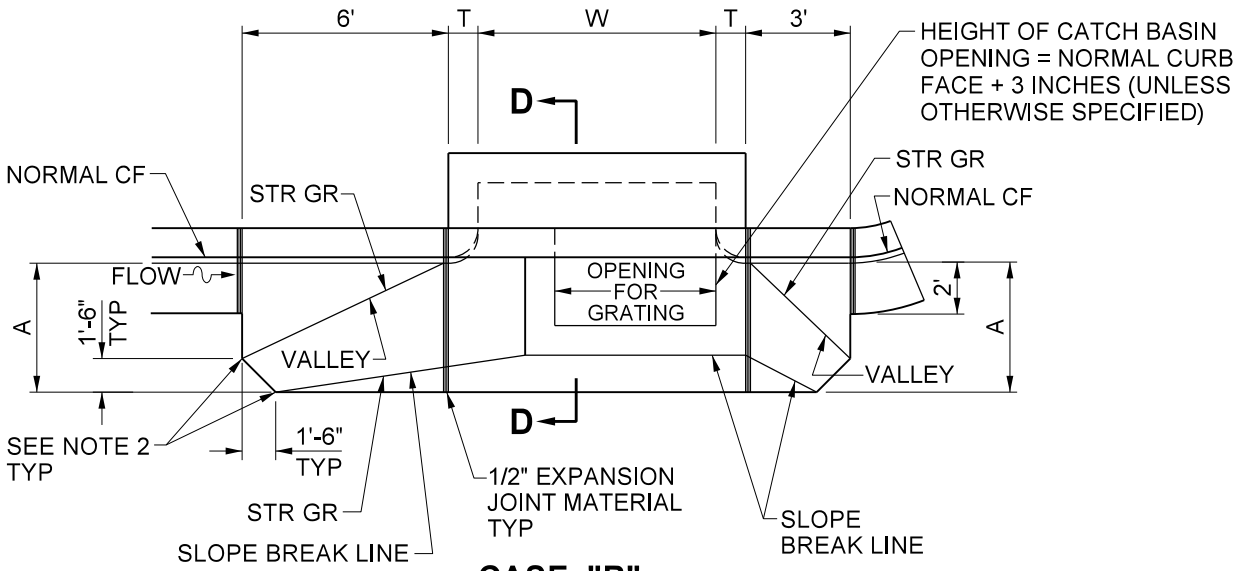
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER — MARK ALAN LANCASTER — C48048 — CIVIL — STATE OF CALIFORNIA

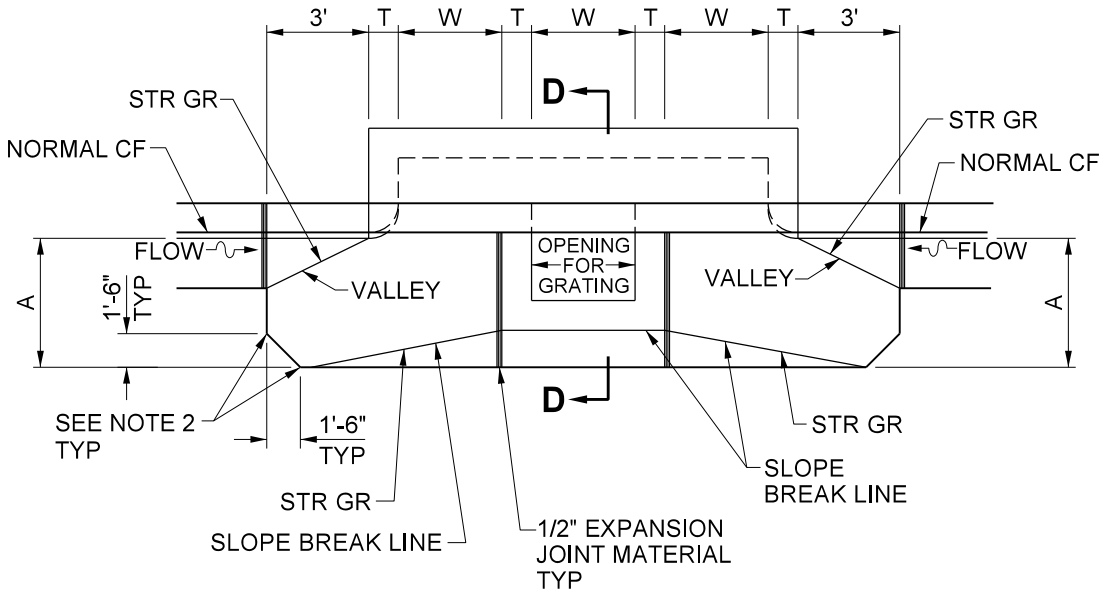
COUNTY OF RIVERSIDE

GUTTER DEPRESSION FOR GRATE OPENING CATCH BASIN

STANDARD No. 312 (1 OF 2)



CASE "B"



CASE "C"

NOT TO SCALE

FOR NOTES & SECTION D-D SEE SHEET 1

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Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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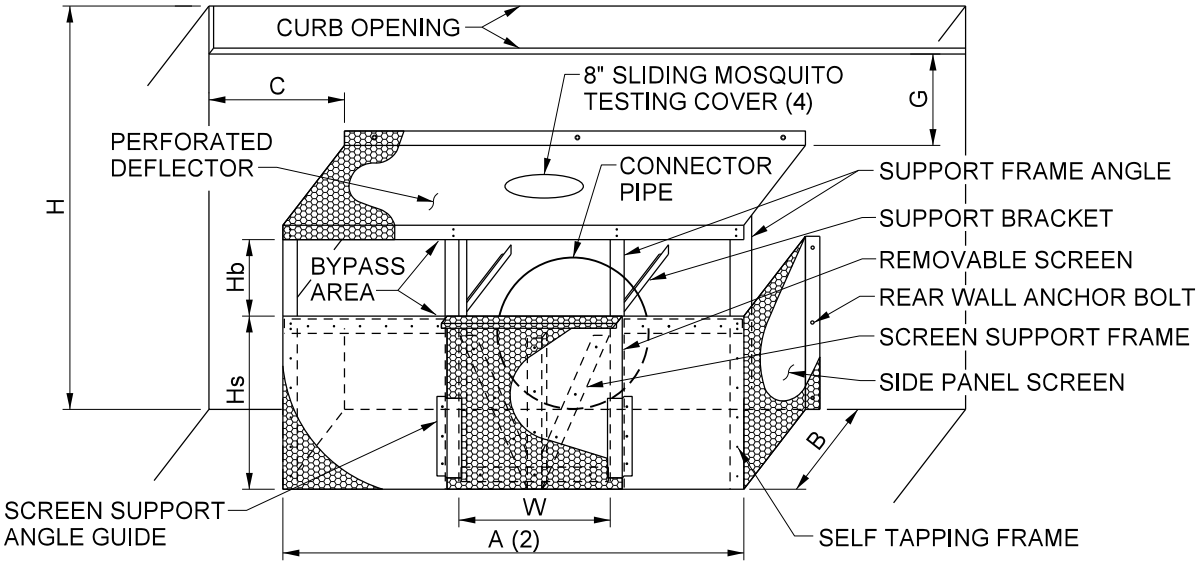
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

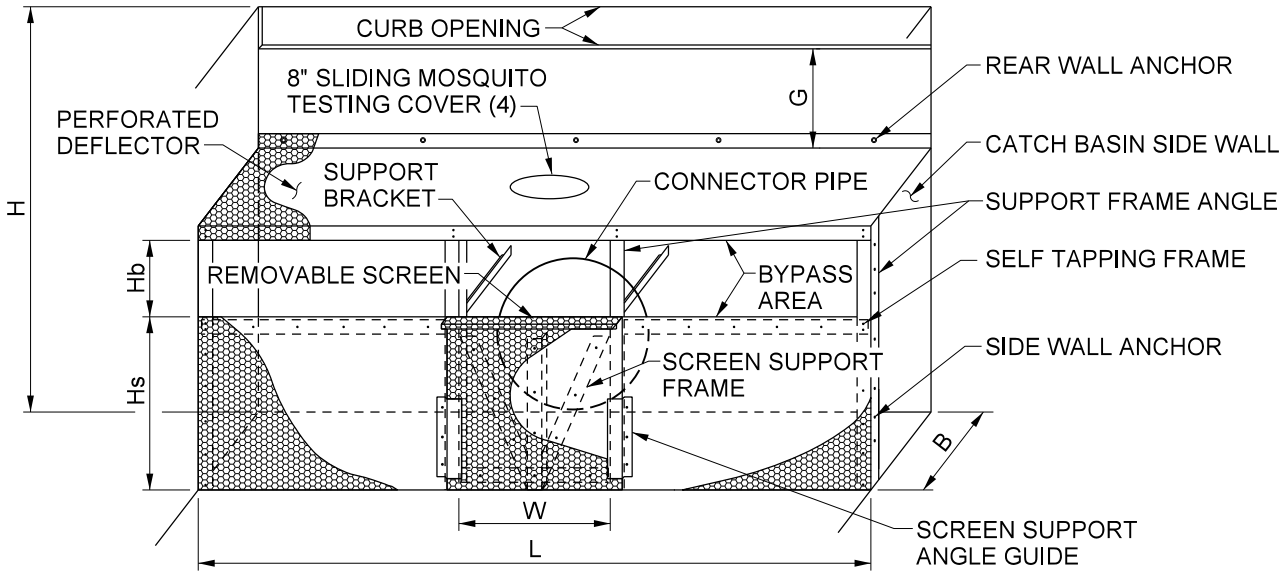
GUTTER DEPRESSION FOR GRATE OPENING CATCH BASIN

STANDARD No. 312 (2 OF 2)



L = A+2B (FOR TYPE A ONLY)

TYPE A (BACK WALL MOUNT)



TYPE B (SIDE WALL MOUNT)

DIMENSIONS:

SCREEN LENGTH (1)	L
REMOVABLE SCREEN WIDTH (2)	W (24" TO 36")
SCREEN HEIGHT (1)	Hs
SCREEN BYPASS HEIGHT (1)	Hb
MINIMUM WALL CLEARANCE (2)	C = 12"
MINIMUM INTERIOR SPACE (2)	B = 10"
DISTANCE BELOW GUTTER FL (1)	G
CATCH BASIN HEIGHT (5)	H

NOTES:

1. SEE TABLES ON PAGES 10-13 FOR VALUES.
2. SEE FTCD GENERAL NOTES ON STANDARD 313-3.
3. SEE FTCD SCREEN TYPE AND LOCATIONS WITHIN CATCH BASINS ON STANDARD 313-4 TO 313-8.
4. MOSQUITO TESTING COVER REQUIRED ONLY FOR STANDARD No. 301 AND 302 APPLICATIONS.
5. CB HEIGHT IS VERTICAL DISTANCE FROM TOP OF CURB TO OUTLET PIPE FLOW LINE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION — DATE
MARK LANCASTER, P.E.

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REGISTERED PROFESSIONAL ENGINEER — MARK ALAN LANCASTER — C48048 — CIVIL — STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FULL TRASH CAPTURE DEVICE (FTCD) - CONNECTOR PIPE SCREEN (CPS)

STANDARD No. 313 (1 OF 14)

FTCD SPECIFICATIONS

1. FULL TRASH CAPTURE DEVICE (FTCD) SHALL BE A UNITED STORM WATER, INC. CONNECTOR PIPE SCREEN (CPS) OR EQUIVALENT. EQUIVALENT SYSTEMS OR ALTERNATIVE DESIGNS SHALL BE ON THE STATE OF CALIFORNIA APPROVED TRASH CAPTURE DEVICE LIST AND REQUIRE APPROVAL OF THE TRANSPORTATION DEPARTMENT.

2. FTCD SHALL HAVE STRUCTURAL FRAME FOR STIFFNESS AND TO ENABLE BOLTING TO CATCH BASIN FLOOR AND WALL. FRAME MEMBERS SHALL BE FABRICATED FROM PERFORATED 14 GAUGE GRADE 304 STAINLESS STEEL HAVING 5 MM DIAMETER HOLES.

3. FTCD SCREENS SHALL BE FABRICATED FROM PERFORATED 14 GAUGE GRADE 304 STAINLESS STEEL HAVING 5 MM DIAMETER HOLES.

4. FTCD SHALL HAVE A PERFORATED DEFLECTOR SCREEN COVERING THE TOP OF THE FTCD TO PROHIBIT DEBRIS FROM FALLING BEHIND THE FRONT AND SIDE SCREENS. THE DEFLECTOR SHALL BE ABLE TO WITHSTAND A VERTICAL LOAD OF 10 LBS PER SQUARE FOOT.

5. FTCD FRAME AND SCREEN SHALL HAVE SUFFICIENT STRUCTURAL INTEGRITY TO WITHSTAND THE FORCE OF STANDING WATER IN THE CATCH BASIN ASSUMING THE SCREEN IS 100% CLOGGED.

6. FTCD SHALL BE FASTENED TO THE CATCH BASIN WALLS AND FLOOR WITH ANCHOR BOLTS. ANCHOR BOLTS SHALL BE SS-304, 3/8" DIAMETER AND 3" LENGTH, AND SHALL BE EPOXY SET INTO CATCH BASIN CONCRETE. IF REINFORCEMENT STEEL IS ENCOUNTERED DURING INSTALLATION, RELOCATE THE ANCHOR HOLE AND FILL VACANT HOLE WITH EPOXY. EPOXY SHALL BE ON THE CURRENT APPROVED LIST OF CHEMICAL ADHESIVES FOR USE IN CALTRANS CONTRACTS. ANCHOR BOLT SPACING TO BE 12" O.C. EXCEPT WHERE FRAME LENGTH WOULD RESULT IN LESS THAN 3 BOLTS PER FRAME MEMBER. IN THIS CASE FASTEN FRAME TO CATCH BASIN WALL USING 3 ANCHOR BOLTS.

7. THE SCREEN SHALL BE SECURED TO THE SUPPORT FRAME, BRACKETS AND SIDE PANEL USING #12 x 0.5" SELF TAPPING SS-304 TECH SCREWS .

8. THE FTCD SHALL BE FABRICATED ON SITE TO BE FLUSH WITH THE INTERIOR SURFACES OF THE CATCH BASIN. THE MAXIMUM ALLOWABLE GAP BETWEEN THE FTCD AND THE CATCH BASIN SURFACES IS 5MM (0.197 INCHES).

9. FOR SCREEN SPANS (DIMENSION "A" FOR TYPE A OR DIMENSION "L" FOR TYPE B PER STANDARD 313-1) GREATER THAN 36" PROVIDE ADDITIONAL SUPPORT BRACKETS AND SUPPORT FRAME ANGLES AT 36" ON CENTER OR LESS. SEE STANDARD 313-1 TYPE B FOR TYPICAL SUPPORT BRACKET AND SUPPORT FRAME ANGLE CONFIGURATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FTCD - CPS SPECIFICATIONS

STANDARD No. 313 (2 OF 14)

FTCD GENTERAL NOTES (NEW CONSTRUCTION)

1. FTCD SHALL CONFORM TO THE CONFIGURATIONS SHOWN IN STANDARD 313-4 THROUGH 313-8 AND SHALL BE SIZED ACCORDING TO THE SIZING TABLES SHOWN IN STANDARD 313-10 THROUGH 313-13.

2. THE REMOVABLE SCREEN WIDTH (W) SHALL EQUAL THE CONNECTOR PIPE DIAMETER OR 24", WHICEVER IS GREATER, BUT SHALL NOT EXCEED 36". WHERE DIMENSION "A" PER STANDARD 313-1 TYPE A (BACK WALL MOUNT) IS LESS THAN OR EQUAL TO 36", THE REMOVABLE SCREEN MAY EXTEND THE FULL WIDTH OF THE FTCD (W = A). IN THIS CASE SUPPORT BRACKETS AND THE ASSOCIATED SUPPORT FRAME ANGLES WILL BE OMITTED.

3. IF THE FTCD CANNOT PROVIDE A SIDE WALL CLEARANCE (C) OF 12", PROVIDE A SIDE WALL MOUNT. AN L-SHAPED FTCD WILL HAVE ONE SIDE WALL AND ONE BACK WALL MOUNT.

4. THE INTERIOR SPACE DIMENSION "B" PER DRAWING 313-1 TYPE A, SHALL BE AT LEAST 10" UNLESS OTHERWISE AUTHORIZED BY THE TRANSPORTATION DEPARTMENT.

5. POSITIVE DRAINAGE TO THE OUTLET PIPE IS REQUIRED FOR THE ENTIRE CATCH BASIN FLOOR.

6. THE CATCH BASIN SHALL INCLUDE MAINTENANCE GAUGE STENCILING ON THE INTERIOR WALL OPPOSITE THE FTCD THAT IDENTIFIES THE ACCUMULATED DEBRIS ELEVATION AT 40% AND 100% OF THE FTCD HEIGHT. SEE STANDARD 313-9 FOR STENCILING REQUIREMENTS.

7. TRANSPORTATION DEPARTMENT APPROVAL REQUIRED WHERE CONNECTOR PIPE SIZE > 42" DIAMETER.

8. CATCH BASINS (NEW OR EXISTING) WITH FOSSIL FILTERS (PER STANDARD 300A OR EQUIVALENT) SHALL REQUIRE SPECIAL CONSIDERATION FOR INCORPORATION OF THE FTCD. A MODIFIED FTCD DESIGN SHALL BE SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

9. ENGINEER MAY PREPARE SITE SPECIFIC CPS DESIGN UTILIZING THE CPS FLOW CHART PER STANDARD 313-14 IN LIEU OF SIZING PER STANDARD 313-10 THROUGH 313-13.

FTCD RETROFIT NOTES

10. WHERE MANHOLE CONFIGURATIONS IN THE EXISTING CATCH BASIN DO NOT CONFORM WITH FTCD LOCATIONS SHOWN IN STANDARD 313-4 THROUGH 313-8, NEW MANHOLES OPENINGS SHALL BE INSTALLED TO CONFORM WITH THESE REQUIREMENTS. RETROFIT DESIGN DRAWINGS MUST BE APPROVED BY THE TRANSPORTATION DEPARTMENT.

11. IF ADEQUATE SPACE IS NOT AVAILABLE FOR RETROFIT OF EXISTING CATCH BASIN WITH FTCD, A MODIFIED FTCD DESIGN SHALL BE SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

12. CATCH BASINS THAT DO NOT DRAIN TOWARD THE CONNECTOR PIPE SHALL BE MODIFIED TO DRAIN PROPERLY UTILIZING A POLYESTER POLYMER CONCRETE OVERLAY PRODUCT APPROVED BY THE TRANSPORTATION DEPARTMENT PRIOR TO INSTALLATION OF THE FTCD. THE BASIN FLOOR SHALL BE ROUGHENED TO THE SATISFACTION OF THE TRANSPORTATION DEPARTMENT PRIOR TO APPLICATION OF THE OVERLAY. SURFACE PREPARATION MUST PROVIDE FOR MINIMUM OVERLAY THICKNESS PER OVERLAY PRODUCT MANUFACTURER'S SPECIFICATIONS. PROPER DRAINAGE OF BASIN FLOOR SHALL BE ACHIEVED TO THE SATISFACTION OF THE TRANSPORTATION DEPARTMENT.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

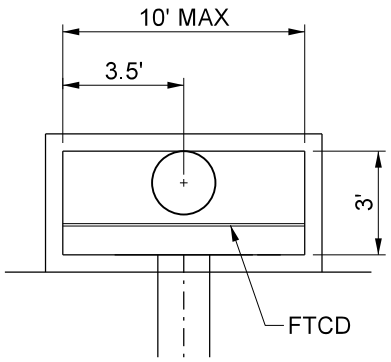
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

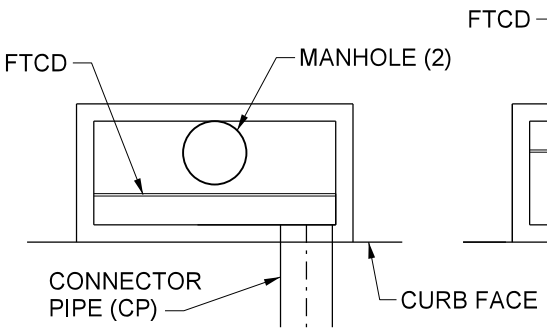
COUNTY OF RIVERSIDE

FTCD - CPS GENERAL NOTES AND RETROFIT NOTES

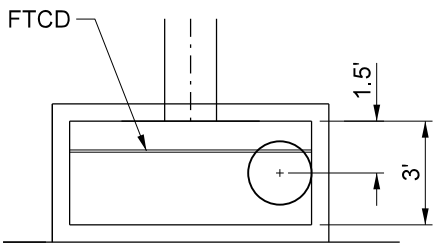
STANDARD No. 313 (3 OF 14)



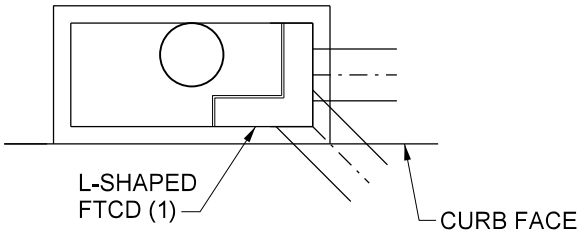
CENTERED CP



OFFSET CP



BACK WALL CP



SIDE OR CORNER CP (1)(3)

NOTES:

(1) FOR CORNER AND SIDE CONNECTOR PIPE (CP) LOCATIONS THE FTCD SHALL BE L-SHAPED TO FULLY COVER THE PIPE OPENING. A SUPPORT FRAME ANGLE SHALL BE PROVIDED IN THE CPS CORNER.

(2) DETAIL VALID FOR CATCH BASIN WIDTHS LESS THAN OR EQUAL TO 10 FEET. MULTIPLE MANHOLES REQUIRED FOR CATCH BASIN WIDTHS GREATER THAN 10 FEET. SEE STANDARD NO. 313-5 AND 313-6.

(3) FOR SIDE OR CORNER CP LOCATIONS WHERE REQUIRED SCREEN LENGTH (L) CANNOT BE ACHIEVED SPECIAL DESIGN MUST BE SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR REVIEW AND APPROVAL.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

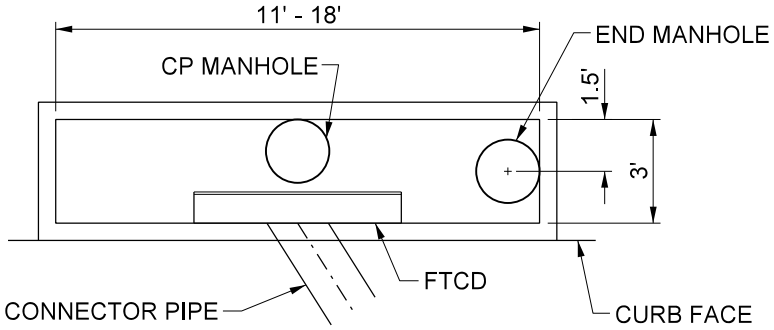
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

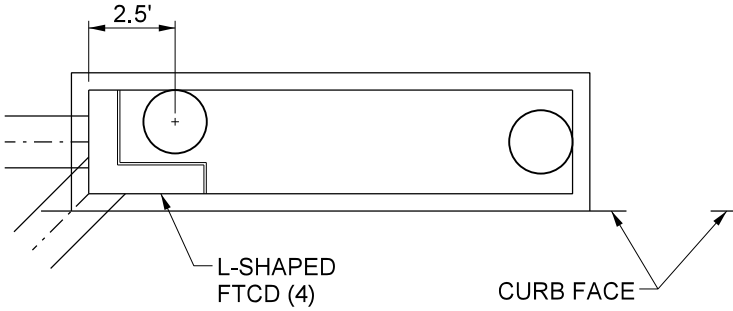
COUNTY OF RIVERSIDE

FTCD - CPS SCREEN / MANHOLE LOCATIONS FOR 10' MAX WIDTH STANDARD NO. 300 CURB INLET CATCH BASINS

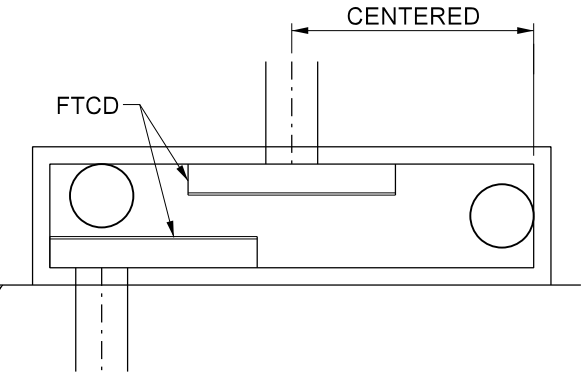
STANDARD No. 313 (4 OF 14)



CENTERED CONNECTOR PIPE (CP) (1)(2)



SIDE OR CORNER CP (4)(5)



OFFSET OR BACK WALL CP (1)(3)

NOTES:

(1) FOR CONNECTOR PIPE EXITING TOWARD STREET CENTERLINE, LOCATE CONNECTOR PIPE (CP) MANHOLE ALONG BACK WALL OPPOSITE OF CP CENTERLINE. LOCATE END MANHOLE AT EITHER END WHEN CP IS CENTERED IN CATCH BASIN, OR ON OPPOSITE SIDE OF CP WHEN CP IS ON EITHER SIDE OF CATCH BASIN CENTERLINE.

(2) SHALLOW CATCH BASINS WITH A HEIGHT (H) LESS THAN 3.5' SHALL INCLUDE A THIRD MANHOLE ON THE OPPOSITE SIDE OF THE CONNECTOR PIPE FROM THAT SHOWN PLACED AGAINST THE END WALL.

(3) CONNECTOR PIPE EXITING THROUGH BACK WALL OF CATCH BASIN MUST BE CENTERED IN CATCH BASIN UNLESS APPROVED BY THE TRANSPORTATION DEPARTMENT.

(4) FOR CORNER AND SIDE CONNECTOR PIPE (CP) LOCATIONS, THE FTCD SHALL BE L-SHAPED TO FULLY COVER THE PIPE OPENING. A SUPPORT FRAME ANGLE SHALL BE PROVIDED IN THE CPS CORNER.

(5) FOR SIDE OR CORNER CP LOCATIONS WHERE REQUIRED SCREEN LENGTH (L) CANNOT BE ACHIEVED, SPECIAL DESIGN MUST BE SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR REVIEW AND APPROVAL.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

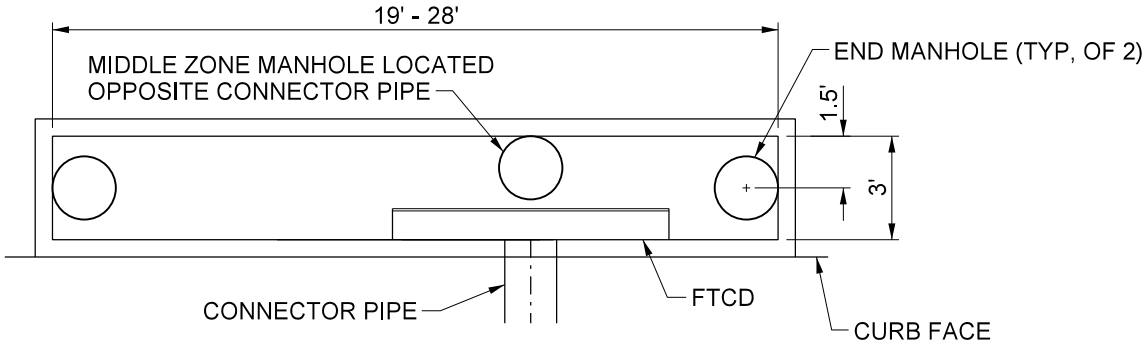
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

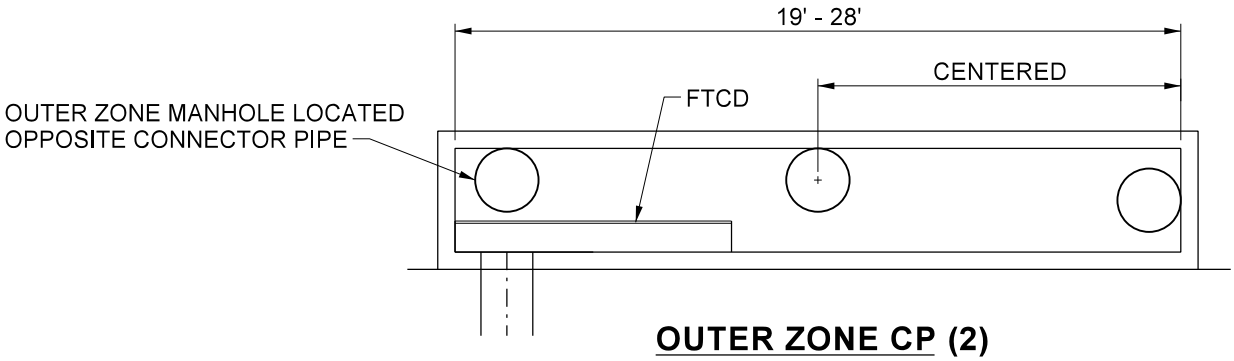
COUNTY OF RIVERSIDE

FTCD - CPS SCREEN / MANHOLE LOCATIONS FOR 11'-18' WIDTH STANDARD NO. 300 CURB INLET CATCH BASINS

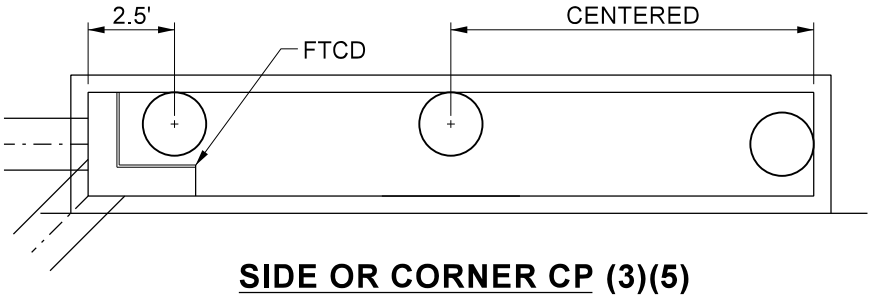
STANDARD No. 313 (5 OF 14)



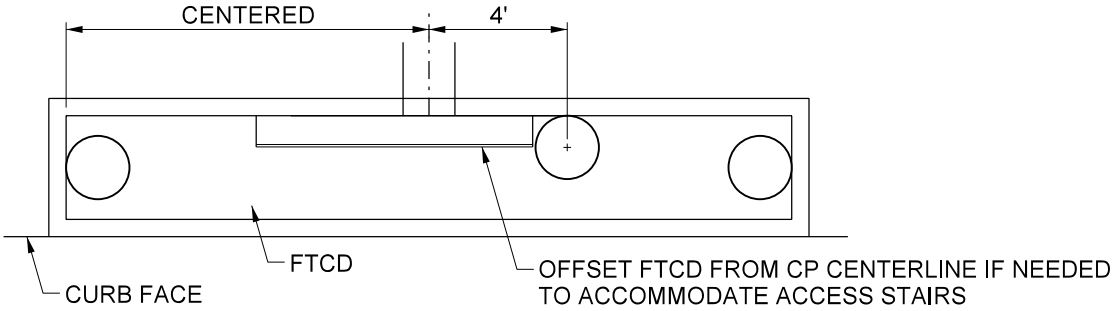
CENTERED OR MIDDLE ZONE CP (1)



OUTER ZONE CP (2)



SIDE OR CORNER CP (3)(5)



BACK WALL CP (4)

NOTE:
SEE STANDARD NO. 313-7
FOR REFERENCED NOTES.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FTCD - CPS SCREEN / MANHOLE LOCATIONS FOR 19'-28' WIDTH STANDARD NO. 300 CURB INLET CATCH BASINS

STANDARD No. 313 (6 OF 14)

NOTES: (FOR STANDARD NO. 313-6)

(1) FOR CONNECTOR PIPE EXITING TOWARD STREET CENTERLINE IN MIDDLE ZONE, LOCATE CONNECTOR PIPE (CP) MANHOLE ALONG BACK WALL OPPOSITE OF CP CENTERLINE. LOCATE END MANHOLES AT EITHER END OF CATCH BASIN AS SHOWN.

(2) FOR CONNECTOR PIPE EXITING TOWARD STREET CENTERLINE IN OUTER ZONE, LOCATE OUTER ZONE MANHOLE ALONG BACK WALL OPPOSITE OF CP CENTERLINE. LOCATE ONE END MANHOLE ON THE OPPOSITE SIDE OF THE CB CENTERLINE FROM THE CP, AND ONE CENTERED MANHOLE ALONG THE CATCH BASIN BACK WALL.

(3) FOR CORNER AND SIDE CONNECTOR PIPE (CP) LOCATIONS THE FTCD SHALL BE L-SHAPED TO FULLY COVER THE PIPE OPENING. A SUPPORT FRAME ANGLE SHALL BE PROVIDED IN THE CPS CORNER.

(4) CONNECTOR PIPE EXITING THROUGH BACK WALL OF CATCH BASIN MUST BE CENTERED IN CATCH BASIN UNLESS APPROVED BY THE TRANSPORTATION DEPARTMENT.

(5) FOR SIDE OR CORNER CP LOCATIONS WHERE REQUIRED SCREEN LENGTH (L) CANNOT BE ACHIEVED SPECIAL DESIGN MUST BE SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR REVIEW AND APPROVAL.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

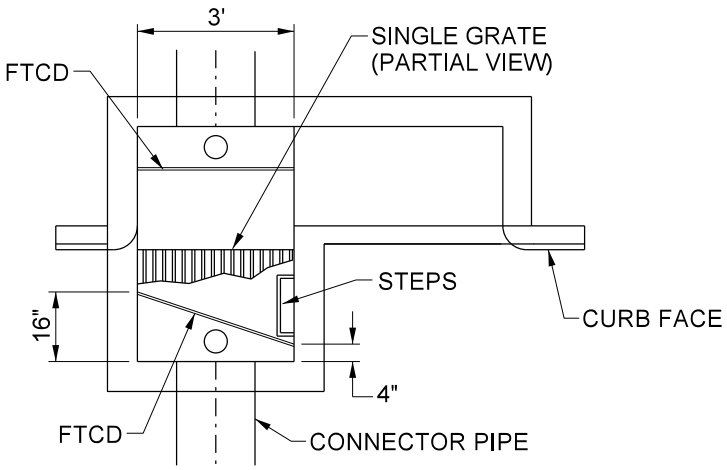
REVISION DESCRIPTION	MARK	DATE	APPROVED

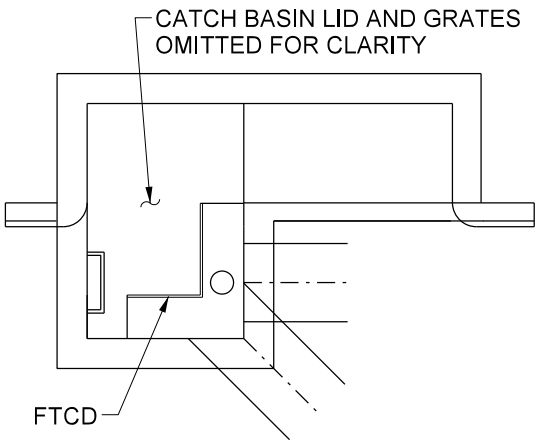
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FTCD - CPS SCREEN / MANHOLE LOCATIONS FOR 19'-28' WIDTH STANDARD NO. 300 CURB INLET CATCH BASINS

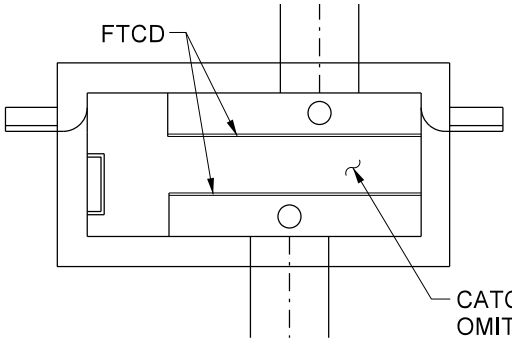
STANDARD No. 313 (7 OF 14)

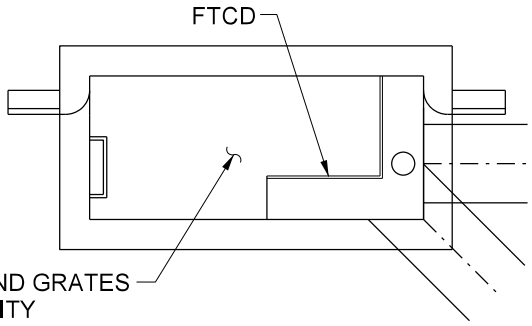




CENTERED OR BACK WALL CP (1)(5) **SIDE OR CORNER CP (2)(4)**

CATCH BASIN 301





CENTERED OR BACK WALL CP (3)(5) **SIDE OR CORNER CP (2)(3)(4)**

CATCH BASIN 302

NOTES:

(1) WHEN STEPS OBSTRUCT THE STANDARD FTCD INSTALLATION, ANGLE THE SCREEN IN FRONT OF THE CONNECTOR PIPE TO AVOID THE STEPS AS SHOWN.

(2) FOR CORNER AND SIDE CONNECTOR PIPE (CP) LOCATIONS, THE FTCD SHALL BE L-SHAPED TO FULLY COVER THE PIPE OPENING.

(3) MULTIPLE GRATE CATCH BASIN WIDTH SHOWN. FOR SINGLE GRATE APPLICATIONS PLACE FTCD PER CATCH BASIN 301 DETAILS ABOVE.

(4) FOR SIDE OR CORNER CP LOCATIONS WHERE REQUIRED SCREEN LENGTH (L) CANNOT BE ACHIEVED, SPECIAL DESIGN MUST BE SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR REVIEW AND APPROVAL.

(5) INSTALL FTCD, TYPE B (SIDE WALL MOUNT), TO AVOID STEPS AS NECESSARY.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

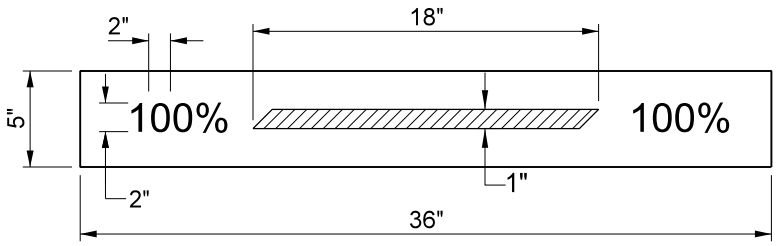
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

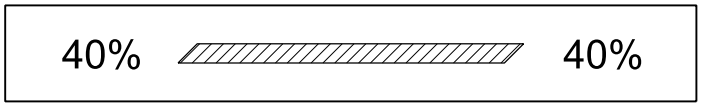
FTCD - CPS SCREEN LOCATIONS FOR STANDARD NO. CB301 AND CB302 COMBINATION INLET CATCH BASINS

STANDARD No. 313 (8 OF 14)



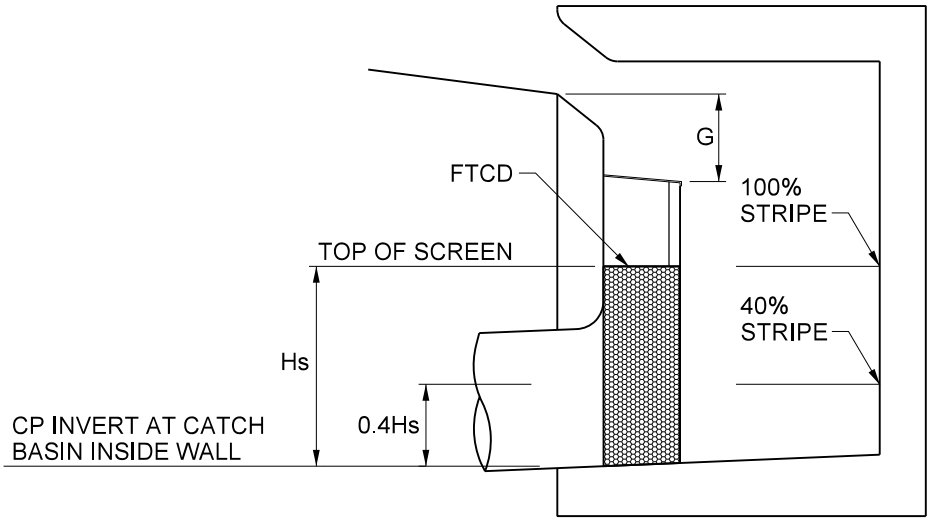
100% STRIPE

(RED STRIPES AND NUMBERS ON WHITE BACKGROUND)



40% STRIPE

(RED STRIPES AND NUMBERS ON WHITE BACKGROUND)



NOTES:

1. PAINT SHALL BE RED STRIPES AND NUMBERS ON WHITE BACKGROUND ON THE BACK WALL OF THE CATCH BASIN, LABELING 40% AND 100% SCREEN HEIGHT AS SHOWN ABOVE. PAINT SHALL BE WATERBORNE ACRYLIC AND REFLECTIVE.
2. SURFACES SHALL BE CLEAN, DRY AND FREE FROM ALL CONTAMINANTS PRIOR TO PAINTING.
3. STENCILING SHALL BE VISIBLE FROM THE STREET THROUGH CATCH BASIN OPENING.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FTCD - CPS MAINTENANCE GAUGE

STANDARD No. 313 (9 OF 14)

FTCD SIZING TABLE FOR STANDARD NO. 300 CURB INLET CATCH BASIN ON GRADE CONDITION

CATCH BASIN TYPE	H (FT)	CATCH BASIN WIDTH (FT) (1)	NUMBER OF GRATES	BYPASS HEIGHT Hb (IN)	SCREEN HEIGHT Hs (IN)	SCREEN LENGTH L (FT)	G (IN)
300	2.5 (30 inches)	7.0	-	8.0	8.0	7.0	4.0
		10.0				7.0	
		14.0				10.0	
	2.67 (32 inches)	7.0	-	8.0	10.0	7.0	4.0
		10.0				7.0	
		14.0				10.0	
	2.83 (34 inches)	7.0	-	8.0	12.0	7.0	4.0
		10.0				7.0	
		14.0				10.0	
		21.0				11.0	
	3.0	7.0	-	8.0	12.0	4.0	6.0
		10.0				6.0	
		14.0		8.0	14.0	10.0	4.0
		21.0				14.0	
		28.0				18.0	
	3.5	7.0	-	8.0	18.0	4.0	6.0
		10.0				6.0	
		14.0				6.0	
		21.0		10.0	16.0	7.0	
		28.0				9.0	
	4.0	7.0	-	12.0	20.0	4.0	6.0
		10.0				6.0	
		14.0				6.0	
		21.0				7.0	
		28.0				8.0	
	4.5 OR GREATER	7.0	-	12.0	24.0	4.0	8.0
		10.0				6.0	
		14.0				6.0	
		21.0				7.0	
		28.0				8.0	

NOTES:

1. FOR CATCH BASIN WIDTHS NOT SHOWN USE NEXT HIGHER VALUE.
2. WHERE THE SCREEN LENGTH (L) IS EQUAL TO THE CATCH BASIN WIDTH, THE CPS SHALL BE THE FULL WIDTH OF THE CATCH BASIN AND UTILIZE A SIDE WALL MOUNT.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FTCD - CPS SIZING TABLE FOR STANDARD NO. 300 CURB INLET CATCH BASIN ON GRADE CONDITION

STANDARD No. 313 (10 OF 14)

FTCD SIZING TABLE FOR STANDARD NO. 301 AND 302 COMBINATION INLET CATCH BASIN ON GRADE CONDITION

CATCH BASIN TYPE	H (FT)	CATCH BASIN WIDTH (FT) (1)	NUMBER OF GRATES	BYPASS HEIGHT Hb (IN)	SCREEN HEIGHT Hs (IN)	SCREEN LENGTH L (FT)	G (IN)
301	3.0	7.0	1	8.0	10.0	4.0	10.0
		10.0	2			7.0	
		14.0	1			8.0	
		14.0	2			8.0	
	3.5	7.0	1	10.0	12.0	6.0	12.0
		10.0	2			5.0	
		14.0	1			5.0	
		14.0	2			6.0	
	4.0	7.0	1	12.0	15.0	4.0	13.0
		10.0	2			5.0	
		14.0	1			4.0	
		14.0	2			5.0	
	4.5 OR GREATER	7.0	1	12.0	18.0	4.0	16.0
		10.0	2			5.0	
		14.0	1			4.0	
		14.0	2			5.0	
302	3.0	-	1	9.0	9.0	3.0	10.0
		-	2			5.0	
		-	3			6.0	
	3.5	-	1	10.0	12.0	2.5	12.0
		-	2			4.0	
		-	3			5.0	
	4.0 OR GREATER	-	1	10.0	18.0	2.5	12.0
		-	2			4.0	
		-	3			5.0	

NOTES:

1. FOR CATCH BASIN WIDTHS NOT SHOWN USE NEXT HIGHER VALUE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FTCD - CPS SIZING TABLE FOR STANDARD NO. 301 AND 302 COMBINATION INLET CATCH BASIN ON GRADE CONDITION

STANDARD No. 313 (11 OF 14)

FTCD SIZING TABLE FOR STANDARD NO. 300 CURB INLET CATCH BASIN SUMP CONDITION

CATCH BASIN TYPE	H (FT)	CATCH BASIN WIDTH (FT) (1)	NUMBER OF GRATES	BYPASS HEIGHT Hb (IN)	SCREEN HEIGHT Hs (IN)	SCREEN LENGTH L (FT)	G (IN)
300	3.5	7.0	-	12.0	16.0	7.0	4.0
		10.0		14.0	14.0	6.0	
		14.0				7.0	
	4.0	7.0	-	16.0	18.0	7.0	4.0
		10.0				6.0	
		14.0				6.0	
		21.0		18.0	16.0	7.0	
		28.0				8.0	
	4.5	7.0	-	16.0	18.0	7.0	10.0
		10.0				6.0	
		14.0				6.0	
		21.0		18.0	16.0	7.0	
		28.0				8.0	
	5.0 OR GREATER	7.0	-	16.0	24.0	7.0	10.0
		10.0				6.0	
		14.0				6.0	
		21.0		18.0	20.0	7.0	12.0
		28.0				8.0	

NOTES:

1. FOR CATCH BASIN WIDTHS NOT SHOWN USE NEXT HIGHER VALUE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FTCD - CPS SIZING TABLE FOR STANDARD NO. 300 CURB INLET CATCH BASIN SUMP CONDITION

STANDARD No. 313 (12 OF 14)

FTCD SIZING TABLE FOR STANDARD NO. 301 AND 302 COMBINATION INLET CATCH BASIN SUMP CONDITION

CATCH BASIN TYPE	H (FT)	CATCH BASIN WIDTH (FT) (1)	NUMBER OF GRATES	BYPASS HEIGHT Hb (IN)	SCREEN HEIGHT Hs (IN)	SCREEN LENGTH L (FT)	G (IN)
301	3.5	7.0	1	14.0	9.0	7.0	11.0
	4.0	7.0	1	16.0	11.0	5.0	13.0
		10.0	2			6.0	
	4.5	7.0	1	18.0	15.0	5.0	13.0
		10.0	2			6.0	
		14.0	1			5.0	
		14.0	2			6.0	
	5.0 OR GREATER	7.0	1	18.0	18.0	4.0	16.0
		10.0	2			6.0	
		14.0	1			5.0	
		14.0	2			6.0	
302	4.0	-	2	14.0	8.0	2.5	18.0
		-	3			6.0	
	4.5	-	1	16.0	8.0	2.5	22.0
		-	2	16.0	10.0	5.0	20.0
		-	3			7.0	
	5.0 OR GREATER	-	1	16.0	12.0	2.5	24.0
		-	2			5.0	
		-	3			7.0	

NOTES:

1. FOR CATCH BASIN WIDTHS NOT SHOWN USE NEXT HIGHER VALUE.

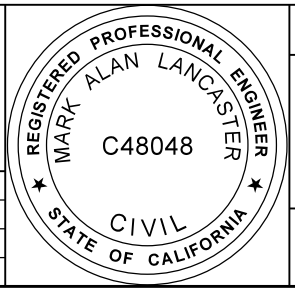
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

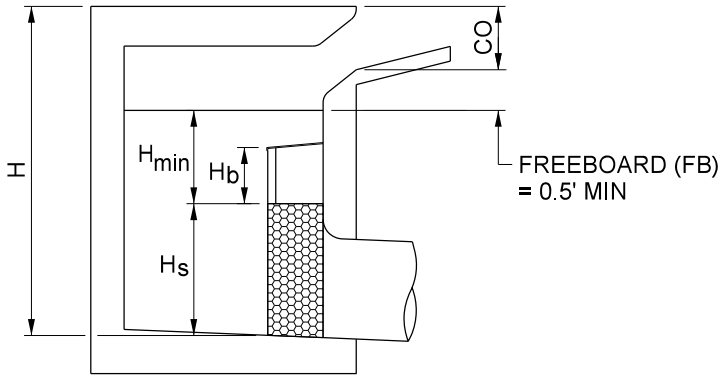
REVISION DESCRIPTION	MARK	DATE	APPROVED



COUNTY OF RIVERSIDE

FTCD - CPS SIZING TABLE FOR STANDARD NO. 301 AND 302 COMBINATION INLET CATCH BASIN SUMP CONDITION

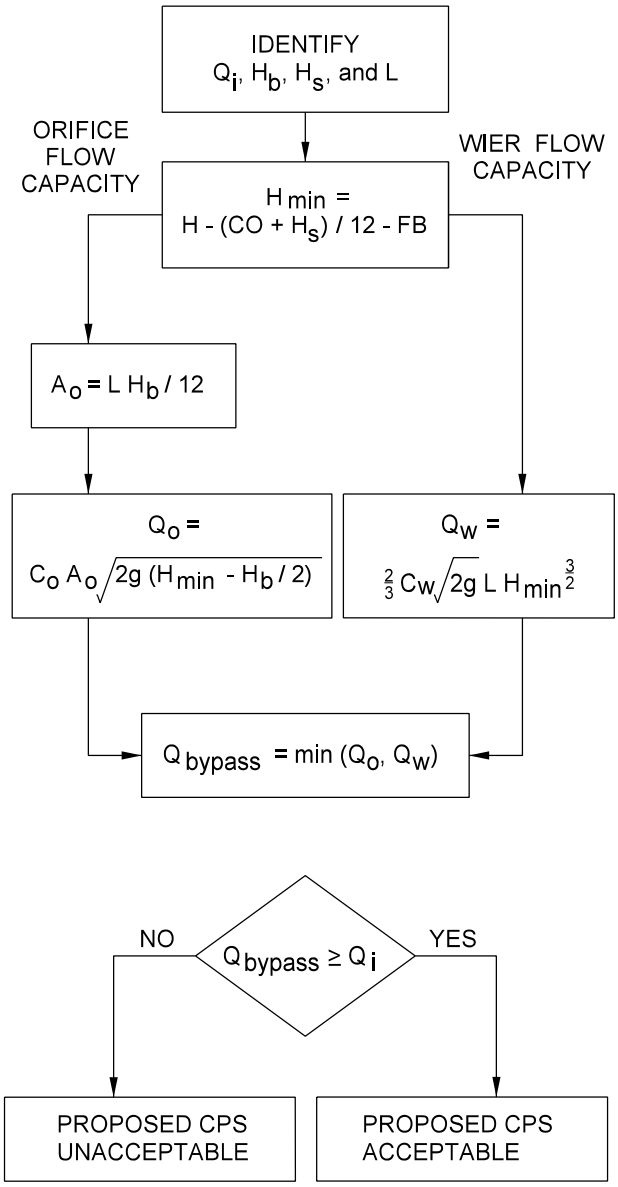
STANDARD No. 313 (13 OF 14)



NOTE:

THE BELOW ANALYSIS ASSUMES THAT THE CONNECTOR PIPE SCREEN IS COMPLETELY CLOGGED AND ALL FLOW IS CONVEYED THROUGH THE BYPASS

VALUE	UNITS	DESCRIPTION
H	FT	HEIGHT OF CATCH BASIN, AS DEFINED IN STANDARDS NO. 300, 301 AND 302
H_{min}	FT	DEPTH FROM TOP OF SCREEN TO FREEBOARD
H_b	IN	BYPASS OPENING HEIGHT
H_s	IN	SCREEN HEIGHT
L	FT	BYPASS OPENING LENGTH
FREE-BOARD (FB)	FT	MINIMUM ALLOWABLE FREEBOARD (FB) IS 0.5' TO ENSURE THAT WATER LEVELS INSIDE THE CATCH BASIN DO NOT IMPAIR THE CATCH BASIN STREET INTERCEPTION CAPACITY
CO	IN	CURB OPENING HEIGHT (CO) IS DEFINED HERE AS THE HEIGHT FROM THE TOP OF CURB TO THE FLOW LINE OF THE INLET AT THE LOCAL DEPRESSION
Q_i	CFS	FLOW RATE INTERCEPTED BY THE INLET AS DETERMINED BY THE ENGINEER FOR SITE-SPECIFIC CONDITIONS
Q_o	CFS	BYPASS FLOW RATE UNDER ORIFICE FLOW CONDITION, ASSUMES THAT ENTIRE BYPASS OPENING FUNCTIONS AS A RECTANGULAR ORIFICE
Q_w	CFS	BYPASS FLOW RATE UNDER WEIR FLOW CONDITION
C_o	-	ORIFICE FLOW COEFFICIENT = 0.61
C_w	-	WEIR FLOW COEFFICIENT = 0.61
A_o	FT^2	BYPASS OPENING AREA FOR ORIFICE FLOW, ASSUMES THAT THE ENTIRE BYPASS OPENING FUNCTIONS AS A RECTANGULAR ORIFICE



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

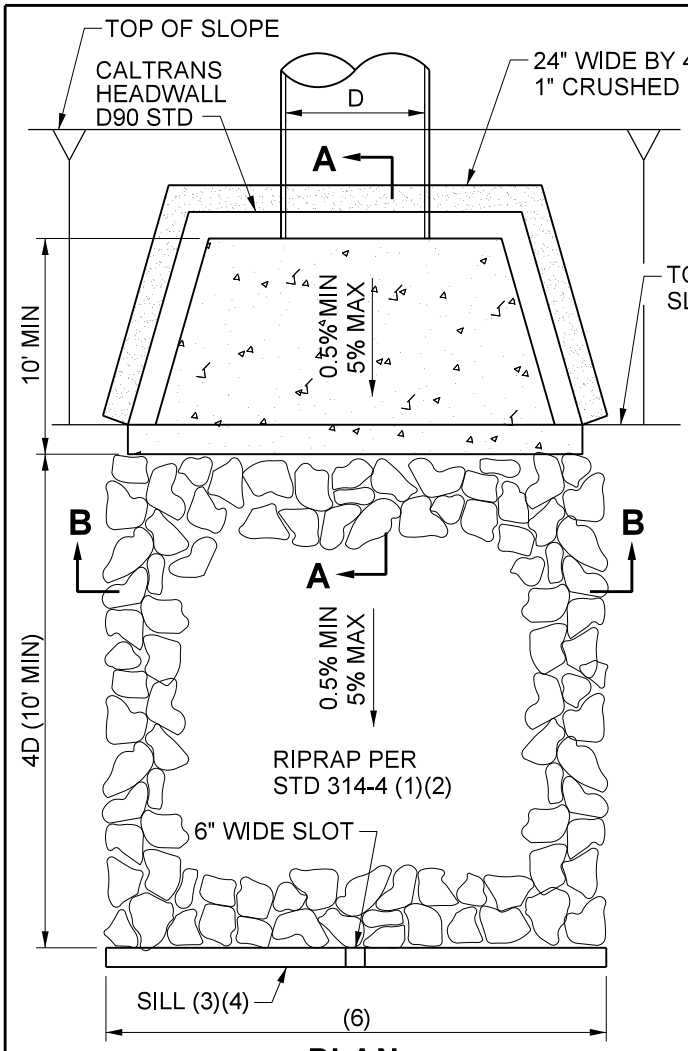
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

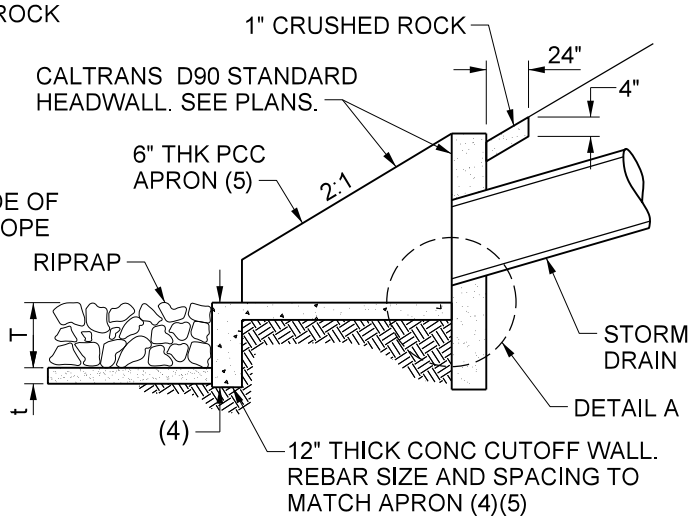
COUNTY OF RIVERSIDE

FTCD - CPS BYPASS CHECK FLOW CHART

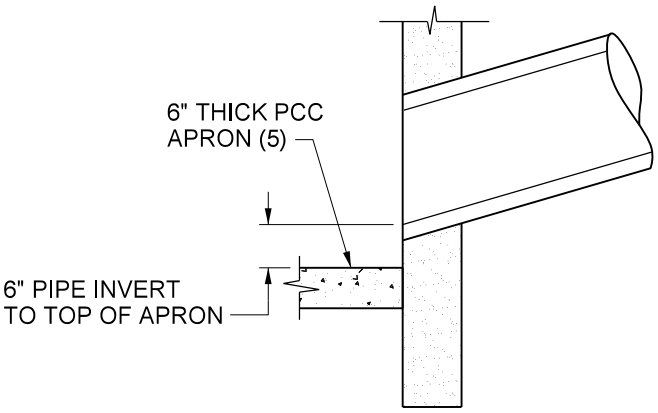
STANDARD No. 313 (14 OF 14)



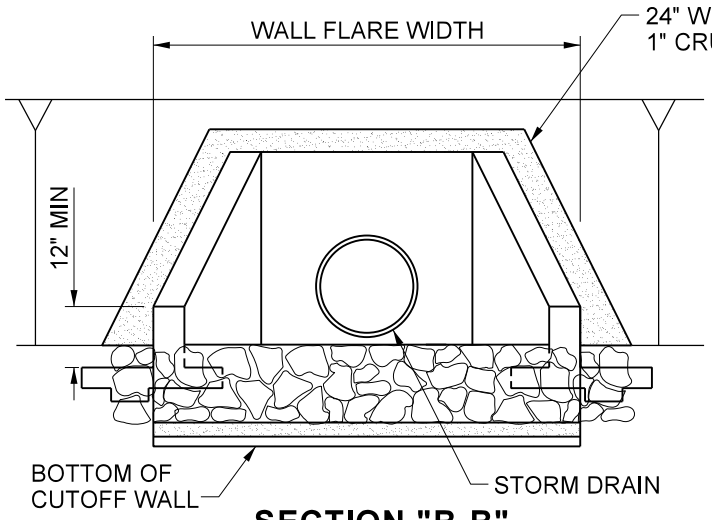
PLAN



SECTION "A-A"



DETAIL A



SECTION "B-B"

NOT TO SCALE

NOTES:

1. PLANS SHALL SPECIFY FOR THIS STANDARD:
   (A) RIPRAP CLASS AND THICKNESS (T)
   (B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN D>36", OR WHEN REQUIRED BY THE ENGINEER - SEE STD 314-4.
4. CUTOFF WALL AND SILL DEPTH TO BE 4" OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. 10' LONG (MIN) BY 6" THICK CONCRETE APRON WITH #4 BARS AT 18" OC.
6. RIPRAP PAD WIDTH TO BE THE GREATER OF THE WALL FLARE WIDTH OR 10'.

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

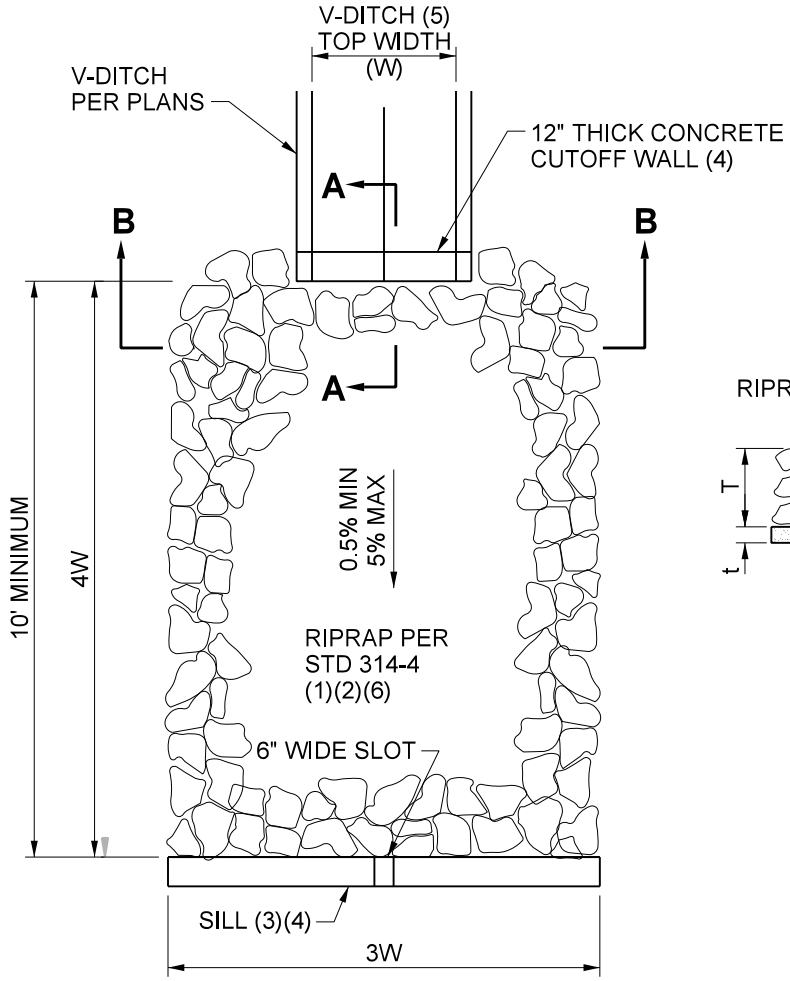
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

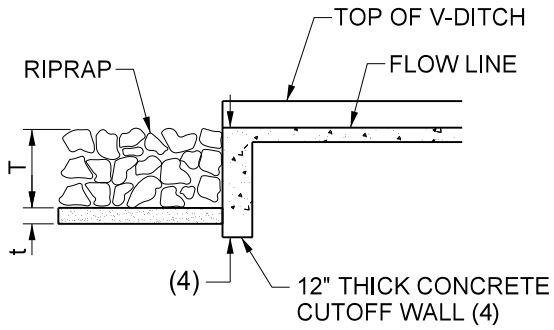
COUNTY OF RIVERSIDE

RIPRAP ENERGY DISSIPATOR AND APRON AT WINGWALL STORM DRAIN OUTFALL

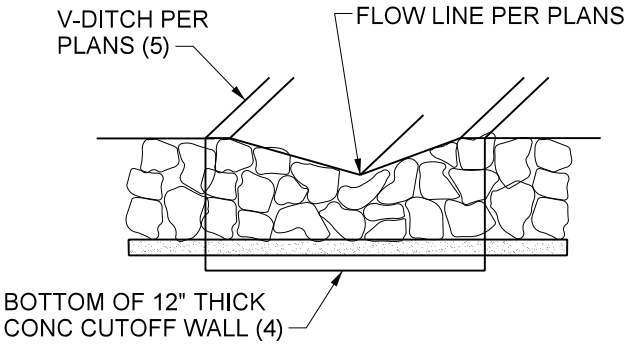
STANDARD No. 314 (1 OF 4)



PLAN



SECTION "A-A"



SECTION "B-B"

NOTES:

1. PLANS SHALL SPECIFY FOR THIS STANDARD:
   (A) RIPRAP CLASS AND THICKNESS (T)
   (B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN W>36", OR WHEN REQUIRED BY THE ENGINEER - SEE STD 314-4.
4. CUTOFF WALL AND SILL DEPTH TO BE 4' OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. DETAIL MAY BE UTILIZED FOR CIRCULAR CONCRETE DITCH ALSO.
6. FOR 3' WIDE DITCH AT SLOPE OF <5% AND A FLOW RATE < 3.0 CFS, ENERGY DISSIPATOR MAY BE 6' BY 6' No. 2 BACKING PER STD 314-4.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

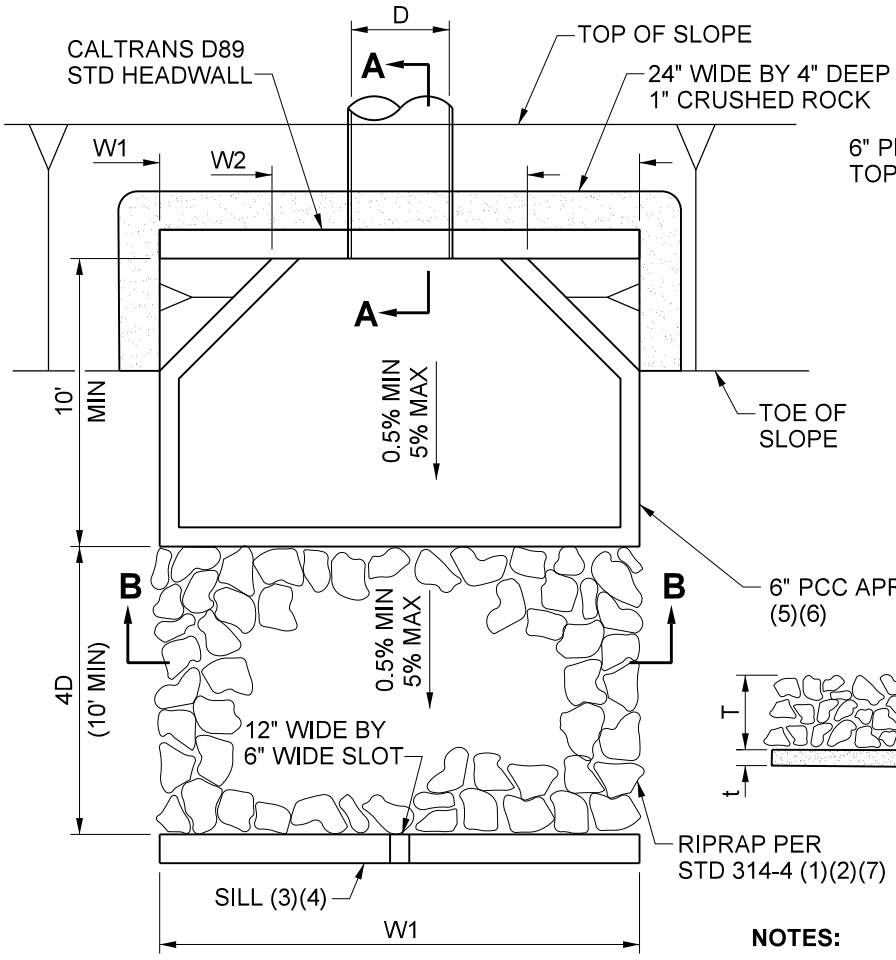
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

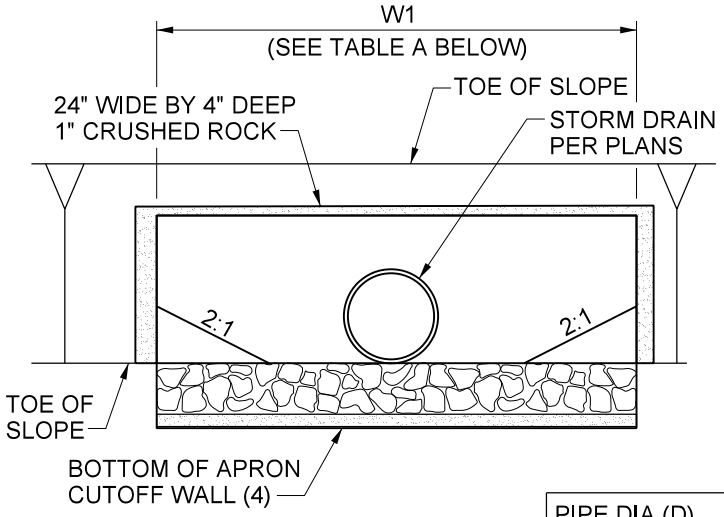
COUNTY OF RIVERSIDE

RIPRAP ENERGY DISSIPATOR AT V-DICTH OUTFALL

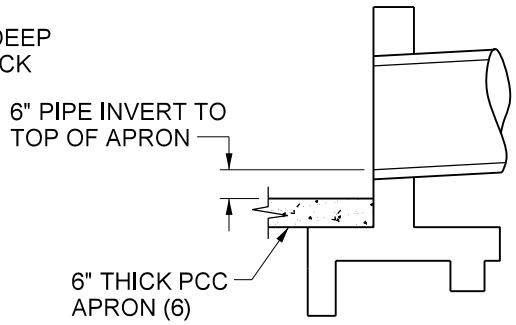
STANDARD No. 314 (2 OF 4)



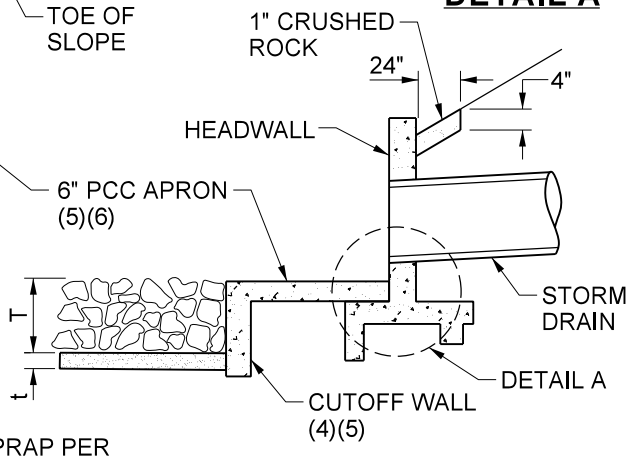
PLAN



SECTION "B-B"



DETAIL A



SECTION "A-A"

NOTES:

1. PLANS SHALL SPECIFY FOR THIS STANDARD:
   (A) RIPRAP CLASS AND THICKNESS (T)
   (B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN D>36", OR WHEN REQUIRED BY THE ENGINEER - SEE STD 314-4.
4. CUTOFF WALL AND SILL DEPTH TO BE 4' OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. CUTOFF WALL TO BE ON BOTH SIDES AND END OF PCC APRON ADJACENT TO RIPRAP.
6. 10' LONG BY 6" THICK CONCRETE APRON WITH #4 BARS AT 18" OC. APRON WIDTH TO MATCH HEADWALL WIDTH (W1).
7. RIPRAP WIDTH TO EQUAL HEADWALL WIDTH (W1).

TABLE A

PIPE DIA (D)	18"	21"	24"	27"	30"	36"	42"	48"	54"
WALL WIDTH (W1)	12.7'	13.7'	14.7'	15.7'	16.7'	18.7'	20.7'	22.7'	25.2'
APRON WIDTH (W2)	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.5'

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

RIPRAP ENERGY DISSIPATOR AND APRON AT STRAIGHT HEADWALL OUTFALL

STANDARD No. 314 (3 OF 4)

RIPRAP ENERGY DISSIPATER SIZING TABLE

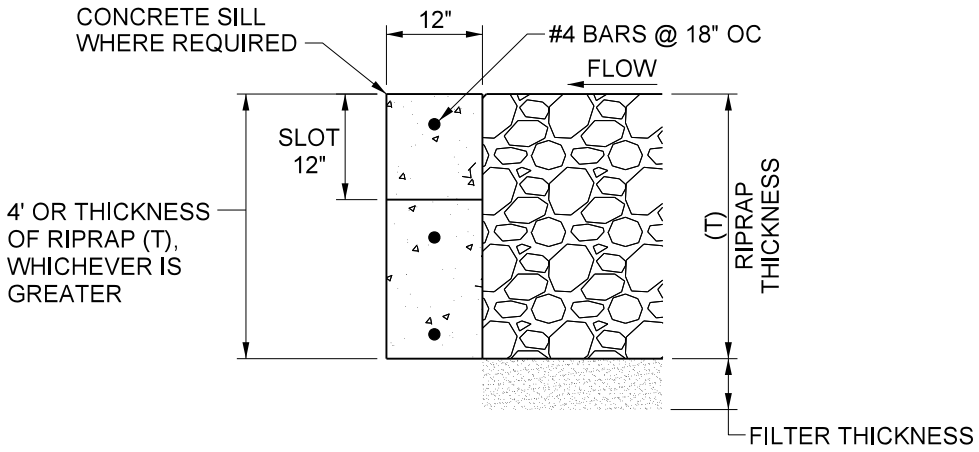
DESIGN VELOCITY (FT/SEC)	RIPRAP CLASS	RIPRAP THICKNESS (T) PLACEMENT METHOD A *	RIPRAP THICKNESS (T) PLACEMENT METHOD B *	FILTER MATERIAL **	FILTER THICKNESS (t)
6-8	NO. 2 BACKING	N/A	1.25'	1" CRUSHED ROCK	0.5'
8-13	1/4 TON	N/A	3.3'	1" CRUSHED ROCK	0.75'
13-15	1/2 TON	3.4'	4.3'	1" CRUSHED ROCK	1.0'
15-17	1 TON	4.3'	5.4'	1" CRUSHED ROCK	1.0'
17-20	2 TON	5.4'	N/A	1" CRUSHED ROCK	1.0'

* FOR RIPRAP GRADATION AND PLACEMENT METHOD DESCIPTIONS SEE CALTRANS STD SPECIFICATIONS SECTION 72-2

** SEE 1" CRUSHED ROCK GRADATION THIS SHEET

1" CRUSHED ROCK GRADATION

SIEVE SIZE	PERCENT (%) PASSING
1-1/2" (37.5 mm)	100
1" (25.0 mm)	90-100
3/4" (19.0 mm)	30-60
1/2" (12.5 mm)	0-20
3/8" (9.5 mm)	-
No. 4 (4.75 mm)	0-5
No. 8 (2.36 mm)	-
ASTM C131 Testing Grading	A



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

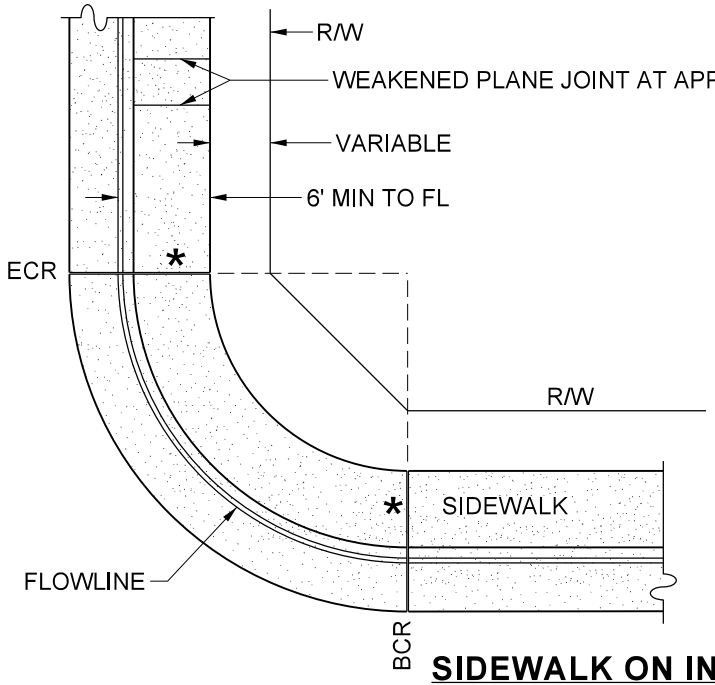
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

RIPRAP ENERGY DISSIPATOR SIZING AND CONCRETE SILL

STANDARD No. 314 (4 OF 4)

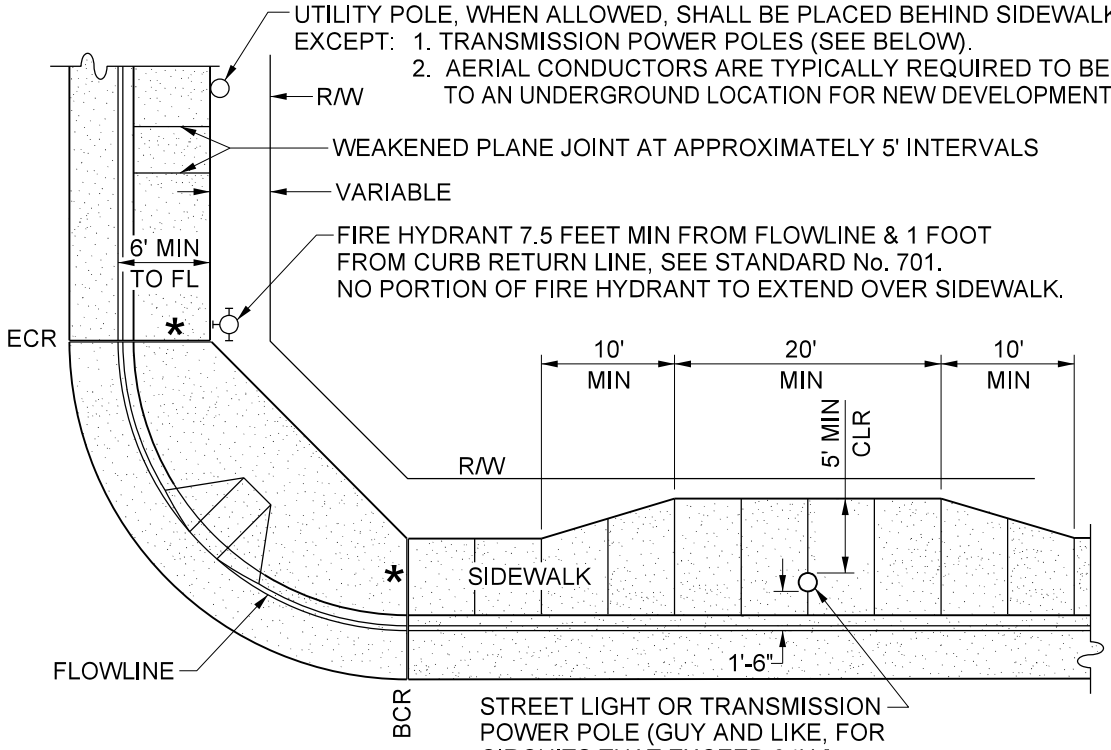


NOTES:

1. VARIABLE DISTANCES TO BE SHOWN ON APPLICABLE TYPICAL ROAD SECTION STANDARD.
2. CONSTRUCTION TO BE 4" MINIMUM THICKNESS CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.

* 1/2" EXPANSION MATERIAL

SIDEWALK ON INSIDE OF KNUCKLE



* 1/2" EXPANSION MATERIAL

SIDEWALK AT INTERSECTION

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

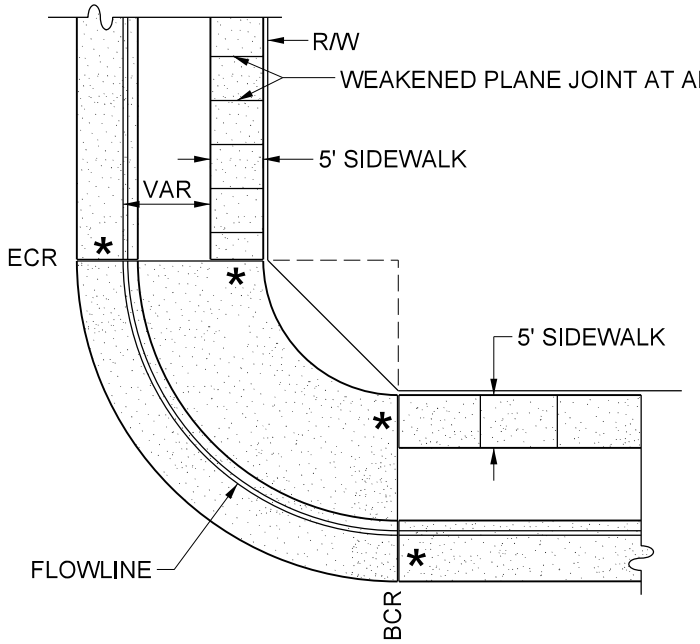
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER — MARK ALAN LANCASTER — C48048 — CIVIL — STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SIDEWALK, FIRE HYDRANT, & UTILITY POLE LOCATION (SIDEWALK AT CURB)

STANDARD No. 400 (1 OF 2)

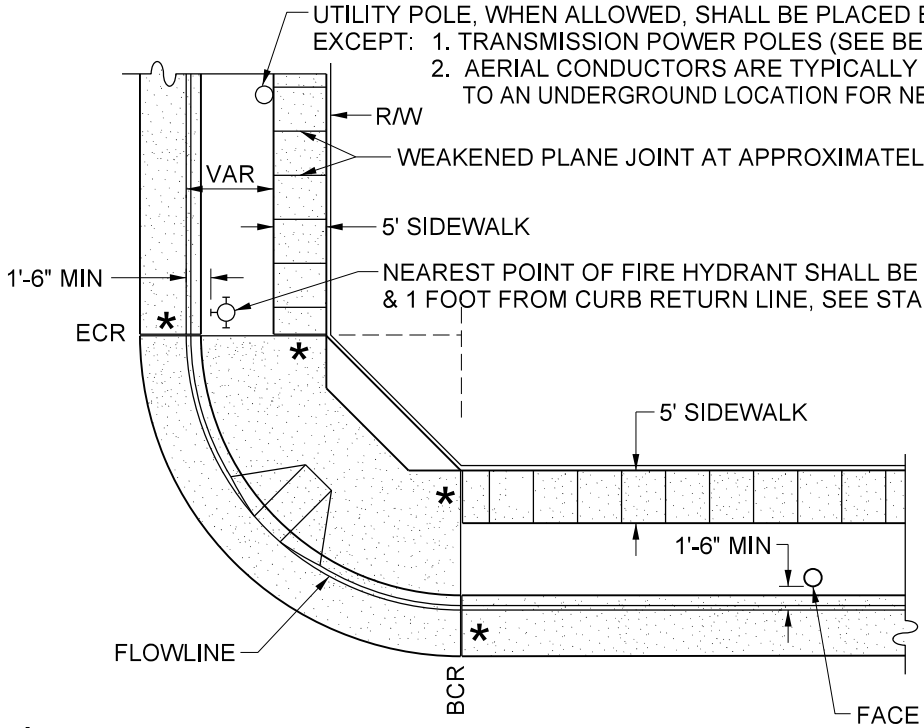


NOTES:

1. VARIABLE DISTANCES TO BE SHOWN ON APPLICABLE TYPICAL ROAD SECTION STANDARD.
2. CONSTRUCTION TO BE 4" MINIMUM THICKNESS CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.

* 1/2" EXPANSION MATERIAL

SIDEWALK ON INSIDE OF KNUCKLE



* 1/2" EXPANSION MATERIAL

SIDEWALK AT INTERSECTION

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

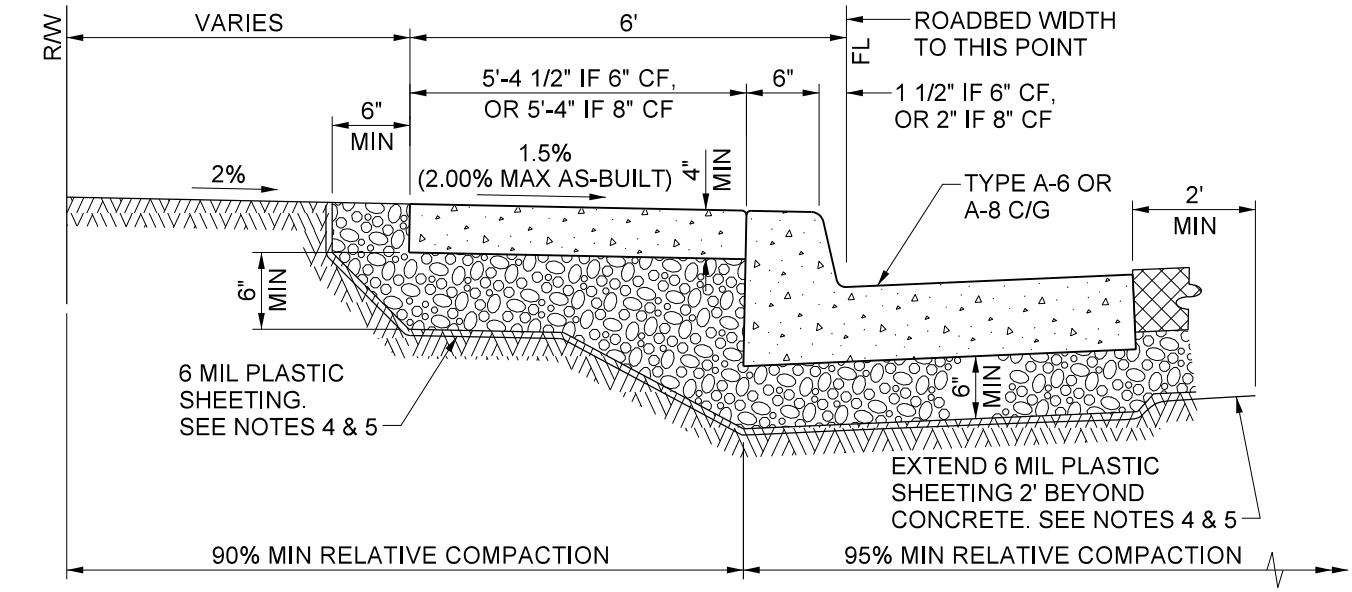
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

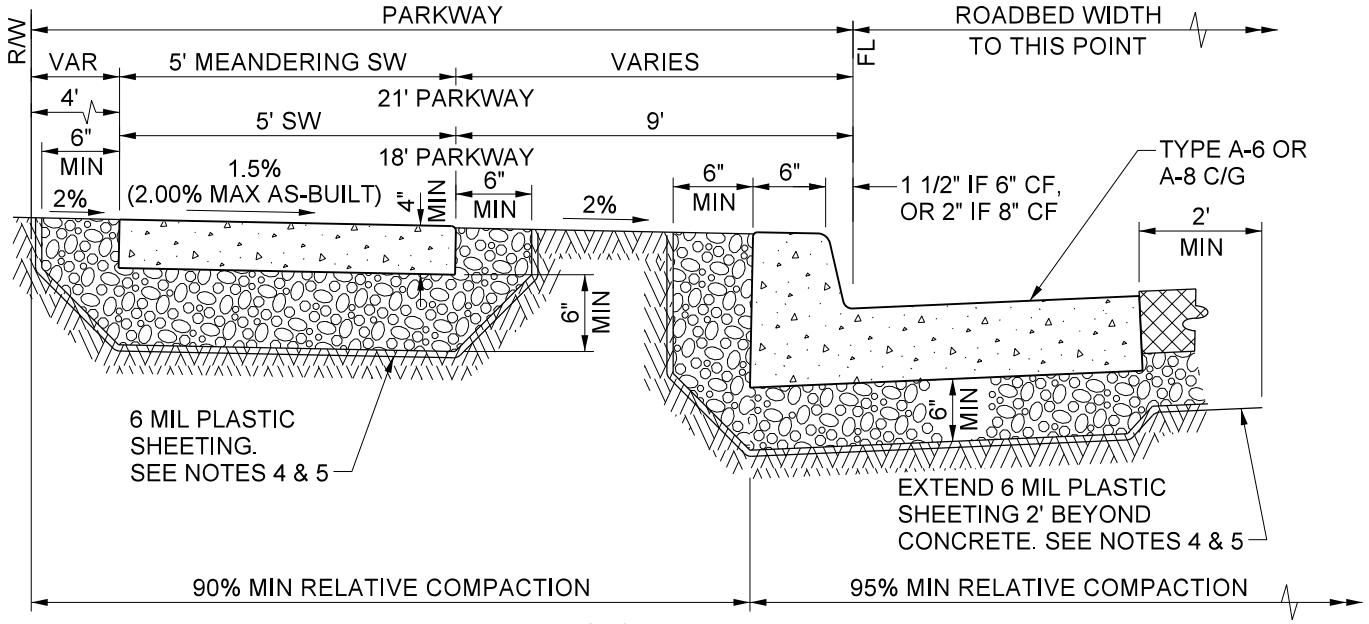
COUNTY OF RIVERSIDE

SIDEWALK, FIRE HYDRANT, & UTILITY POLE LOCATION (SIDEWALK AT R/W)

STANDARD No. 400 (2 OF 2)



SIDEWALK ADJACENT TO CURB



MEANDERING SIDEWALK IN 21' PARKWAY
SIDEWALK NOT ADJACENT TO CURB IN 18' PARKWAY

NOTES:

1. ALL CONSTRUCTION SHALL BE CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB/CU YD.
2. TO MAINTAIN PUBLIC PEDESTRIAN ACCESS, TEMPORARY TRAP FENCES FOR MODEL HOMES SHALL BE PLACED BEHIND PUBLIC SIDEWALK AND NOT BETWEEN PUBLIC SIDEWALK AND CURB.
3. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE STANDARD SPECIFICATIONS SECTION 16.03.
4. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS AND STRUCTURES. SEE COUNTY STANDARD SPECIFICATION SECTION 16.04.
5. WHEN USING 6 MIL PLASTIC SHEETING, PLACE THE SHEETING BETWEEN THE CLASS 2 AGGREGATE BASE AND THE COMPACTED NATIVE SOIL. EXTEND THE SHEETING 2 FEET BEYOND THE EDGE OF CONCRETE GUTTER INTO THE ROADWAY. IN ORDER TO PREVENT DAMAGE TO THE PLASTIC SHEETING RESULTING FROM LATER GRADING AND COMPACTING, PLACE THE EXTENDED 2 FEET OF SHEETING ONLY AFTER THE SUBGRADE HAS BEEN CERTIFIED BY THE SURVEYOR.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

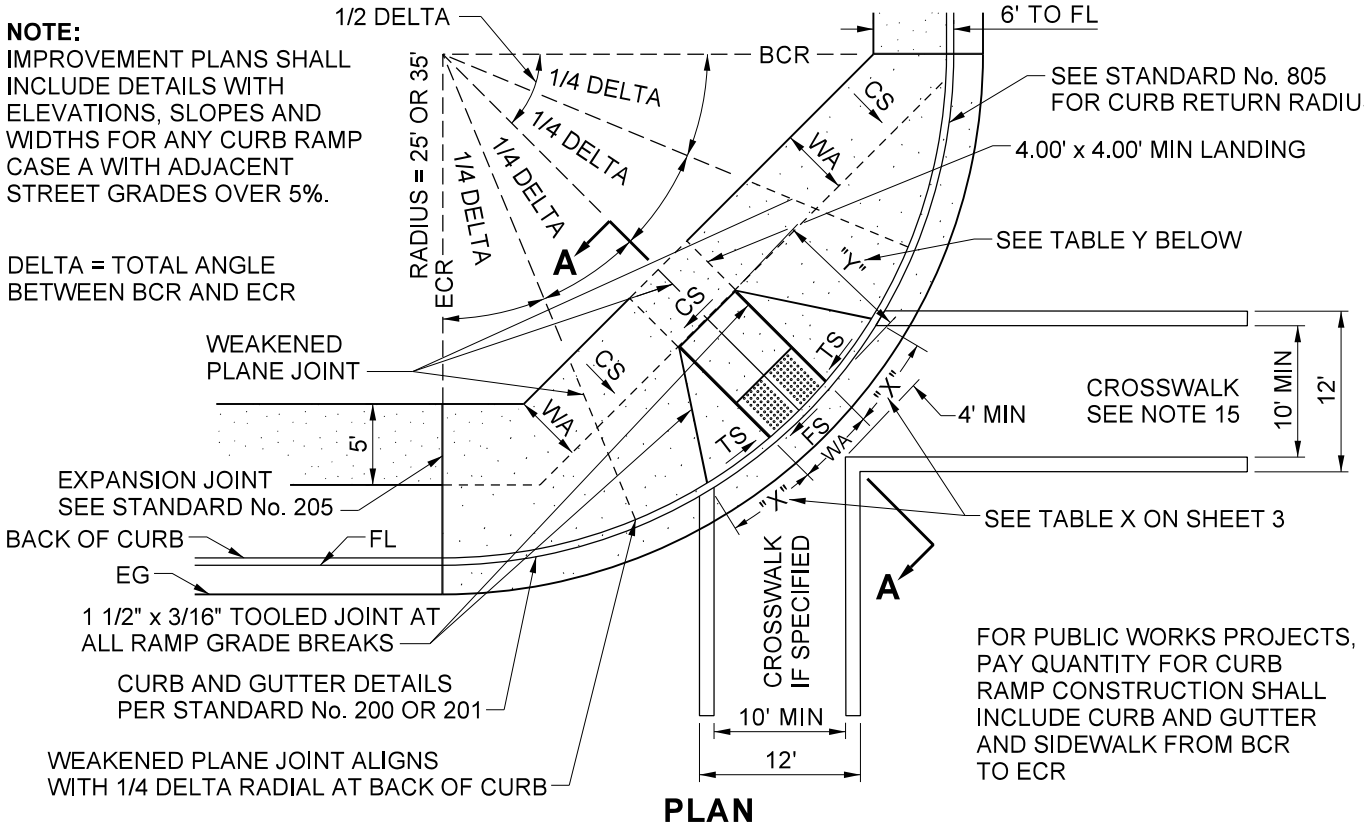
COUNTY OF RIVERSIDE

SIDEWALK AND CURB

STANDARD No. 401

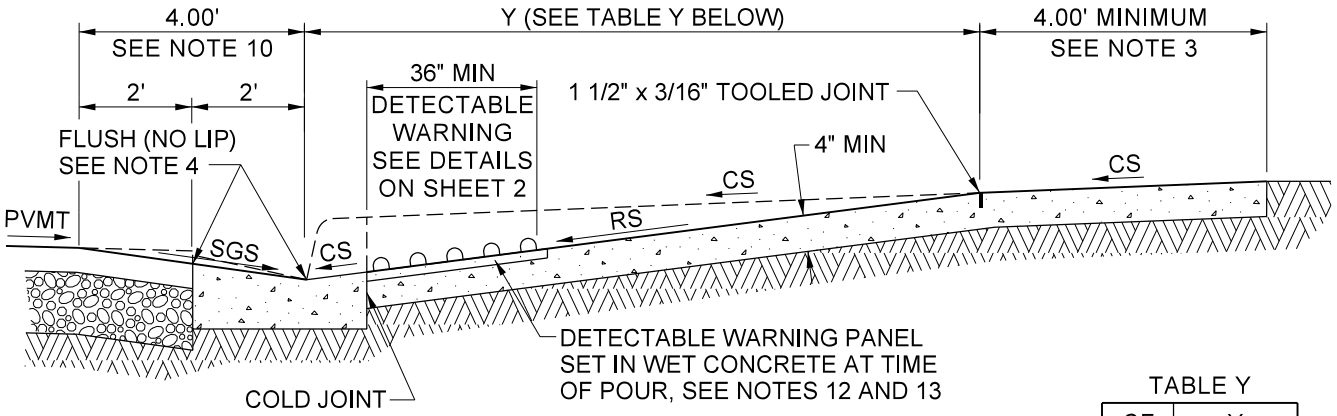
NOTE:
IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE A WITH ADJACENT STREET GRADES OVER 5%.

DELTA = TOTAL ANGLE BETWEEN BCR AND ECR



FOR PUBLIC WORKS PROJECTS, PAY QUANTITY FOR CURB RAMP CONSTRUCTION SHALL INCLUDE CURB AND GUTTER AND SIDEWALK FROM BCR TO ECR

PLAN



SECTION "A-A"

TABLE Y

CF	Y
6"	8.93'
8"	11.74'

ABBREVIATIONS AND VALUES:

RS = RAMP SLOPE: 7.5% (8.33% MAX AS-BUILT)
CS = CROSS SLOPE: 1.5% (2.00% MAX AS-BUILT)
TS = TRANSITION SLOPE: 9.0% (10.00% MAX AS-BUILT)
SGS = STREET & GUTTER SLOPE: 5.00% MAX AS-BUILT
WA = WIDTH A: 4.00' MIN AS-BUILT
FS = FLOWLINE SLOPE AT CURB OPENING:

- 1.50% (2.00% MAX AS-BUILT) FOR LEGS WITH STOP OR YIELD CONTROL.
- 4.50% (5.00% MAX AS-BUILT) FOR LEGS WITHOUT STOP, YIELD, OR GREEN LIGHT SIGNALIZATION.
- STREET % FOR MID-BLOCK CROSSINGS.

MOTOR VEHICLES ARE PROHIBITED FROM USING CURB RAMPS AS ACCESS ONTO PRIVATE PROPERTY.

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
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CIVIL
STATE OF CALIFORNIA

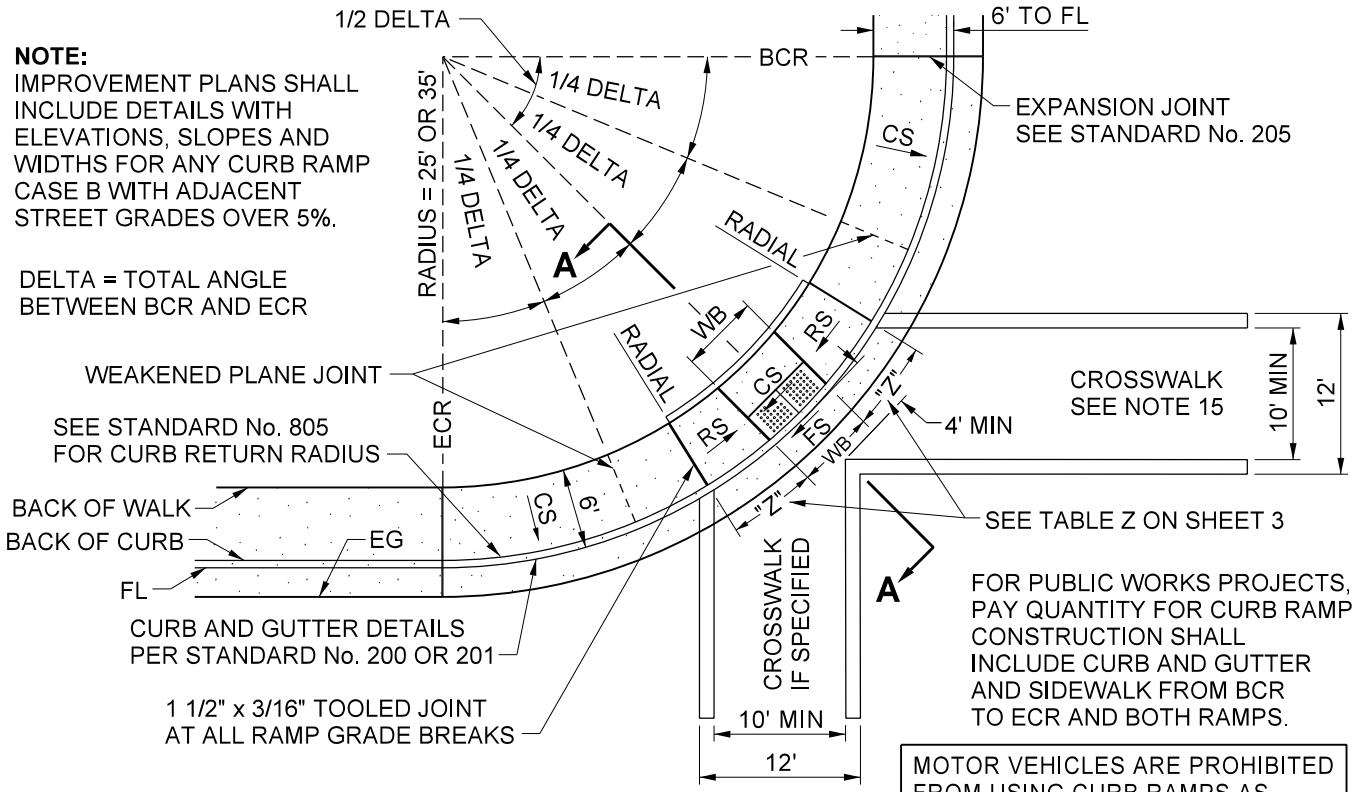
COUNTY OF RIVERSIDE

CURB RAMP CASE A

STANDARD No. 403 (1 OF 7)

NOTE:
IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE B WITH ADJACENT STREET GRADES OVER 5%.

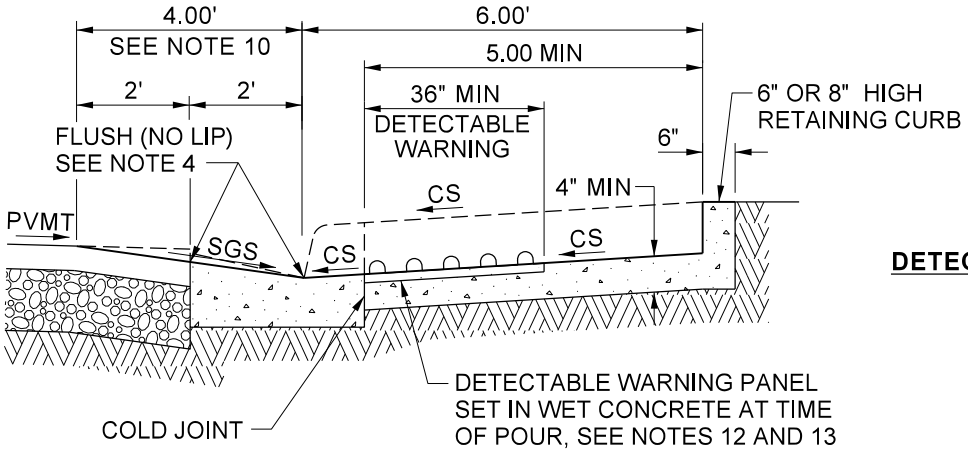
DELTA = TOTAL ANGLE BETWEEN BCR AND ECR



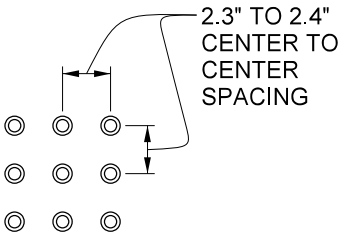
FOR PUBLIC WORKS PROJECTS, PAY QUANTITY FOR CURB RAMP CONSTRUCTION SHALL INCLUDE CURB AND GUTTER AND SIDEWALK FROM BCR TO ECR AND BOTH RAMPS.

MOTOR VEHICLES ARE PROHIBITED FROM USING CURB RAMPS AS ACCESS ONTO PRIVATE PROPERTY.

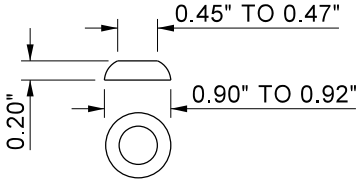
PLAN



SECTION "A-A"



RAISED TRUNCATED DOME PATTERN DETECTABLE WARNING SURFACE
SEE NOTES 11, 12 & 13



RAISED TRUNCATED DOME
SEE NOTE 11

ABBREVIATIONS AND VALUES:
WB = WIDTH B: 5.00' MIN AS-BUILT (SEE NOTE 16)
SEE SHEET 1 FOR ADDITIONAL ABBREVIATIONS AND VALUES

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

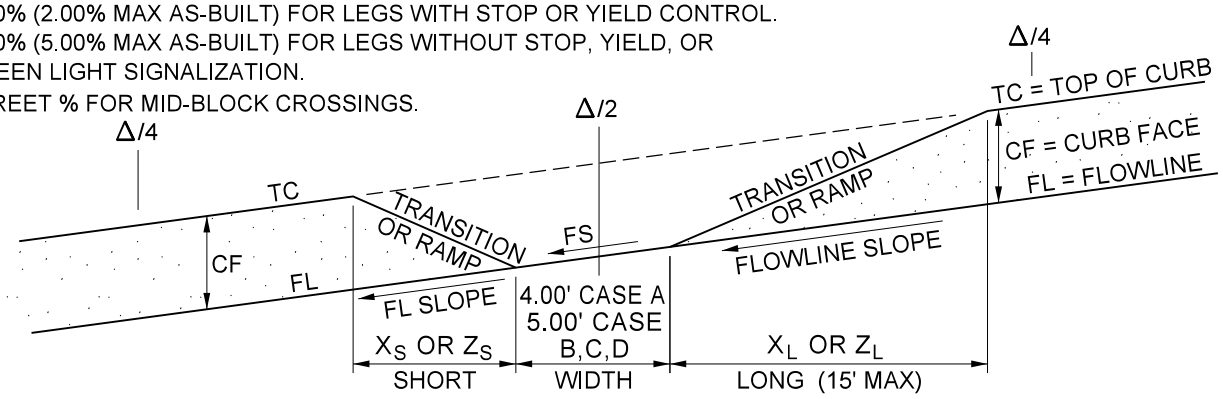
COUNTY OF RIVERSIDE

CURB RAMP CASE B

STANDARD No. 403 (2 OF 7)

RS = RAMP SLOPE: 7.5% (8.33% MAX AS-BUILT)
TS = TRANSITION SLOPE: 9.0% (10.00% MAX AS-BUILT)
FS = FLOWLINE SLOPE AT CURB OPENING:

- 1.50% (2.00% MAX AS-BUILT) FOR LEGS WITH STOP OR YIELD CONTROL.
- 4.50% (5.00% MAX AS-BUILT) FOR LEGS WITHOUT STOP, YIELD, OR GREEN LIGHT SIGNALIZATION.
- STREET % FOR MID-BLOCK CROSSINGS.



PROFILE

TABLE X - CASE "A" TRANSITION LENGTH ALONG CURB RETURN (FEET)

CF	TRANSITION SLOPE	X	FLOWLINE SLOPE (ALONG CURB RETURN)					
			1%	2%	3%	4%	5%	6%
6"	9.0%	X_S	5.00	4.55	4.17	3.85	3.57	3.33
		X_L	6.25	7.14	8.33	10.11	12.50	16.67
8"	9.0%	X_S	6.67	6.06	5.56	5.13	4.76	4.44
		X_L	8.33	9.52	11.11	13.33	16.67	22.22

NOTE: THE TRANSITION LENGTH IS NOT REQUIRED TO GO BEYOND THE BCR OR ECR, NOR EXCEED 15' IN LENGTH.

TABLE Z - CASE "B", "C" AND "D" RAMP LENGTH ALONG BACK OF WALK (FEET)

CF	RAMP SLOPE	Z	FLOWLINE SLOPE (ALONG CURB)					
			1%	2%	3%	4%	5%	6%
6"	7.5%	Z_S	5.88	5.26	4.76	4.35	4.00	3.70
		Z_L	7.69	9.09	11.11	14.29	15.0*	15.0*
8"	7.5%	Z_S	7.84	7.02	6.35	5.80	5.33	4.94
		Z_L	10.26	12.12	14.81	15.0*	15.0*	15.0*

* NOTE: RAMP LENGTH IS NOT REQUIRED TO EXCEED 15.0' ALONG THE BACK OF WALK.

TO CALCULATE "X" OR "Z" LENGTH:

$$X_S \text{ OR } Z_S(FT) = \frac{\text{SHORT SIDE (DOWN SLOPE): CURB FACE (FEET)}}{\text{TRANS OR RAMP SLOPE + FL SLOPE}}$$

$$X_L \text{ OR } Z_L(FT) = \frac{\text{LONG SIDE (UP SLOPE): CURB FACE (FEET)}}{\text{TRANS OR RAMP SLOPE - FL SLOPE}}$$

ENGINEER TO SHOW X_S, X_L, Z_S, AND Z_L ON IMPROVEMENT PLANS

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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MARK ALAN LANCASTER
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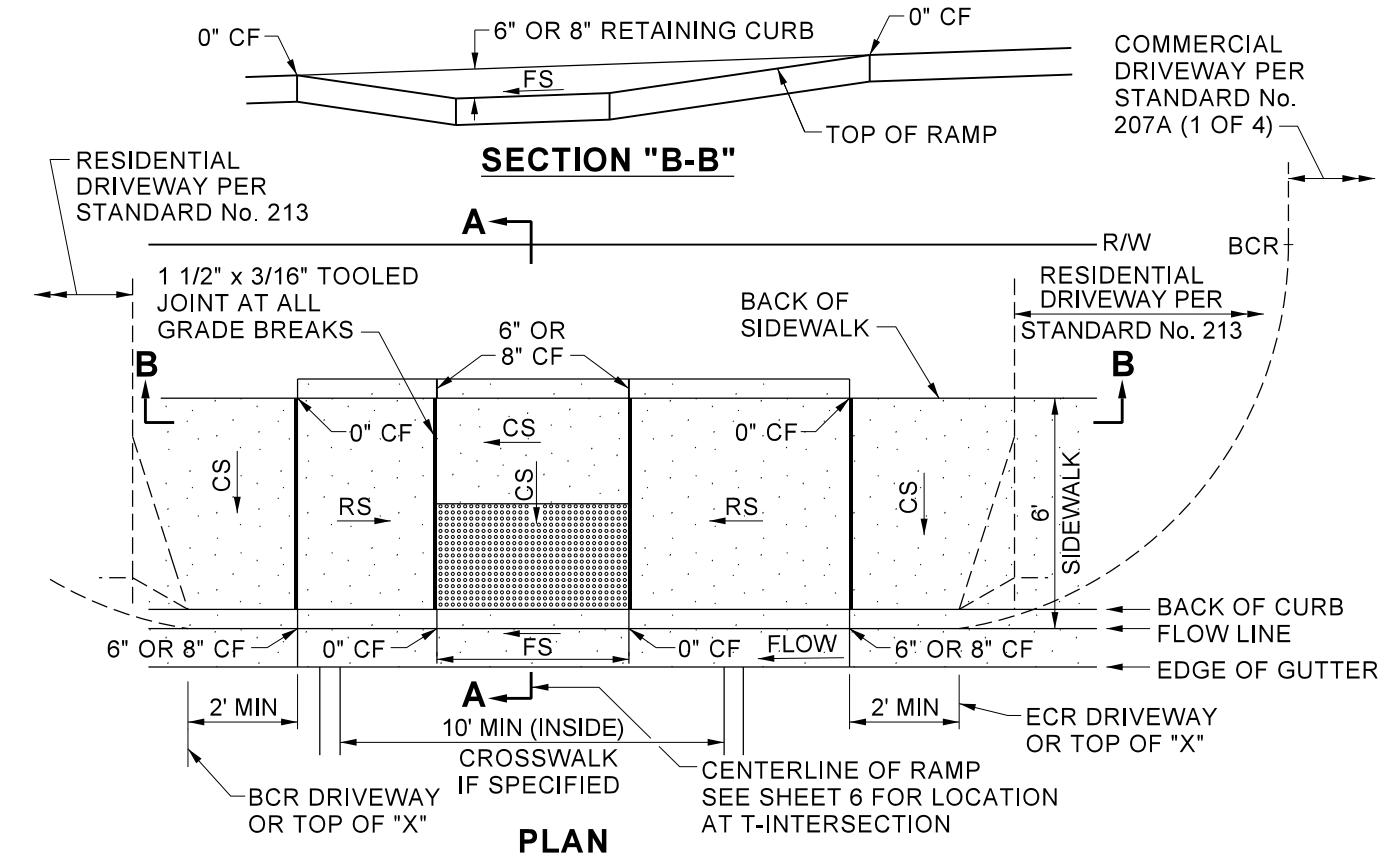
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CURB RAMP PROFILE

STANDARD No. 403 (3 OF 7)



FOR PUBLIC WORKS PROJECTS PAY QUANTITY FOR CURB RAMP CONSTRUCTION SHALL INCLUDE CURB AND GUTTER FROM TOP OF RAMP TO TOP OF RAMP AND BOTH RAMPS.

MOTOR VEHICLES ARE PROHIBITED FROM USING CURB RAMPS AS ACCESS ONTO PRIVATE PROPERTY.

NOTE:
IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE C WITH STREET GRADES OVER 5%.

ABBREVIATIONS AND VALUES: SEE SHEET 1

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

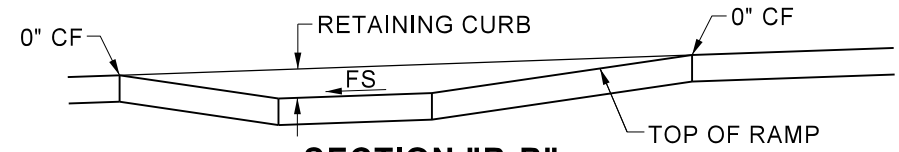
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

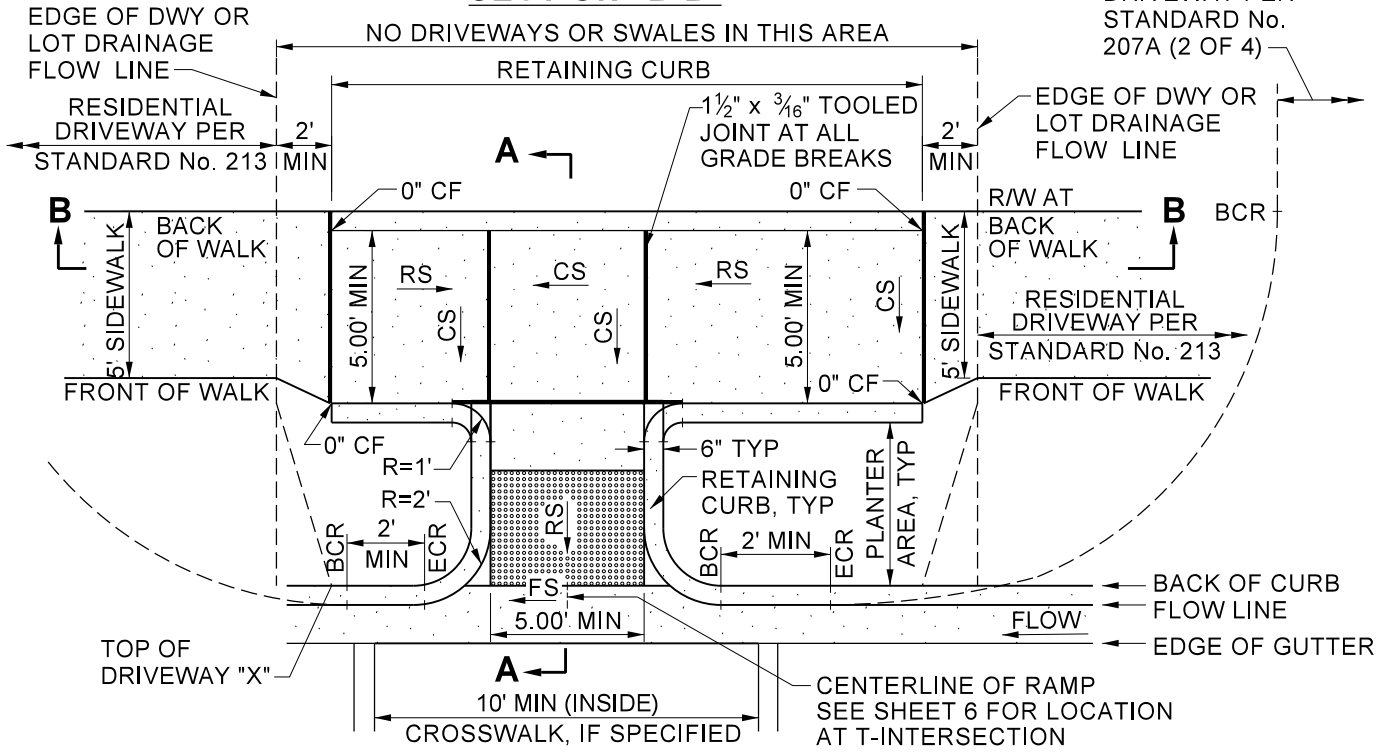
COUNTY OF RIVERSIDE

CURB RAMP - CASE C
"T" INTERSECTION WITH SIDEWALK AT CURB

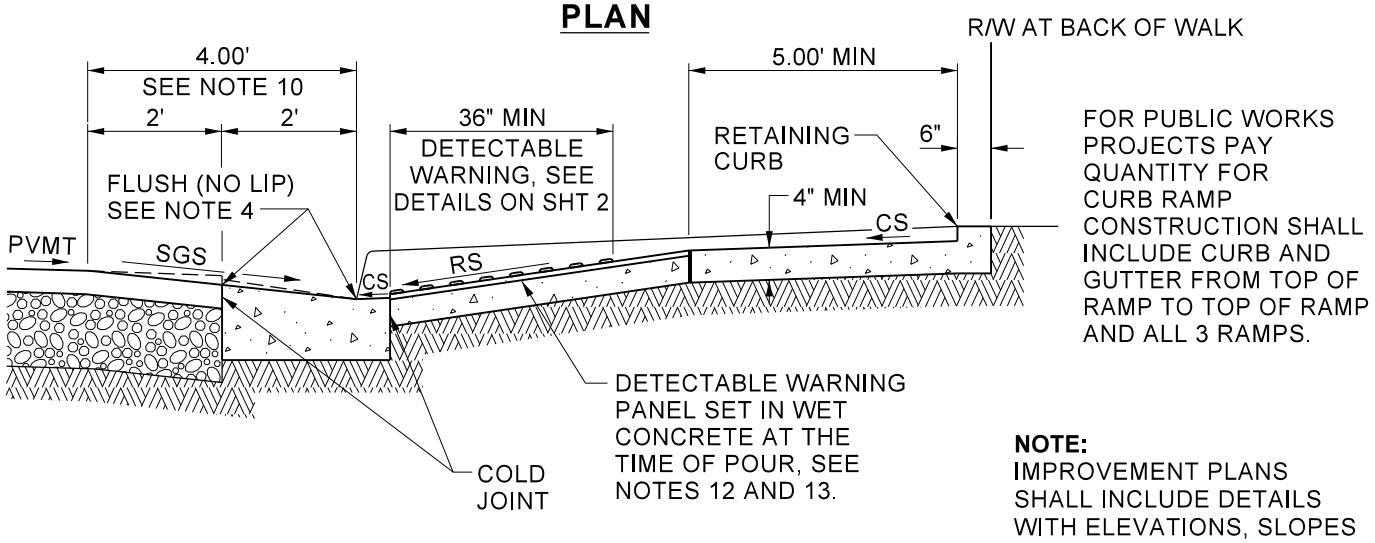
STANDARD No. 403 (4 OF 7)



SECTION "B-B"



PLAN



FOR PUBLIC WORKS PROJECTS PAY QUANTITY FOR CURB RAMP CONSTRUCTION SHALL INCLUDE CURB AND GUTTER FROM TOP OF RAMP TO TOP OF RAMP AND ALL 3 RAMPS.

NOTE:
IMPROVEMENT PLANS SHALL INCLUDE DETAILS WITH ELEVATIONS, SLOPES AND WIDTHS FOR ANY CURB RAMP CASE D.

SECTION "A-A"

ABBREVIATIONS AND VALUES: SEE SHEET 1

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

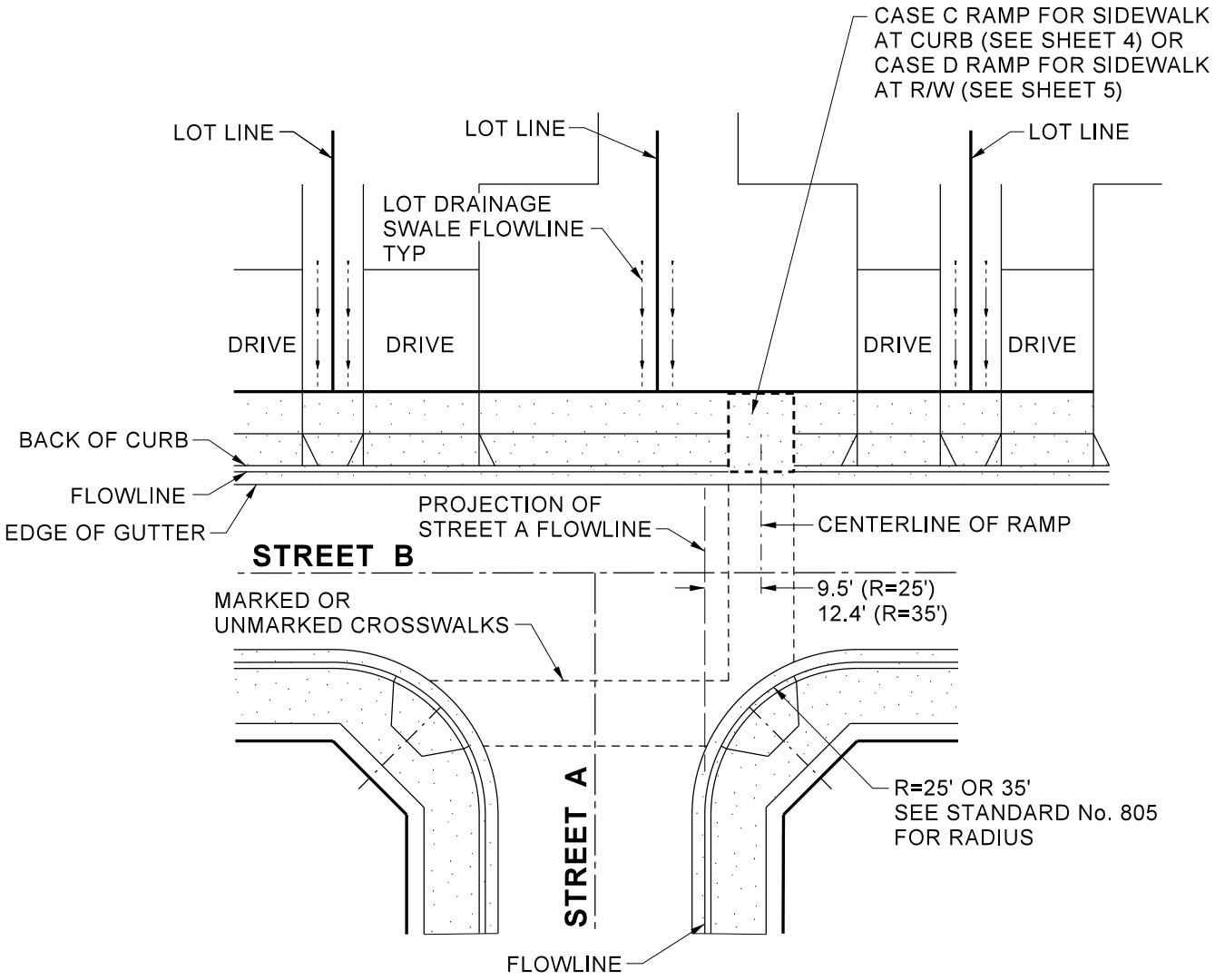
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CURB RAMP - CASE D
"T" INTERSECTION WITH SIDEWALK AT R/W

STANDARD No. 403 (5 OF 7)



RAMP LOCATION AT "T" INTERSECTION (RIGHT TURN SIDE OF STREET A)

CASES "C" AND "D"

NOTE:
DRIVEWAYS TO BE LOCATED SO THAT THEY DO NOT CONFLICT WITH REQUIRED RAMP LOCATION. AVOID LOCATING DRIVEWAYS WITHIN INTERSECTION.

NOT TO SCALE

SEE ALL NOTES ON SHEET 7

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CURB RAMP CASE C AND D LOCATION AT "T" INTERSECTIONS

STANDARD No. 403 (6 OF 7)

NOTES:

1. TO MEET AMERICAN WITH DISABILITIES ACT STANDARDS, MAXIMUM STATED SLOPES AND MINIMUM STATED DISTANCES ARE ABSOLUTE AND NO CONSTRUCTION TOLERANCES WILL BE PERMITTED.
2. IF THE DISTANCE FROM CENTER OF CURB RETURN TO EXISTING RIGHT-OF-WAY LINE IS INSUFFICIENT TO ACCOMMODATE THE CASE A CURB RAMP AND TOP LANDING, THEN USE THE CASE B CURB RAMP.
3. THE MINIMUM SIDEWALK WIDTH IS 5.00' WHERE A VERTICAL OBJECT (SUCH AS A CURB OR WALL) IS ADJACENT TO THE PEDESTRIAN ACCESS ROUTE.
4. TRANSITIONS FROM CURB RAMPS TO SIDEWALKS, GUTTERS, AND STREETS SHALL BE FLUSH AND FREE FROM ABRUPT LEVEL CHANGES. NO LIPS ARE PERMITED AT THE GUTTER FLOWLINE OR EDGE OF PAVEMENT.
5. THE TOP OF CURB WIDTH IS NOT INCLUDED IN THE MEASUREMENT OF MINIMUM SIDEWALK WIDTH.
6. THE TRANSITION SLOPE OF THE FLARED WINGS OF THE CASE A CURB RAMP IS MEASURED ALONG THE BACK OF CURB.
7. FOR CASE B CURB RAMPS, CONSTRUCT WEAKENED PLANE JOINTS AT 1/4 DELTAS WHEN THE RADIUS EQUALS 35' AND AT TOPS OF RAMPS WHEN THE RADIUS EQUALS 25'.
8. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
9. CONCRETE SHALL HAVE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.
10. THE ROAD SURFACE AND GUTTER SURFACE SHALL NOT EXCEED 5.00% WITHIN 4' OF THE CURB RAMP EDGE (FLOW LINE).
11. DETECTABLE WARNING SURFACES ARE REQUIRED WHEREVER AT-GRADE PEDESTRIAN SURFACES ENTER INTO A VEHICULAR TRAVEL WAY (EXCEPT NOT REQUIRED AT DRIVEWAY APPROACHES).
12. CURB RAMPS SHALL INCLUDE A YELLOW DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL CURB OPEN WIDTH AND 3'-0" DEPTH OF THE RAMP. DETECTABLE WARNING SURFACES SHALL CONSIST OF A PANEL SET INTO WET CONCRETE AND CONFORM TO THE DETAILS ON SHEET 2 OF THIS STANDARD. NO BOLT DOWN OR GLUE DOWN PANELS WILL BE ALLOWED FOR NEW RAMP CONSTRUCTION.
13. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.
14. UTILITY PULL BOXES, MANHOLES, VAULTS AND ALL OTHER UTILITY FACILITIES ARE NOT TO BE LOCATED WITHIN THE BOUNDARIES OF THE CURB RAMP. EXISTING STRUCTURES WILL BE RELOCATED OR ADJUSTED TO GRADE BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, CURB RAMP CONSTRUCTION.
15. CROSSWALK STRIPING IS ONLY APPLIED IF SHOWN ON IMPROVEMENT PLANS. CROSSWALK STRIPING, WHEN CALLED FOR, SHALL BE PER STANDARD No. 1211.
16. FOR NEW CASE B, CASE C, AND CASE D CURB RAMPS THE LEVEL LANDING AT THE BOTTOM OF THE RAMPS SHALL BE A MINIMUM OF 5.00' WIDE. FOR INVENTORYING EXISTING CASE B AND CASE C RAMPS, A CURB OPENING WIDTH OF 4.00' MIN IS ACCEPTABLE.
17. FOR PUBLIC WORKS PROJECTS, THE CONTRACT UNIT PRICE FOR CURB RAMP SHALL INCLUDE RAMP, SIDEWALK, CURB AND GUTTER (OR SPANDREL) FROM BCR TO ECR.

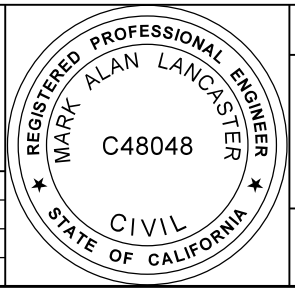
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

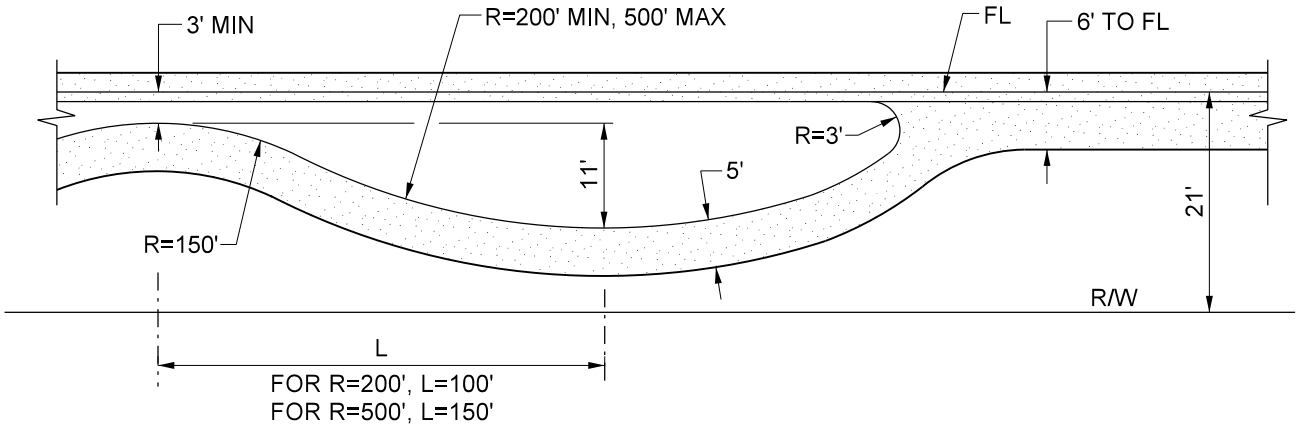
REVISION DESCRIPTION	MARK	DATE	APPROVED

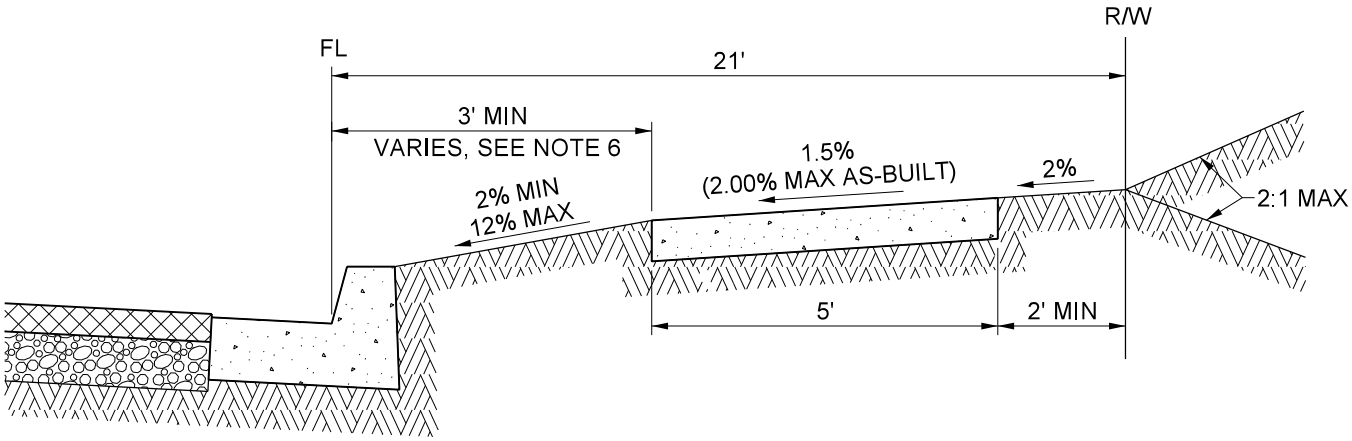


COUNTY OF RIVERSIDE

CURB RAMP NOTES

STANDARD No. 403 (7 OF 7)





NOTES:

1. RADII FOR CURVED SIDEWALK SHALL VARY BETWEEN 200' AND 500' AT FRONT OF SIDEWALK.
2. SIDEWALK SHALL BE A MINIMUM OF 6' WIDTH ADJACENT TO CURB.
3. SIDEWALK SHALL BE 3' MIN AWAY FROM FLOW LINE EXCEPT AT CURB RETURNS, BUS STOPS, AND AT TOP OF "T" INTERSECTIONS WHERE CURB RAMPS ARE REQUIRED.
4. SIDEWALK LAYOUT ON PLANS IS CONCEPTUAL ONLY. APPROVAL OF THE FINAL SIDEWALK LAYOUT SHALL BE MADE IN THE FIELD AND ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS AS APPROVED BY THE INSPECTOR PRIOR TO FINAL CONSTRUCTION.
5. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
6. IRRIGATION TYPE TO BE LOW VOLUME OR SUBSURFACE BETWEEN WALK AND CURB.
7. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.
8. THE RUNNING SLOPE OF SIDEWALK MAY EQUAL THE STREET SLOPE, EVEN IF THE STREET SLOPE IS GREATER THAN 8.33%. WHERE SIDEWALK EXCEEDS THE STREET SLOPE, SUCH AS TRANSITIONS IN ELEVATION OF MEANDERING SIDEWALK, A SIDEWALK RUNNING SLOPE GREATER THAN 5% WOULD BE CONSIDERED A RAMP. IN THIS CASE, RAMPS WOULD BE DESIGNED AT 7.5% MAX (8.33% MAX AS-BUILT) RUNNING SLOPE AND REQUIRE LANDINGS AS SPECIFIED IN THE 2010 ADA STANDARDS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

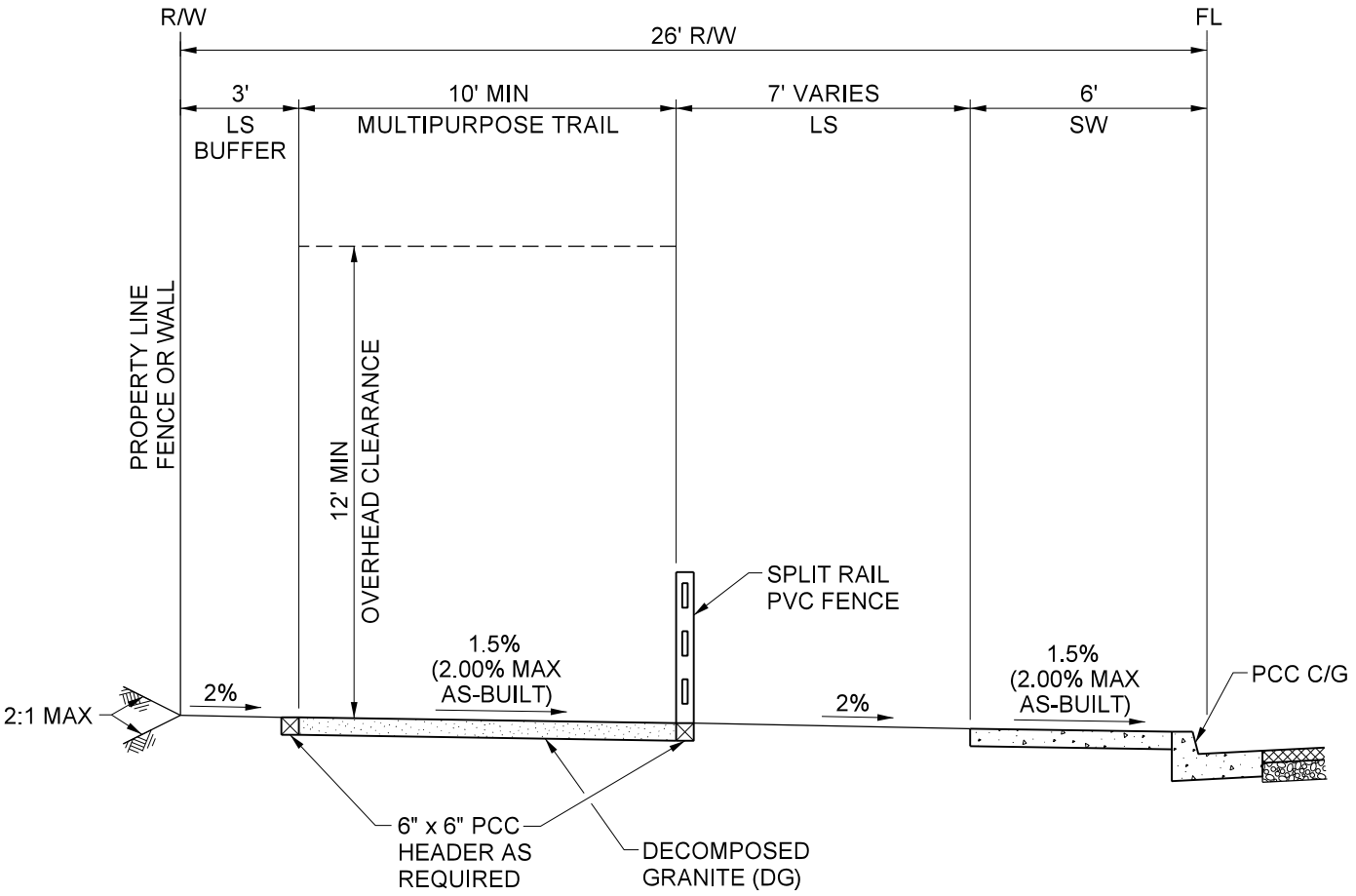
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

MEANDERING SIDEWALK

STANDARD No. 404



NOTES:

1. OMIT FENCE WITHIN SIGHT DISTANCE OF RESTRICTED USE AREAS.
2. TRAIL AND FENCE TO BE CONSTRUCTED PER LATEST DETAILS.
3. FOR TRAIL AND FENCE DETAILS, REFER TO THE COUNTY OF RIVERSIDE COMPREHENSIVE LANDSCAPE GUIDELINES AND STANDARDS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

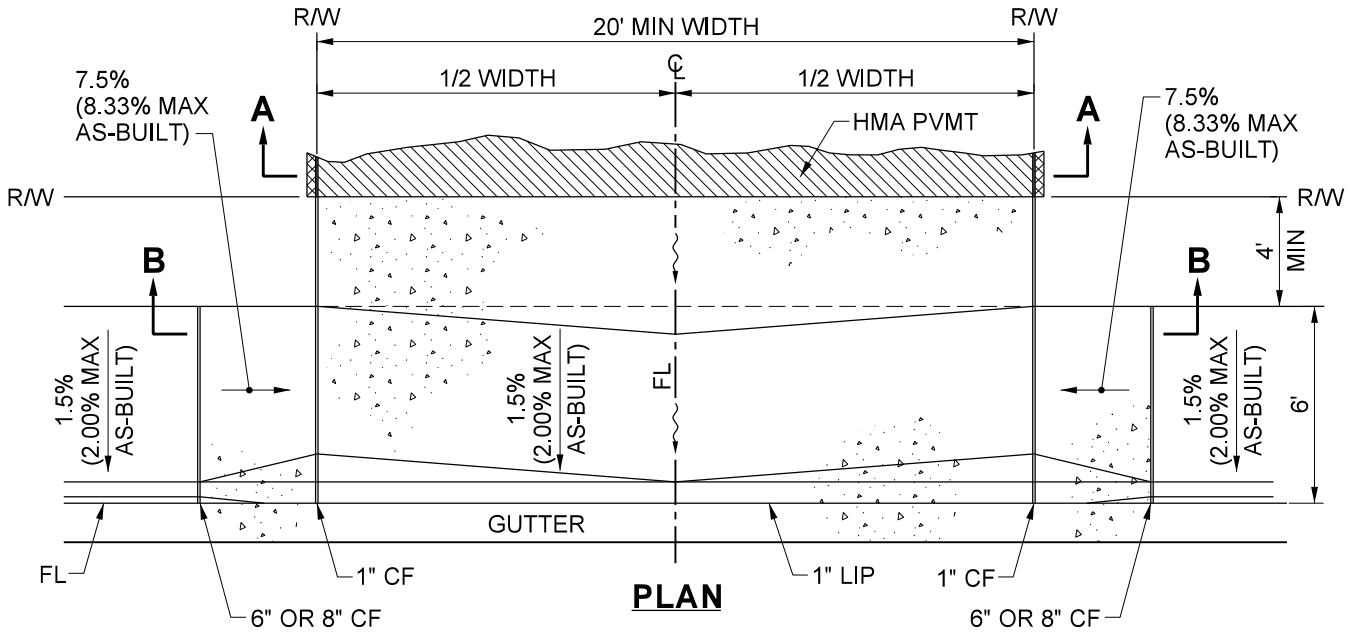
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

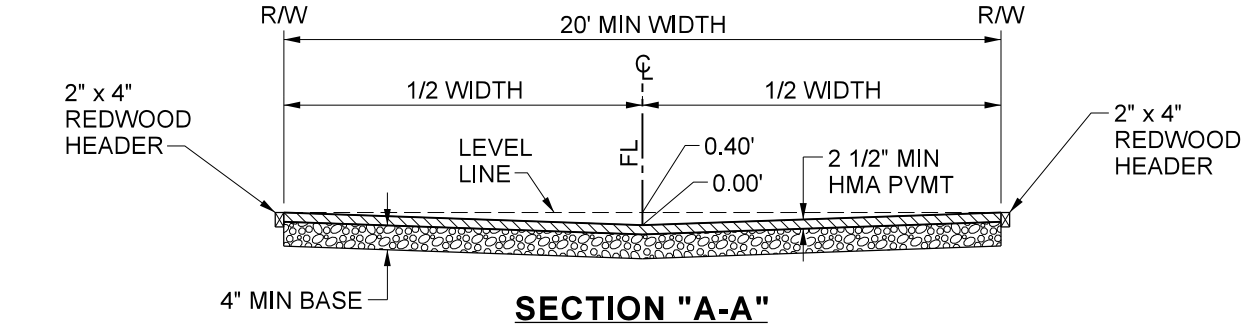
COUNTY OF RIVERSIDE

MULTIPURPOSE TRAIL

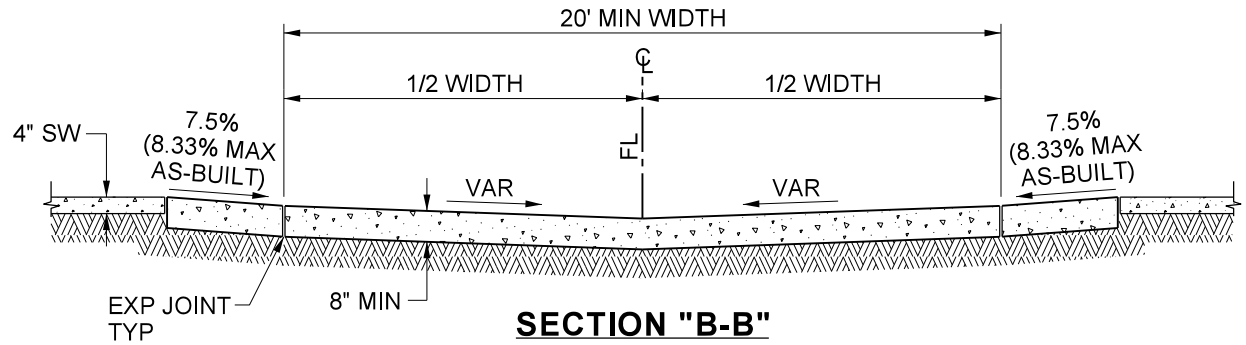
STANDARD No. 405



PLAN



SECTION "A-A"



SECTION "B-B"

NOTES:

1. ALLEY WIDTH AS SPECIFIED BY THE DIRECTOR OF TRANSPORTATION.
2. ALLEY APRON SHALL BE 8" THICK CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU FT.
3. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.
4. RELATIVE COMPACTION OF SUBGRADE SHALL BE 95% MIN.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

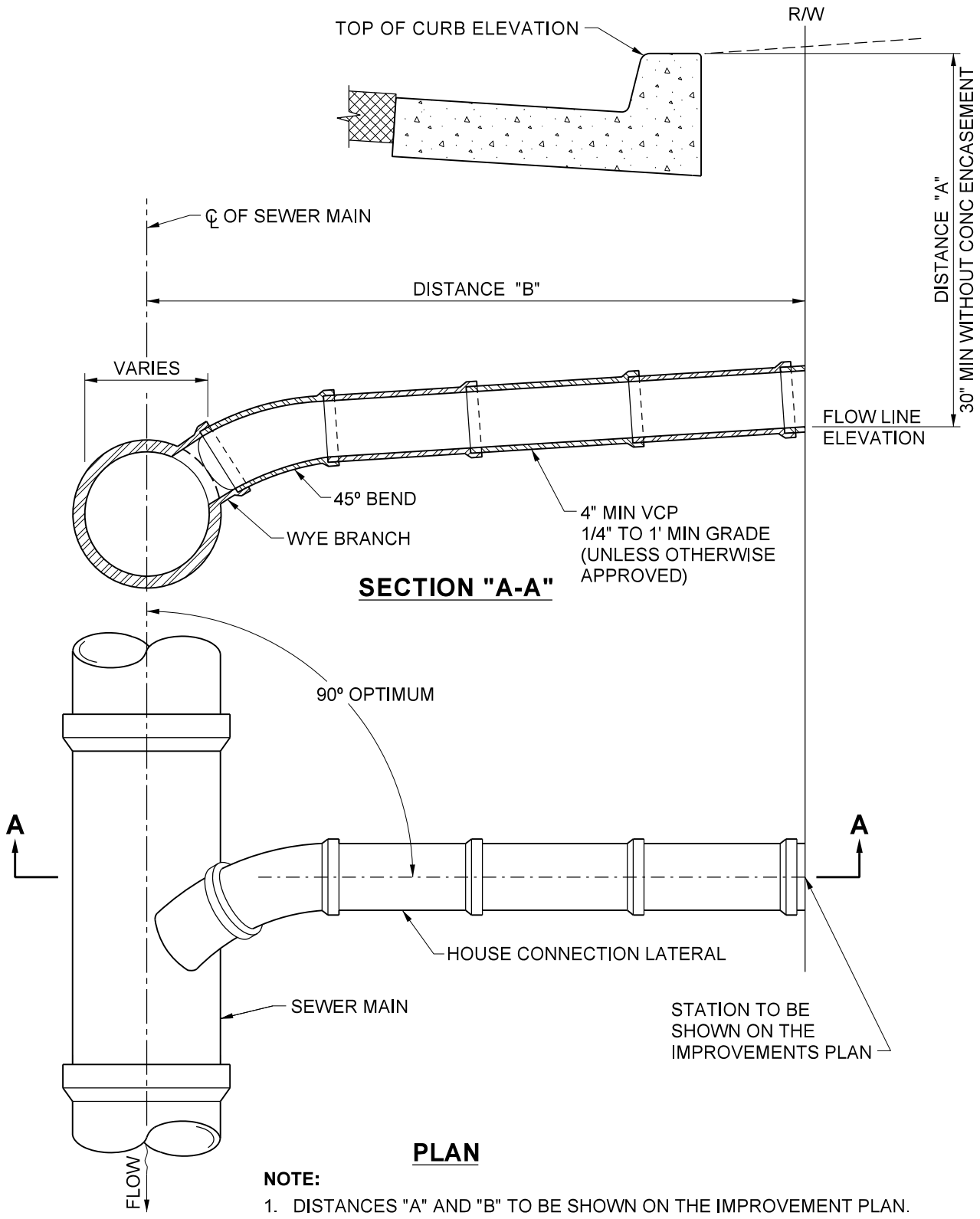
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

ALLEY AND ALLEY APRON SECTIONS

STANDARD No. 500



NOTE:

1. DISTANCES "A" AND "B" TO BE SHOWN ON THE IMPROVEMENT PLAN.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

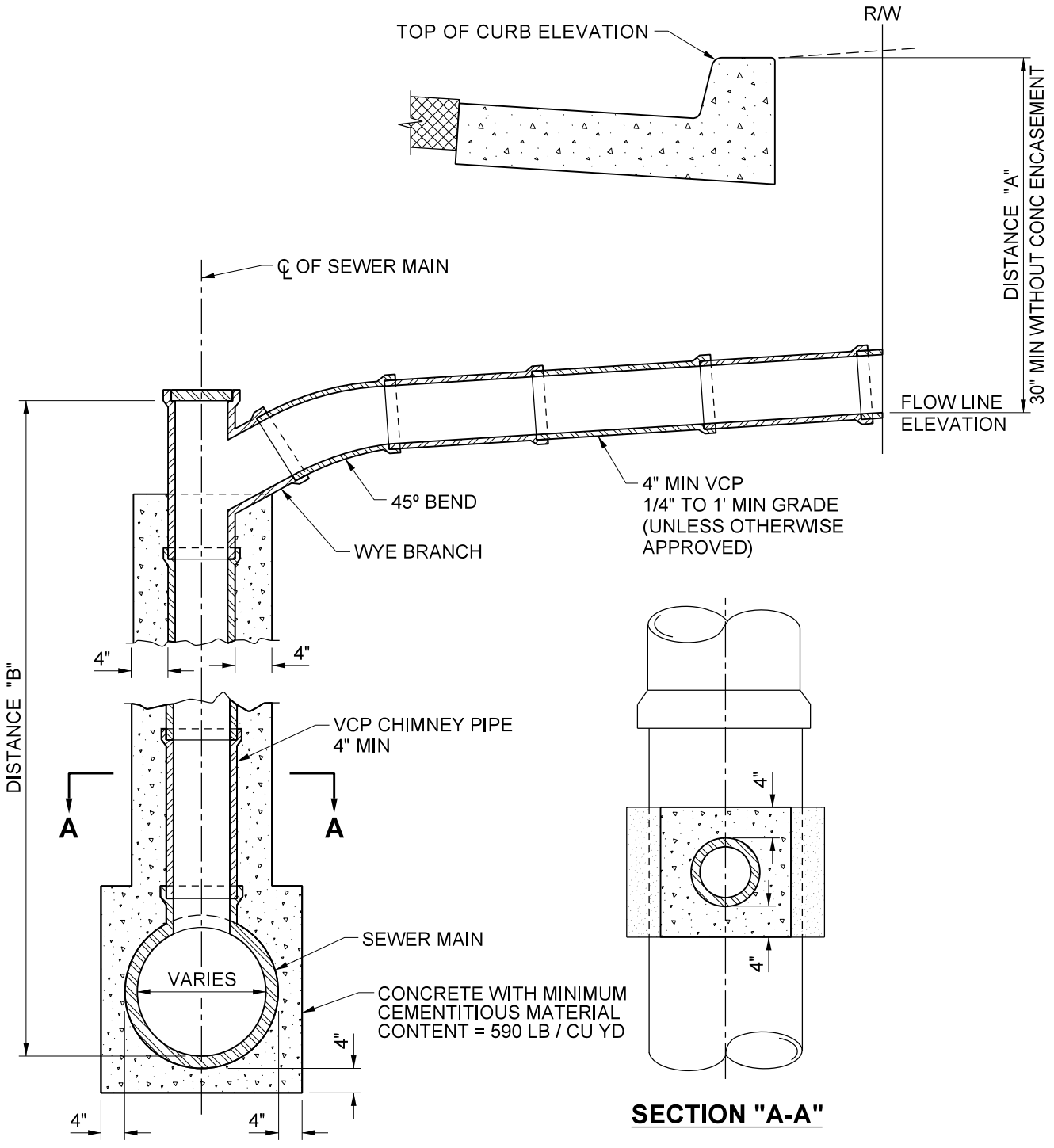
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SEWER HOUSE CONNECTION

STANDARD No. 600



ELEVATION

SECTION "A-A"

NOTES:

1. DISTANCES "A" AND "B" TO BE SHOWN ON THE IMPROVEMENT PLAN.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

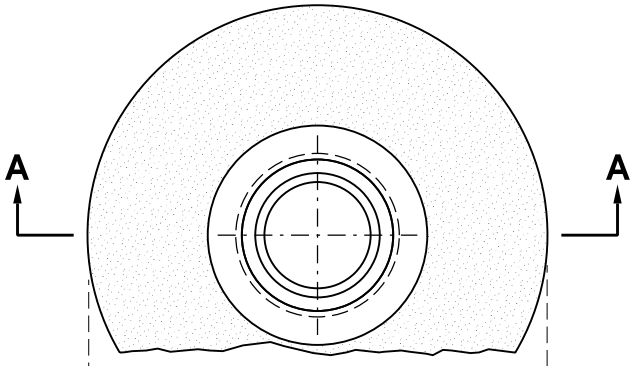
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

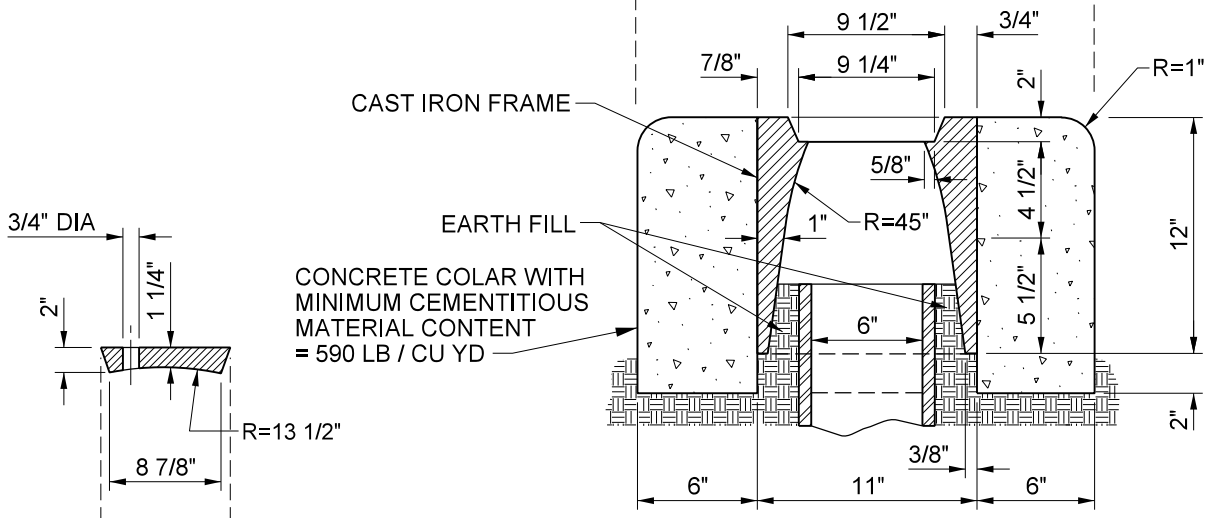
COUNTY OF RIVERSIDE

SEWER CHIMNEY PIPE

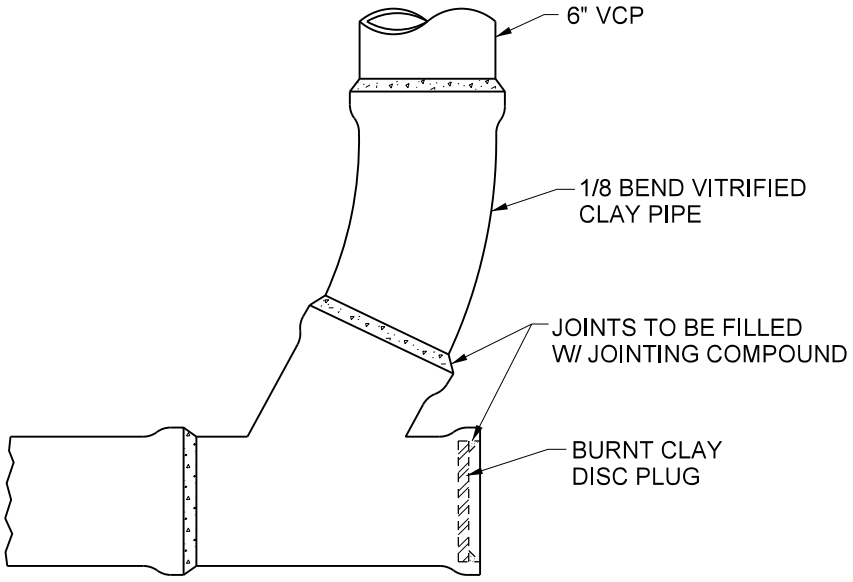
STANDARD No. 601



PLAN



CAST IRON COVER



SECTION "A-A"

NOTE:

1. MINIMUM WEIGHT OF CAST IRON FRAME AND COVER --- 90 POUNDS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

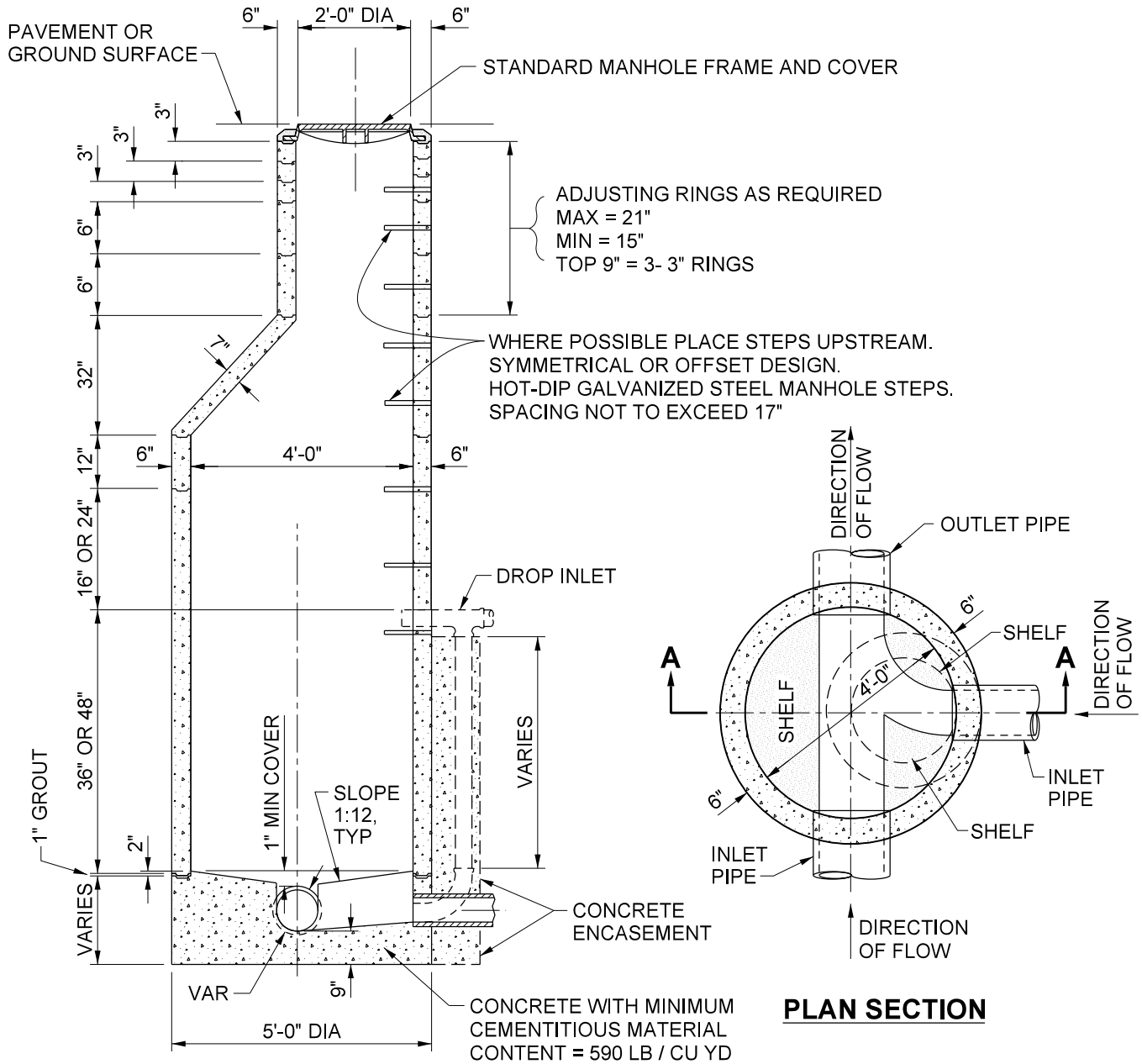
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SEWER CLEANOUT

STANDARD No. 603



SECTION "A-A"

PLAN SECTION

NOTE:
CHANNELS OF MANHOLE BOTTOMS TO BE FORMED IN CONCRETE, AND SIDE INLETS TO HAVE CHANNELS CURVED IN THE DIRECTION OF FLOW.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22
DATE

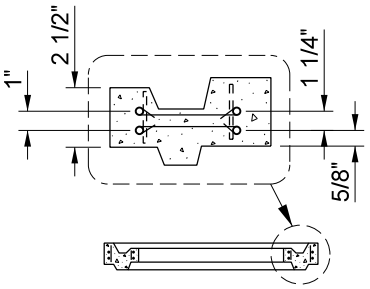
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

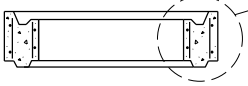
COUNTY OF RIVERSIDE

PRE-CAST CONCRETE MANHOLE (ECCENTRIC)

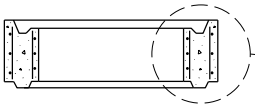
STANDARD No. 606



24" x 2 1/2" GRADE RING

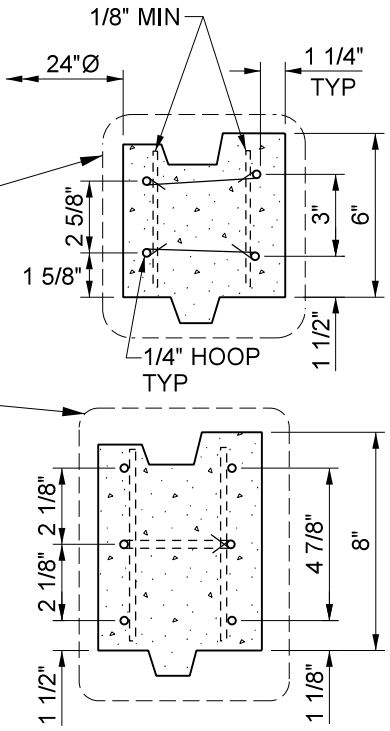


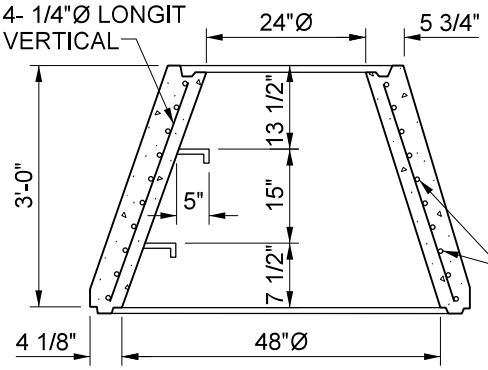
24" x 6" GRADE RING



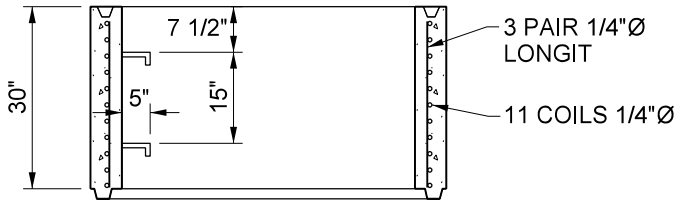
24" x 8" GRADE RING

NOTE:
CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

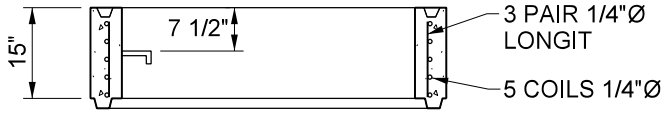




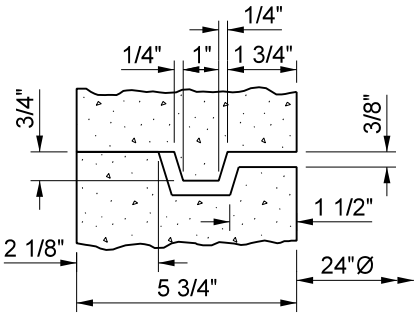
48" x 24" CONCENTRIC CONE



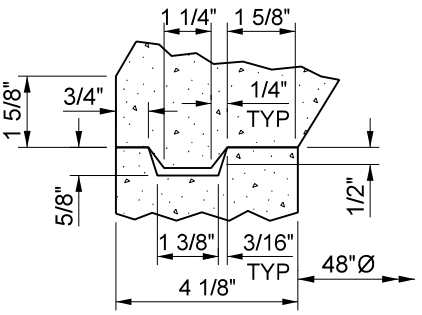
48" x 30" MANHOLE PIPE



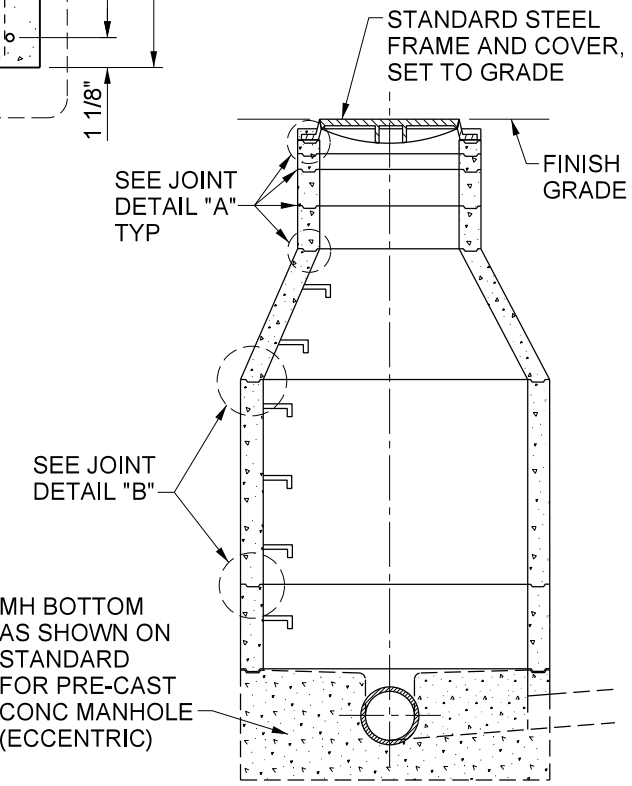
48" x 15" MANHOLE PIPE



JOINT DETAIL "A"



JOINT DETAIL "B"



TYPICAL SECTION

NOTE: REINFORCEMENT SHOWN IS TYPICAL; ALTERNATE SYSTEMS SUBJECT TO APPROVAL.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

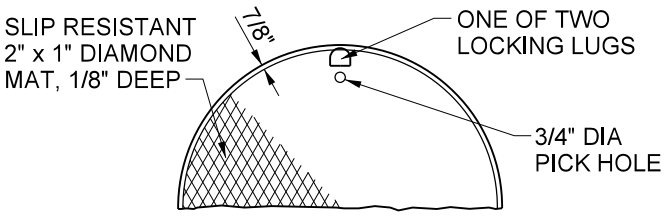
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

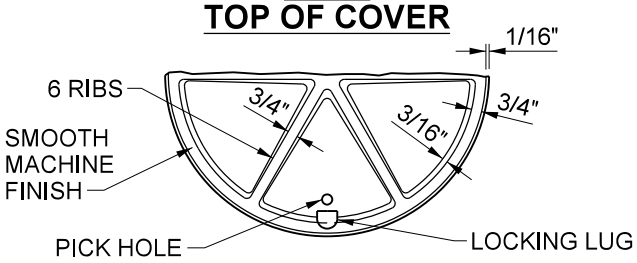
COUNTY OF RIVERSIDE

PRE-CAST CONCRETE MANHOLE (CONCENTRIC)

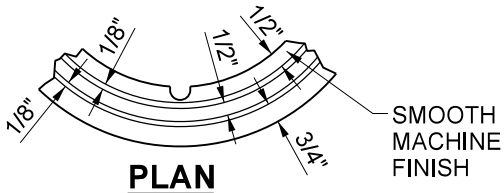
STANDARD No. 607



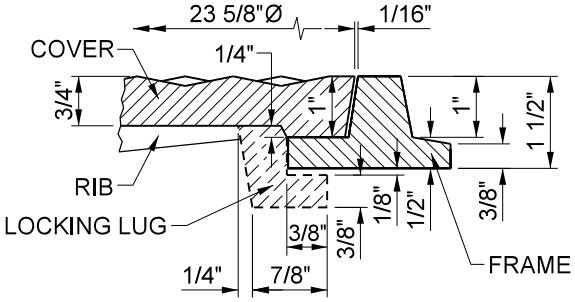
PLAN
TOP OF COVER



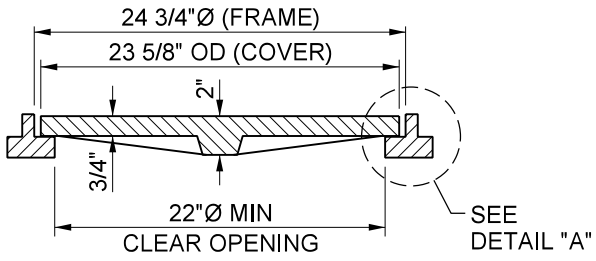
PLAN
BOTTOM OF COVER



PLAN
PORTION OF FRAME



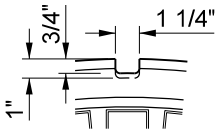
DETAIL "A"



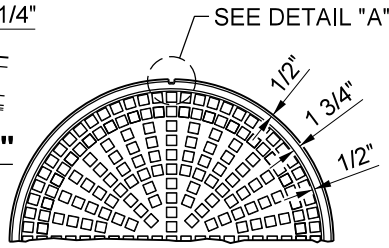
SECTION - FRAME AND COVER
PARKWAY

TOTAL WEIGHT - APPROX 130 LBS.
ALL METAL TO BE HOT-DIP GALVANIZED.

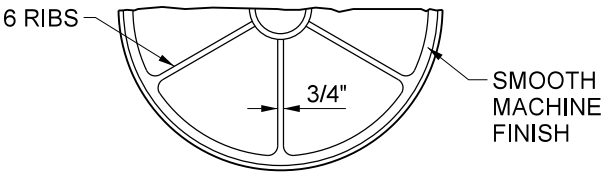
NOT TO SCALE



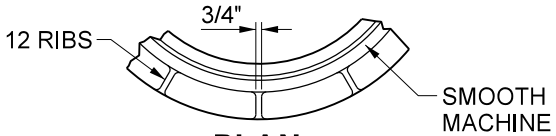
DETAIL "A"



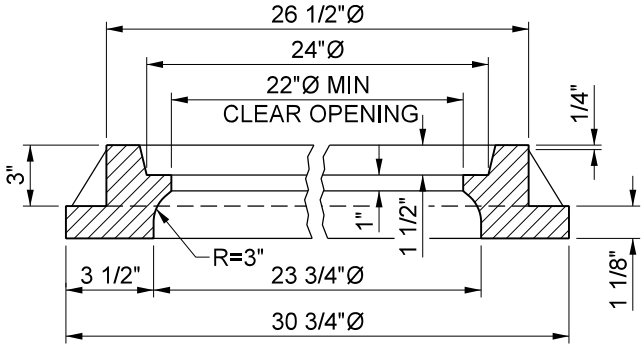
PLAN
TOP OF COVER



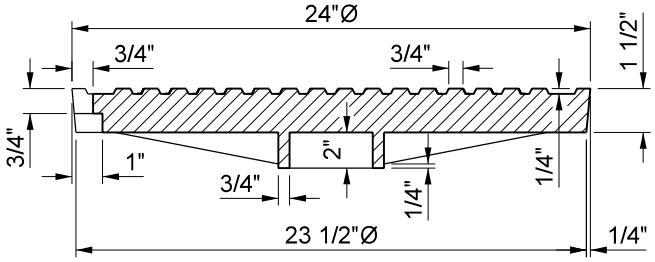
PLAN
BOTTOM OF COVER



PLAN
PORTION OF FRAME



SECTION - FRAME



SECTION - COVER
ROADWAY

TOTAL WEIGHT - APPROX 380 LBS.
ALL METAL TO BE HOT-DIP GALVANIZED.

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION — DATE
MARK LANCASTER, P.E.

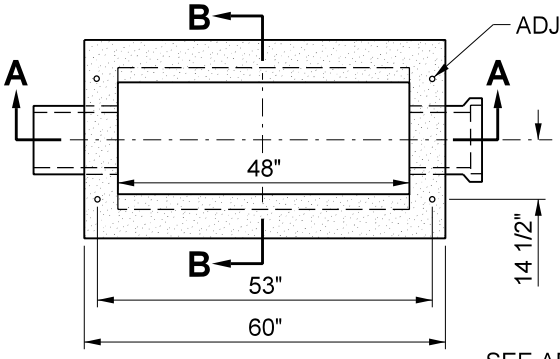
REVISION DESCRIPTION	MARK	DATE	APPROVED

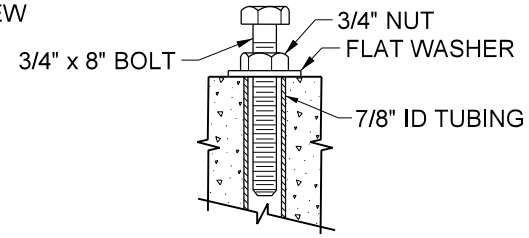
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

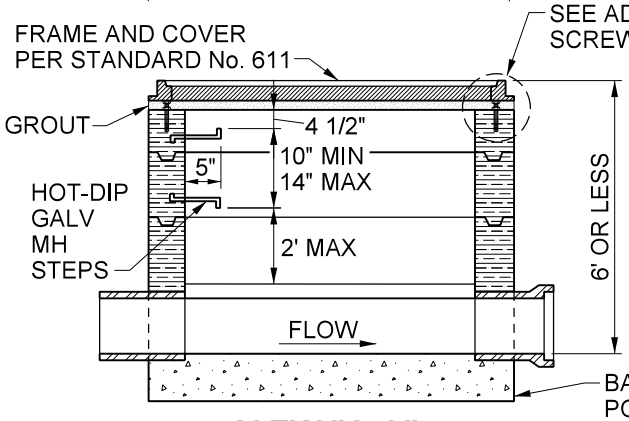
MANHOLE FRAMES AND COVERS

STANDARD No. 608

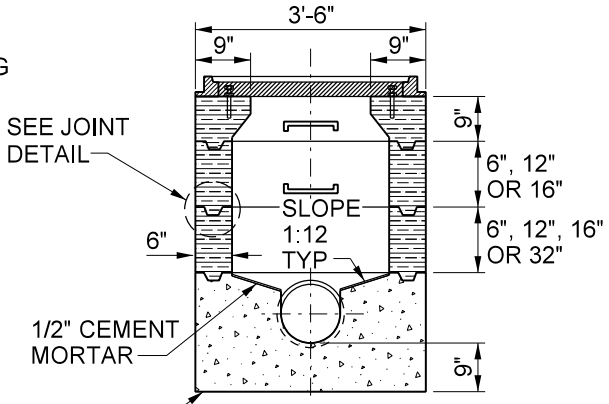




ADJUSTING SCREW DETAIL

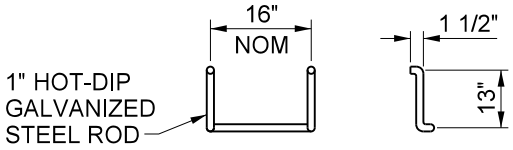


VIEW "A-A"



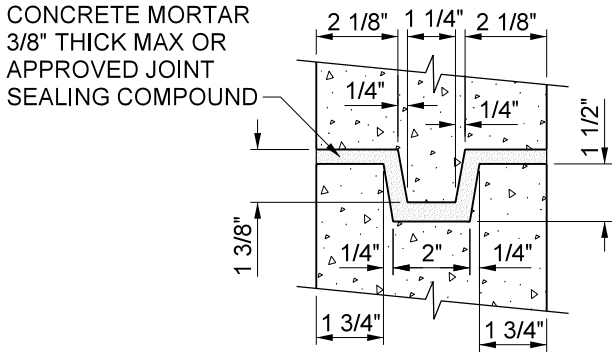
VIEW "B-B"

BASE AND CHANNELS
POURED MONOLITHICALLY

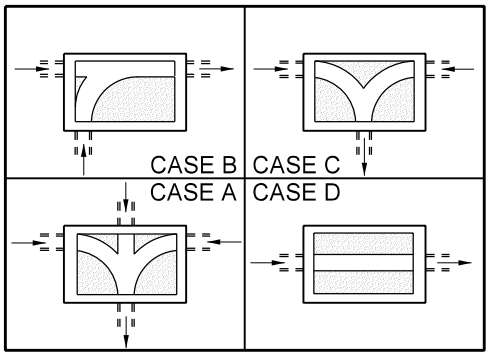


DROP STEP DETAIL

PRECAST OR GROUT STEPS INTO PLACE
AS SHOWN IN SECTIONAL ELEVATION.



JOINT DETAIL



ALTERNATE PLACEMENT OF CHANNELS

NOTES:

1. CONCRETE FOR ALL PRECAST UNITS SHALL BE THOROUGHLY VIBRATED IN FORMS. IT SHALL BE CURED ACCORDING TO APPROVED PRACTICE EITHER BY STEAM, SPRINKLING, MEMBRANE SOLUTION, OR A COMBINATION OF THESE. IT SHALL DEVELOP 3500 PSI OR GREATER IN 28 DAYS. CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.
2. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD. ALL FIELD POURED CONCRETE SHALL BE ALLOWED TO SET 24 HOURS BEFORE PLACING PRECAST UNITS.
3. ALL PRECAST UNITS SHALL BE REINFORCED FOR HS-20 BRIDGE LOADING.
4. TO BE USED FOR DEPTHS LESS THAN 5' FROM MANHOLE TOP TO SEWER PIPE SHELF.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

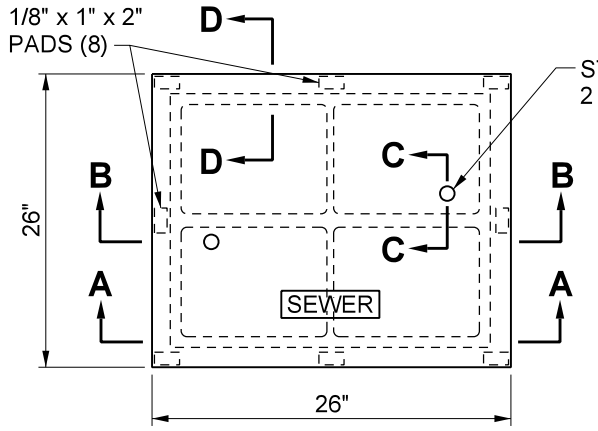
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

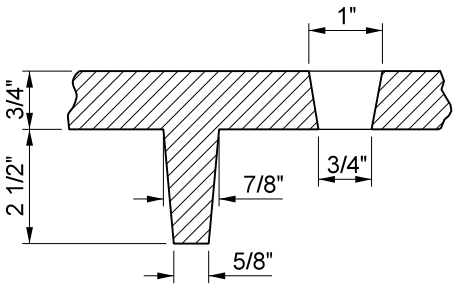
PRECAST RECTANGULAR SHALLOW MANHOLE

STANDARD No. 610

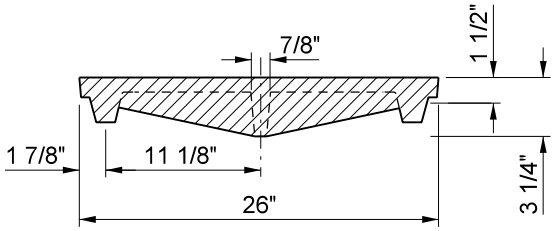


MANHOLE COVER

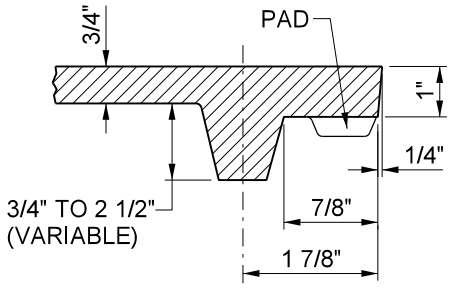
(2 COVERS REQUIRED PER FRAME)



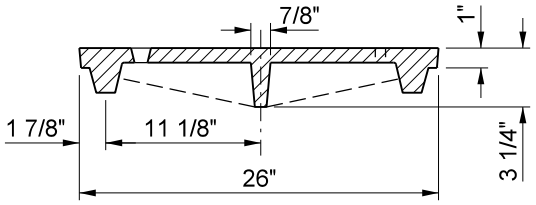
SECTION "C-C"



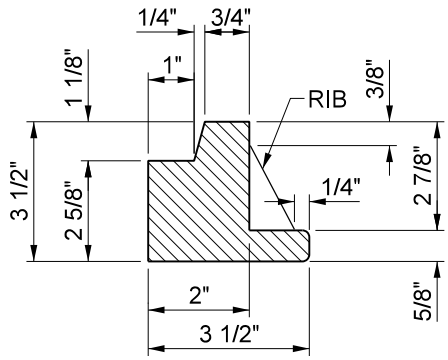
SECTION "A-A"



SECTION "D-D"



SECTION "B-B"



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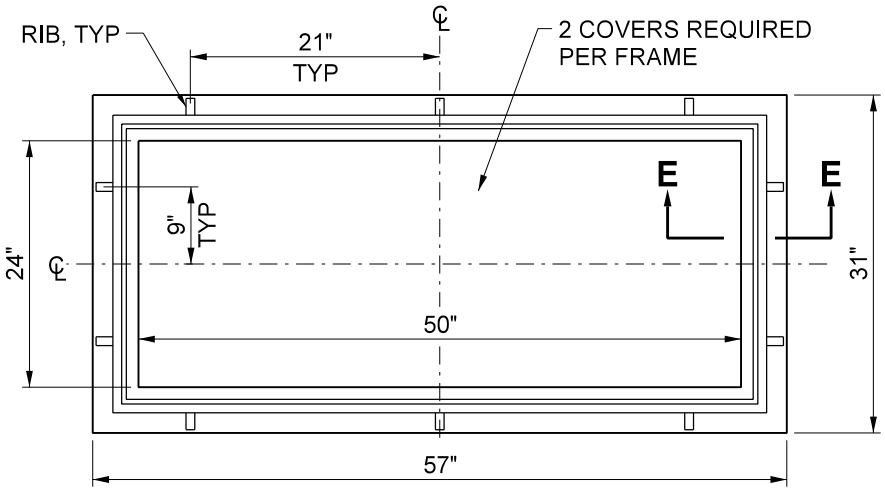


MANHOLE FRAME

NOTE:

EXPOSED METAL & COVER TO BE OT-DIP GALVANIZED AFTER FABRICATION.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

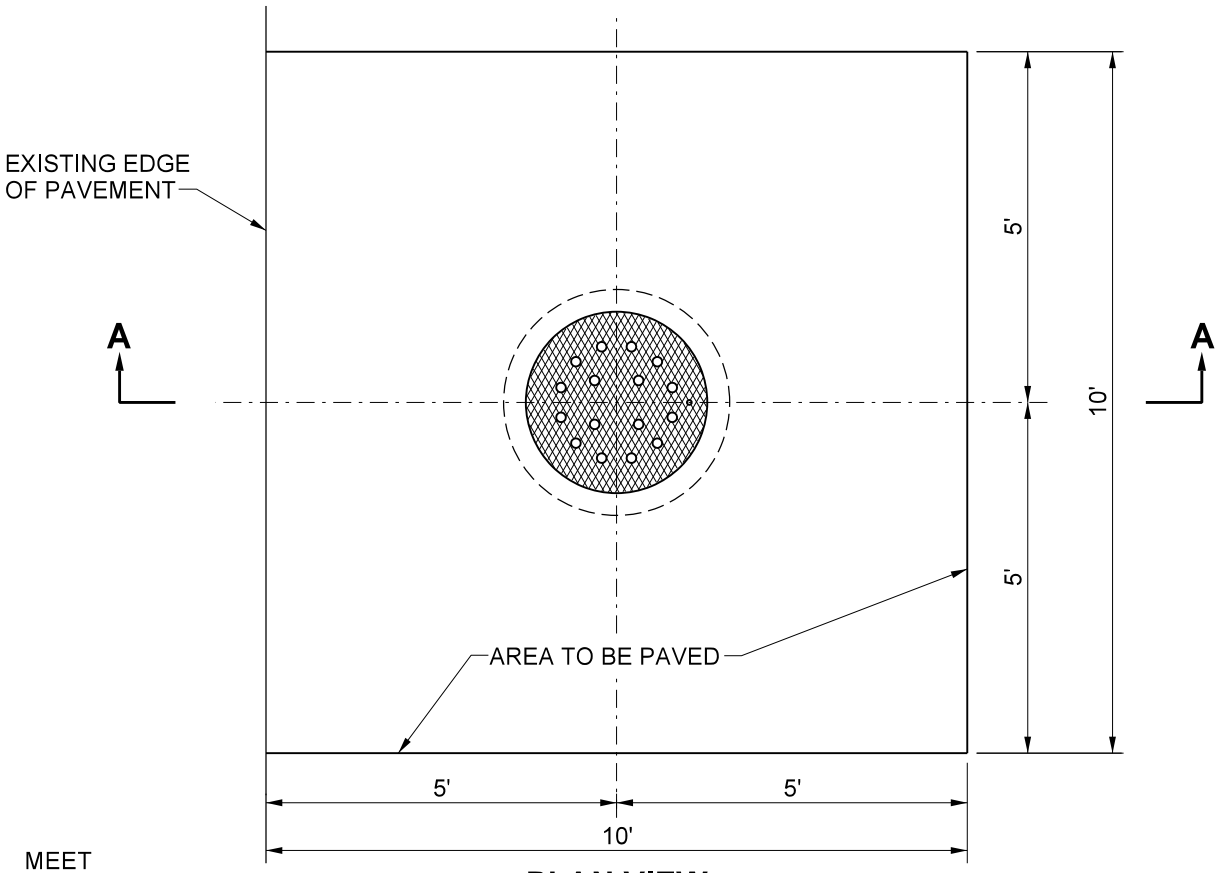
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

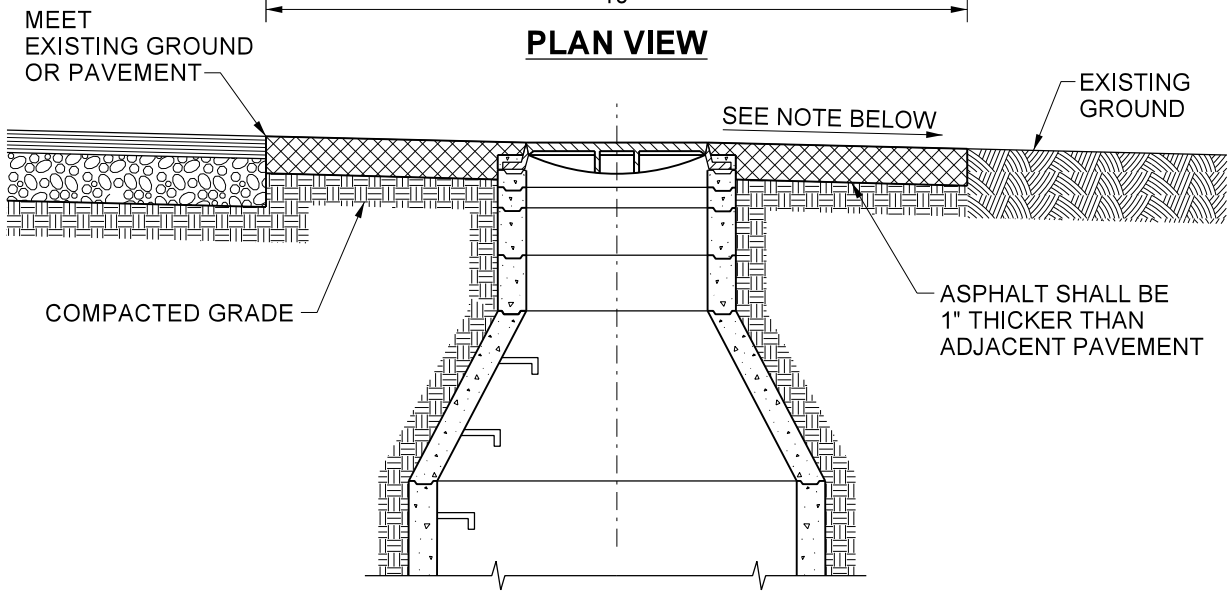
COUNTY OF RIVERSIDE

RECTANGULAR MANHOLE FRAME AND COVER

STANDARD No. 611



PLAN VIEW



SECTION "A-A"

NOTE:
SLOPE WILL CONFORM WITH COUNTY OF RIVERSIDE ROAD IMPROVEMENT STANDARDS AND SPECIFICATIONS, OR MEET EXISTING CONDITIONS AS DIRECTED BY THE COUNTY ENGINEER.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
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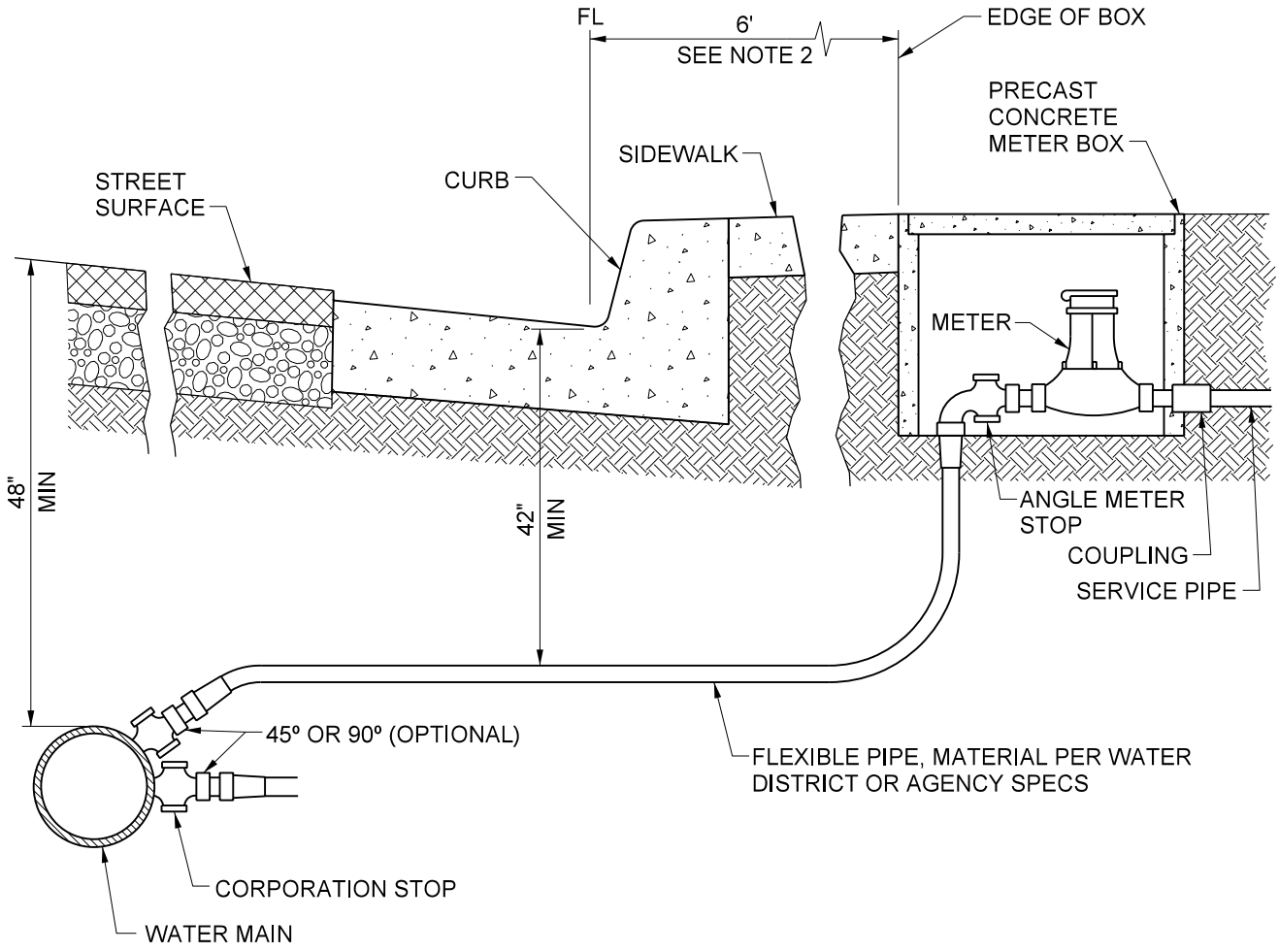
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

PAVING DETAIL AROUND MANHOLE IN UNPAVED AREA

STANDARD No. 612



NOTES:

1. ALL LOT SERVICE LATERALS TO BE INSTALLED PRIOR TO PAVING OF STREET, INCLUDING FIRE SPRINKLER PREVENTION SERVICE.

2. 1.5' WHEN SIDEWALK IS ADJACENT TO R/W.

3. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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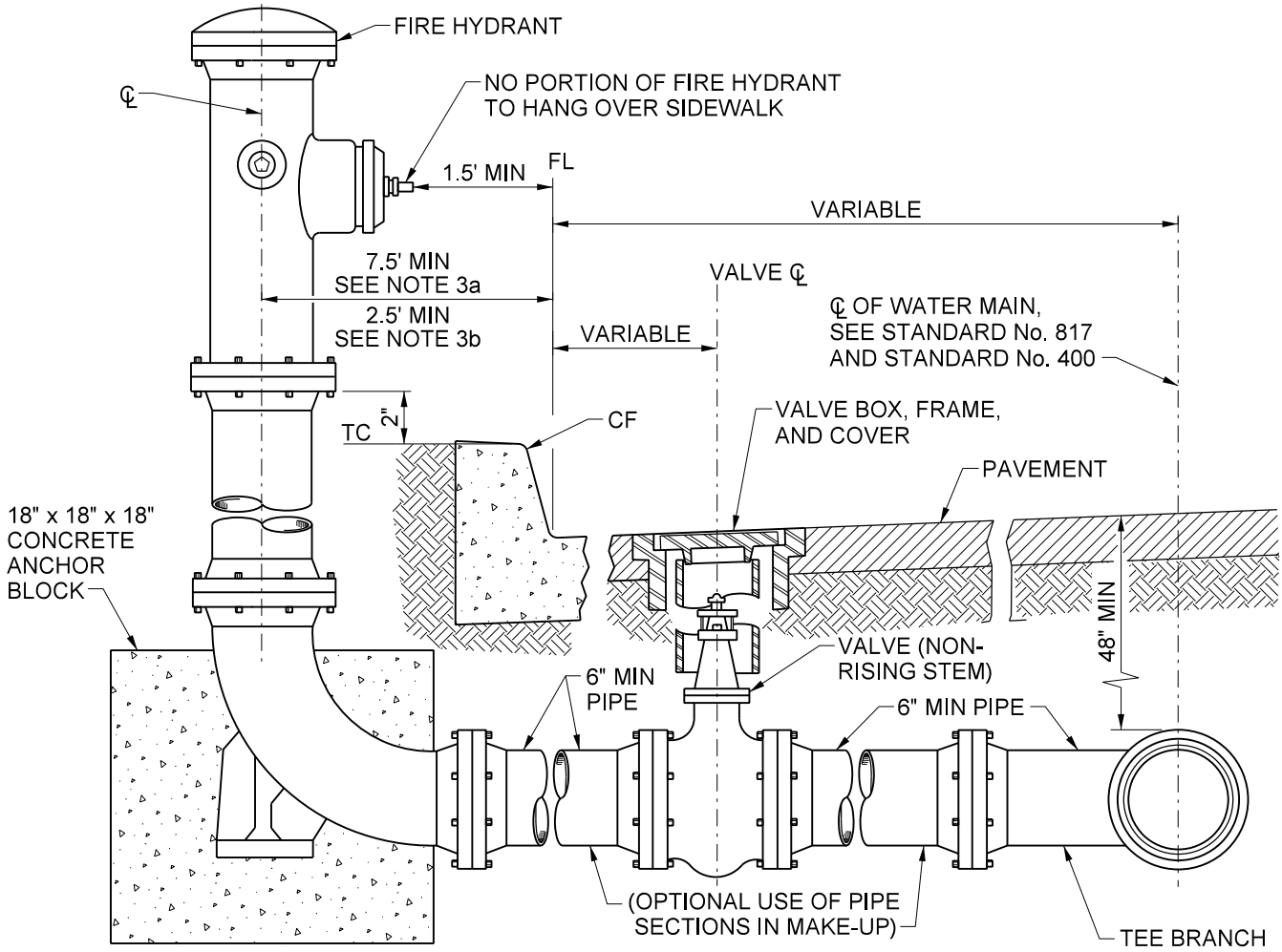
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

WATER METER INSTALLATION

STANDARD No. 700



NOTES:

1. FIRE HYDRANT TO BE AS APPROVED BY SERVING AGENCY.
2. HYDRANTS WILL BE INSTALLED IN ACCORDANCE WITH ORDINANCE 460.
3. FIRE HYDRANT SHALL BE PLACED:
   a) 7.5 FEET MIN FROM CURB FLOW LINE TO THE CENTERLINE OF THE FIRE HYDRANT WHEN THE SIDEWALK IS ADJACENT TO THE CURB AND 6 FEET WIDE FROM THE CURB FLOW LINE.
   b) 2.5 FEET MIN FROM CURB FLOW LINE TO THE CENTERLINE OF THE FIRE HYDRANT WHEN THE SIDEWALK IS ADJACENT TO THE RIGHT OF WAY OR MEANDERING, AND WHEN NO SIDEWALK IS PROPOSED OR EXISTING, AND CURB AND GUTTER IS EXISTING. KEEP AN UNOBSTRUCTED DISTANCE OF 1.5 FEET FROM CURB FLOW LINE TO THE NEAREST PORTION OF THE FIRE HYDRANT.
4. FIRE HYDRANT SHALL NOT BE PLACED WITHIN THE CORNER CUT BACK AT ANY TIME.
5. FIRE HYDRANT ORIENTATION: (REV 1)
   a) SINGLE OUTLET HYDRANTS SHALL BE INSTALLED WITH THE OUTLET FACING THE CURB AND AT RIGHT ANGLES TO THE CURB.
   b) DOUBLE OUTLET HYDRANTS SHALL BE INSTALLED WITH THE OUTLETS FACING THE CURB AND AT FORTY-FIVE (45) DEGREES TO THE CURB.
   c) TRIPLE OUTLET HYDRANTS SHALL BE INSTALLED WITH THE LARGEST OUTLET FACING AT RIGHT ANGLES TO THE CURB.
6. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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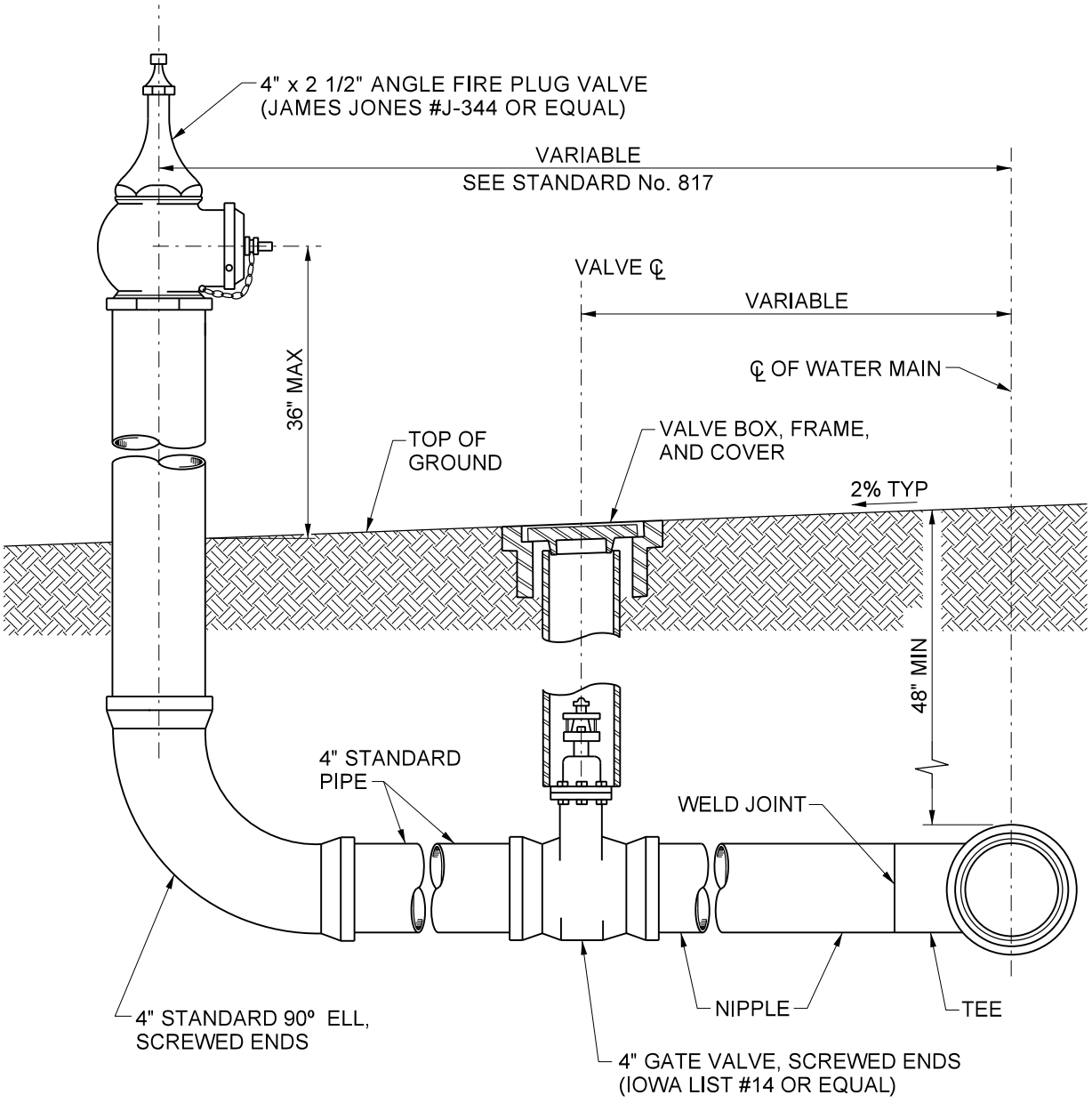
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FIRE HYDRANT INSTALLATION

STANDARD No. 701



NOTE:

HYDRANTS TO BE INSTALLED IN ACCORDANCE WITH ORDINANCES 460 AND 787.4.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

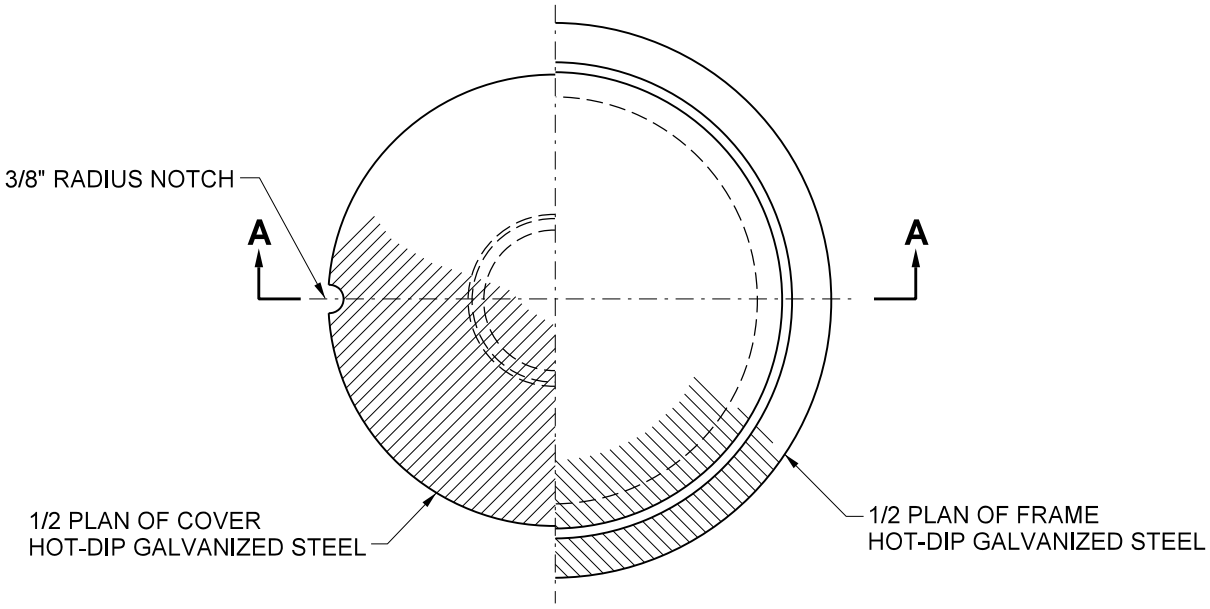
REVISION DESCRIPTION	MARK	DATE	APPROVED

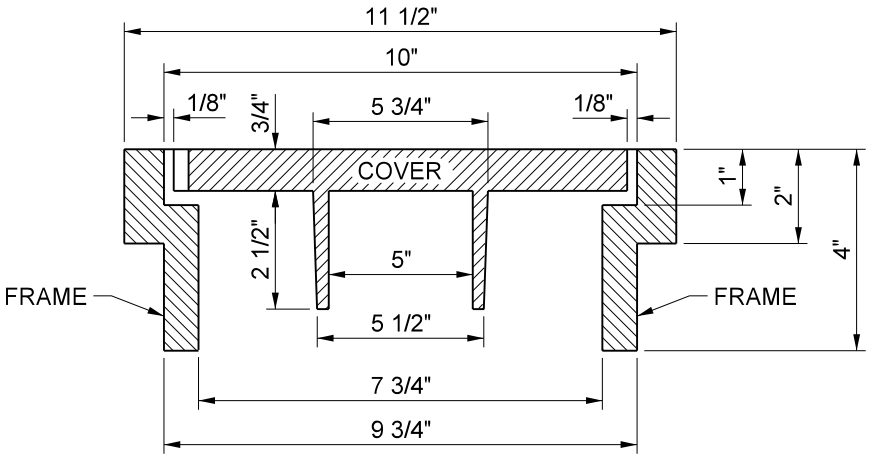
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

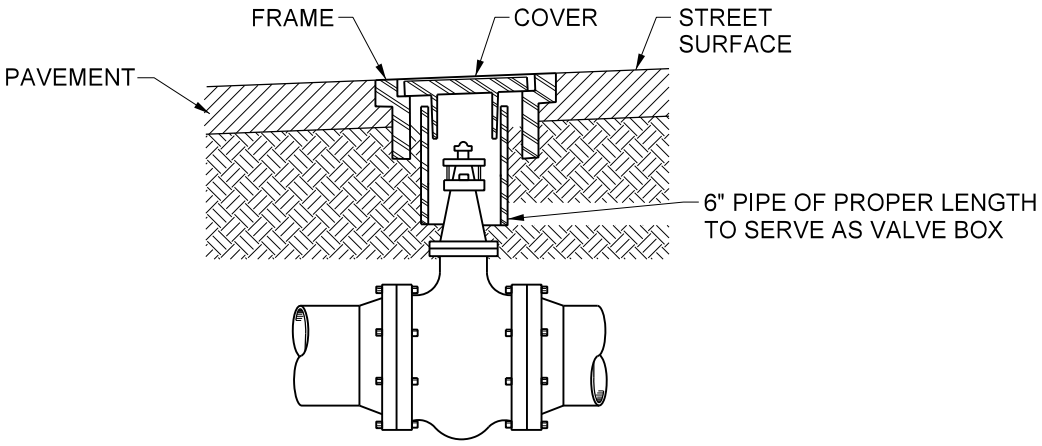
FIRE HYDRANT INSTALLATION (ALTERNATE)

STANDARD No. 702





SECTION "A-A"



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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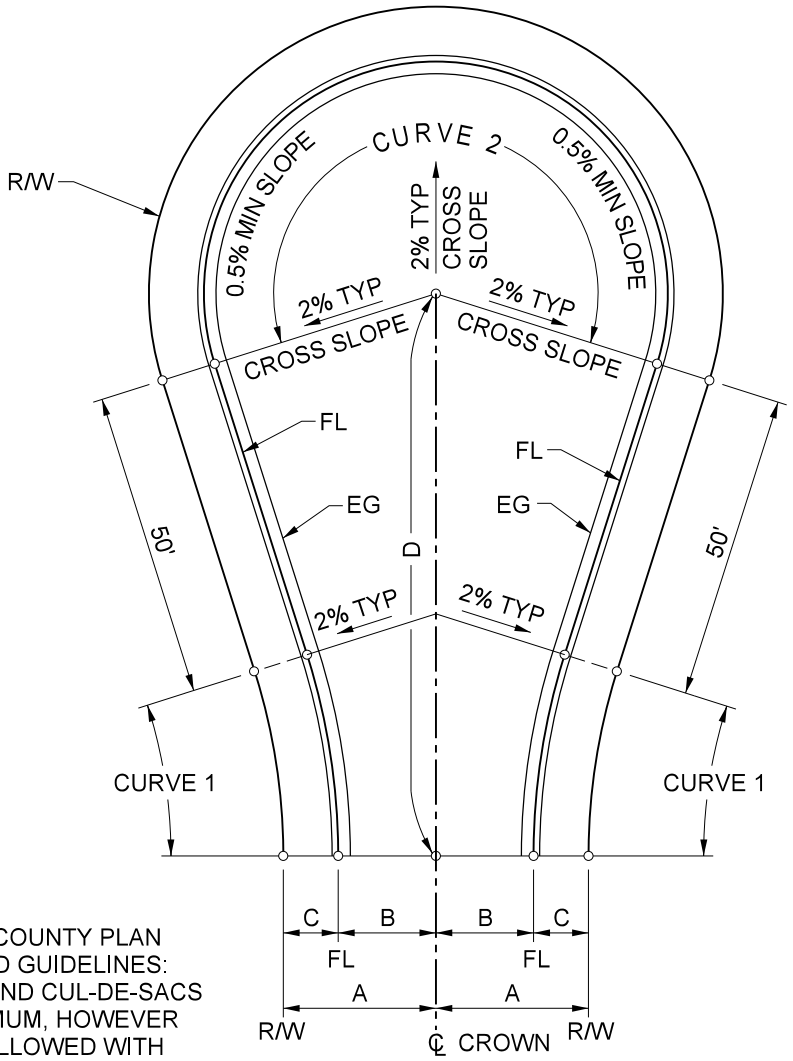
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

VALVE BOX, FRAME AND COVER

STANDARD No. 703



NOTE:
REQUIREMENT PER COUNTY PLAN CHECK POLICIES AND GUIDELINES: MINIMUM FALL AROUND CUL-DE-SACS SHALL BE 1.0% MINIMUM, HOWEVER A 0.5% MINIMUM IS ALLOWED WITH PRIOR APPROVAL.

					CURVE 1					CURVE 2				
					△	FL		R/W		△	FL		R/W	
R/W	A	B	C	D		R	L	R	L		R	L	R	L
50'	25'	16'	9'	92.11'	17°36' 01"	109'	33.48'	100'	30.72'	215°12' 02"	38'	142.73'	47'	176.53'
56'	28'	18'	10'	89.55'	16°18' 41"	110'	31.31'	100'	28.47'	212°37' 22"	38'	141.02'	48'	178.12'
60'	30'	20'	10'	86.63'	15°00' 38"	110'	28.82'	100'	26.20'	210°01' 17"	38'	139.29'	48'	175.95'
66'	33'	22'	11'	83.74'	13°38' 40"	111'	26.44'	100'	23.82'	207°17' 21"	38'	137.48'	49'	177.28'
74'	37'	22'	15'	84.50'	13°34' 05"	115'	27.23'	100'	23.68'	207°08' 10"	38'	137.38'	53'	191.61'
78'	39'	28'	11'	95.39'	17°12' 31"	111'	33.33'	100'	30.03'	214°25' 02"	50'	187.11'	61'	228.28'

SCHEDULE "H"					CURVE 1- EDGE OF AGGREGATE BASE					CURVE 2- EDGE OF AGGREGATE BASE				
—	—	12'		90.00	21° 02' 30"	82.69'	30.37'	—	—	222°04' 59"	38'	147.29'	—	—

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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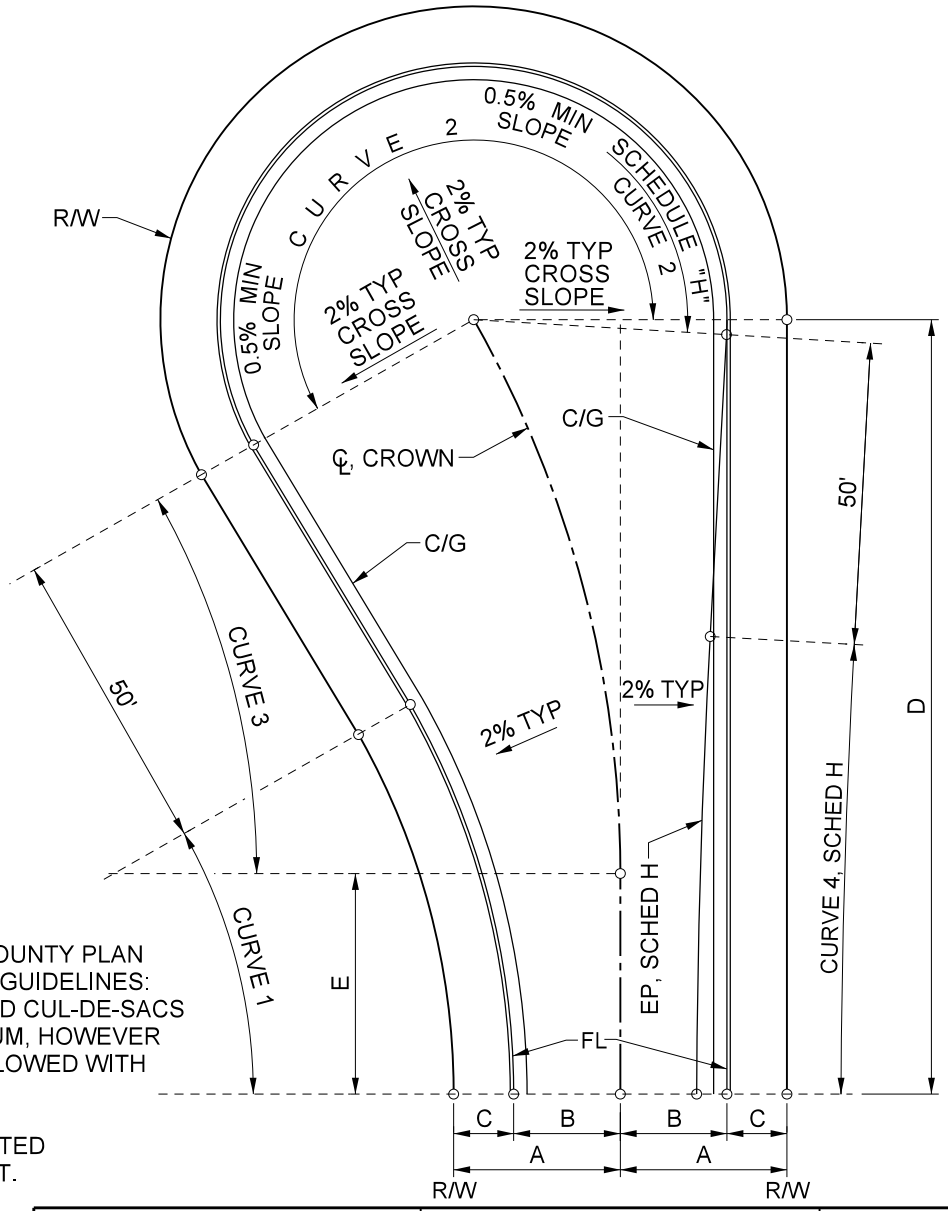
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CUL-DE-SAC

STANDARD No. 800



NOTE:
REQUIREMENT PER COUNTY PLAN CHECK POLICIES AND GUIDELINES: MINIMUM FALL AROUND CUL-DE-SACS SHALL BE 1.0% MINIMUM, HOWEVER A 0.5% MINIMUM IS ALLOWED WITH PRIOR APPROVAL.

OFFSET MAY BE LOCATED EITHER LEFT OR RIGHT.

NOT TO SCALE

R/W	A	B	C	D	E	CURVE 1 △	CURVE 1 FL R	CURVE 1 FL L	CURVE 1 R/W R	CURVE 1 R/W L	CURVE 2 △	CURVE 2 FL R	CURVE 2 FL L	CURVE 2 R/W R	CURVE 2 R/W L	CURVE 3 △	CURVE 3 CROWN R	CURVE 3 CROWN L
50'	25'	16'	9'	116.19'	32.00'	29°39' 31"	109'	56.42'	100'	51.76'	209°39' 31"	38'	139.05'	47'	171.98'	29°39' 31"	170.14'	88.07'
56'	28'	18'	10'	112.87'	31.44'	27°35' 48"	110'	52.98'	100'	48.17'	207°35' 48"	38'	137.68'	48'	173.92'	27°35' 47"	175.79'	84.67'
60'	30'	20'	10'	108.90'	29.45'	25°31' 48"	110'	49.01'	100'	44.56'	205°31' 48"	38'	136.31'	48'	172.18'	25°31' 48"	184.35'	82.14'
66'	33'	22'	11'	104.94'	27.47'	23°20' 19"	111'	45.21'	100'	40.73'	203°20' 19"	38'	134.86'	49'	173.90'	23°20' 19"	195.54'	79.65'
74'	37'	22'	15'	106.15'	28.08'	23°09' 45"	115'	46.49'	100'	40.43'	203°09' 45"	38'	134.74'	53'	187.93'	23°09' 45"	198.48'	80.24'
78'	39'	28'	11'	121.38'	35.69'	28°47' 56"	111'	55.79'	100'	50.26'	208°47' 56"	50'	182.21'	61'	222.30'	28°47' 56"	177.87'	89.41'

SCHEDULE "H"						CURVE 1 - EDGE OF AB					CURVE 2 - EDGE OF AB					CURVE 4 - EDGE OF AB		
-	-	12'	-	113.58'	31.79'	31°24' 45"	98.05'	55.47'	-	-	215°36' 50"	38'	143.00'	-	-	4°12' 05"	831.70'	60.99'

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

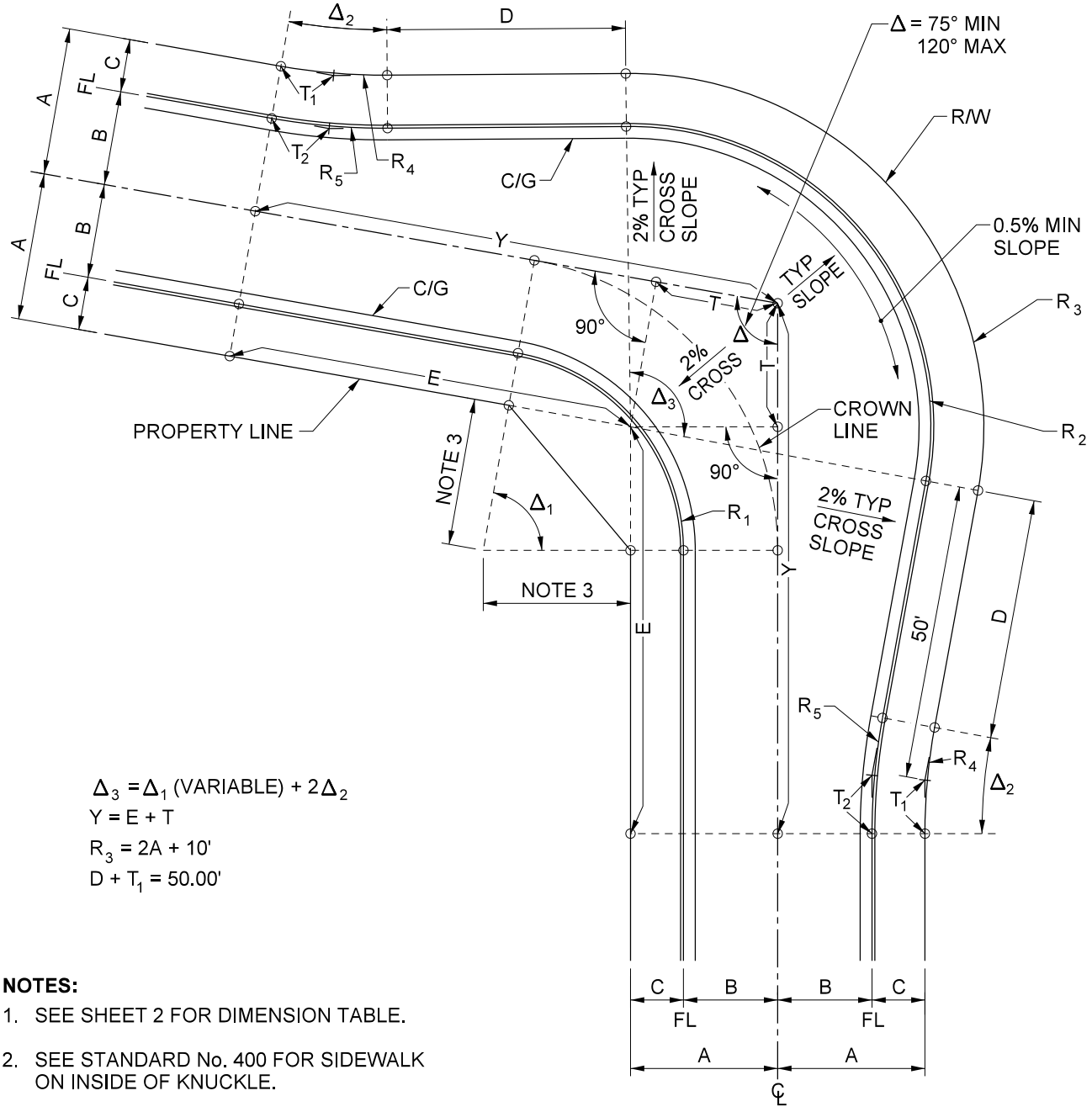
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

OFFSET CUL-DE-SAC

STANDARD No. 800A



$\Delta_3 = \Delta_1$ (VARIABLE) + $2\Delta_2$

$Y = E + T$

$R_3 = 2A + 10'$

$D + T_1 = 50.00'$

NOTES:

1. SEE SHEET 2 FOR DIMENSION TABLE.
2. SEE STANDARD No. 400 FOR SIDEWALK ON INSIDE OF KNUCKLE.
3. 25' REGARDLESS OF R/W WIDTH.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

KNUCKLE

STANDARD No. 801 (1 OF 2)

KNUCKLE DIMENSION TABLE

R/W	ROADWAY IMPROVEMENT WIDTH	A	B	C	D	E	R_1	R_2	R_3	Δ_2	R_4	T_1	R_5	T_2
50'	32'	25'	16'	9'	40.91'	69.09'	35'	51'	60'	10°23'19"	100'	9.09'	109'	9.91'
56'	36'	28'	18'	10'	40.99'	70.00'	35'	56'	66'	10°17'48"	100'	9.01'	110'	9.91'
60'	40'	30'	20'	10'	41.04'	70.60'	35'	60'	70'	10°14'12"	100'	8.96'	110'	9.85'
66'	44'	33'	22'	11'	41.12'	71.49'	36'	65'	76'	10°08'58"	100'	8.88'	111'	9.86'
74'	44'	37'	22'	15'	41.22'	72.66'	40'	69'	84'	10°02'13"	100'	8.88'	115'	10.10'
78'	56'	39'	28'	11'	41.27'	73.23'	36'	77'	88'	9°58'58"	100'	8.73'	111'	9.69'

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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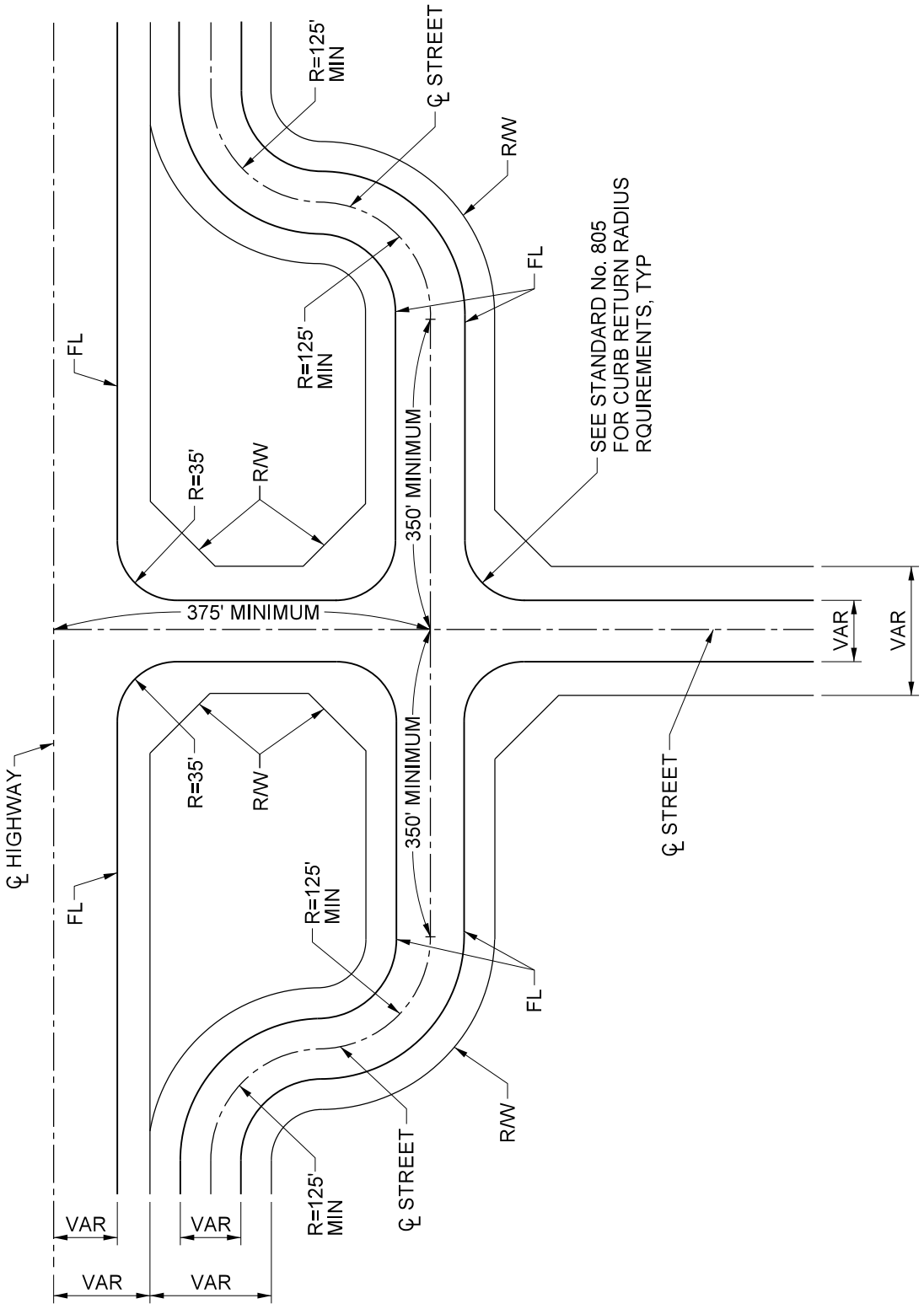
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

KNUCKLE

STANDARD No. 801 (2 OF 2)



NOT TO SCALE

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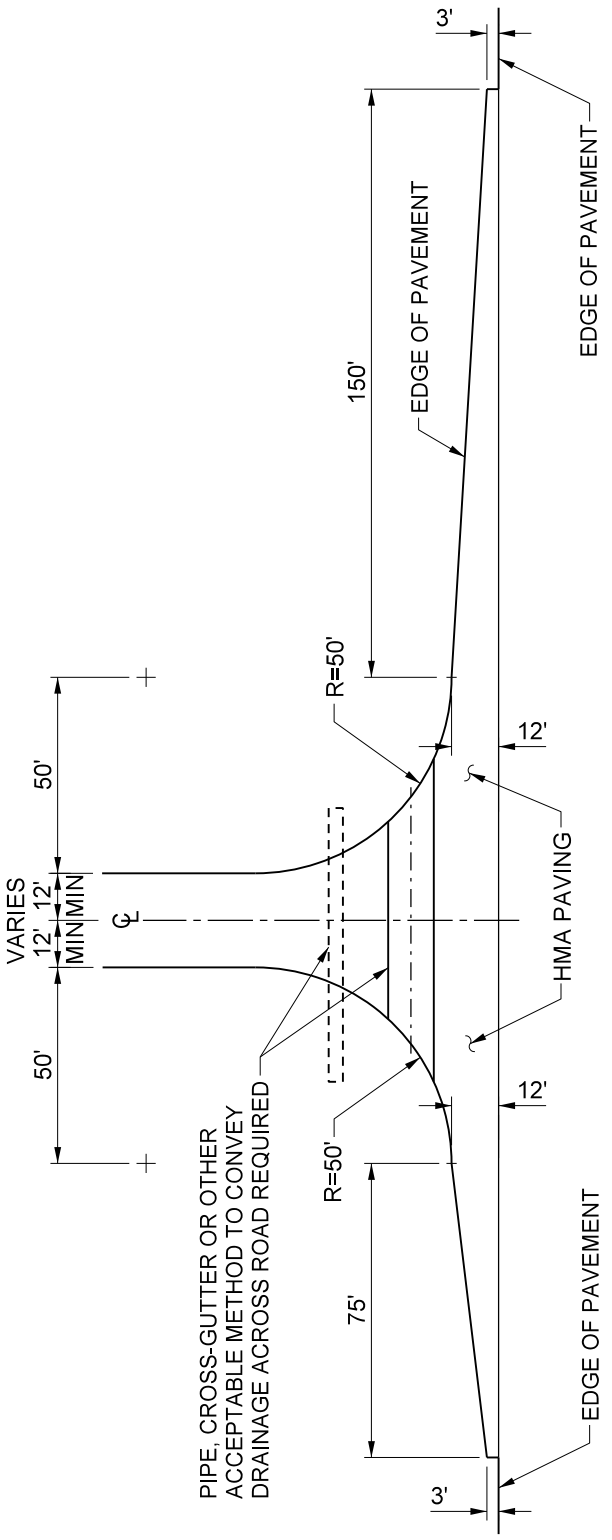
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FRONTAGE ROAD INTERSECTION

STANDARD No. 802



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REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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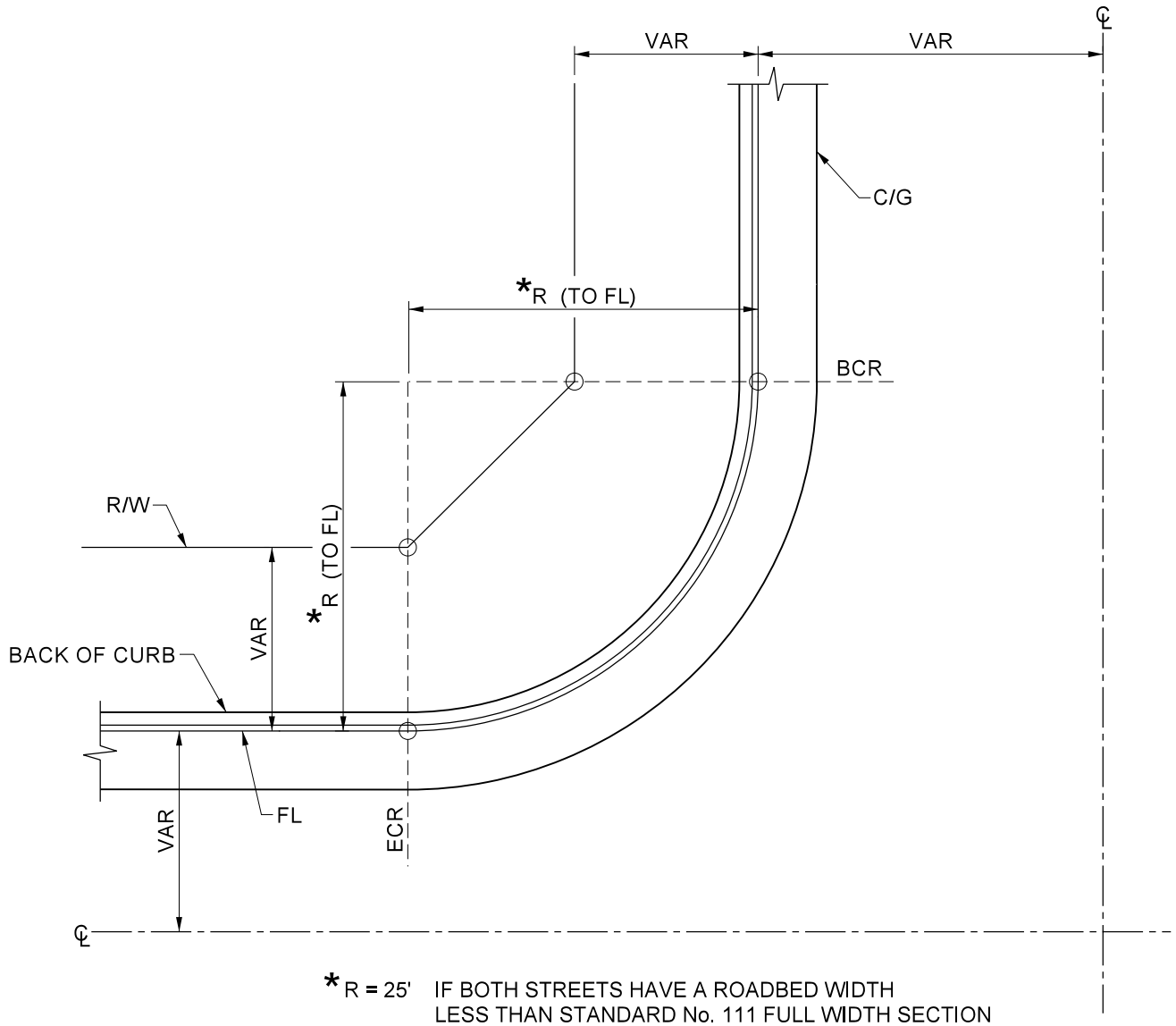
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

PRIVATE ROAD CONNECTION (RURAL AREA)

STANDARD No. 803



*R = 25' IF BOTH STREETS HAVE A ROADBED WIDTH LESS THAN STANDARD No. 111 FULL WIDTH SECTION (INDUSTRIAL COLLECTOR, 78' R/W)

*R = 35' IF EITHER STREET HAS A ROADBED WIDTH GREATER THAN OR EQUAL TO STANDARD No. 111 FULL WIDTH SECTION (INDUSTRIAL COLLECTOR 78' R/W)

NOTES:

1. SEE SHEET 2 OF 2 FOR EXTENDED CORNER CUT BACK REQUIREMENTS FOR SCHEDULE A SUBDIVISIONS WITH ENTRY STATEMENTS PER COUNTYWIDE DESIGN GUIDELINES.

2. THE CORNER CUT BACK MAY NEED TO BE SET FURTHER FROM THE CURB RETURN IN ORDER TO MEET DISTANCE REQUIREMENTS FOR CURB RAMPS AND LANDINGS. SEE STD No. 403 - CASE A.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
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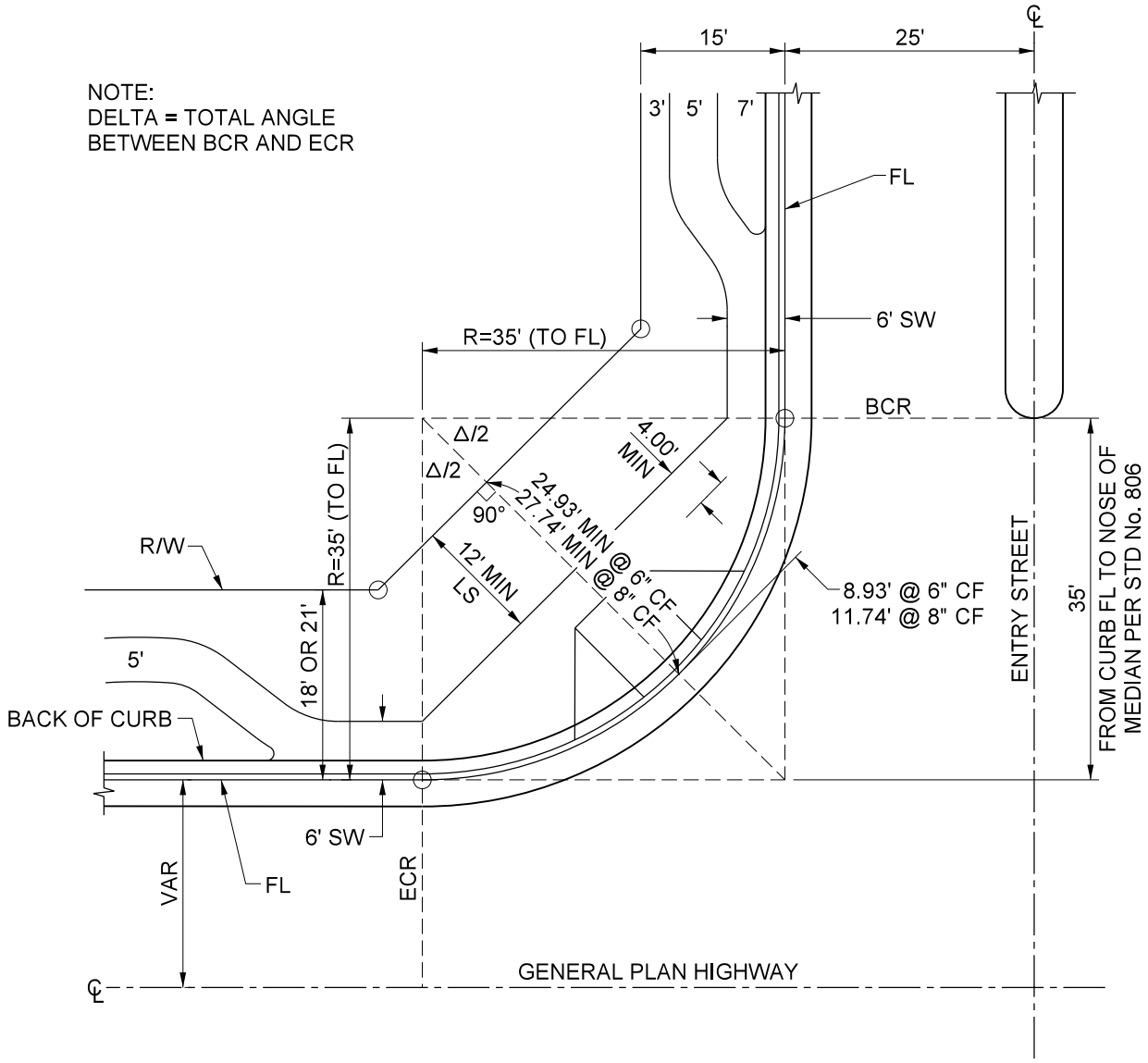
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

PROPERTY LINE CORNER CUT-BACK, CURB RETURN RADIUS

STANDARD No. 805 (1 OF 2)



NOTE:

1. USE THIS EXTENDED CORNER CUT BACK FOR SCHEDULE A SUBDIVISIONS AT ALL INTERSECTIONS OF GENERAL PLAN HIGHWAYS CLASSIFIED AS SECONDARY HIGHWAY OR HIGHER WITH ALL DESIGNATED TRACT ENTRANCES. THE CORNER CUTBACK RIGHT OF WAY LINE WILL BE BE A MINIMUM OF 24.93 FEET WITH 6 INCH CURB FACE OR 27.74 FEET WITH 8 INCH CURB FACE FROM THE CURB FLOWLINE AS REQUIRED PER EXHIBIT C OF THE APPROVED COUNTYWIDE DESIGN GUIDELINES.

2. MEDIAN FOR PRIVATE ENTRY STREET SHALL BE APPROVED BY THE TRANSPORTATION DEPARTMENT.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
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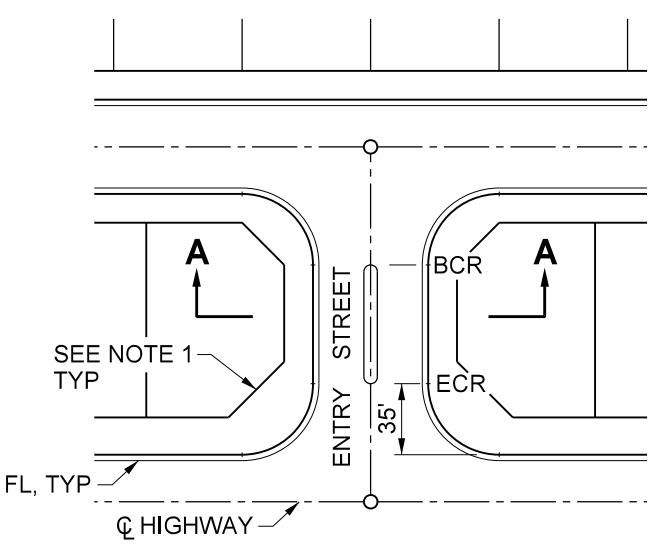
CIVIL
STATE OF CALIFORNIA

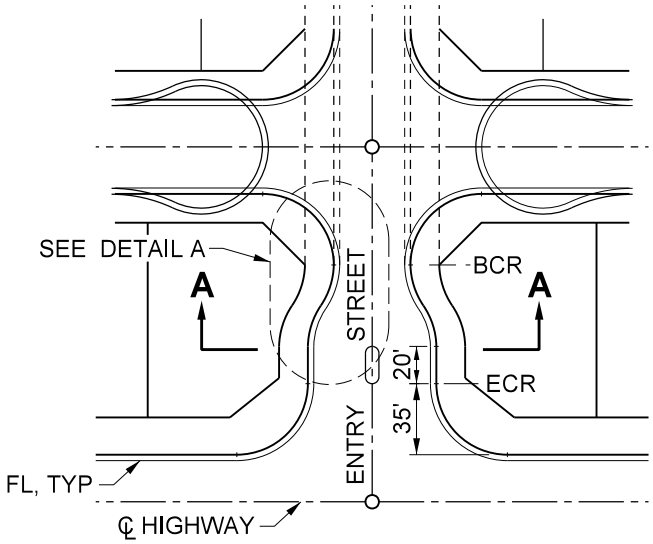
COUNTY OF RIVERSIDE

PROPERTY LINE CORNER CUT-BACK, CURB RETURN RADIUS

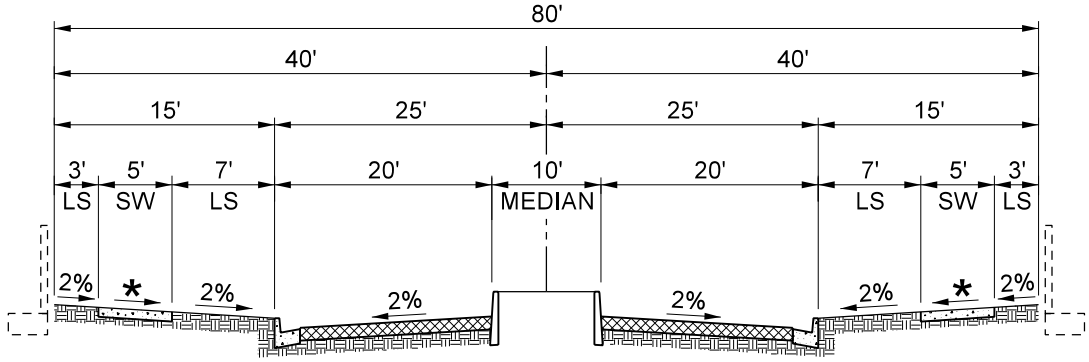
STANDARD No. 805 (2 OF 2)



GENERAL PLAN HIGHWAY

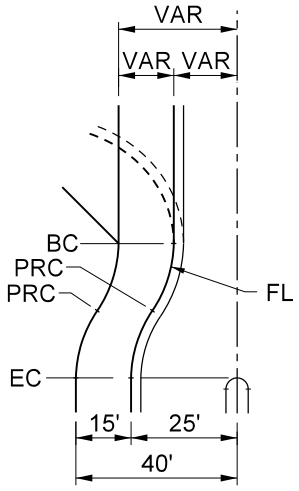


GENERAL PLAN HIGHWAY



SECTION "A-A"

* CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)



DETAIL "A"

NOTE:

1. EXTENDED CORNER CUT BACK PER STANDARD No. 805 (2 OF 2).

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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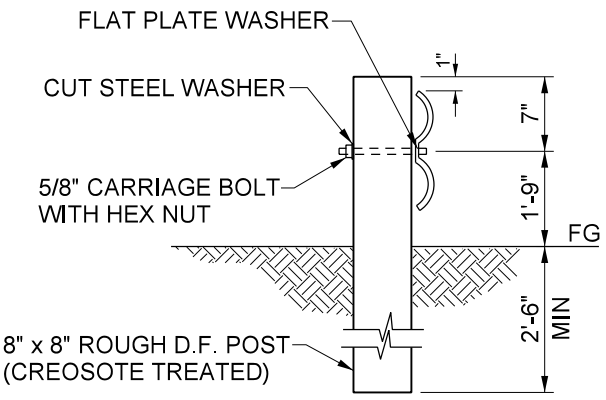
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

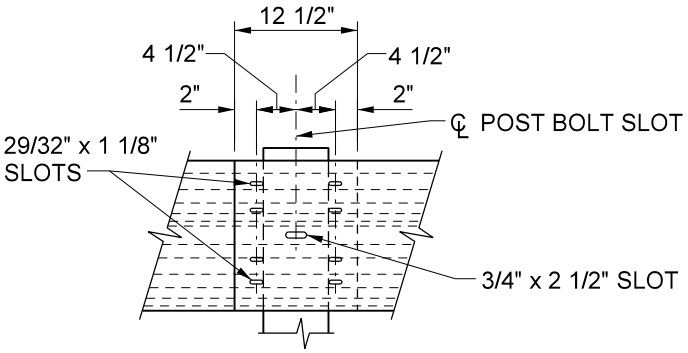
COUNTY OF RIVERSIDE

ENTRY STREET
50' IMP / 80' R/W

STANDARD No. 806



TYPICAL POST SPACING 12'-6" OC

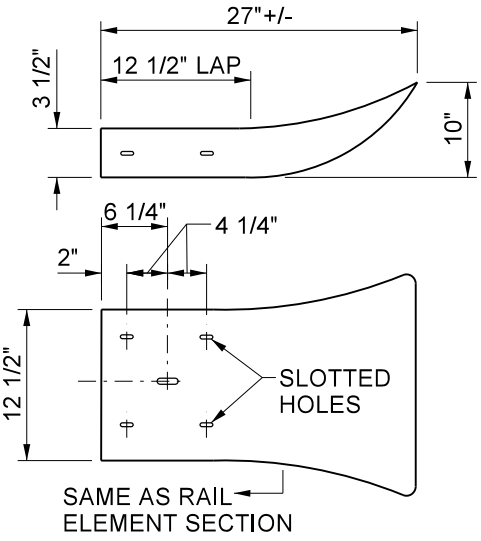


5/8" x 1 1/4" BUTTON HEAD OVAL SHOULDER BOLTS WITH 1 1/4" RECESSED HEX NUTS - TOTAL: 8 PER SPLICE AND 4 PER TERMINAL SECTION.

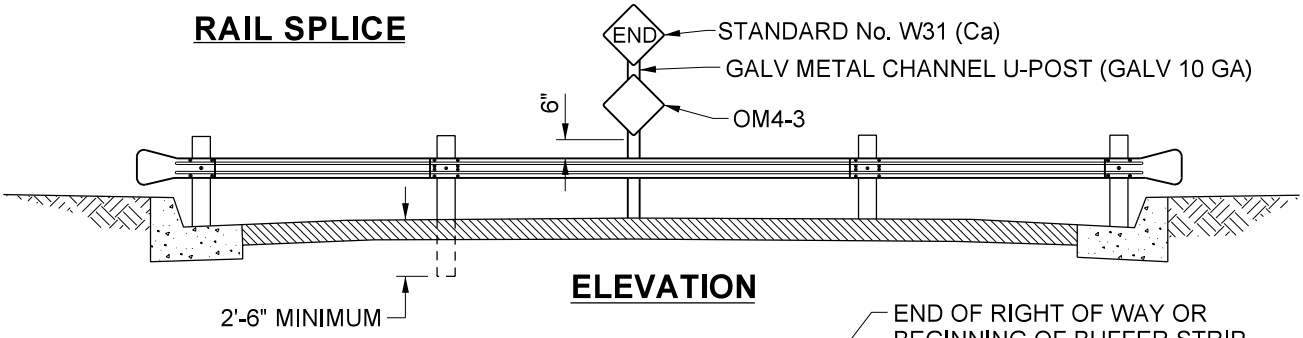
RAIL SPLICE

NOTES:

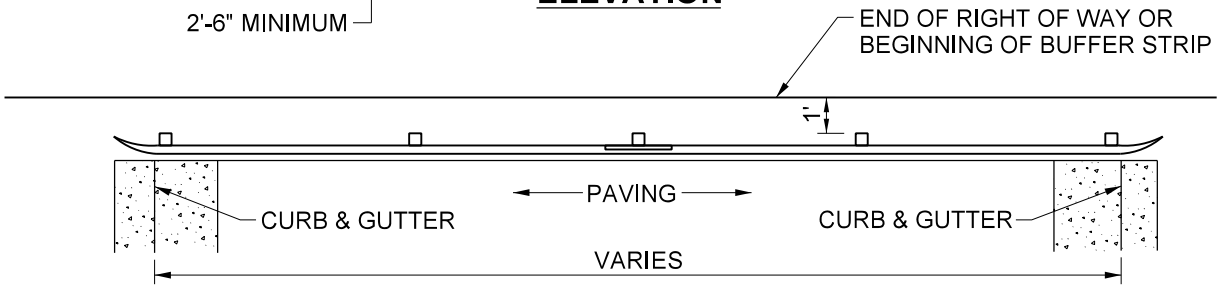
1. GUARD RAIL ELEMENT MAY BE EITHER STEEL OR ALUMINUM.
2. STEEL RAIL SHALL BE HOT-DIP GALVANIZED PER ASTM DESIGNATION A-123.
3. STEEL RAIL THICKNESS SHALL BE MIN 12 GAUGE.
4. ALUMINUM RAIL THICKNESS SHALL BE MIN 0.105 IN.
5. MEET CURRENT CALTRANS STANDARDS OR DESIGNATE BY ENGINEER.



TERMINAL SECTION



ELEVATION



PLAN

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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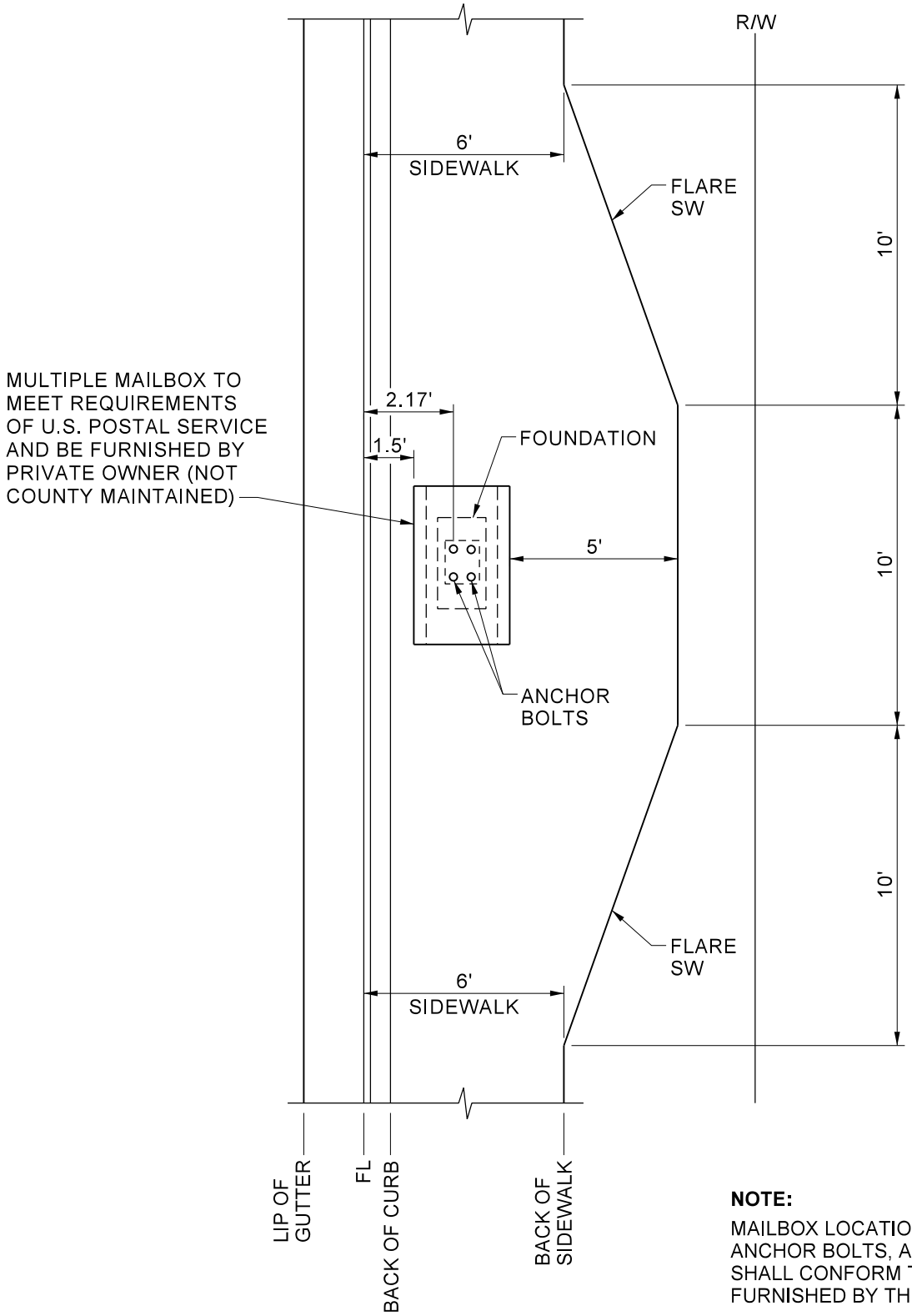
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

BARRICADE

STANDARD No. 810



NOTE:

MAILBOX LOCATION, FOUNDATION ANCHOR BOLTS, AND BOLT HOLES SHALL CONFORM TO SPECIFICATIONS FURNISHED BY THE POSTMASTER.

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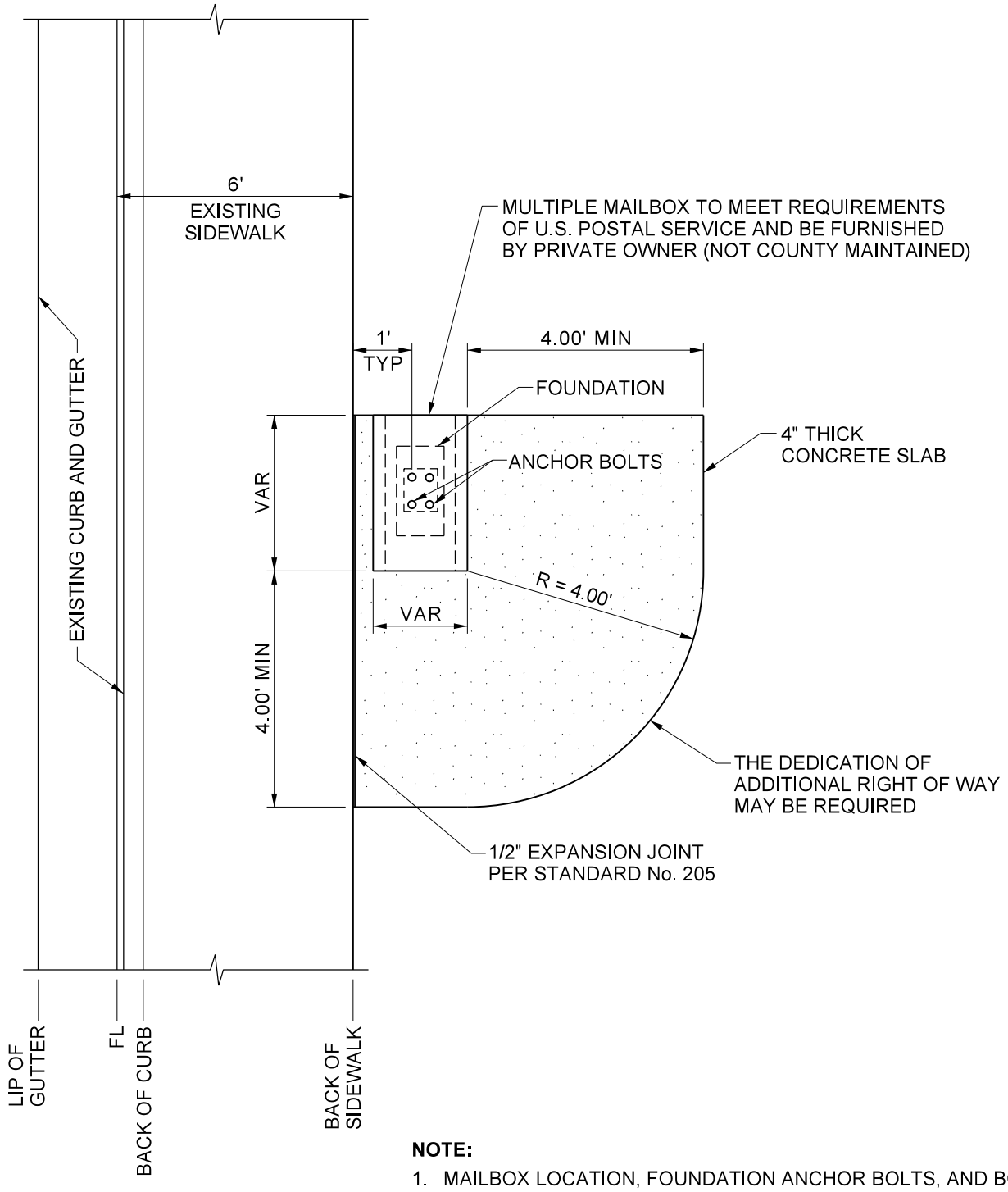
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

MULTIPLE MAILBOX INSTALLATION FOR NEW SIDEWALK

STANDARD No. 812



NOTE:

1. MAILBOX LOCATION, FOUNDATION ANCHOR BOLTS, AND BOLT HOLES SHALL CONFORM TO SPECIFICATIONS FURNISHED BY THE POSTMASTER. MAILBOX FOUNDATION AND SLAB TO BE A MONOLITHIC POUR.

NOT TO SCALE

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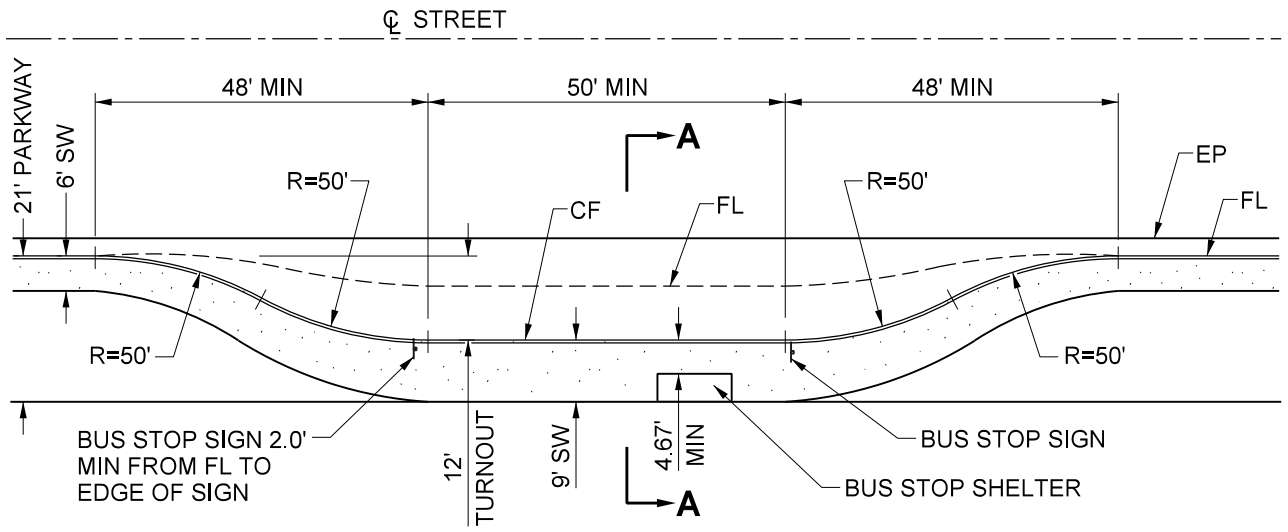
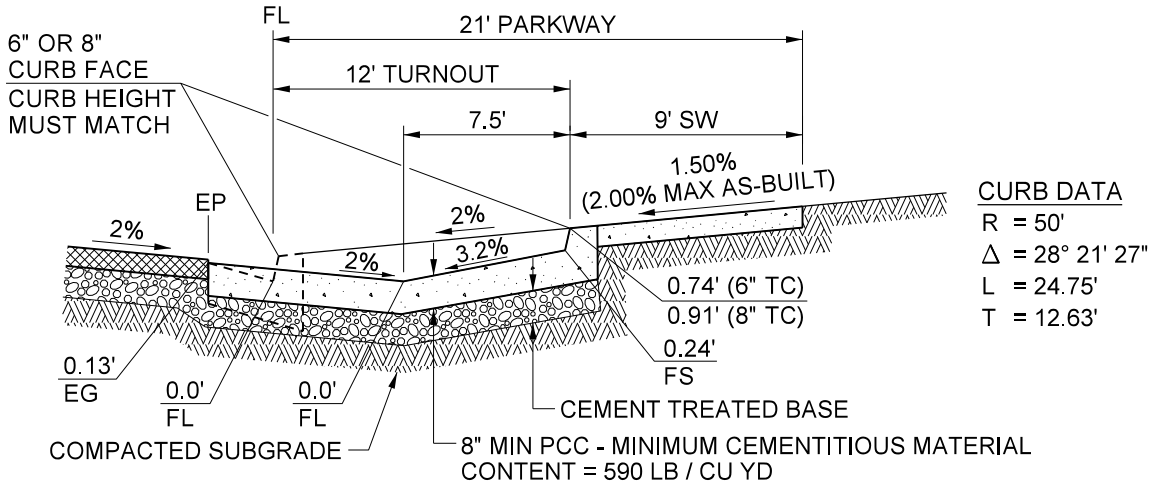
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

MULTIPLE MAILBOX INSTALLATION FOR EXISTING SIDEWALK

STANDARD No. 813

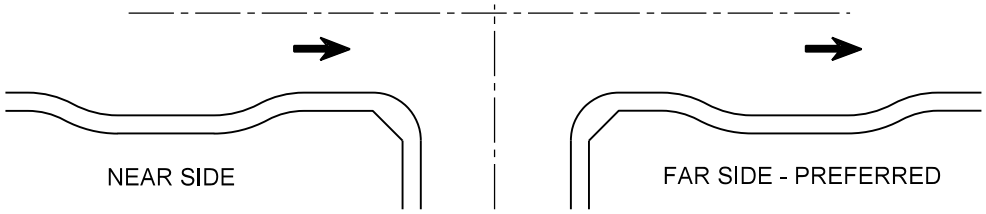




SECTION "A-A"

NOTES:

1. THICKNESS OF PCC AND BASE DEPENDS UPON ADT VOLUME AND SOIL TYPE. STRUCTURAL SECTION CALCULATIONS ARE REQUIRED.
2. LOCATION OF BUS TURNOUT SHOULD BE AS APPROVED BY THE TRANSPORTATION DEPARTMENT, AND IN CONSULTATION WITH THE APPROPRIATE TRANSIT AGENCY.
3. FAR SIDE BUS TURNOUT IS THE PREFERRED LOCATION:



4. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

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MARK ALAN LANCASTER
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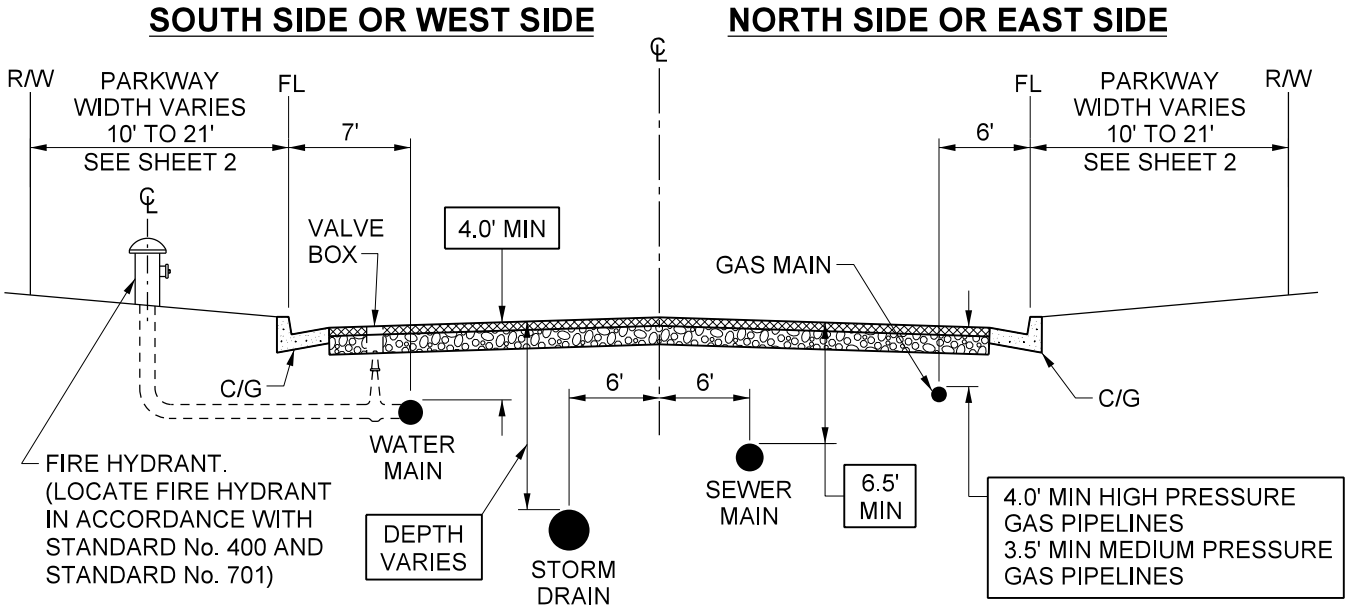
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

BUS TURNOUT

STANDARD No. 814



TYPICAL SECTION

NOTES:

1. LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER, AND SHOWN ON ANY PLANS SUBMITTED TO THE TRANSPORTATION DEPARTMENT FOR APPROVAL.
2. CHANGES MAY BE PERMITTED BY THE DIRECTOR OF TRANSPORTATION IN CASES OF CONFLICTING FACILITIES.
3. CONFLICTS BETWEEN UTILITY COMPANY FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITY COMPANIES.
4. ABOVE-GROUND FACILITIES SHALL BE LOCATED BEHIND SIDEWALK WHEN SIDEWALK IS ADJACENT TO CURB.
5. FOR TREE INSTALLATION ON LOCAL STREETS, TREES SHALL BE LOCATED 2 FEET CLEAR OUTSIDE OF R/W WHEN SIDEWALK IS ADJACENT TO CURB.
6. ALL UTILITIES UNDER PAVEMENT OR CURB & GUTTER SHALL BE A MINIMUM OF 3.5' BELOW THE FINISHED GRADE OF THE STREET.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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MARK LANCASTER, P.E.

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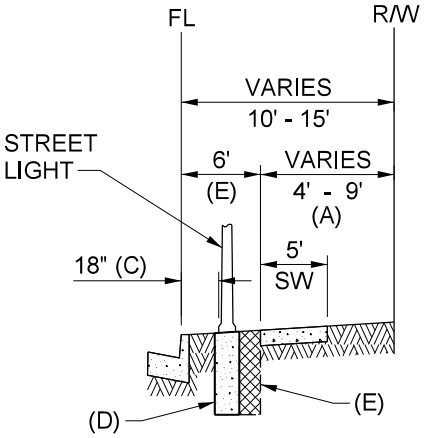
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

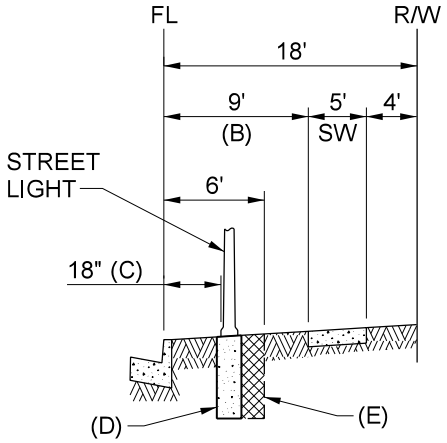
COUNTY OF RIVERSIDE

UNDERGROUND UTILITY LOCATIONS

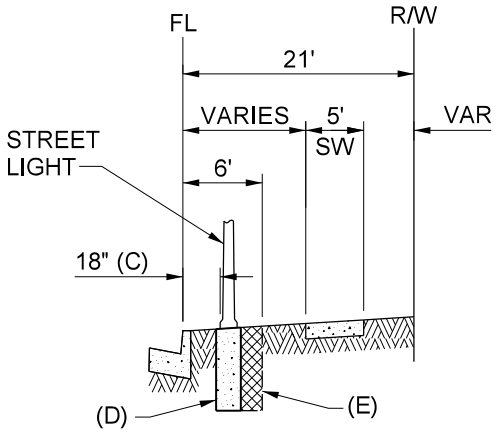
STANDARD No. 817 (1 OF 2)



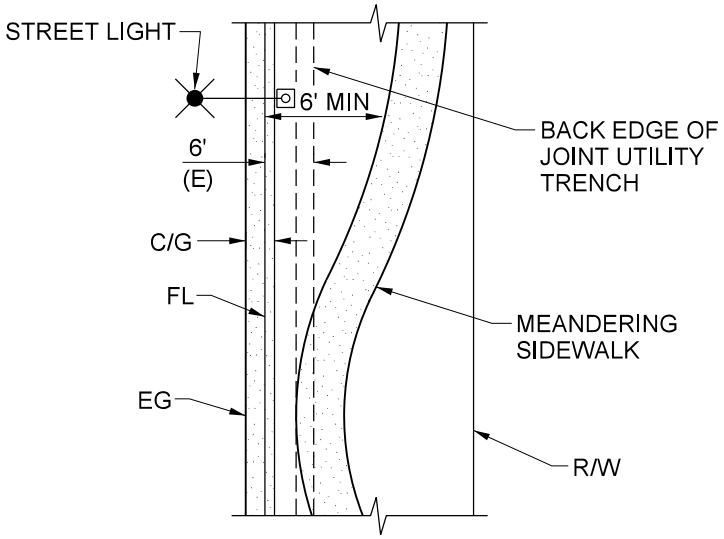
10' - 15' PARKWAY



18' PARKWAY



SECTION



PLAN

21' PARKWAY

NOTES:

(A) SIDEWALK LOCATION VARIES.

(B) 9 FEET FROM FLOWLINE TO FRONT OF SIDEWALK.

(C) 1.5 FEET FROM FLOWLINE TO BASE OF STREET LIGHT. SEE STANDARDS No. 1000 & 1001.

(D) STREET LIGHT FOUNDATION: SEE STANDARD No. 1000 OR 1001 FOR RESIDENTIAL AND ARTERIAL LIGHTING DETAILS.

(E) 6' FROM FLOW LINE TO BACK OF JOINT UTILITY TRENCH. ADJUST TRENCH TO AVOID CONFLICTS.

(F) ALL UNDERGROUND UTILITIES BETWEEN CURB AND R/W SHALL BE MINIMUM OF 2.5' BELOW TOP OF CURB GRADE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
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COUNTY OF RIVERSIDE

UNDERGROUND UTILITY LOCATIONS

STANDARD No. 817 (2 OF 2)

NOT TO SCALE

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MARK ALAN LANCASTER
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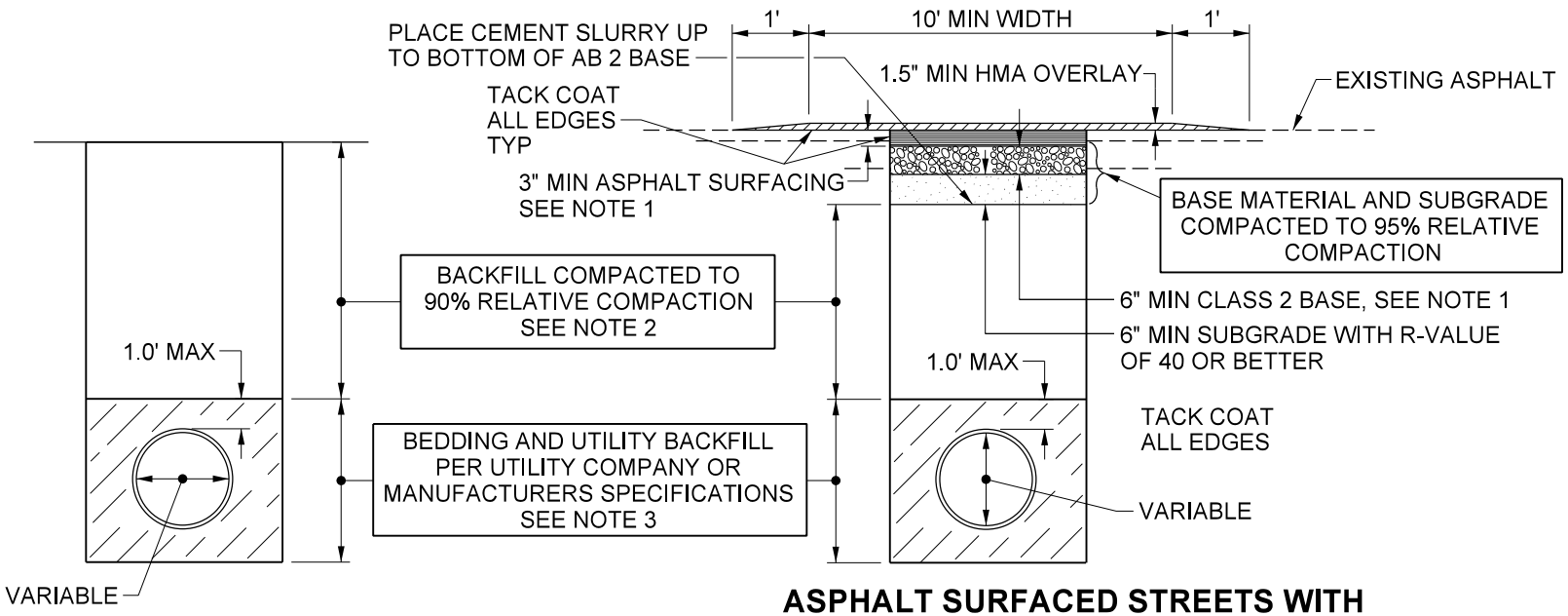
STATE OF CALIFORNIA

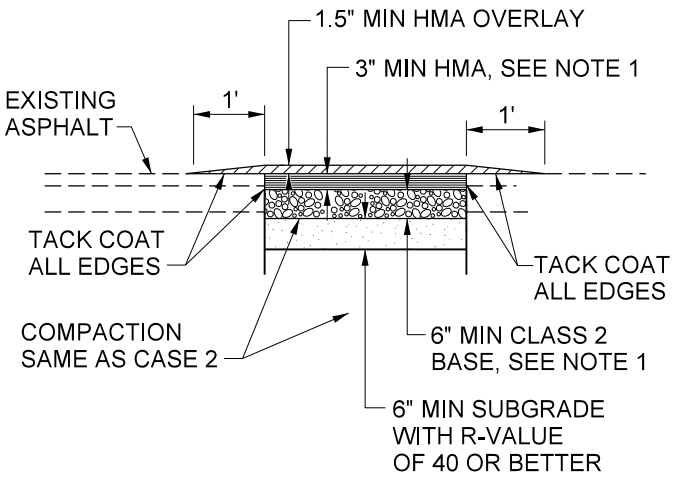
COUNTY OF RIVERSIDE

UTILITY TRENCH BACKFILL

STANDARD No. 818



NON-ASPHALT SURFACED AREAS CASE 1

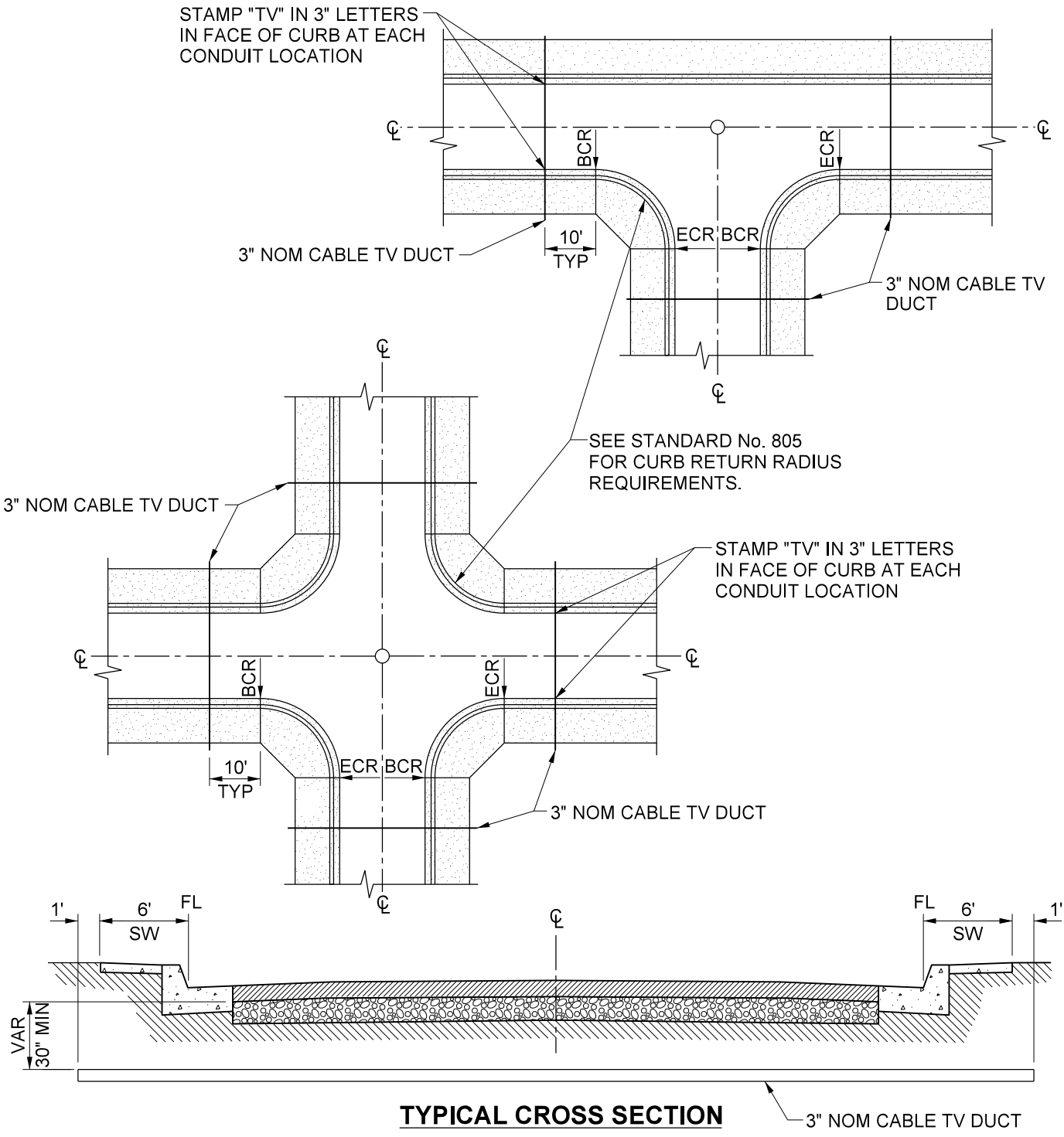


ASPHALT SURFACED STREET WITHOUT OVERLAY PERPENDICULAR INSTALLATION CASE 3

ASPHALT SURFACED STREETS WITH OVERLAY PARALLEL INSTALLATION CASE 2

NOTES:

1. REPLACE STRUCTURAL SECTION AS FOLLOWS:
   SURFACING: EXISTING THICKNESS; OR 3" MIN HMA.
   BASE: CLASS 2 AB IN SAME THICKNESS AS EXISTING BASE.
   MATERIAL, 6" MIN AS DIRECTED BY THE INSPECTOR.
   IF A GEOSYNTHETIC MATERIAL (GEOGRID) IS ENCOUNTERED, TRENCH THROUGH GEOGRID AND PERFORM ONE OF THE FOLLOWING:
   1) REPLACE GEOGRID AT SAME ELEVATION WITH BUTT JOINT;
   2) DOUBLE THE THICKNESS OF EXISTING BASE; OR
   3) REPLACE EXISTING BASE WITH CEMENT SLURRY.
2. NO PONDING OR JETTING ALLOWED. A 1/2 SACK CEMENT SLURRY FOR DEEP(>4') AND 1 SACK CEMENT SLURRY FOR SHALLOW (<4') TRENCHES.
3. WHEN SOFT, SPONGY OR UNSUITABLE MATERIAL IN ENCOUNTERED, SUCH MATERIAL SHALL BE REMOVED TO THE LIMITS DIRECTED BY THE DIRECTOR OF TRANSPORTATION OR AFFECTED UTILITY COMPANY AND THE RESULTING EXCAVATION BACKFILLED WITH PIPE BEDDING MATERIAL.
4. WHEN REQUIRED IN THE ENCROACHMENT PERMIT OR AS DIRECTED BY THE INSPECTOR, THE NEW HMA SHOWN IN CASE 2 AND CASE 3 SHALL BE PLACED FLUSH WITH THE EXISTING ASPHALT. ADDITIONAL 1-FOOT GRNDING OF THE EXISTING ASPHALT BEYOND THE EXCAVATION LIMIT OF THE TRENCH SHALL BE REQUIRED AND AS DETERMINED BY THE COUNTY.



TYPICAL CROSS SECTION

NOTE:

1. 3" NOM CABLE TV DUCTS SHALL BE SCHEDULE 80 PVC, RIGID GALVANIZED STEEL CONDUITS, OR APPROVED EQUAL.

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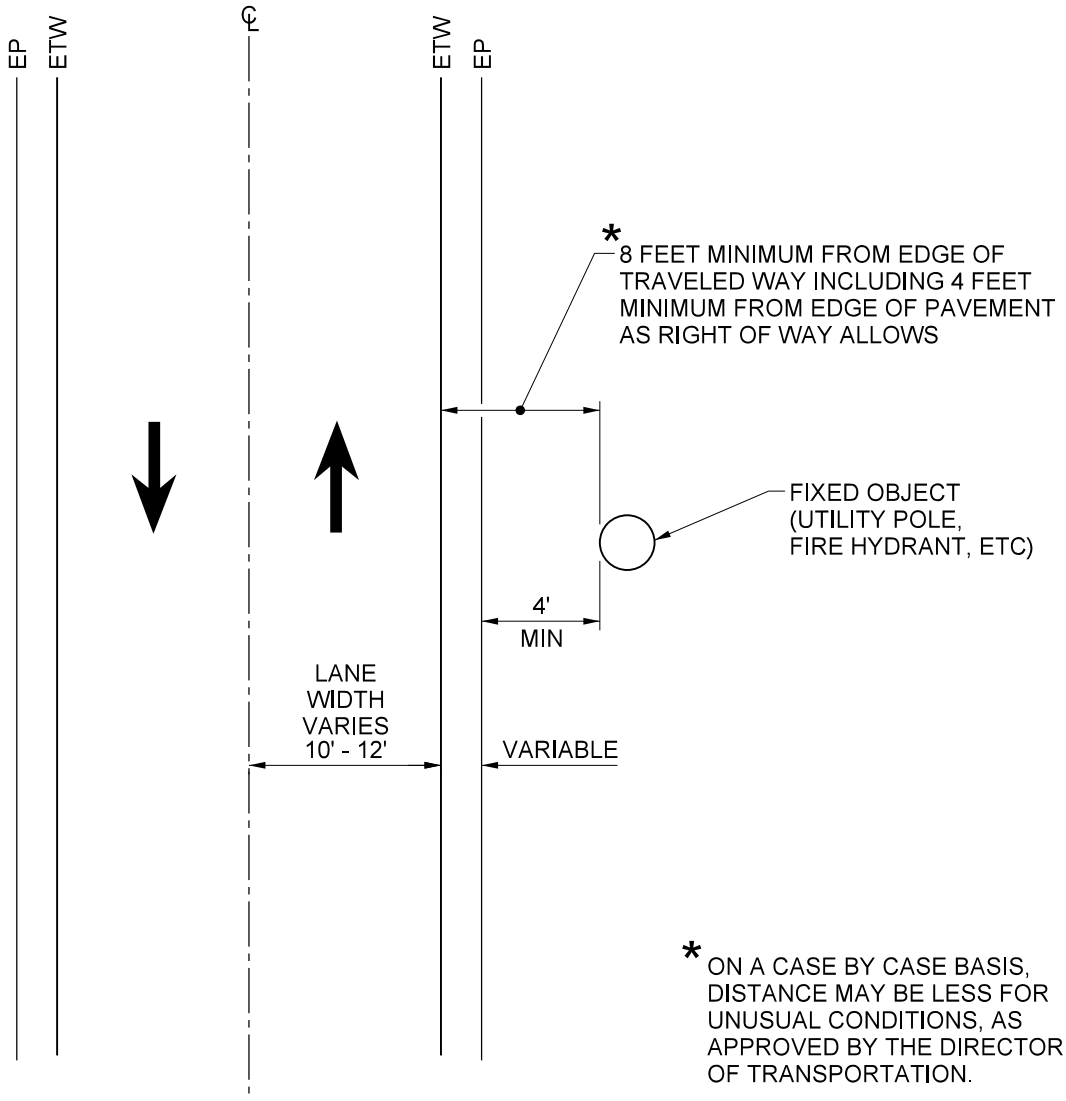
COUNTY OF RIVERSIDE

LOCATION OF CABLE TV DUCTS AT STREET INTERSECTIONS

STANDARD No. 819



NOTES:

1. TO AVOID FUTURE RELOCATIONS, ALL INSTALLATIONS SHOULD BE MADE IN THE ULTIMATE LOCATIONS BEHIND FUTURE CURB, IN ACCORDANCE WITH STANDARDS No. 400 AND 817 IF POSSIBLE.

2. FOR APPLICATIONS ADJACENT TO CURB AND GUTTER USE STANDARDS No. 400 AND 817.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

FIXED OBJECT PLACEMENT FOR ROADWAYS WITHOUT CURBS

STANDARD No. 820

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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MARK LANCASTER, P.E.

11/30/22
DATE

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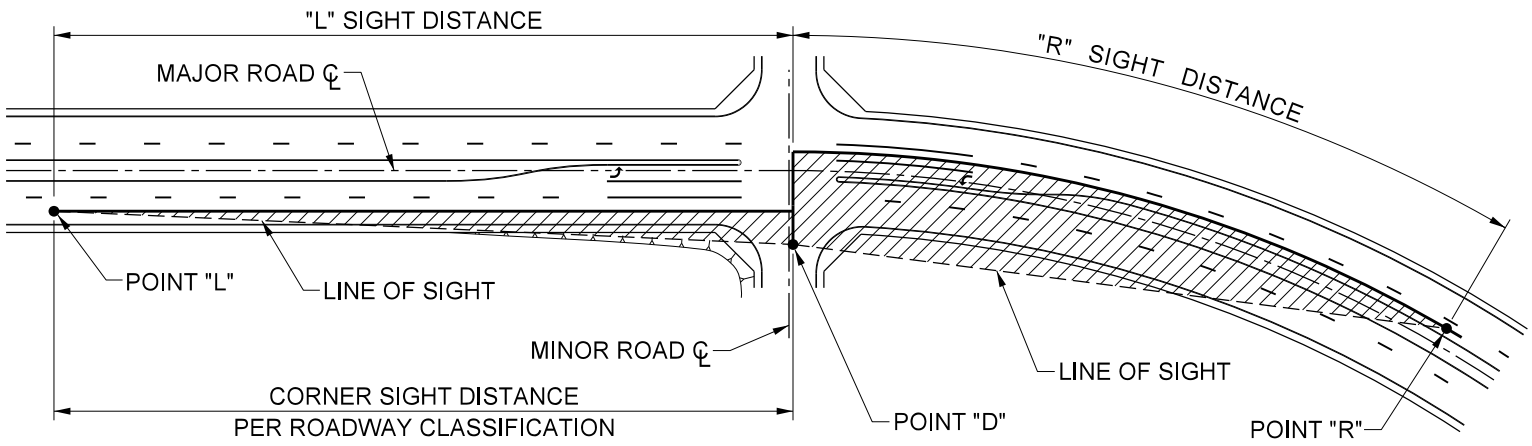
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

INTERSECTION SIGHT DISTANCE

STANDARD No. 821



LEGEND:

- LIMITED USE AREA
- SIGHT LINE
- CENTERLINE OF ROADWAY

DESIGN SPEED (MPH)	SIGHT DISTANCE (FT)	
	PUBLIC STREETS[1]	PRIVATE STREETS[2]
20	220	125
25	275	150
30	330	200
35	385	250
40	440	300
45	495	360
50	550	430
55	605	500
60	660	580
65	715	660

1. BASED ON 7.5 S GAP TIME FOR CROSSING 2-LANE HIGHWAY; ADD 0.5 S FOR EACH ADDITIONAL LANE TO BE CROSSED; AND ADD 0.2 S FOR EACH PERCENT GRADE WHEN MINOR ROAD'S APPROACH EXCEEDS 3% UPGRADE. SIGHT DISTANCE = 1.47 x DESIGN SPEED (MPH) x GAP TIME (S).

2. PER CALTRANS HIGHWAY DESIGN MANUAL INDEX 405.1(2)(C), THE MIN. CORNER SIGHT DISTANCE SHALL BE EQUAL TO STOPPING SIGHT DISTANCE AS SHOWN ON TABLE 201.1 .

NOTES:

1. **POINT "D"** IS THE DECISION POINT, MEASURED 3' TO THE RIGHT OF MINOR ROAD CENTERLINE, 15' BACK FROM THE EDGE OF THE TRAVELED WAY OR 8' BACK FROM THE STOP BAR WHICHEVER IS GREATER.

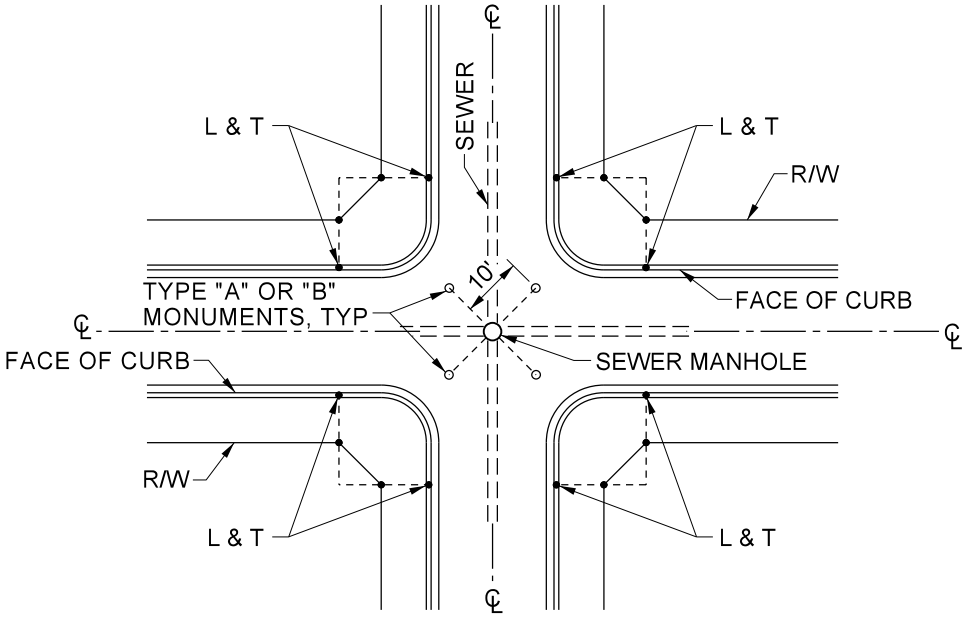
2. **POINTS "L" & "R"** ARE LOCATED AT THE END OF THE REQUIRED SIGHT DISTANCES MEASURED FROM POINT "D", WHERE DRIVER WITH EYE LEVEL AT 3.5' ABOVE ROAD SURFACE CAN SEE A 3.5' HEIGHT OBJECT AT POINT "L" AND "R".

3. **LINE OF SIGHT** IS THE STRAIGHT LINE CONNECTING POINT "D" TO POINT "L", AND POINT "D" TO POINT "R".

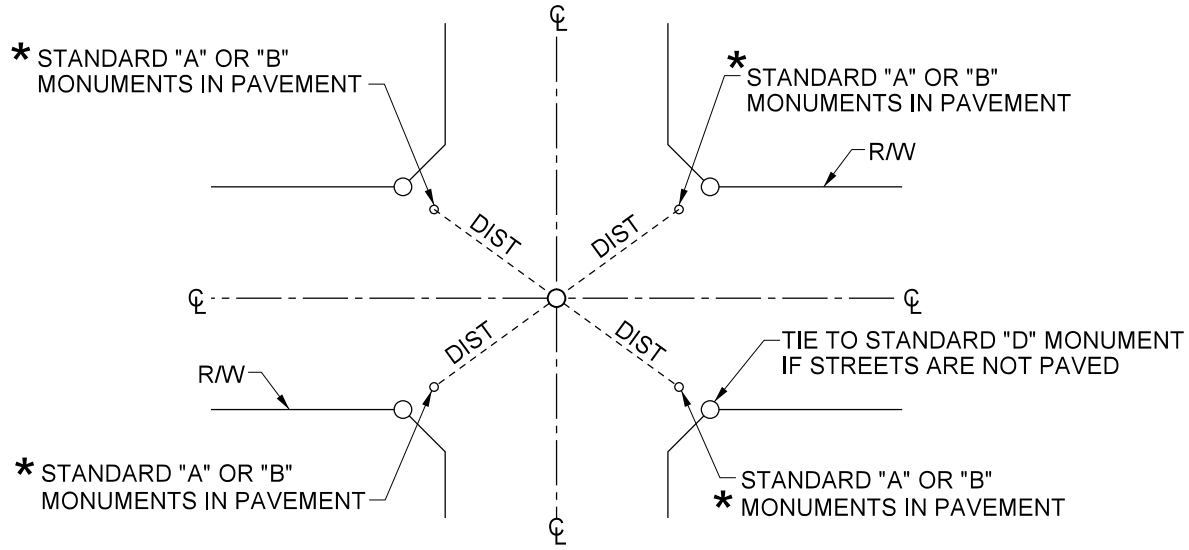
4. **SIGHT DISTANCE** SHALL BE MEASURED ALONG THE CENTERLINE OF THE NEAREST APPROACHING TRAFFIC LANE.

5. **LIMITED USE AREA,** THE AREA BOUNDED BY SIGHT LINES AND CENTERLINES OF THE NEAREST APPROACHING TRAFFIC LANES, SHALL BE SHOWN AT INTERSECTIONS ON TENTATIVE MAPS, SITE PLANS, GRADING PLANS, STREET PLANS, AND LANDSCAPE PLANS. THIS AREA SHALL BE CLEAR OF ALL OBSTRUCTIONS MORE THAN 18 INCHES ABOVE ROAD SURFACE INCLUDING VEGETATION. SELECTED PLANT MATERIAL SHALL HAVE MATURE HEIGHT LESS THAN 12" WITHOUT TRIMMING. HARDSCAPE IS PREFERRED WITHIN THE LIMITED USE AREA.

6. WHEN AN INTERSECTION IS LOCATED ON A VERTICAL CURVE, A PROFILE OF THE SIGHT LINE SHALL BE PROVIDED.



MONUMENTING STREET CENTERLINES WHEN SEWERS ARE LOCATED ON CENTERLINE USING 10' CROSS TIES AND/OR SWING TIES



MONUMENTING STREET CENTERLINES WHERE CURBS ARE NOT REQUIRED

* SET TIE IN PAVEMENT IF R/W IS UNAVAILABLE.

NOTES:

1. L & T AS SHOWN HEREON INDICATES LEAD AND TACK OR STEEL PIN MONUMENT SET IN CURB.
2. LEAD AND TACK OR STEEL PIN MONUMENT WITNESS TO PROPERTY CORNER MAY BE SET, NOT REQUIRED.
3. SEE MONUMENT SPECIFICATIONS SECTION 21 OF THIS ORDINANCE FOR TYPE "A", "D", & "E" MONUMENT DESCRIPTION AND STANDARD No. 903 FOR TYPE "B" MONUMENT DRAWING. SEE SPECIFICATIONS SECTION 21.07 OF THIS ORDINANCE FOR MONUMENT SCHEDULE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

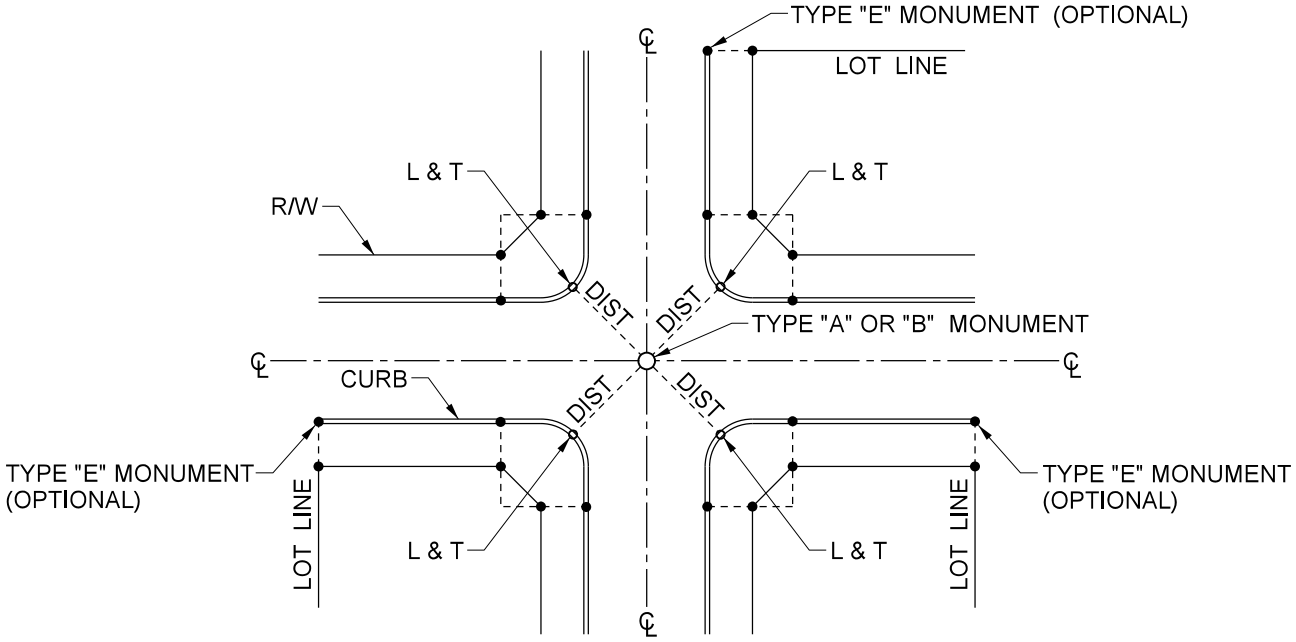
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

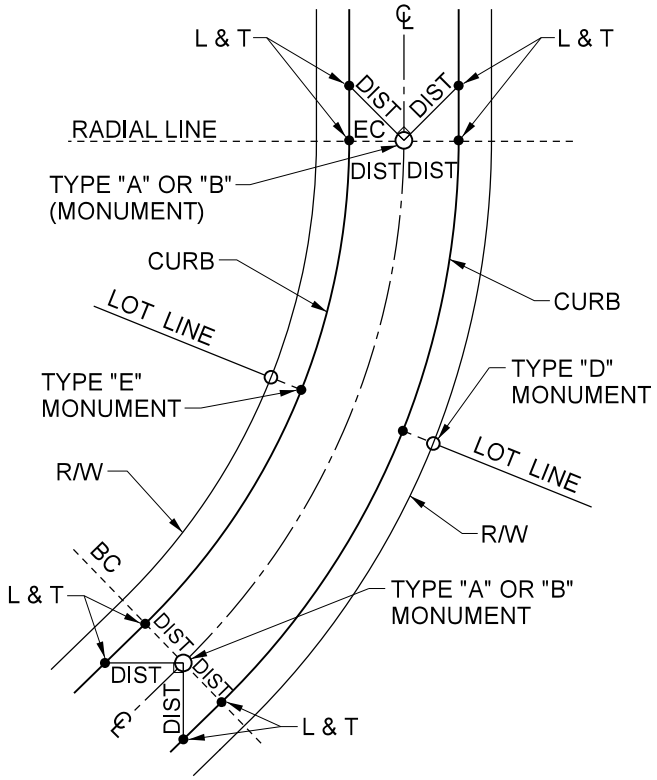
COUNTY OF RIVERSIDE

TIE-OUT STANDARDS

STANDARD No. 900



MONUMENTING STREET INTERSECTIONS WHERE CURBS AND GUTTERS ARE INSTALLED



MONUMENTING BEGINNING AND ENDING OF CURVE

NOTES:

1. L & T SHOWN HEREON INDICATES A LEAD AND TACK OR STEEL PIN MONUMENT SET IN CONCRETE CURB.
2. A METAL IDENTIFICATION DISK SET WITH A LEAD AND TAG OR STEEL PIN MONUMENT WITNESS TO PROPERTY CORNER MAY BE SET ("E" MONUMENT), IN LIEU OF SETTING FRONT LOT CORNERS ("D" MONUMENT).
3. THE PI OF THE CURVE CENTERLINE OF A STREET MAY BE MONUMENTED IN LIEU OF EC & BC, IF THE PI FALLS WITHIN THE TRAVELED WAY. IT SHALL BE REFERENCED WITH L & T's IN CURB.
4. SEE MONUMENT SPECIFICATIONS SECTION 21 OF THIS ORDINANCE FOR TYPE "A", "D", & "E" MONUMENT DESCRIPTION AND STANDARD No. 903 FOR TYPE "B" MONUMENT DRAWING. SEE SPECIFICATIONS SECTION 21.07 OF THIS ORDINANCE FOR MONUMENT SCHEDULE.
5. TYING OUT BC'S AND EC'S WITH 90 DEGREE TIES INTO THE TANGENT.

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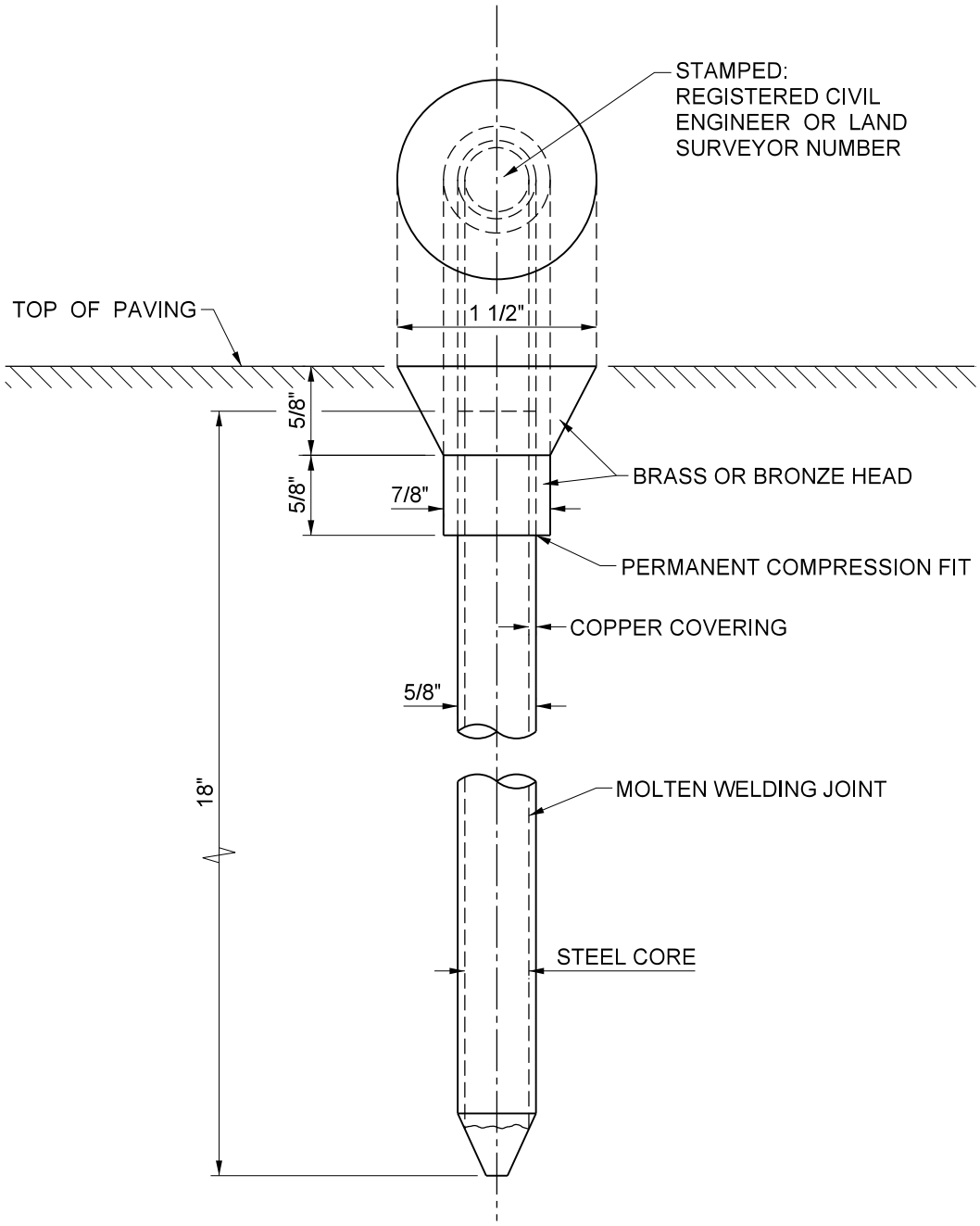
COUNTY OF RIVERSIDE

STREET CENTERLINE MONUMENT

STANDARD No. 901



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

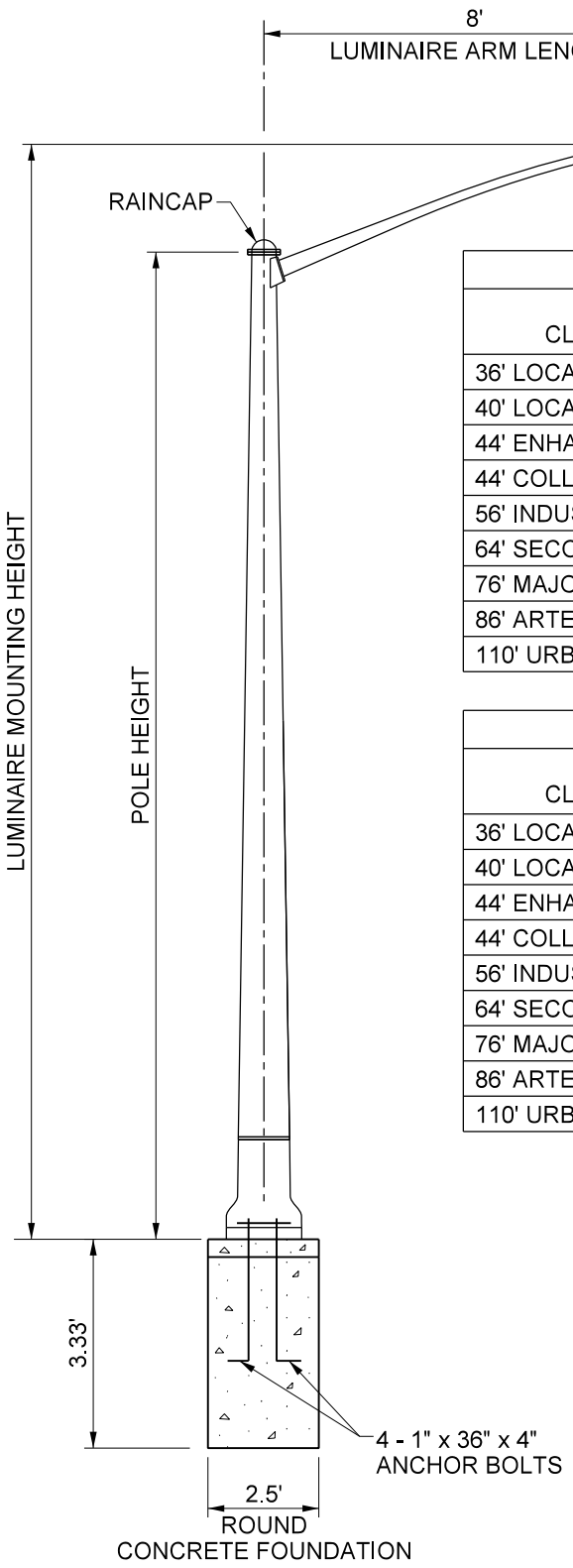
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TYPE "B" MONUMENT

STANDARD No. 903



LIGHT POLE TABLE			
ROADWAY CLASSIFICATION	POLE HEIGHT	LUMINAIRE MOUNTING HEIGHT	POLE SPACING
36' LOCAL	23' +/-	26' +/-	200' STAGGERED
40' LOCAL			
44' ENHANCED LOCAL			
44' COLLECTOR			
56' INDUSTRIAL COLLECTOR	28' +/-	31' +/-	
64' SECONDARY	31' +/-	34' +/-	
76' MAJOR			
86' ARTERIAL			
110' URBAN ARTERIAL			

LIGHT-EMITTING DIODE (LED) LUMINAIRE TABLE		
ROADWAY CLASSIFICATION	HPSV EQUIVALENT 4000K CT LED	HPSV EQUIVALENT 3000K CT LED
36' LOCAL	50 W	50 W
40' LOCAL	70 W	
44' ENHANCED LOCAL		
44' COLLECTOR	100 W	
56' INDUSTRIAL COLLECTOR	150 W	100 W
64' SECONDARY		
76' MAJOR	250 W	150 W
86' ARTERIAL		
110' URBAN ARTERIAL	310 W	200 W

GENERAL NOTES:

1. STREET LIGHT POLE SHALL BE TAPERED OCTAGONAL CONCRETE POLE APPROVED BY SCE. ALTERNATE POLE TYPE/MATERIAL SHALL BE APPROVED BY SCE AND THE DIRECTOR OF TRANSPORTATION DEPARTMENT.
2. 3000 CT LED LUMINAIRE APPLIES TO AREA WITHIN 30-MILE RADIUS OF MT. PALOMAR.
3. SEE ORDINANCE 348 AND 655 ON LIGHT POLLUTION REGULATION ON PRIVATE LIGHTING.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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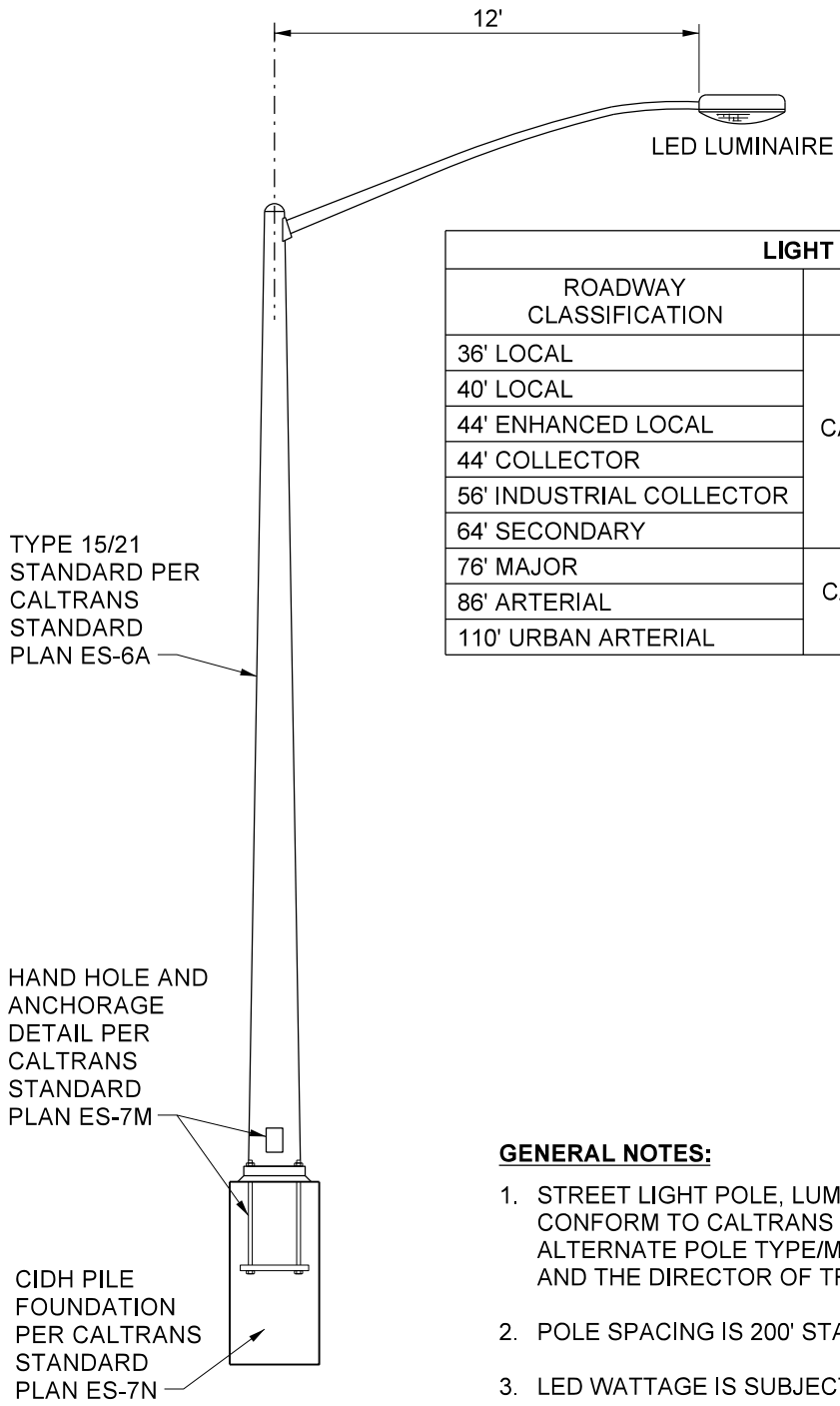
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

STREET LIGHTING

(Southern California Edison (SCE) Electric Serving Area)

STANDARD No. 1000 (1 OF 3)



LIGHT POLE TABLE		
ROADWAY CLASSIFICATION	POLE TYPE / HEIGHT	LED
36' LOCAL	CALTRANS TYPE 15 30'	31 W
40' LOCAL		39 W
44' ENHANCED LOCAL		
44' COLLECTOR		58 W
56' INDUSTRIAL COLLECTOR		98 W
64' SECONDARY		
76' MAJOR	CALTRANS TYPE 21 35'	149 W
86' ARTERIAL		
110' URBAN ARTERIAL		

GENERAL NOTES:

1. STREET LIGHT POLE, LUMINAIRE ARM, AND FOUNDATION SHALL CONFORM TO CALTRANS STANDARD PLANS AND SPECIFICATIONS. ALTERNATE POLE TYPE/MATERIAL SHALL BE APPROVED BY SCE AND THE DIRECTOR OF TRANSPORTATION DEPARTMENT.
2. POLE SPACING IS 200' STAGGERED.
3. LED WATTAGE IS SUBJECT TO CHANGE BY IID.
4. SEE ORDINANCE 348 AND 655 ON LIGHT POLLUTION REGULATION ON PRIVATE LIGHTING.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

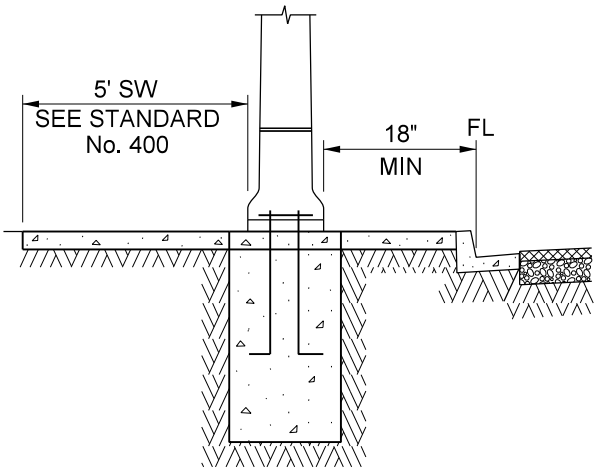
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

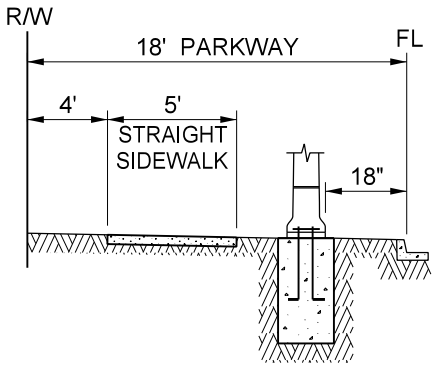
COUNTY OF RIVERSIDE

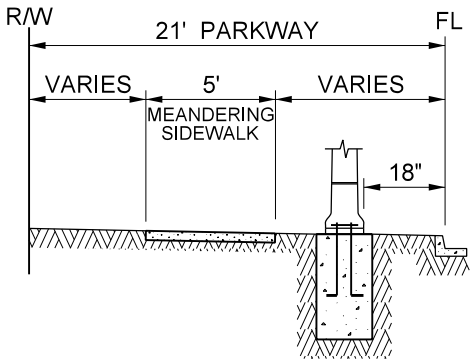
STREET LIGHTING

(Imperial Irrigation District (IID) Electric Serving Area)

STANDARD No. 1000 (2 OF 3)







SIDEWALK SECTIONS

NOTE:

1. WHEN ABUTTING SOIL HAS A HIGH SULFATE CONTENT, USE A MODIFIED CONCRETE MIX AND PLACE 6" MIN CLASS 2 AGGREGATE BASE AND 6 MIL PLASTIC SHEETING UNDER AND AROUND ALL SIDES OF CONCRETE IMPROVEMENTS. FOR EXPANSIVE SOIL, PLACE 6" MIN CLASS 2 AGGREGATE BASE UNDER CONCRETE IMPROVEMENTS AS DIRECTED BY THE ENGINEER. SEE SPECIFICATIONS SECTIONS 16.03 & 16.04 AND STANDARD No. 401 FOR REFERENCE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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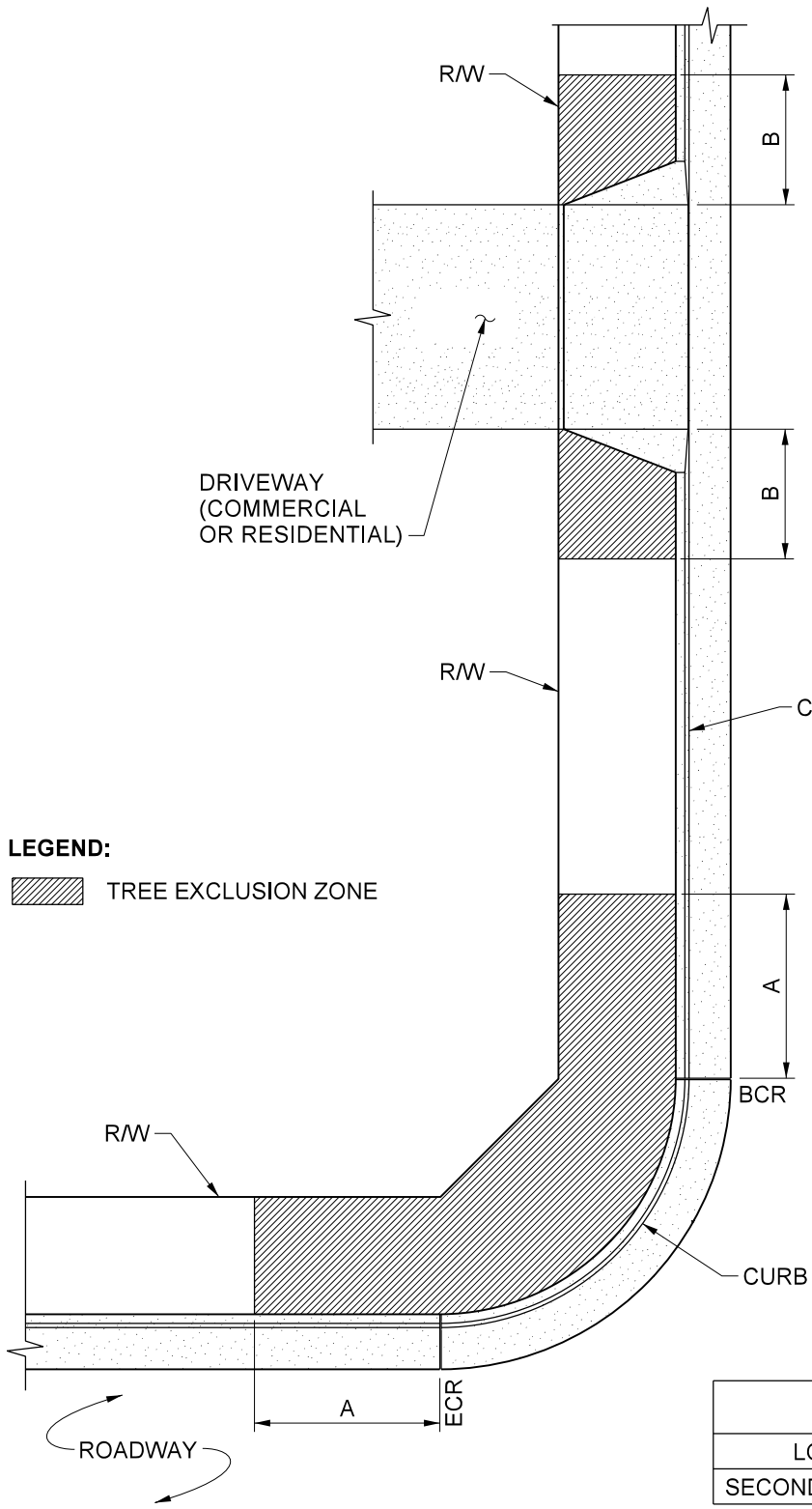
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

STREET LIGHTING

STANDARD No. 1000 (3 OF 3)



TYPE OF DRIVEWAY	DISTANCE B
RESIDENTIAL	10'
COMMERCIAL	15'

ROADWAY CLASSIFICATION	DISTANCE A
LOCAL, COLLECTOR	10'
SECONDARY, MAJOR, ARTERIAL	20'

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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REVISION DESCRIPTION	MARK	DATE	APPROVED

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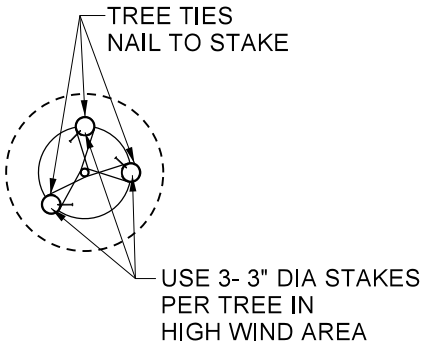
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

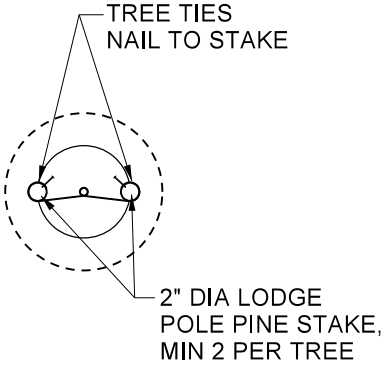
COUNTY OF RIVERSIDE

TREE SETBACKS AT CORNER CUT-BACKS AND DRIVEWAYS

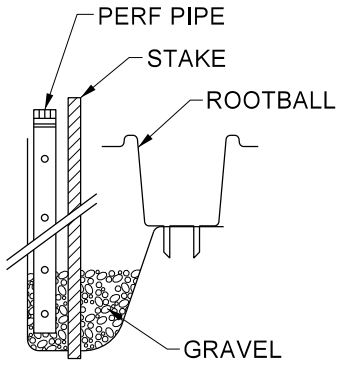
STANDARD No. 1101



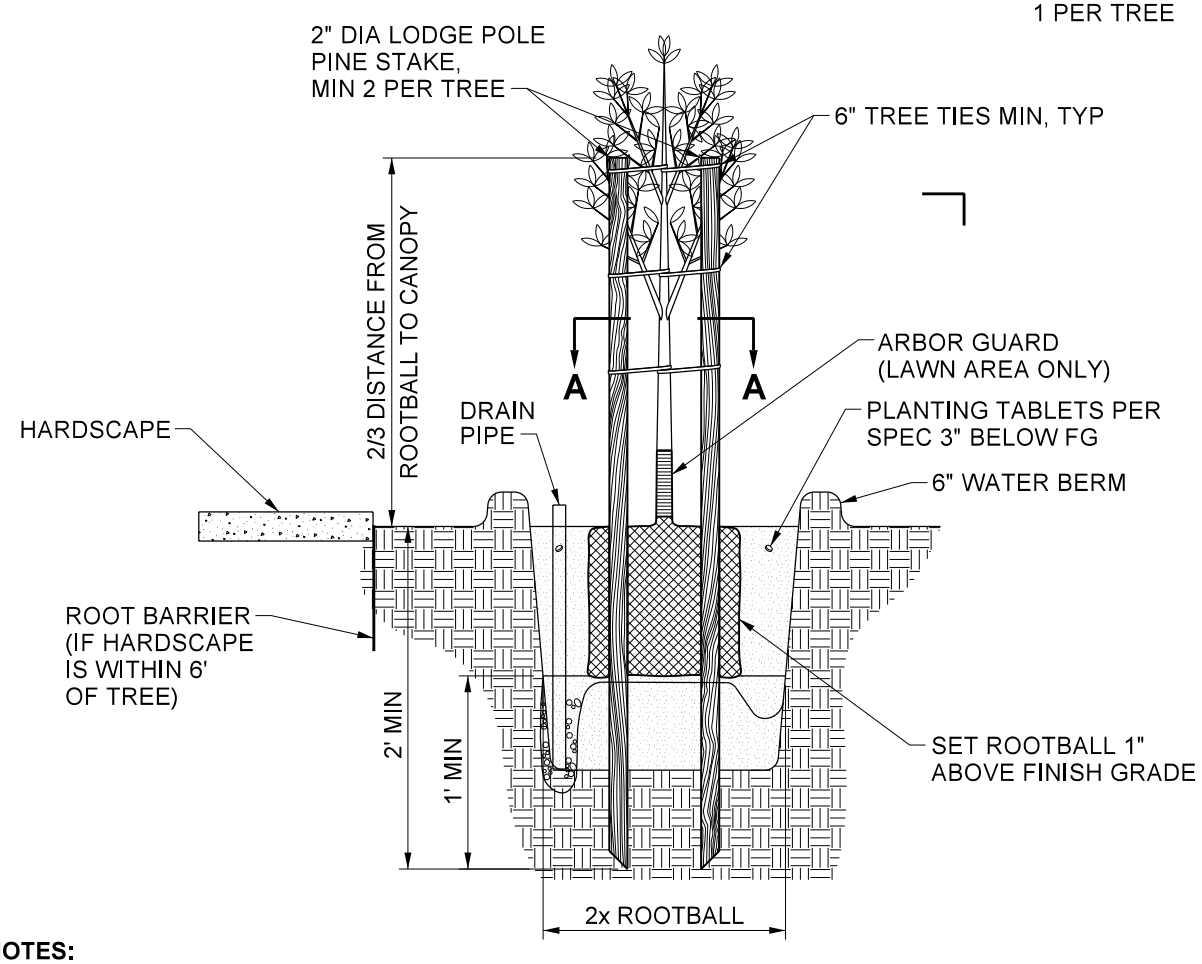
HIGH WIND
SECTION "A-A"



SECTION "A-A"



DRAIN PIPE DETAIL
4" SCH 40 PERF PIPE
1 PER TREE



NOTES:

1. STAKE TREE PERPENDICULAR TO DIRECTION OF PREVAILING WIND.
2. MULTI-STEM TREES SHALL HAVE 3 STAKES
3. 48" BOX OR GREATER TO USE GUY WIRES.
4. DETAIL FOR USE IN AREAS WITHOUT SEPARATE APPROVED LANDSCAPE PLANS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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MARK ALAN LANCASTER
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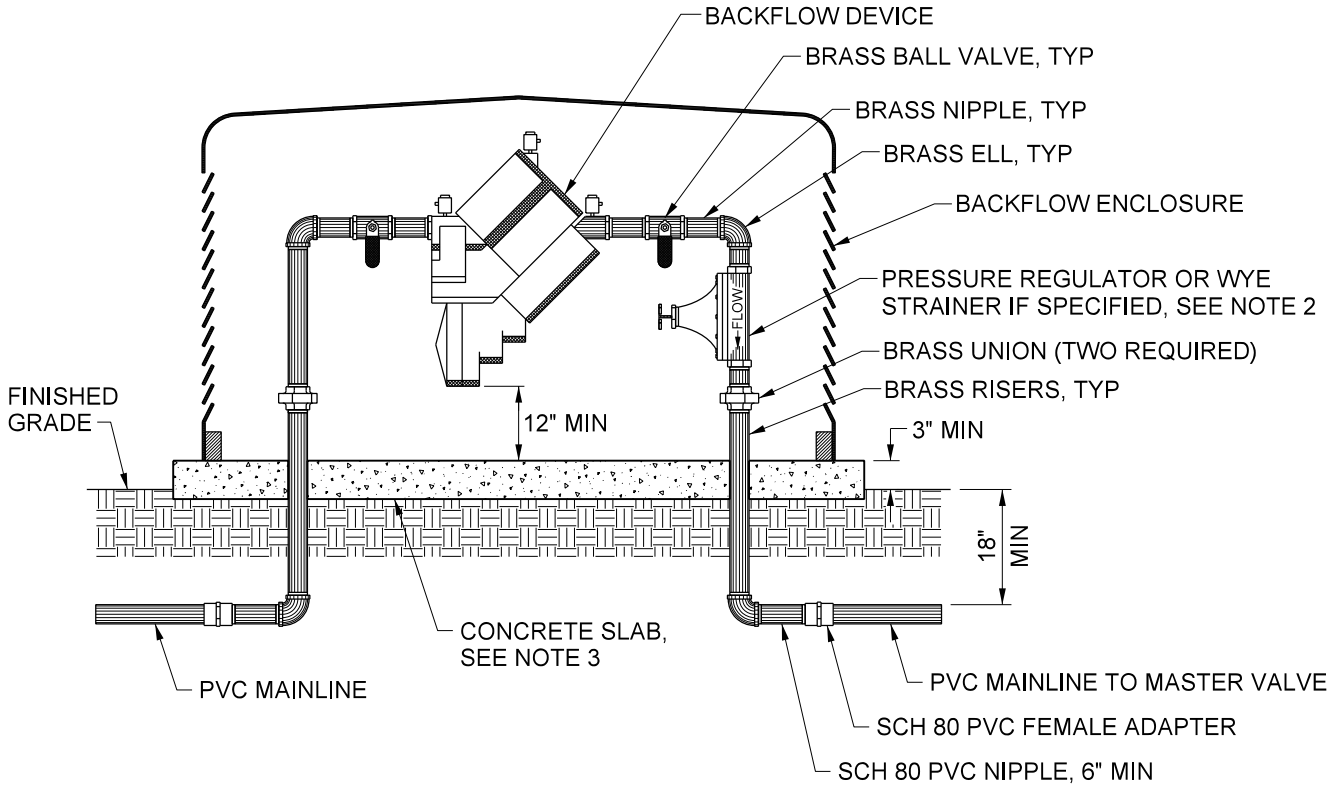
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TREE STAKING DETAIL

STANDARD No. 1102



NOTES:

1. INSTALL PER LOCAL WATER DISTRICT STANDARD DETAIL.
2. INSTALL WYE STRAINER AND/OR PRESSURE REGULATOR IF SPECIFIED AND ALLOWED.
3. CONCRETE PAD LENGTH AND WIDTH SHALL BE 6" GREATER THAN SIZE OF BACKFLOW CAGE. CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD.
4. VIT QUICKPAD IS ALLOWED. BACKFLOW CAGE SHALL BE STAINLESS STEEL OR ALUMINUM BY VIT.
5. FOR USE IN AREAS WITHOUT SEPARATE APPROVED LANDSCAPE PLANS.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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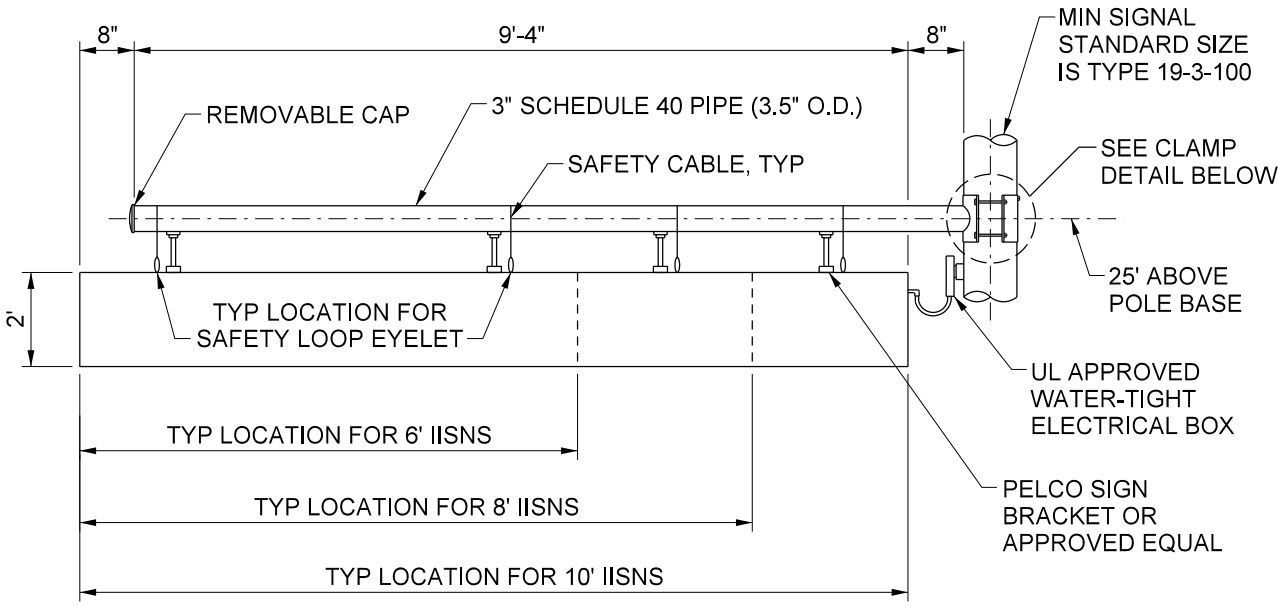
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

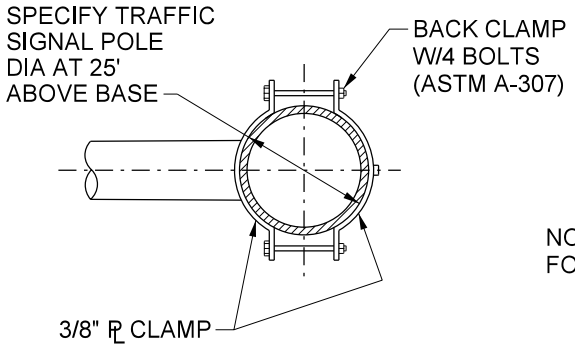
BACKFLOW PREVENTION DEVICE INSTALLATION

STANDARD No. 1103

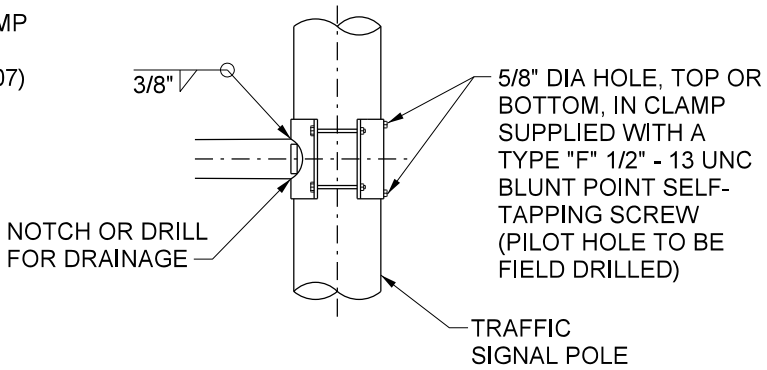


10' IISNS STRAIGHT MAST ARM MOUNTING DETAIL

NOTE:
SIGN LOCATION MAY VARY DEPENDING ON HEIGHT OF SIGNAL MAST ARM.



TOP VIEW



ELEVATION

CLAMP DETAIL

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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MARK ALAN LANCASTER
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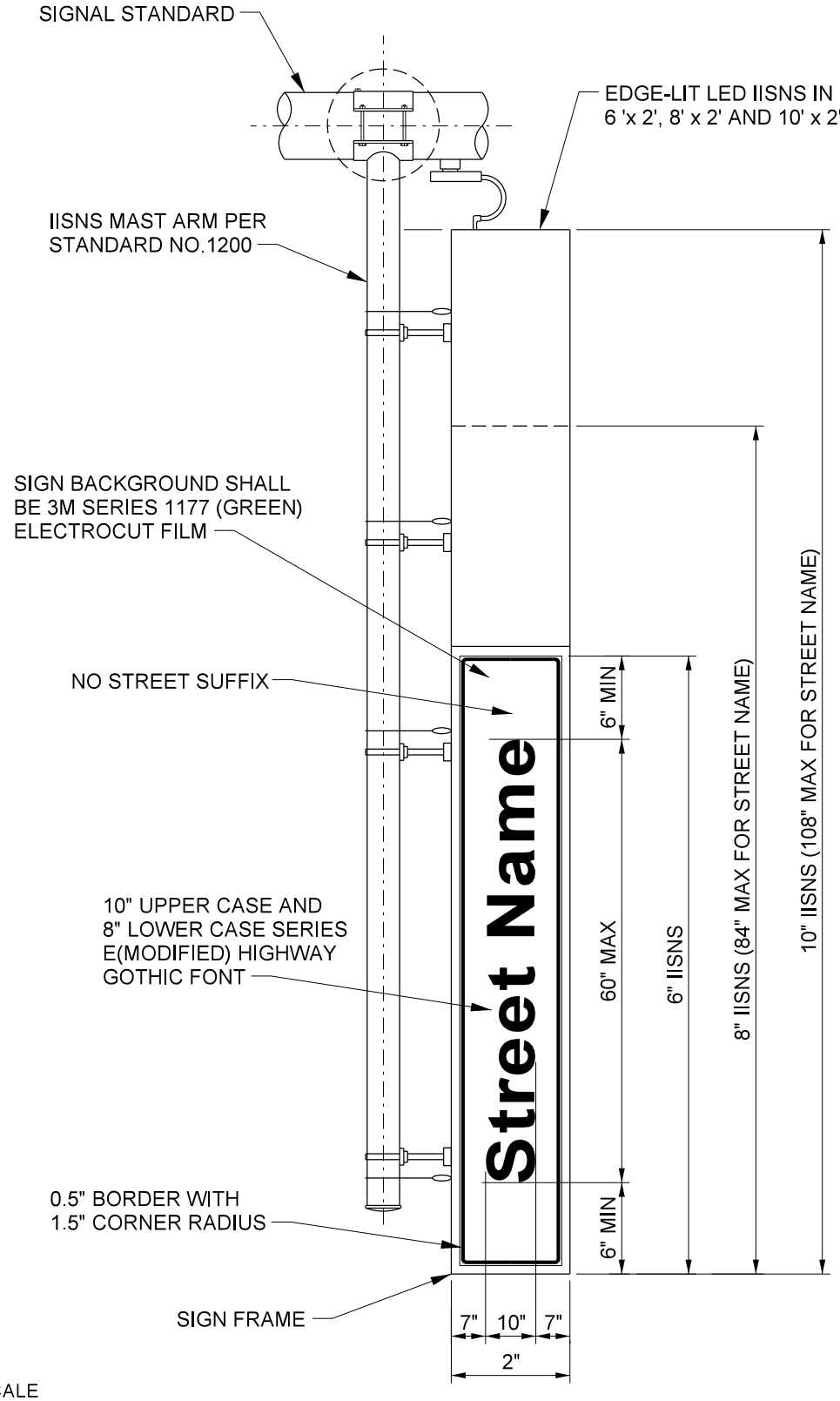
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

IISNS MAST ARM DETAIL

STANDARD No. 1200



NOTE:

FOR 6' AND 8' IISNS, FONT TYPE CANNOT BE CHANGED BUT WORD SPACING CAN BE REDUCED UP TO 80% TO FIT STREET NAME WITHIN THE ALLOTTED SPACE WITHOUT UPSIZING THE SIGN SIZE;

FOR 10' IISNS, AS DIRECTED BY THE COUNTY, A COMBINATION OF REDUCING WORD SPACING, CHANGING FONT TYPE, AND/OR ABBREVIATE STREET NAME CAN BE INSTITUTED TO ACCOMMODATE LENGTHY STREET NAME ON THE IISNS.

NOT TO SCALE

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Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
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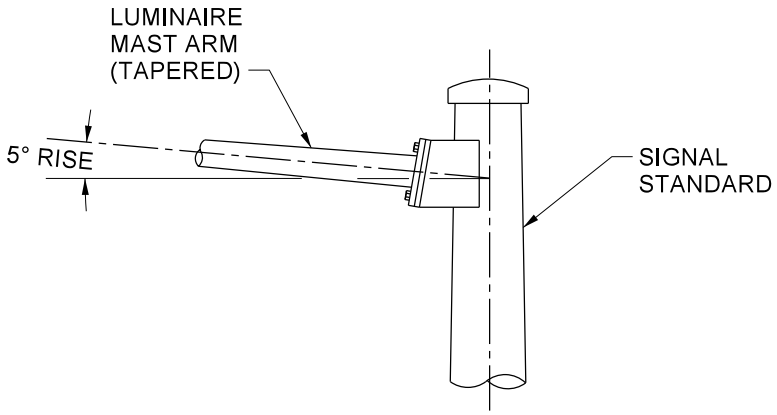
STATE OF CALIFORNIA

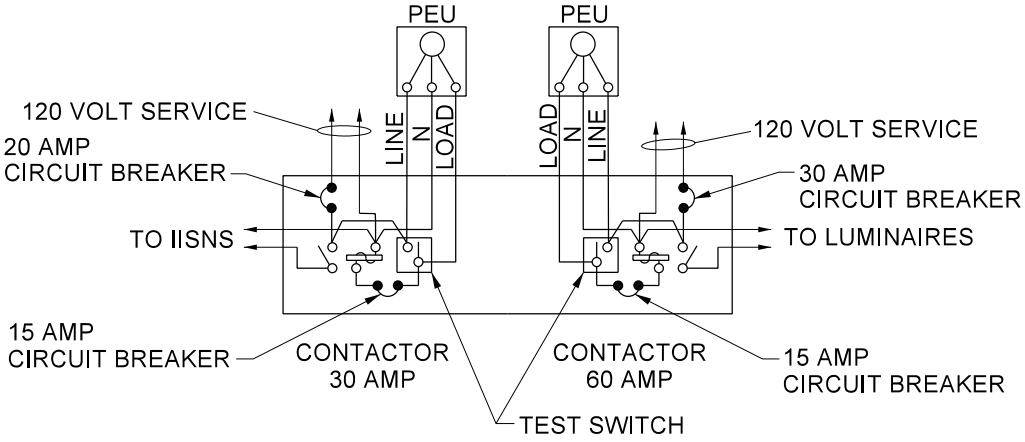
COUNTY OF RIVERSIDE

IISNS DETAIL

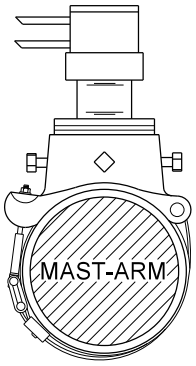
STANDARD No. 1201



STRAIGHT LUMINAIRE MAST ARM DETAIL



DUAL PEC WIRING DIAGRAM



MOUNTING CLAMP FOR EVP OPTICAL DETECTOR

NOT TO SCALE

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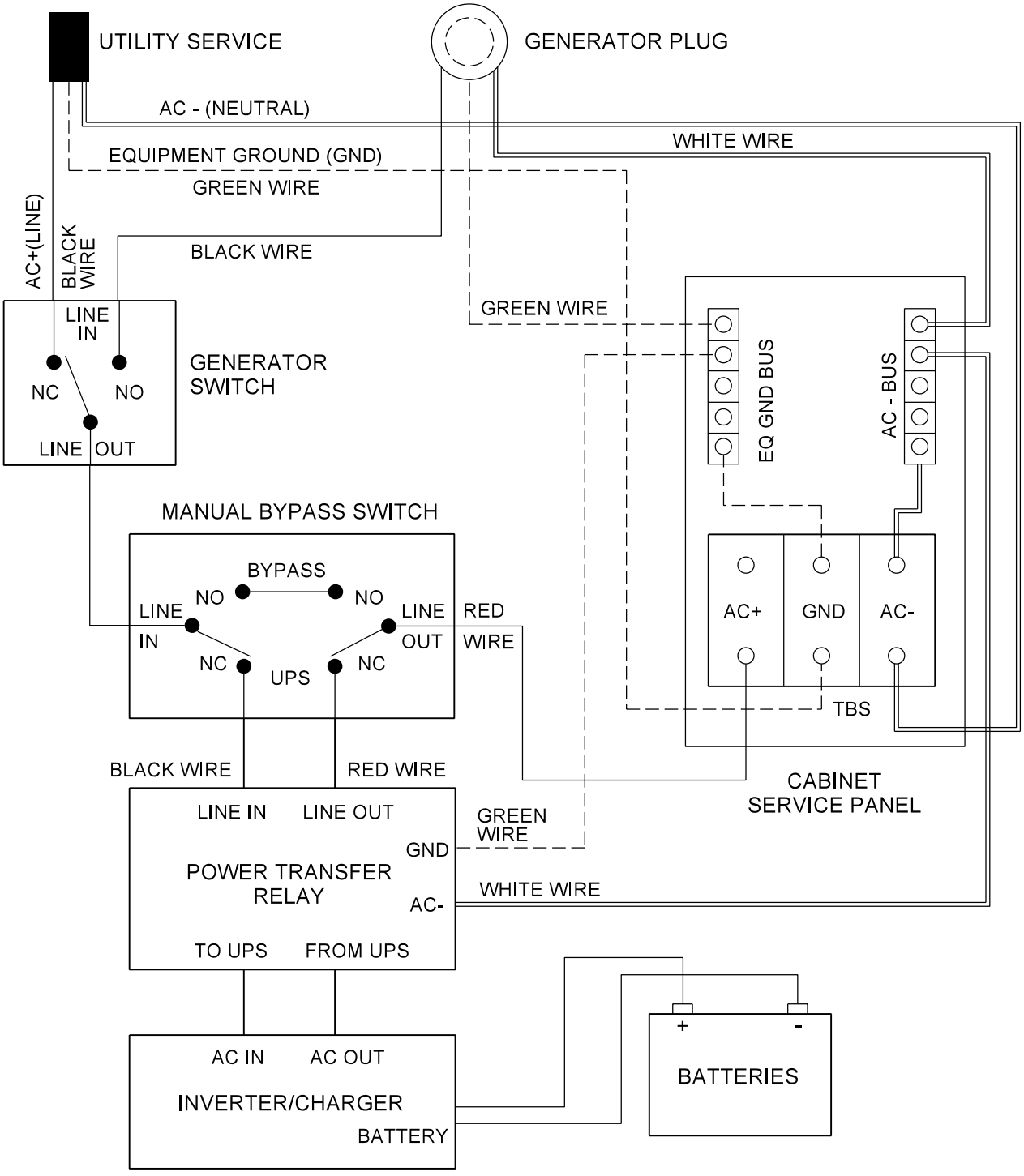
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

TRAFFIC SIGNAL DETAIL

STANDARD No. 1202 (1 OF 3)



BATTERY BACKUP SYSTEM SCHEMATIC DIAGRAM

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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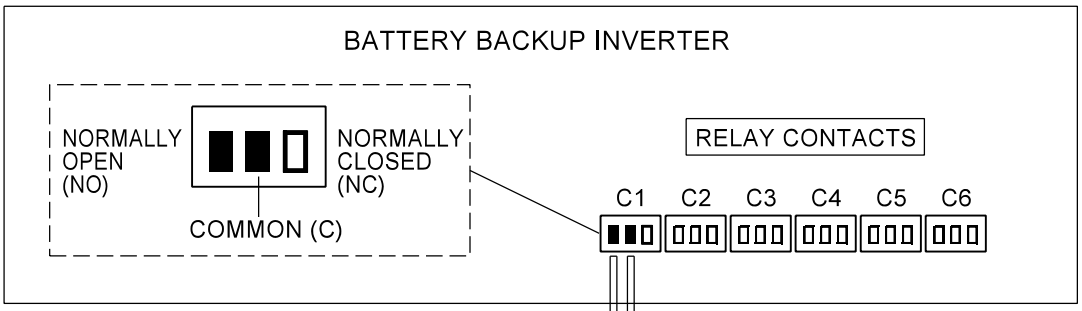
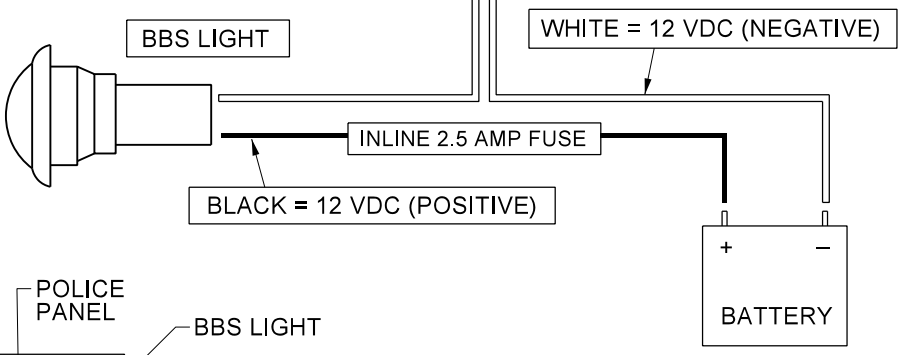
CIVIL
STATE OF CALIFORNIA

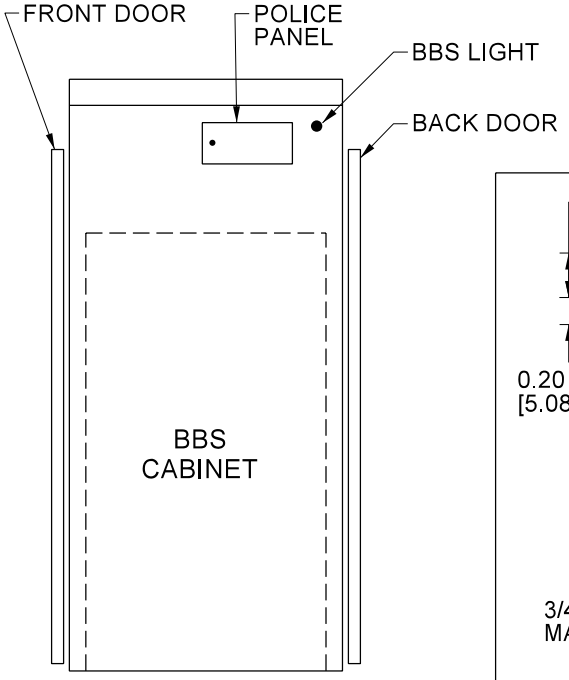
COUNTY OF RIVERSIDE

TRAFFIC SIGNAL DETAIL

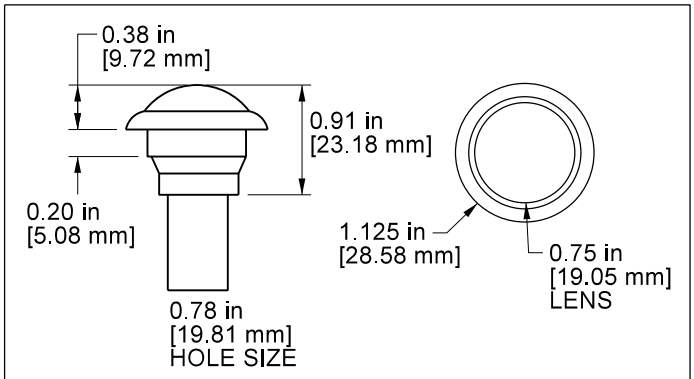
STANDARD No. 1202 (2 OF 3)







332/ATC CABINET
STREET VIEW
(FRONT SIDE)



BBS LIGHT

3/4" ROUND CLEARANCE MARKER RED CLEAR LENS
MAXXIMA MODEL #M09320RCL-X OR EQUAL
OFF - CLEAR
ON - RED

BATTERY BACKUP SYSTEM (BBS) LIGHT

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

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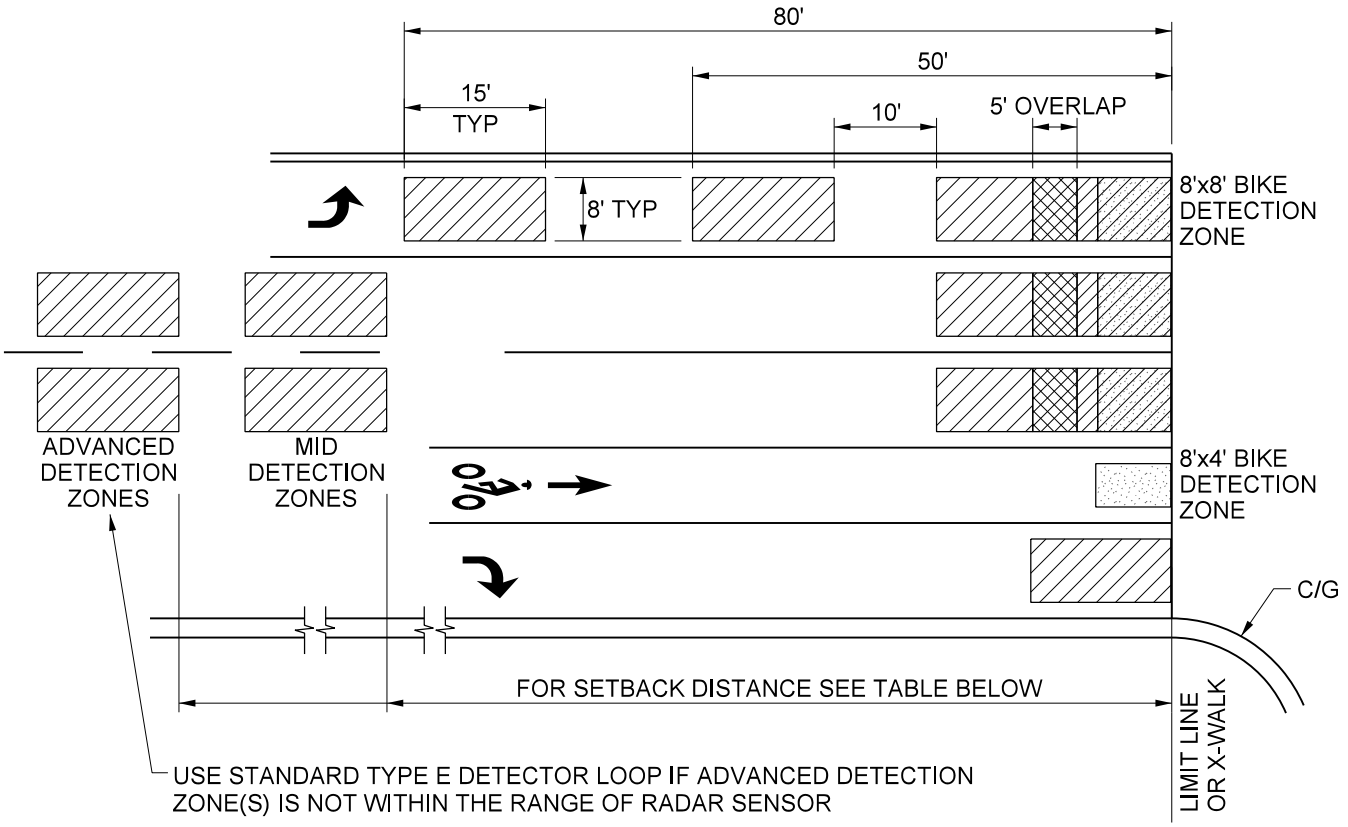
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

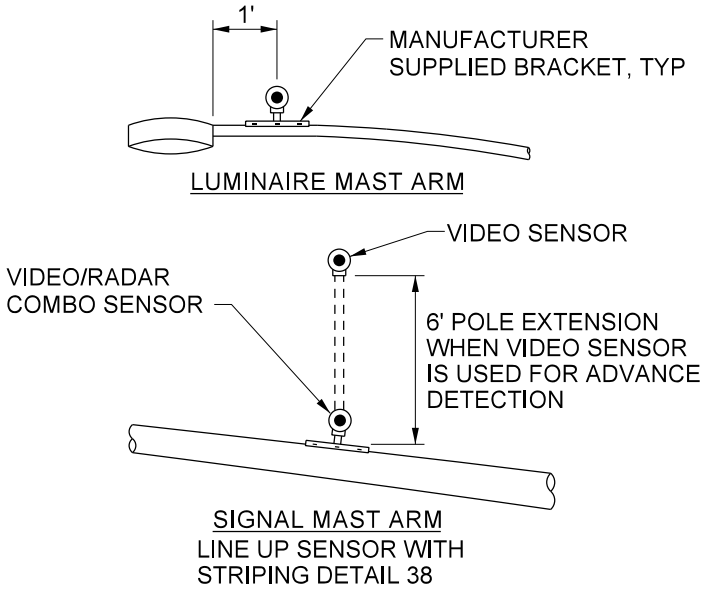
COUNTY OF RIVERSIDE

TRAFFIC SIGNAL DETAIL

STANDARD No. 1202 (3 OF 3)



VIDEO/RADAR DETECTION ZONE DETAIL



SENSOR MOUNTING DETAIL

ADVANCE AND MID-DETECTION ZONES SETBACK DISTANCE FROM LIMIT LINE

SPEED	SETBACK ADVANCED	MID (FT)
25 MPH	105'	-
30 MPH	140'	-
35 MPH	185'	100'
40 MPH	230'	120'
45 MPH	285'	150'
50 MPH	345'	180'
55 MPH	405'	210'
60 MPH	475'	245'
65 MPH	550'	280'

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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MARK ALAN LANCASTER
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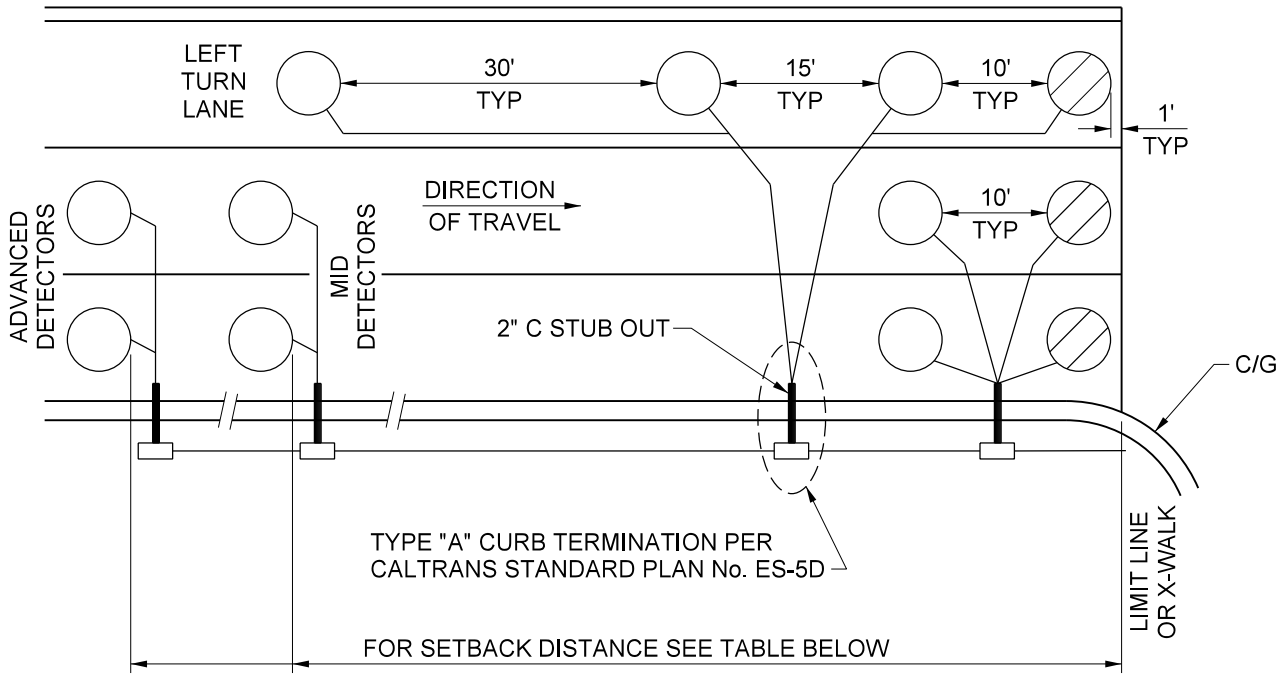
CIVIL
STATE OF CALIFORNIA

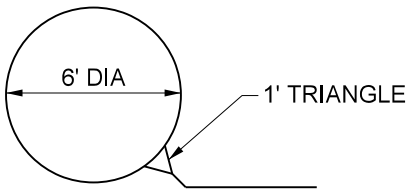
COUNTY OF RIVERSIDE

VIDEO/RADAR DETECTION DETAIL

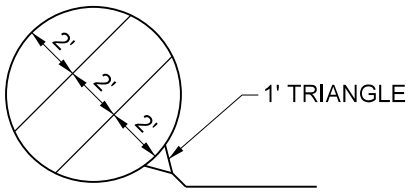
STANDARD No. 1205



LOOP DETECTOR PLACEMENT DETAIL



TYPE E



TYPE E (MODIFIED)

LOOP DETECTOR SAWCUT DETAIL

ADVANCE AND MID-DETECTION ZONES SETBACK DISTANCE FROM LIMIT LINE

SPEED	SETBACK ADVANCED	MID (FT)
25 MPH	105'	-
30 MPH	140'	-
35 MPH	185'	100'
40 MPH	230'	120'
45 MPH	285'	150'
50 MPH	345'	180'
55 MPH	405'	210'
60 MPH	475'	245'
65 MPH	550'	280'

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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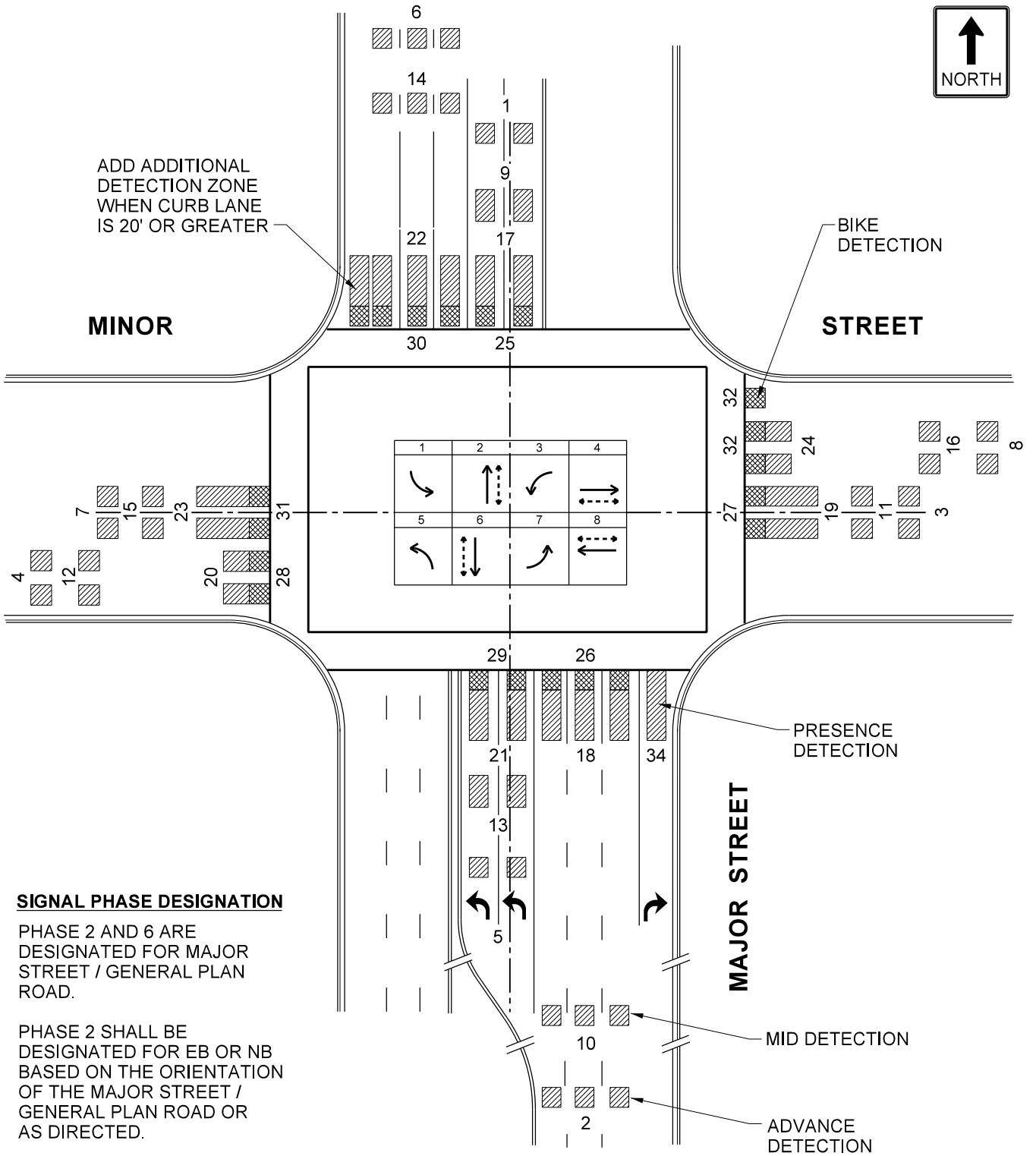
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

LOOP DETECTOR DETAIL

STANDARD No. 1206



SIGNAL PHASE DESIGNATION

PHASE 2 AND 6 ARE DESIGNATED FOR MAJOR STREET / GENERAL PLAN ROAD.

PHASE 2 SHALL BE DESIGNATED FOR EB OR NB BASED ON THE ORIENTATION OF THE MAJOR STREET / GENERAL PLAN ROAD OR AS DIRECTED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION — DATE

MARK LANCASTER, P.E.

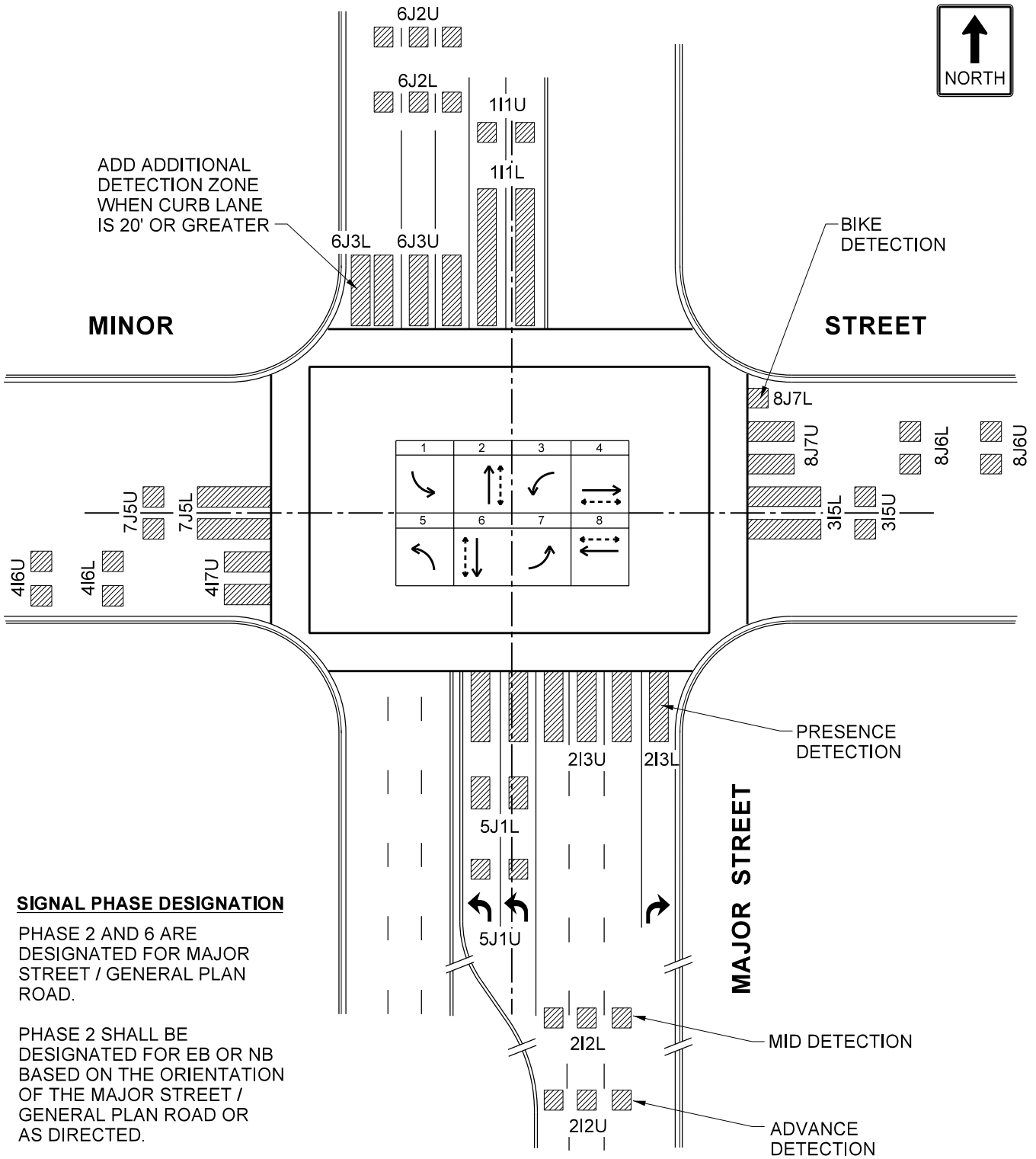
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER — MARK ALAN LANCASTER — C48048 — CIVIL — STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

ATS DETECTION INPUT ASSIGNMENTS

STANDARD No. 1207 (1 OF 2)



SIGNAL PHASE DESIGNATION

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PHASE 2 SHALL BE DESIGNATED FOR EB OR NB BASED ON THE ORIENTATION OF THE MAJOR STREET / GENERAL PLAN ROAD OR AS DIRECTED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

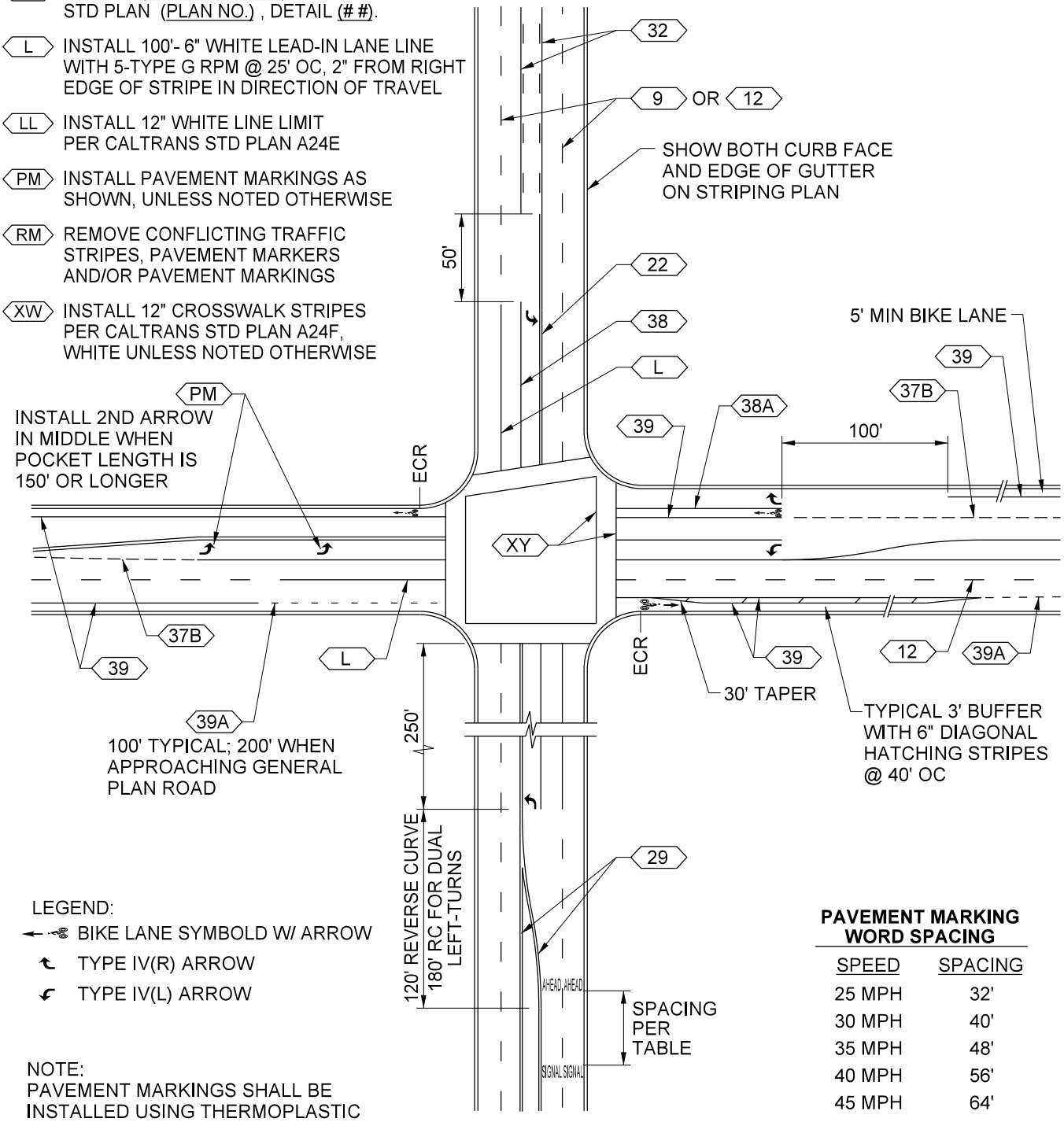
COUNTY OF RIVERSIDE

170 & 2070 DETECTION INPUT ASSIGNMENTS

STANDARD No. 1207 (2 OF 2)

STRIPING CONSTRUCTION NOTES:

- ⟨ # # ⟩ INSTALL (STRIPING TYPE) PER CALTRANS STD PLAN (PLAN NO.) , DETAIL (# #).
- ⟨ L ⟩ INSTALL 100'- 6" WHITE LEAD-IN LANE LINE WITH 5-TYPE G RPM @ 25' OC, 2" FROM RIGHT EDGE OF STRIPE IN DIRECTION OF TRAVEL
- ⟨ LL ⟩ INSTALL 12" WHITE LINE LIMIT PER CALTRANS STD PLAN A24E
- ⟨ PM ⟩ INSTALL PAVEMENT MARKINGS AS SHOWN, UNLESS NOTED OTHERWISE
- ⟨ RM ⟩ REMOVE CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKERS AND/OR PAVEMENT MARKINGS
- ⟨ XW ⟩ INSTALL 12" CROSSWALK STRIPES PER CALTRANS STD PLAN A24F, WHITE UNLESS NOTED OTHERWISE



LEGEND:

- BIKE LANE SYMBOLD W/ ARROW
- TYPE IV(R) ARROW
- TYPE IV(L) ARROW

NOTE:
PAVEMENT MARKINGS SHALL BE INSTALLED USING THERMOPLASTIC MATERIAL UNLESS NOTED OTHERWISE.

PAVEMENT MARKING WORD SPACING

SPEED	SPACING
25 MPH	32'
30 MPH	40'
35 MPH	48'
40 MPH	56'
45 MPH	64'
50 MPH	72'
≥ 55 MPH	80'

*SEE COUNTY ROAD IMPROVEMENT STANDARD FOR LANE WIDTH REQUIREMENTS

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

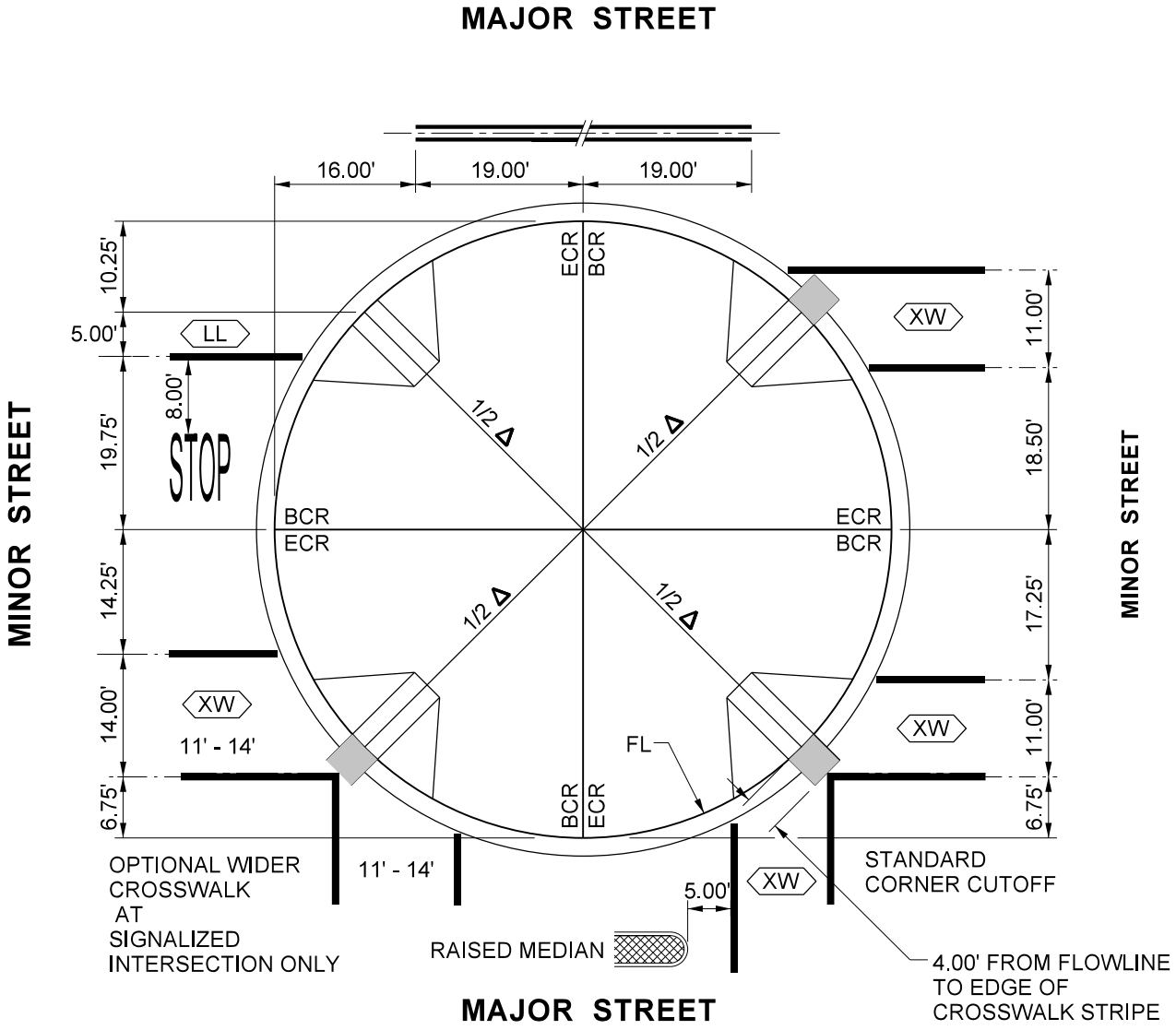
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

STRIPING DETAILS AND CONSTRUCTION NOTES

STANDARD No. 1210



35' RADIUS CURB RETURN

LEGEND:

MIN 4' x 4' LANDING WITHIN THE CROSSWALK

NOTES:

1. KEEP CROSSWALK AND LIMIT LINE MARKING OFF GUTTER PLATE.
2. PLACE 4" BLACK CONTRAST STRIPE ON BOTH SIDES OF XW OR LL WHEN XW OR LL WAS INSTALLED OVER CONCRETE PAVEMENT OR CROSS GUTTER.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E. DATE

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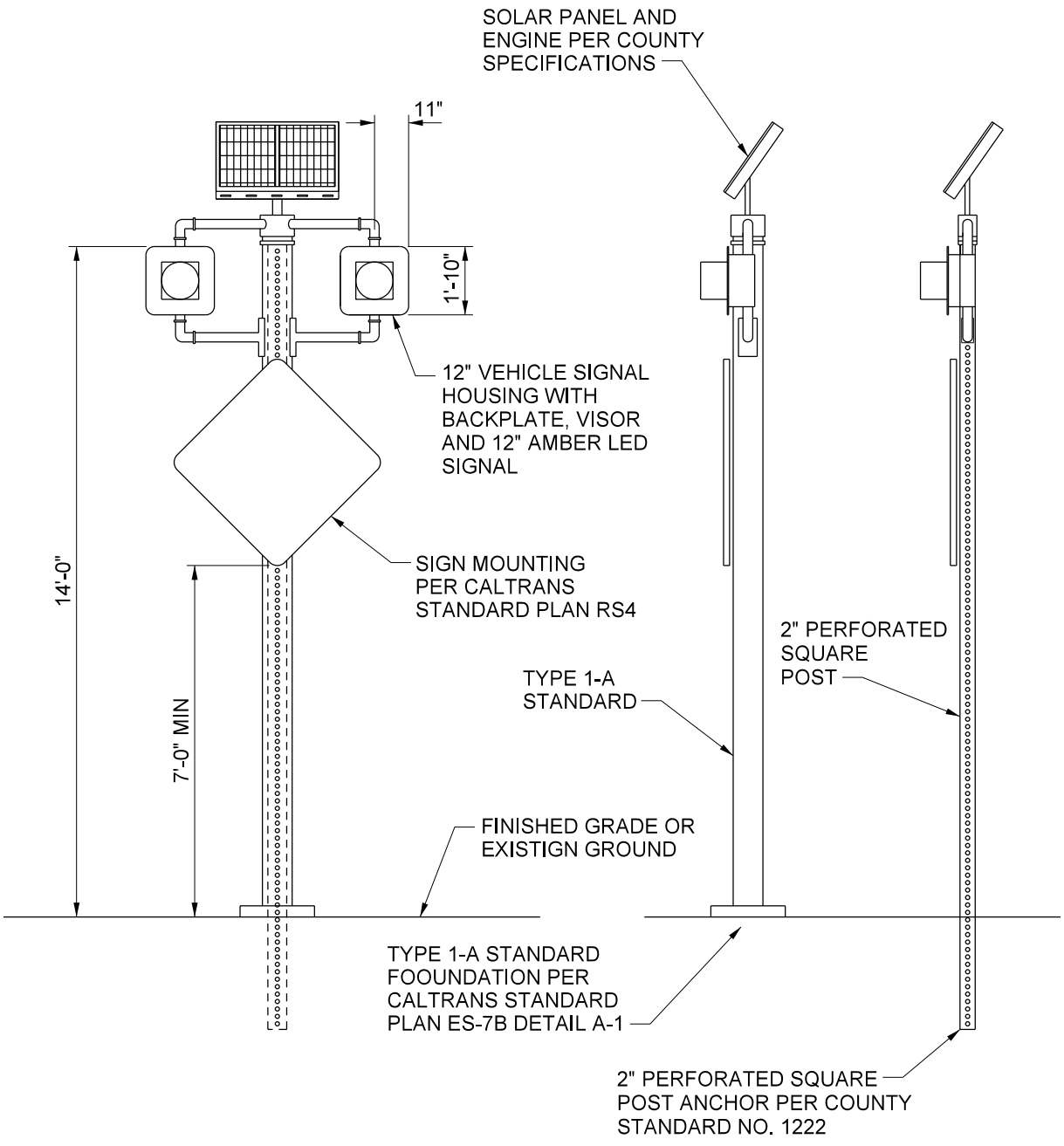
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CROSSWALK AND LIMIT LINE DETAIL

STANDARD No. 1211



FRONT VIEW **SIDE VIEW**

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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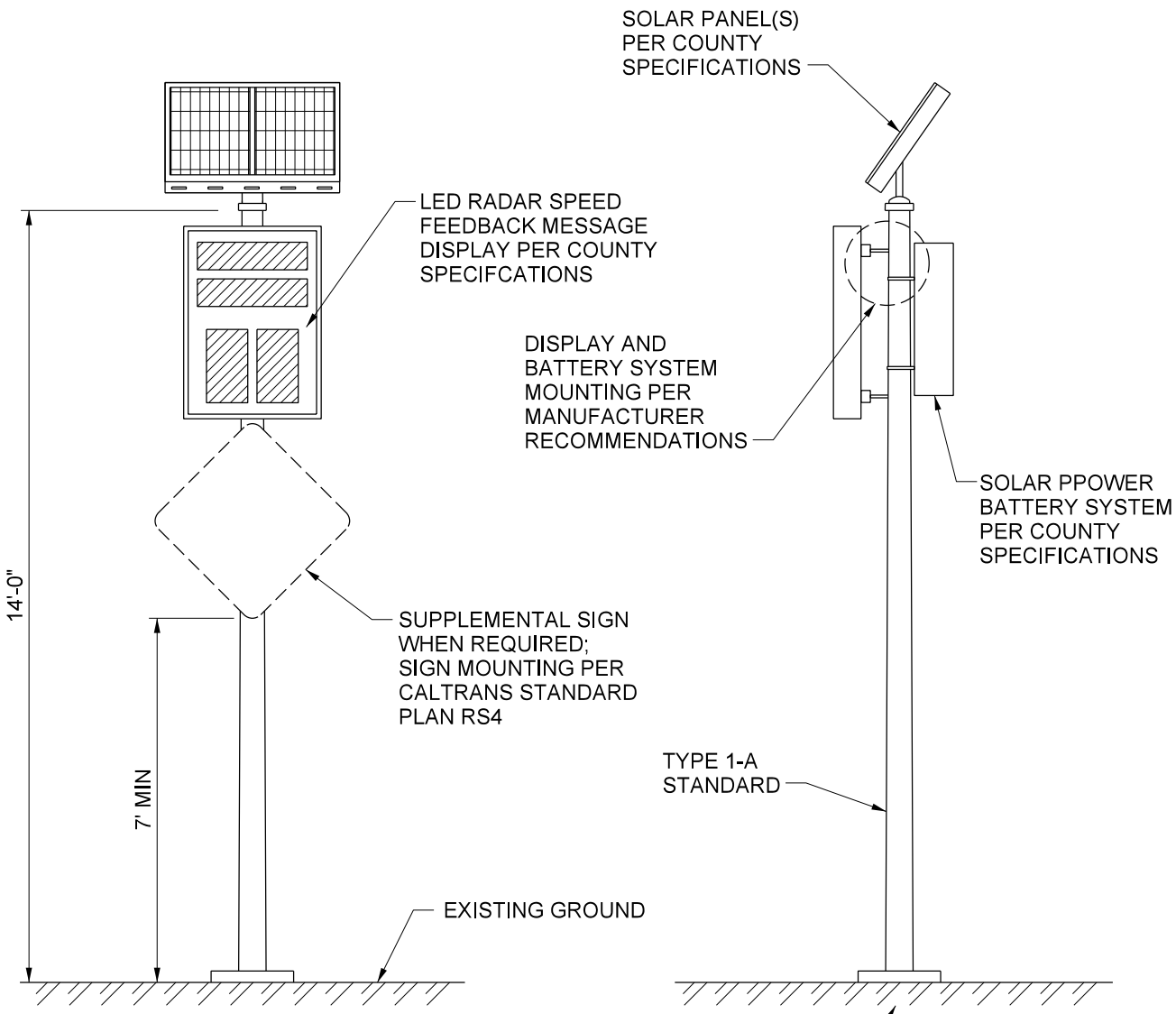
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SOLAR POWERED FLASHING BEACON

STANDARD No. 1215



FRONT VIEW **SIDE VIEW**

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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MARK ALAN LANCASTER
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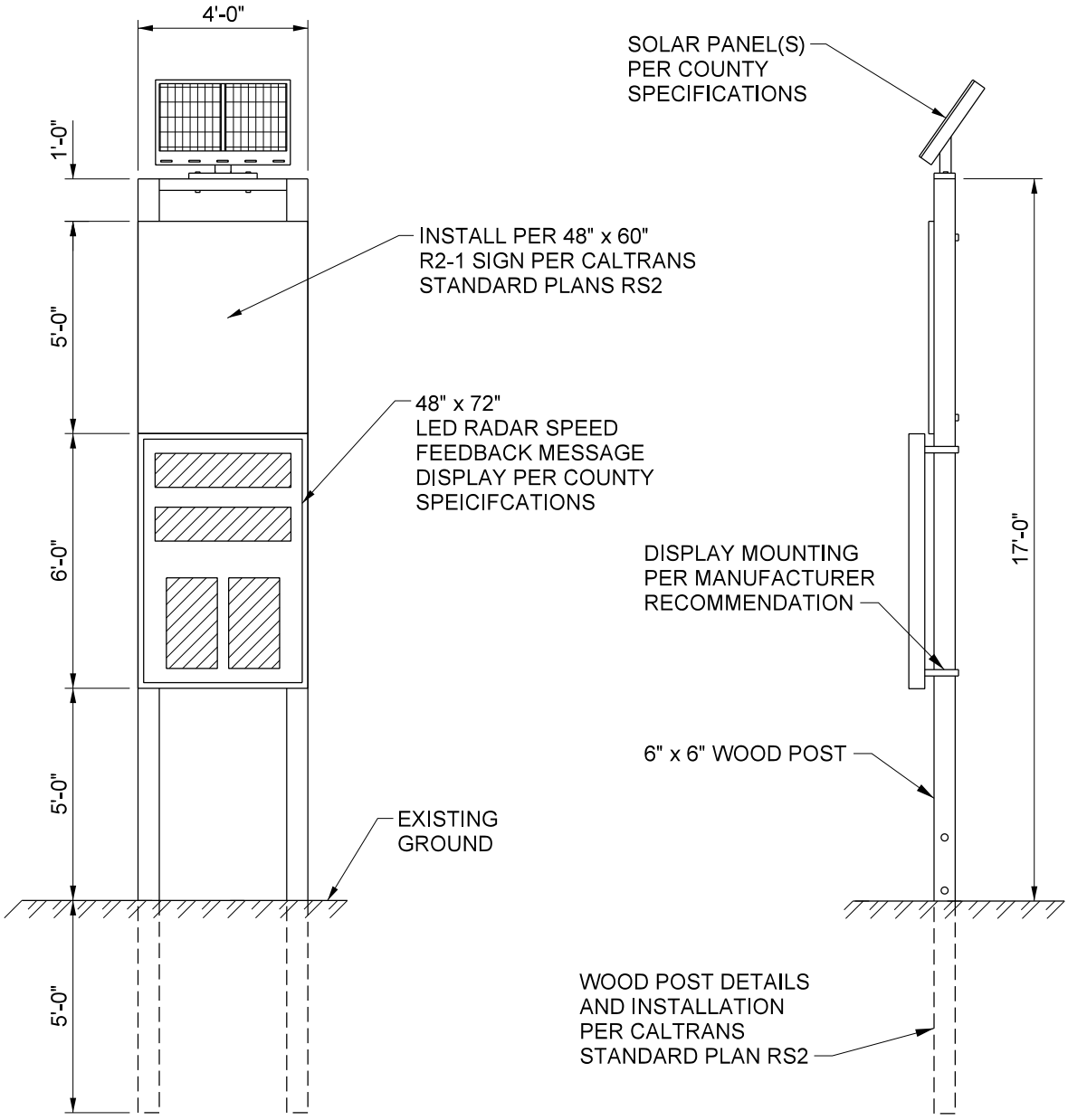
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SOLAR POWERED RADAR SPEED FEEDBACK SIGN

- LOCAL ROAD

STANDARD No. 1216



FRONT VIEW

SIDE VIEW

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

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MARK LANCASTER, P.E.

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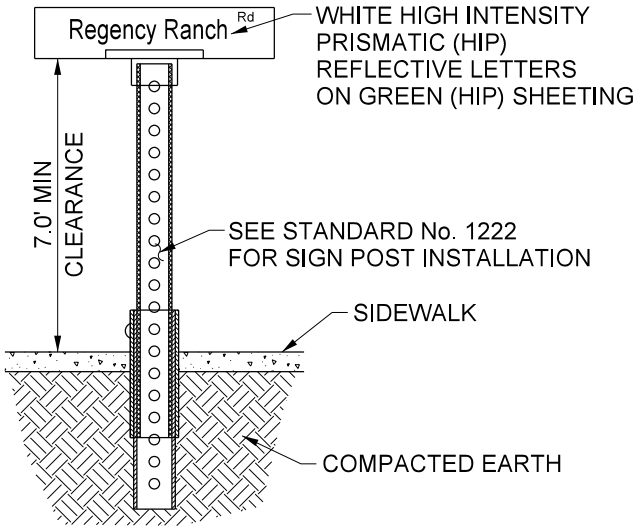
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SOLAR POWERED RADAR SPEED FEEDBACK SIGN

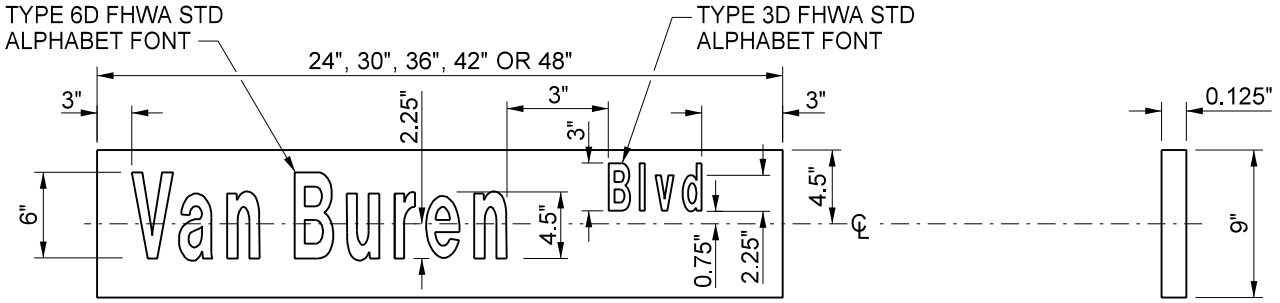
- HIGHWAY

STANDARD No. 1217



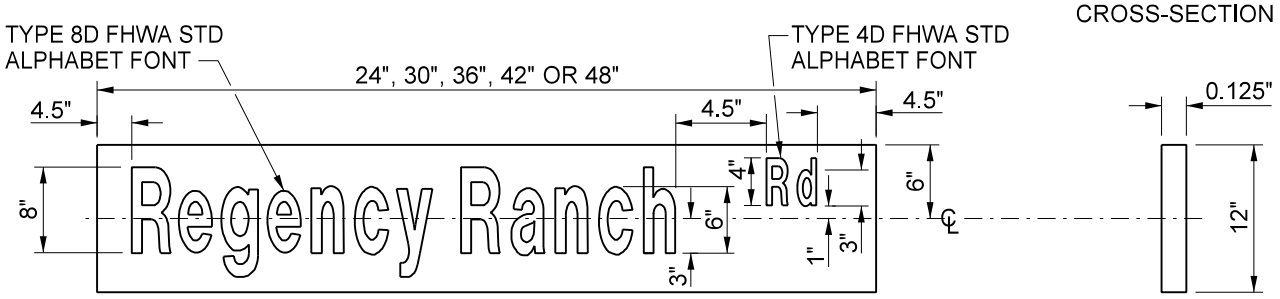
NOTES:

1. WHEN ONE OF THE INTERSECTING ROADWAYS HAS AN ULTIMATE PAVED WIDTH OR CURBED WIDTH GREATER THAN 60 FEET, STANDARD No. 1220 SHALL BE USED.
2. WHEN ALL INTERSECTING STREETS HAVE ULTIMATE PAVED WIDTHS OR CURBED WIDTHS OF 60 FEET OR LESS, AND THEY ARE NOT GENERAL PLAN ROADS, USE STANDARD No. 1221.
3. MORE THAN FOUR STREET NAME SIGNS MAY BE REQUIRED AT INTERSECTIONS WITH MORE THAN FOUR LEGS.



MINOR STREET NAME SIGN SPECS (SIGN LOCATION A)

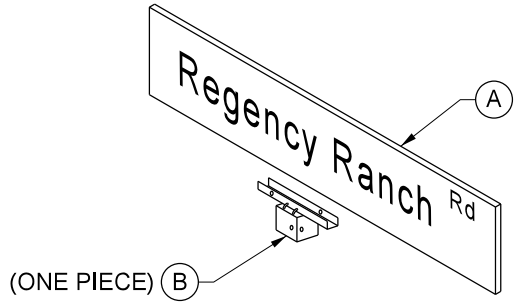
SIGN CROSS-SECTION



MAJOR STREET NAME SIGN SPECS (SIGN LOCATION B, C & D)

SIGN CROSS-SECTION

* LETTER SIZING AND SPACING SHALL MEET FHWA SPACING GUIDELINES. MINOR VARIATIONS AS APPROVED BY ENGINEER.



NOTES:

(A) SIGN PLATES (5052-H38 ALUMINUM ALLOY MATERIAL)

(B) 2" SQ x 12" CAST ANODIZED ALUMINUM POST CAP WITH SIX 3/8" ALLEN HEAD STAINLESS STEEL SET SCREWS TO FIT 0.125" SIGN BLANK

NOT TO SCALE

FOR ABBREVIATIONS SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

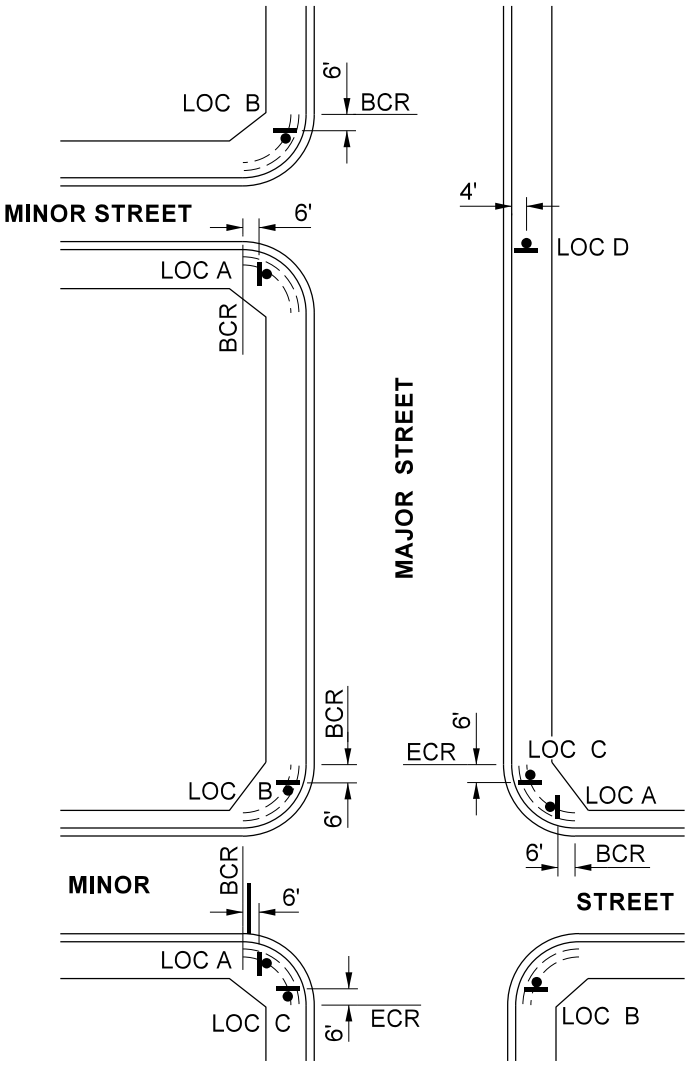
REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

STREET NAME SIGN (CURB TO CURB WIDTH GREATER THAN 60')

STANDARD No. 1220 (1 OF 2)



SIGN INSTALLATION LOCATIONS

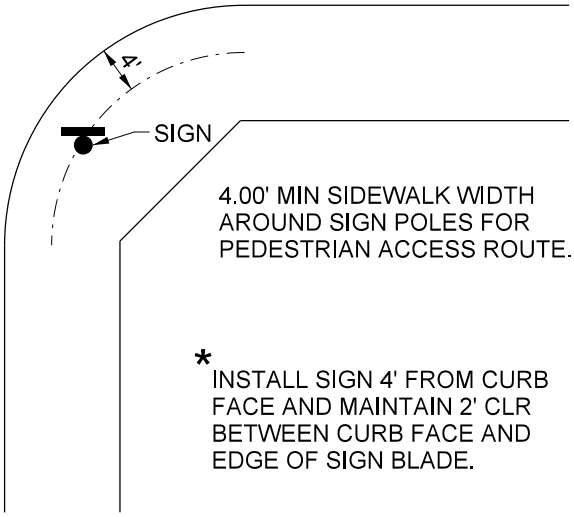
A. 9" BLADE, WITH MAJOR STREET NAME, PERPENDICULAR TO MINOR STREET.

B. 12" BLADE, WITH MINOR STREET NAME, PERPENDICULAR TO MAJOR STREET.

C. 12" BLADE, WITH MINOR STREET NAME, PERPENDICULAR TO MAJOR STREET.
*(ONLY INSTALL SIGN LOC C IF SIGN LOC B DOES NOT PROVIDE GOOD SIGN VISIBILITY)

* FINAL SIGN LOCATION TO BE DETERMINED BY ENGINEER.

SIGN INSTALLATION DETAILS



4.00' MIN SIDEWALK WIDTH AROUND SIGN POLES FOR PEDESTRIAN ACCESS ROUTE.

* INSTALL SIGN 4' FROM CURB FACE AND MAINTAIN 2' CLR BETWEEN CURB FACE AND EDGE OF SIGN BLADE.

SIGNS SHALL NOT EXCEED 48". IF STREET NAME CONTAINS A SECOND WORD, SECOND WORD MAY BE ABBREVIATED AS FOLLOWS:

SUFFIX	ABBR
AVENUE	Ave
BOULEVARD	Blvd
CANYON	Cyn
CENTER	Ctr
CIRCLE	Cir
COURT	Ct
DRIVE	Dr
LANE	Ln
LOOP	Lp
PARKWAY	Pkwy
PLACE	Pl
RANCH	Rch
ROAD	Rd
SCHOOL	Sch
SPRING	Spr
STREET	St
TERRACE	Ter
TRAIL	Tr
WAY	Way

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

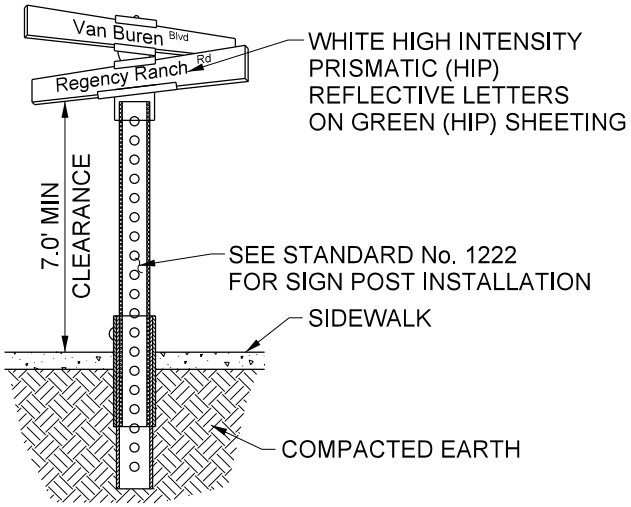
REVISION DESCRIPTION	MARK	DATE	APPROVED

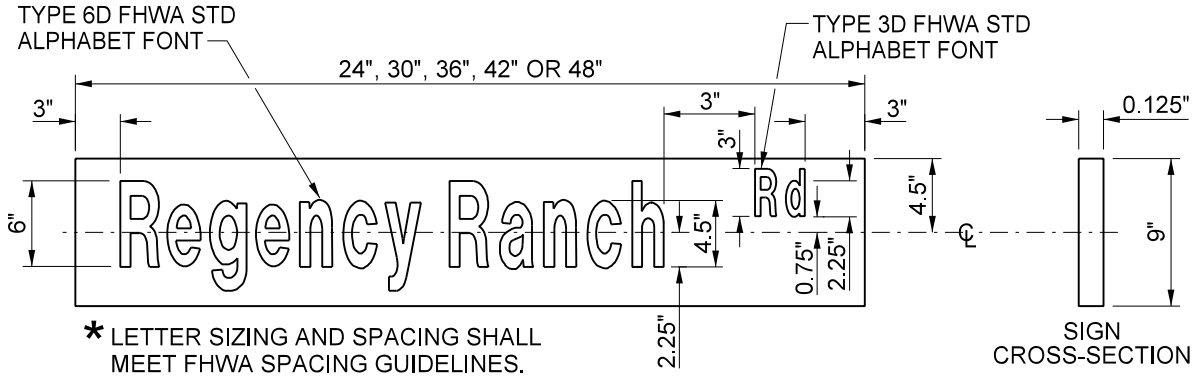
REGISTERED PROFESSIONAL ENGINEER
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

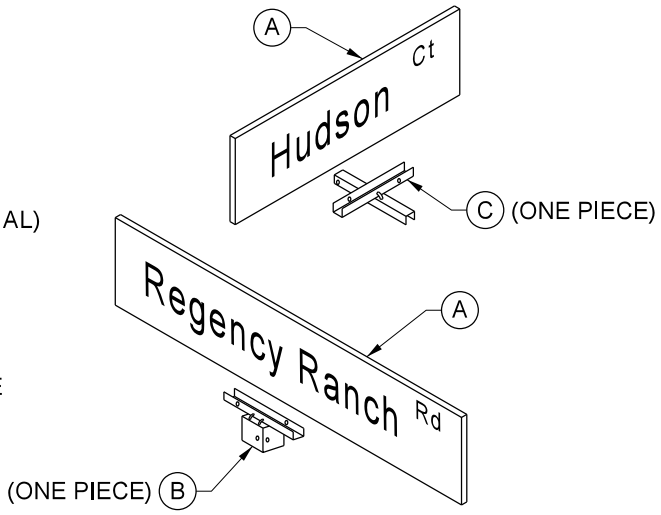
STREET NAME SIGN
(CURB TO CURB WIDTH GREATER THAN 60')

STANDARD No. 1220 (2 OF 2)





* LETTER SIZING AND SPACING SHALL MEET FHWA SPACING GUIDELINES. MINOR VARIATIONS AS APPROVED BY ENGINEER.



NOTES:

(A) SIGN PLATES (5052-H38 ALUMINUM ALLOY MATERIAL)

(B) 2" SQ x 12" CAST ANODIZED ALUMINUM POST CAP WITH SIX 3/8" ALLEN HEAD STAINLESS STEEL SET SCREWS TO FIT 0.125" SIGN BLANK

(C) CENTER CROSS SADDLE SHALL BE 12" ONE-PIECE CAST ANODIZED ALUMINUM WITH FOUR 3/8" STAINLESS STEEL ALLEN HEAD SET SCREWS TO FIT 0.125" SIGN BLANK

NOT TO SCALE

FOR ABBREVIATIONS SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

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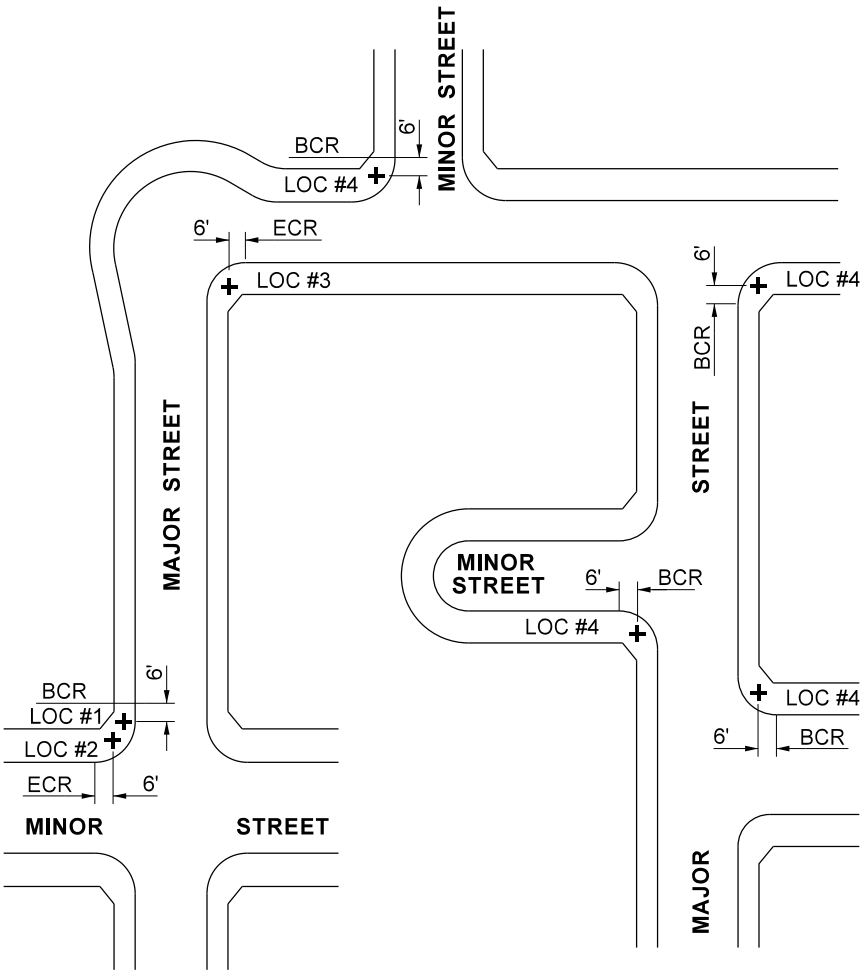
CIVIL
STATE OF CALIFORNIA

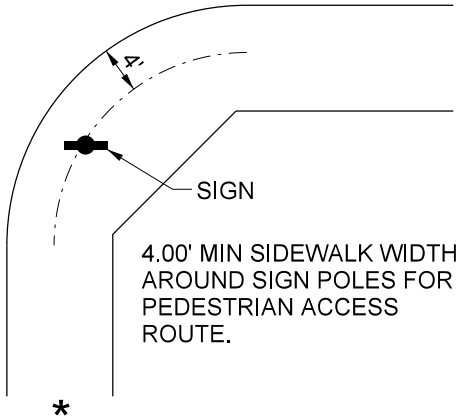
COUNTY OF RIVERSIDE

STREET NAME SIGN (CURB TO CURB WIDTH LESS THAN OR EQUAL TO 60')

STANDARD No. 1221 (1 OF 2)



SIGN INSTALLATION DETAILS



* INSTALL SIGN 4' FROM CURB FACE AND MAINTAIN 2' CLR BETWEEN CURB FACE AND EDGE OF SIGN BLADE.

SIGNS SHALL NOT EXCEED 48". IF STREET NAME CONTAINS A SECOND WORD, SECOND WORD MAY BE ABBREVIATED AS FOLLOWS:

SUFFIX	ABBR
AVENUE	Ave
BOULEVARD	Blvd
CANYON	Cyn
CENTER	Ctr
CIRCLE	Cir
COURT	Ct
DRIVE	Dr
LANE	Ln
LOOP	Lp
PARKWAY	Pkwy
PLACE	Pl
RANCH	Rch
ROAD	Rd
SCHOOL	Sch
SPRING	Spr
STREET	St
TERRACE	Ter
TRAIL	Tr
WAY	Way

SIGN INSTALLATION LOCATIONS

SIGN LOC No. 1 - FOR RESIDENTIAL STREETS WITHIN A TRACT
SIGN LOC No. 2 - ALL OTHER STREETS THAT ARE NON-RESIDENTIAL STREETS WITHIN A TRACT FOR LOCATION THAT IS INSIDE KNUCKLES FOR T-INTERSECTION

* **FINAL SIGN LOCATION TO BE DETERMINED BY COUNTY ENGINEER**

NOTE:
ONE COMPLETE NAME SIGN UNIT IS REQUIRED AT EACH INTERSECTION WHEN PAVED WIDTHS OR CURBED WIDTHS OF ALL INTERSECTING STREETS ARE 60 FEET OR LESS. AT INTERSECTIONS WITH ONE OR MORE STREETS WITH AN ULTIMATE PAVED WIDTH OR CURBED WIDTH GREATER THAN 60 FEET, USE STANDARD NO. 1220.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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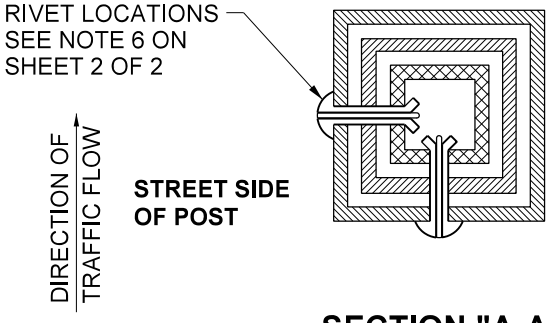
C48048
CIVIL
STATE OF CALIFORNIA

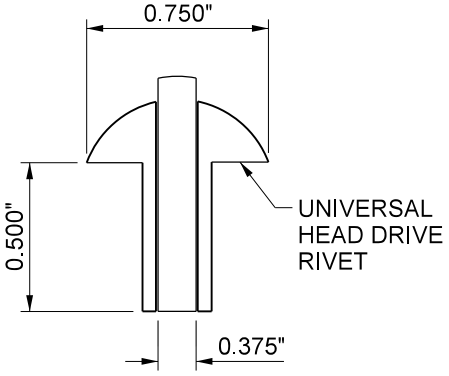
COUNTY OF RIVERSIDE

STREET NAME SIGN
(CURB TO CURB WIDTH LESS THAN OR EQUAL TO 60')

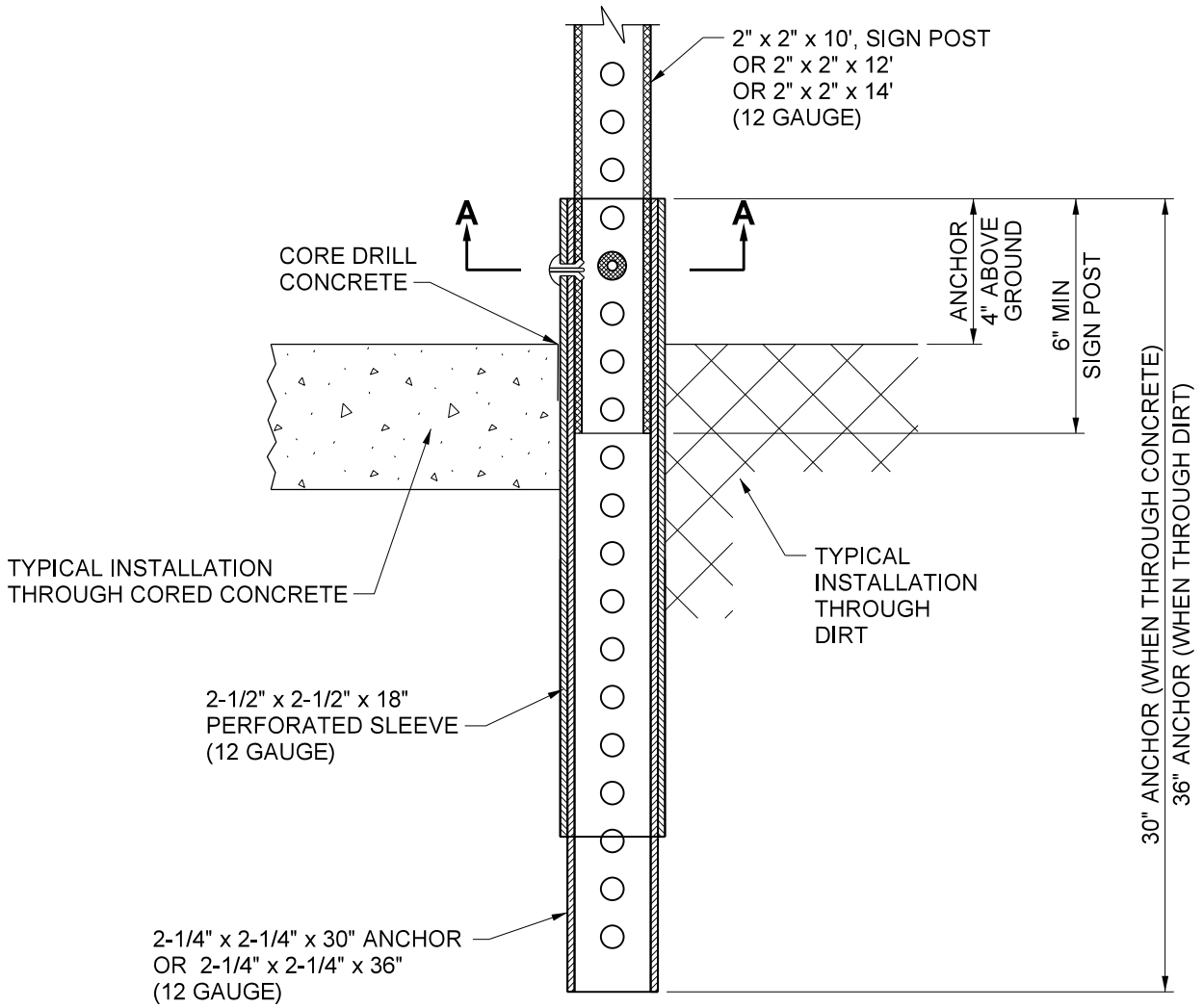
STANDARD No. 1221 (2 OF 2)



SECTION "A-A"



RIVET DETAIL



NOT TO SCALE

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DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SIGN POST INSTALLATION

STANDARD No. 1222 (1 OF 2)

NOTES:

1. SQUARE PERFORATED STEEL TUBE POST WITH TWO PIECE ANCHOR AND SLEEVE, "TELESPAR", SHALL BE USED FOR ALL TRAFFIC CONTROL AND INFORMATIONAL SIGNS WITHIN ROAD RIGHT OF WAY.

2. THE NUMBER OF POSTS REQUIRED FOR SIGN INSTALLATION SHALL BE DETERMINED BY THE AREA OF THE SIGN OR COMBINATION OF SIGNS TO BE INSTALLED. A SINGLE POST SHALL BE USED WHERE BOTH THE LENGTH AND WIDTH ARE 48" OR LESS. DOUBLE POSTS SHALL BE USED WHERE EITHER THE LENGTH OR WIDTH EXCEEDS 48".

3. THE 2 PIECE ANCHOR AND SLEEVE ASSEMBLY SHALL CONSIST OF A 2 1/4" SQUARE BY 30" (THROUGH SIDEWALK) OR 36" (THROUGH SOIL) ANCHOR WITH A 2 1/2" SQUARE BY 18" SLEEVE. ALL SLEEVES AND ANCHORS SHALL BE 12 GAUGE.

4. THE ANCHOR AND SLEEVE ASSEMBLIES SHALL BE DRIVEN SIMULTANEOUSLY UNTIL ONLY 4" REMAINS ABOVE GROUND LEVEL.

5. ALL DIRT SHALL BE REMOVED FROM THE INSIDE TOP 6" MINIMUM OF THE ANCHOR ASSEMBLY TO ALLOW FOR THE INSTALLATION OF THE SIGN POST.

6. INSTALL 2" SQUARE SIGN POST MINIMUM 6" INTO THE ANCHOR ASSEMBLY AND SECURE IN PLACE WITH TWO 3/8" DRIVE RIVETS AS SHOWN. THE RIVETS SHALL BE INSTALLED ON THE SIDE FACING TRAFFIC FLOW AND THE SIDE OF APPROACHING TRAFFIC AS SHOWN IN ORDER TO ACHIEVE THE MAXIMUM BREAK-AWAY EFFECT.

7. INSTALLATION ACCORDING TO THESE REQUIREMENTS IS ESSENTIAL TO MAINTAIN BREAKAWAY CHARACTERISTICS OF THE POST SYSTEM.

8. SEE STANDARD No's. 1220 AND 1221 FOR PLACEMENT OF SIGN POST.

9. ALL ANCHOR ASSEMBLIES SHALL BE CORE DRILLED THROUGH CONCRETE AND ASPHALT.

10. ALL SIGNS ATTACHED TO PERFORATED POSTS SHALL HAVE ZINC COATED OR STAINLESS STEEL WASHERS BEHIND THE RIVET THAT ARE LARGER THAN THE HEAD OF THE RIVET.

11. ALL REGULATORY, WARNING AND GUIDE SIGNS INSTALLED SHALL BE 0.080 INCHES IN THICKNESS.

12. ALL SIGNS 36" OR LARGER SHALL BE INSTALLED WITH BACK BRACES SPECIFICALLY DESIGNED FOR 2" SQUARE PERFORATED POSTS. (2" RISE)

13. IN SOME INSTANCES CONCRETE FOUNDATION MAY BE REQUIRED TO ENSURE PROPER STABILITY, THIS OPTION IS TO BE USED AT THE DISCRETION OF THE COUNTY ENGINEER OR DESIGNEE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

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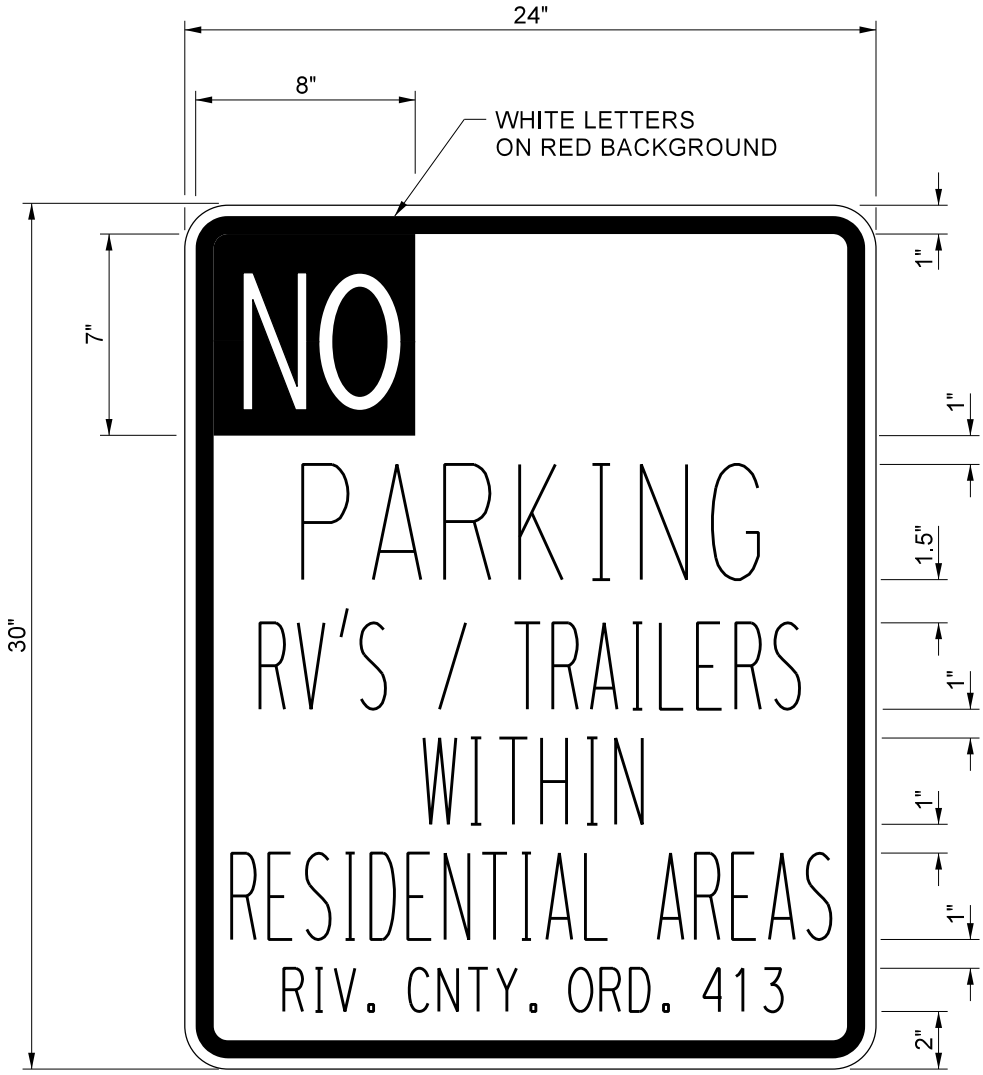
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

SIGN POST INSTALLATION

STANDARD No. 1222 (2 OF 2)



RED LETTERS ON WHITE BACKGROUND
WITH RED BORDER

SIZE: 24" x 30"
C.R.: 1-1/2"
MARGIN: 3/8"
BORDER WIDTH: 5/8"
SINGLE FACE
SCREEN
2 HOLES, 3/8" DIA STD
SHEETING: SEG
SUBSTRATE: 0.063" ALUM
SCREEN ID & ANTI INK

LINE	SIZE	SERIES	COLOR	FONT	UC	LC
1	5"	B	WHT	FHWA	X	
2	4"	C	RED	FHWA	X	
3-5	3"	B	RED	FHWA	X	
6	1.5"	C	RED	FHWA	X	

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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MARK LANCASTER, P.E.

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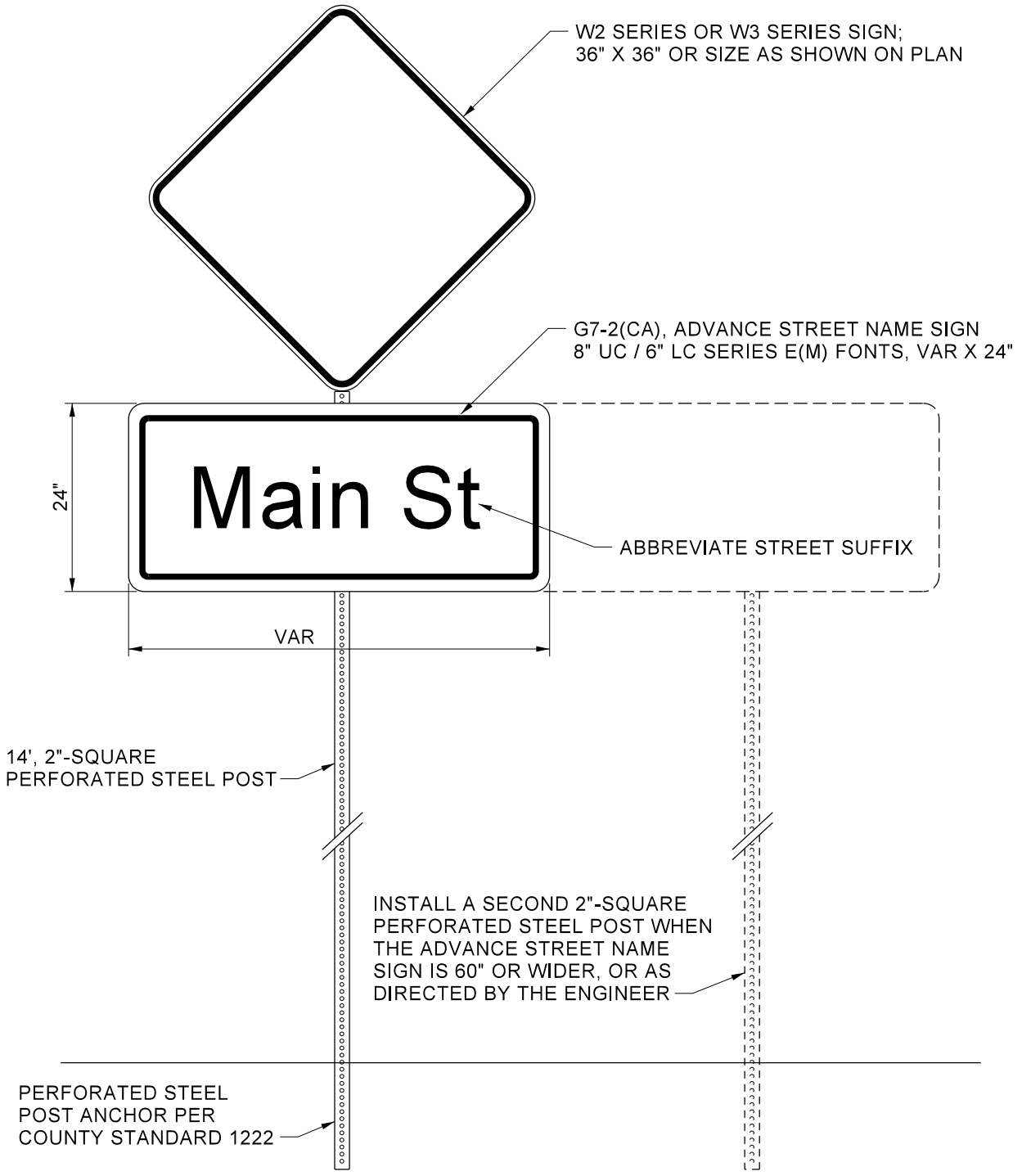
MARK ALAN LANCASTER
C48048
CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

NO PARKING SIGN RV'S / TRAILERS

STANDARD No. 1223



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Mark Lancaster 11/30/22

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E.

REVISION DESCRIPTION	MARK	DATE	APPROVED

REGISTERED PROFESSIONAL ENGINEER
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CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

ADVANCE STREET NAME SIGN

STANDARD No. 1225