2023
County Road Standards
# COUNTY ROAD STANDARDS

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SALV SALVAGE
SB SOUTHBOUND
SCH, SCHEDULE
SCHED
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
SPECIFICATION
SR STATE ROUTE
ST STREET
STA STATION
STD STANDARD
STR STRUCTURE, STRAIGHT
SURF SURFACING
SW SIDEWALK, SOUND WALL

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WA WIDTH A
WB WESTBOUND
WHT WHITE
WO WEST OF
WW WATER VALVE
WW WINGWALL

X
X SEC CROSS SECTION
X-WALK CROSSWALK
XING CROSSING

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YR YEAR
YRS YEARS

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

MISCELLANEOUS
2:1 2 HORIZONTAL TO 1 VERTICAL

ACRONYMS AND ABBREVIATIONS (SHEET 3 OF 3)
* 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.
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.
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

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22

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

COUNTY OF RIVERSIDE

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

STANDARD No. 83 (2 OF 2)
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

NOTE: THIS WAS NUMBERED STANDARD NO. 62 PRIOR TO 2023

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.
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

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

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

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.
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)

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

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

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

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

*CROSS SLOPE OF SIDEWALK SHALL BE 1.5% (2.00% MAX AS-BUILT)
TYPICAL CONFIGURATION FOR:
1. SR 79 (SOUTH) FROM 1200' E/O BUTTERFIELD STAGE RD EAST TO APPROX 500' E/O PAUBA RD

NOTE: THIS WAS NUMBERED STANDARD No. 85 PRIOR TO 2023
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 RW, 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)
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 Q10 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.
**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-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 Q₁₀ 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.
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.
Curb Return Radius = 35'
(See Standard No. 805)

0' ECR

0' BCR

12' Painted Median

120' Reverse Curve

250'

370'

120' Curb Median, C/G and R/W Transition

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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. 32 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.

SECTION "A"

SECTION "B"

SECTION "C"
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.

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

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

STANDARD No. 103
**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.
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.
NOT TO SCALE

SECTION "A"

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

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

SECTION "B"

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.
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

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

STANDARD No. 105C
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.
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22

COUNTY OF RIVERSIDE
LOCAL FRONTAGE ROAD
(52' 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.
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.
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). CURB IS NOT ALLOWED.

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

NOT TO SCALE
PREPARED UNDER THE SUPERVISION OF:
Mark Lancaster, P.E.
11/30/22
DIRECTOR OF TRANSPORTATION
COUNTY OF RIVERSIDE
SECONDARY FRONTAGE ROAD
(82’ R/W)
STANDARD No. 108
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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
LOCAL MOUNTAIN RESIDENTIAL STREET (50' R/W)

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'.
NOTES:

1. ALL LANDSCAPING AND IRRIGATION PLANS MUST BE APPROVED BY THE TRANSPORTATION DEPARTMENT.

2. CONTINUED MAINTENANCE OF PLANTED LANDSCAPING 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.
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:

CROSSOVER MEDIAN

STANDARD No. 113A
| ROAD TYPE                              | STANDARD No. | 105B | 105A | 104 | 111 | 110 | 103 | 102 | 90  | 81  | 71  | 61  | 51  | 41  | 31  | 21  | 11  | 1   |
|----------------------------------------|--------------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 5.5 (1) MIN                           | 5.5 (1) MIN  | 5.5  | 5.5  | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| TRAFFIC INDEX (1)                      | 32           | 36   | 40   | 44  | 44  | 44  | 44  | 44  | 44  | 44  | 44  | 44  | 44  | 44  | 44  | 44  | 44  |
| RIGHT-OFF-WAY (FT)                     | 300          | 300  | 300  | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| SURFACED WIDTH OR CURB TO CURB (FT)    | 400          | 400  | 400  | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| MINIMUM RADIUS (HORIZ. FT)             | 16           | 16   | 16   | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  | 16  |
| FLAT ROLLING MOUNTAINOUS              | 30           | 30   | 30   | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| FLAT ROLLING MOUNTAINOUS              | 30           | 30   | 30   | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| FLAT ROLLING MOUNTAINOUS              | 30           | 30   | 30   | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| MAXIMUM LOGICAL GRADES (%)             | 1.5          | 1.5  | 1.5  | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| PREFERRED DESIGN SPEEDS (MPH)          | 30           | 30   | 30   | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| CURB RETURN RADIUS (FT)                | 30           | 30   | 30   | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| INTERSECTION INTERVALS (FT)             | 30           | 30   | 30   | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  | 30  |
| NOT TO SCALE                           |              |      |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

FOR NOTES SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

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.
**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.

Prepared under the supervision of:

**Local and Collector Street Bridge**

County of Riverside

Standard No. 115
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.
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, P.E.
11/30/22
DIRECTOR OF TRANSPORTATION

COUNTY OF RIVERSIDE
ARTERIAL HIGHWAY BRIDGE

STANDARD No. 117
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.

PREPARED UNDER THE SUPERVISION OF:

MARK LANCASTER, P.E.
DIRECTOR OF TRANSPORTATION

COUNTY OF RIVERSIDE
MAJOR HIGHWAY BRIDGE

STANDARD No. 118
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.
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.


NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

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.


PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22

COUNTRY 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:

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.
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.
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.
ROADBED WIDTH TO THIS POINT

8" Curb Face (or as approved)

6"

Epoxy Adhesive Surface

R = 3/4"

R = 3/4"

2% inclination

* 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, P.E.

Director of Transportation

11/30/22

County of Riverside

Type "D-1" Curb Only on Existing Pavement

Standard No. 203
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.
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.

TYPICAL PLAN VIEW

PREPARED UNDER THE SUPERVISION OF:

COUNTY OF RIVERSIDE

CURB AND GUTTER JOINTS

STANDARD No. 205
NOTES:
1. HOT MIX ASPHALT ON 4'-0" MIN THICKNESS CLASS 3 BASE OR 3'-12" THICKNESS HIMA ON NATIVE SOIL.
2. 3' OF FULL HEIGHT REQUIRED BETWEEN DRIVEWAYS WHEN STREET GRADIENT EXCEEDS 4%.
3. RELATIVE COMPACTATION OF SUBGRADE UNLESS OTHERWISE PERMITTED.
4. CONCRETE: MINIMUM CEMENTITIOUS MATERIAL CONTENT = 680 LB./CU YD.

RESIDENTIAL DRIVEWAY APPROACH WITH HMA DIKE

SECTION

* IF SIDEWALK IS CONSTRUCTED 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. 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 RW
MEDIAN DETAIL

IF MEDIAN IS PROPOSED, APPROVAL IS REQUIRED BY THE TRANSPORTATION DEPARTMENT AND THE FIRE DEPARTMENT

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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
COMMERCIAL DRIVE APPROACH
(WITH SIDEWALK AT CURB)

STANDARD No. 207A (1 OF 4)
MEDIAN DETAIL

IF MEDIAN IS PROPOSED, APPROVAL IS REQUIRED BY THE TRANSPORTATION DEPARTMENT AND THE FIRE DEPARTMENT

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.

PREPARED UNDER THE SUPERVISION OF:

MARK LANCASTER, P.E.

11/30/22

DIRECTOR OF TRANSPORTATION

COMMERCIAL DRIVE APPROACH
(WITH SIDEWALK AT R/W)

COUNTY OF RIVERSIDE

REVISION DESCRIPTION MARK DATE APPROVED

STANDARD No. 207A (3 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.
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. WEAKEENED PLANE JOINTS TO BE CONSTRUCTED AT 1/3 POINTS ON 25° RADIUS SPANDRELS, AND AT 1/4 POINTS ON 35° RADIUS SPANDRELS.

7. CONSTRUCT WEAKEENED 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".
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 COMPACCIÓN 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.
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
DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
C48048
STANDARD No. 211
NOTE:
1. HMA DIKE REQUIRED WHERE FILL SLOPES ARE STEEPER THAN 4:1, MATERIAL IS SUSCEPTIBLE TO EROSION, OR WHERE ROADWAY GRADIENT EXCEEDS 3%.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22

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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
RESIDENTIAL DRIVEWAY APPROACH WITH SIDEWALK AT R/W

STANDARD No. 213 (1 OF 2)
LEGEND:

- HMA OVERLAY

ABBREVIATIONS:

- TE TAPERED EDGE

CASE A
TAPERED EDGE

CASE B
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.

DETAIL "A"

FOR HMA OVERLAY THICKNESS MORE THAN 0.43'.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster, P.E.

11/30/22

DIRECTOR OF TRANSPORTATION

REVISION DESCRIPTION MARK DATE APPROVED

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.

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster, P.E.

DIRECTOR OF TRANSPORTATION

11/30/22

DATE

COUNTY OF RIVERSIDE

SAFETY EDGE

STANDARD No. 214 (2 of 2)
EXCEPT FOR REINFORCING BAR SHOWN ADJACENT TO FRAME, REINFORCE TOP SLAB WITH #4 BARS SPACED 6" C-C

FRAME 23 3/4" OPENING

2" CLR TYP

TYP

SLIP-RESISTANT PARKWAY COVER & FRAME STANDARD No. 608

ANCHOR

R = 4" CURB DEPRESSION 1 1/2" OR AS NOTED

SEE STANDARD No. 311 FOR GUTTER DEPRESSION

BACK OF CURB FL

GUTTER EXP JOINT

STRAIGHT GRADE 4'

4' MIN OPENING OPENING TO BE SPECIFIED ON IMPROVEMENT PLAN, SEE NOTES ON SHEET 2

6' MIN EXP JOINT GUTTER

FL

SIDEWALK WIDTH, SEE NOTE 15

NORMAL GUTTER FL ELEVATION

BASIN INLET FL ELEVATION

6" THICK APRON #4 BARS @ 18" C-C MIN 3" PIPE EMBEDMENT

CON ST JOINT

1 1/2" CLR TYP

1/2" : 1'

1/2" : 1'

4 1/2'

1 1/2" DIA

2 1/2"

1'-6" TYP

3'

T

T

3'

3'

3'

4 1/2'

1'-6" TYP

SEE STANDARD No. 304 FOR DETAIL OF OPENING

1.5%, (2.00% MAX AS-BUILT)

SECTION "A-A"

FOR NOTES SEE SHEET 2

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION

MARK LANCASTER, P.E.

11/30/22

REVISION DESCRIPTION MARK DATE APPROVED

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.
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).
NOTES:

1. **DIMENSIONS UNLESS OTHERWISE SPECIFIED**

<table>
<thead>
<tr>
<th>Y</th>
<th>W</th>
<th>T</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>2'-3'</td>
<td>7&quot;*</td>
<td>6'*</td>
<td>4'-6'*</td>
</tr>
<tr>
<td>8'</td>
<td>5' OR LESS</td>
<td>8'</td>
<td>5' TO 8'</td>
</tr>
<tr>
<td>10'</td>
<td>8' OR GREATER</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.**
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:

DIRECTOR OF TRANSPORTATION
MARK LANCOSTER, P.E.

COUNTY OF RIVERSIDE

COMBINATION INLET CATCH BASIN No. 2

STANDARD No. 302 (2 OF 2)
NOTE:
USE 4' WIDE CHECKERED PLATE
CUT TO CORRECT DIMENSIONS.
THEN CONSTRUCT FRAME TO
FIT PLATE AND FASTEN WITH
AN INTERMITTENT WELD.

SCHEMATIC PLAN VIEW

PROFILE

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

COUNTY OF RIVERSIDE

FLAT OUTLET
DRAINAGE STRUCTURE

STANDARD No. 303 (1 OF 2)
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.
CUT REINFORCING STEEL TO CLEAR FACE PLATE

NOTE 2

- 1/8" HOLE IN PLATE
- ADJUSTING NUTS TO BE TIGHTENED AND SECURED IN PLACE WHEN STEEL PLATE ANGLE IS IN PROPER POSITION.
- R = 1" MIN
- 1/2" Ø STIRRUP, WELD AS SHOWN

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 GALVANIZED.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
CURB SUPPORT DETAIL

STANDARD No. 304
TYPE 24 - 9 WELDED GRATE

TYPE 24 - 12X WELDED GRATE

GRATE DETAILS
(SEE TABLE BELOW)

BOLTED END BLOCK

BAR SPACER

ALTERNATIVE SPACER

ALTERNATIVE BOLTED GRATE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>NO. BARS</th>
<th>&quot; W &quot;</th>
<th>&quot; X &quot;</th>
<th>GRATE OPEN AREA</th>
<th>USAGE</th>
</tr>
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<tbody>
<tr>
<td>24 - 9</td>
<td>9</td>
<td>2&quot;</td>
<td>1 9/16&quot;</td>
<td>5.21 SqFt</td>
<td>USE IN LOCATIONS OFF THE ROADBED</td>
</tr>
<tr>
<td>24 -12X</td>
<td>12</td>
<td>1 1/2&quot;</td>
<td>1 5/16&quot;</td>
<td>4.91 SqFt</td>
<td>USE WITHIN THE ROADBED</td>
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</table>

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

GRATE AND FRAME DETAIL

STANDARD No. 305 (1 OF 2)
WEIGHTS

<table>
<thead>
<tr>
<th>TYPE</th>
<th>WELDED</th>
<th>BOLTED</th>
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<tbody>
<tr>
<td>24'-9</td>
<td>200</td>
<td>230</td>
</tr>
<tr>
<td>24'-12X</td>
<td>258</td>
<td>286</td>
</tr>
<tr>
<td>24&quot; FRAME</td>
<td>90</td>
<td>-</td>
</tr>
</tbody>
</table>

OMIT ANCHOR IF WF BEAM SUPPORT IS USED

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.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

GRATE AND FRAME DETAIL

STANDARD No. 305 (2 OF 2)
SECTION "A-A"

CROSS SECTION OF SLOPE DITCH MAY BE MAY BE SEMICIRCULAR, VEE, OR TRAPEZOIDAL, MIN TOP WIDTH = 25" MIN DEPTH = 8"

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
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.

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.

PCC DIP SECTION

PREPARED UNDER THE SUPERVISION OF:

11/30/22
DIRECTOR OF TRANSPORTATION
MARK LANCaster, P.E.

REVISION DESCRIPTION MARK DATE APPROVED

COUNTY OF RIVERSIDE

CIVIL

STATE OF CALIFORNIA

STANDARD No. 307
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'
   - C₁ - D₁ = 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.
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.
FL OF PIPE 1/2" ABOVE GUTTER FLOW LINE, INVERT ELEV PER PLAN

1.5% (2.00% MAX AS-BUILT)

INVERT ELEV PER PLAN

3" MIN PVC (SCHEDULE 40)
3" MIN RECTANGULAR CAST IRON PIPE
4" MIN ROUND CAST IRON PIPE

INSTALL POLYETHYLENE PLASTIC JOINT MATERIAL "QUICK JOINT" OR EQUAL

1 1/2" MIN COVER

MULTIPLE PIPE TYPICAL

3" FROM C PIPE, TYP

CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 505 LB / CU YD

NOT TO SCALE
PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.
11/30/22

PRIVATE DRAIN THROUGH CURB
COUNTY OF RIVERSIDE
STANDARD No. 310
CASE "A"

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.
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.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

C48048

COUNTY OF RIVERSIDE
GUTTER DEPRESSION
FOR GRATE OPENING
CATCH BASIN

STANDARD No. 312 (1 OF 2)
CASE "B"

CASE "C"

HEIGHT OF CATCH BASIN OPENING = NORMAL CURB FACE + 3 INCHES (UNLESS OTHERWISE SPECIFIED)

SLOPE BREAK LINE

SEE NOTE 2 TYP

1/2" EXPANSION JOINT MATERIAL TYP

SLOPE BREAK LINE

1/2" EXPANSION JOINT MATERIAL TYP

NOT TO SCALE

FOR NOTES & SECTION D-D SEE SHEET 1

GUTTER DEPRESSION FOR GRATE OPENING CATCH BASIN

COUNTY OF RIVERSIDE

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) \( H_s \)
- SCREEN BYPASS HEIGHT (1) \( H_b \)
- 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, P.E.

DIRECTOR OF TRANSPORTATION

11/30/22

C48048

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.
**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.


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.


**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.
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
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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

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)
19' - 28'
MIDDLE ZONE MANHOLE LOCATED
OPPOSITE CONNECTOR PIPE

1.5
CONNECTOR PIPE
FTCD
CURB FACE

CENTERED OR MIDDLE ZONE CP (1)

19' - 28'
1.5
CENTERED

OUTER ZONE MANHOLE LOCATED
OPPOSITE CONNECTOR PIPE

FTCD

OUTER ZONE CP (2)

2.5'
CENTERS

FTCD

SIDE OR CORNER CP (3)(5)

CENTERS

OFFSET FTCD FROM CP CENTERLINE IF NEEDED
TO ACCOMMODATE ACCESS STAIRS

FTCD
CURB FACE

BACK WALL CP (4)

NOTE:
SEE STANDARD NO. 313-7
FOR REFERENCED NOTES.
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.
CATCH BASIN 301

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.
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:

11/30/22
DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E.

COUNTRY 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

<table>
<thead>
<tr>
<th>CATCH BASIN TYPE</th>
<th>H (FT)</th>
<th>CATCH BASIN WIDTH (FT) (1)</th>
<th>NUMBER OF GRATES</th>
<th>BYPASS HEIGHT Hb (IN)</th>
<th>SCREEN HEIGHT Hs (IN)</th>
<th>SCREEN LENGTH L (FT)</th>
<th>G (IN)</th>
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**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: [Signature]

DIRECTOR OF TRANSPORTATION DATE
MARK LANCASTER, P.E. 11/30/22

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

<table>
<thead>
<tr>
<th>Catch Basin Type</th>
<th>H (FT)</th>
<th>Catch Basin Width (FT)</th>
<th>Number of Grates</th>
<th>Bypass Height Hb (IN)</th>
<th>Screen Height Hs (IN)</th>
<th>Screen Length L (FT)</th>
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<td>3</td>
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<td>4.0 or Greater</td>
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</tr>
</tbody>
</table>

**NOTES:**
1. For Catch Basin Widths Not Shown Use Next Higher Value.

**Prepared Under the Supervision Of:**

**Country 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

<table>
<thead>
<tr>
<th>CATCH BASIN TYPE</th>
<th>H (FT)</th>
<th>CATCH BASIN WIDTH (FT) (1)</th>
<th>NUMBER OF GRATES</th>
<th>BYPASS HEIGHT Hb (IN)</th>
<th>SCREEN HEIGHT Hs (IN)</th>
<th>SCREEN LENGTH L (FT)</th>
<th>G (IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5</td>
<td></td>
<td>7.0</td>
<td>-</td>
<td>12.0</td>
<td>16.0</td>
<td>7.0</td>
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<tr>
<td></td>
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<td>-</td>
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<td>14.0</td>
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<td>5.0 OR GREATER</td>
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</tr>
</tbody>
</table>

**Notes:**
1. For catch basin widths not shown use next higher value.

---

**Prepared Under the Supervision Of:**

Mark Lancaster, P.E.

**Director of Transportation**

Mark Lancaster, P.E.

**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

<table>
<thead>
<tr>
<th>Catch Basin Type</th>
<th>H (FT)</th>
<th>Catch Basin Width (FT)</th>
<th>Number of Grates</th>
<th>Bypass Height Hb (IN)</th>
<th>Screen Height Hs (IN)</th>
<th>Screen Length L (FT)</th>
<th>G (IN)</th>
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<td>1</td>
<td>18.0</td>
<td>18.0</td>
<td>6.0</td>
<td>16.0</td>
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<tr>
<td>GREATER</td>
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<td></td>
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</tr>
</tbody>
</table>

### Notes:
1. For catch basin widths not shown use next higher value.

**NOT TO SCALE**

Prepared under the Supervision of:

Mark Lancaster, P.E.

11/30/22

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.

<table>
<thead>
<tr>
<th>VALUE</th>
<th>UNITS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>FT</td>
<td>Height of catch basin, as defined in standards No. 300, 301 and 302</td>
</tr>
<tr>
<td>H_{min}</td>
<td>FT</td>
<td>Depth from top of screen to freeboard</td>
</tr>
<tr>
<td>H_b</td>
<td>IN</td>
<td>Bypass opening height</td>
</tr>
<tr>
<td>H_s</td>
<td>IN</td>
<td>Screen height</td>
</tr>
<tr>
<td>L</td>
<td>FT</td>
<td>Bypass opening length</td>
</tr>
<tr>
<td>FREEBOARD (FB)</td>
<td>FT</td>
<td>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</td>
</tr>
<tr>
<td>C_o</td>
<td>IN</td>
<td>Curb opening height (C_o) is defined here as the height from the top of curb to the flow line of the inlet at the local depression</td>
</tr>
<tr>
<td>Q_i</td>
<td>CFS</td>
<td>Flow rate intercepted by the inlet as determined by the engineer for site-specific conditions</td>
</tr>
<tr>
<td>Q_o</td>
<td>CFS</td>
<td>Bypass flow rate under orifice flow condition, assumes that entire bypass opening functions as a rectangular orifice</td>
</tr>
<tr>
<td>Q_w</td>
<td>CFS</td>
<td>Bypass flow rate under weir flow condition</td>
</tr>
<tr>
<td>C_o</td>
<td>-</td>
<td>Orifice flow coefficient = 0.61</td>
</tr>
<tr>
<td>C_w</td>
<td>-</td>
<td>Weir flow coefficient = 0.01</td>
</tr>
<tr>
<td>A_o</td>
<td>FT^2</td>
<td>Bypass opening area for orifice flow, assumes that the entire bypass opening functions as a rectangular orifice</td>
</tr>
</tbody>
</table>

IDENTIFY
Q_i, H_b, H_s, and L

ORIFICE FLOW CAPACITY

WIER FLOW CAPACITY

H_{min} = H - (C_o + H_s) / 12 - FB

A_o = L H_b / 12

Q_o = C_o A_o \sqrt{2g (H_{min} - H_b / 2)}

Q_w = \frac{2}{3} C_w \sqrt{2g L H_{min}^3}

Q_{bypass} = \min (Q_o, Q_w)

Q_{bypass} \geq Q_i \rightarrow YES

PROPOSED CPS ACCEPTABLE

Q_{bypass} < Q_i \rightarrow NO

PROPOSED CPS UNACCEPTABLE
SECTION "A-A"

- 24" WIDE BY 4" DEEP 1" CRUSHED ROCK
- 6" THK PCC APRON (5)
- TOE OF SLOPE
- RIPRAP
- STORM DRAIN
- DETAIL A
- 12" THICK CONC CUTOFF WALL, REBAR SIZE AND SPACING TO MATCH APRON (4)(5)
- 6" THICK PCC APRON (5)
- 6" PIPE INVERT TO TOP OF APRON

SECTION "B-B"

- 24" WIDE BY 4" DEEP 1" CRUSHED ROCK
- WALL FLARE WIDTH
- BOTTOM OF CUTOFF WALL
- STORM DRAIN

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%).
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'.

COUNTY OF RIVERSIDE

RIPRAP ENERGY DISSIPATOR AND APRON AT WINGWALL STORM DRAIN OUTFALL

STANDARD No. 314 (1 OF 4)
NOTES:
1. PLANS SHALL SPECIFY FOR THIS STANDARD:
(A) RIPRAP CLASS AND THICKNESS (T)
(B) FILTER BLANKET MATERIAL AND THICKNESS (f).
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 (f)
   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.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
RIPRAP ENERGY
DISSIPATOR AT
V-DITCH OUTFALL

STANDARD No. 314 (2 OF 4)
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 WTH
   #4 BARS AT 18" OC. APRON WIDTH TO MATCH
   HEADWALL WIDTH (W1).
7. RIPRAP WIDTH TO EQUAL HEADWALL WIDTH (W1).

TABLE A

<table>
<thead>
<tr>
<th>PIPE DIA (D)</th>
<th>18&quot;</th>
<th>21&quot;</th>
<th>24&quot;</th>
<th>27&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
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</thead>
<tbody>
<tr>
<td>WALL WIDTH (W1)</td>
<td>12.7&quot;</td>
<td>13.7&quot;</td>
<td>14.7&quot;</td>
<td>15.7&quot;</td>
<td>16.7&quot;</td>
<td>18.7&quot;</td>
<td>20.7&quot;</td>
<td>22.7&quot;</td>
<td>25.2&quot;</td>
</tr>
<tr>
<td>APRON WIDTH (W2)</td>
<td>4.0&quot;</td>
<td>4.0&quot;</td>
<td>4.0&quot;</td>
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<td>4.0&quot;</td>
<td>4.0&quot;</td>
<td>4.0&quot;</td>
<td>4.0&quot;</td>
</tr>
</tbody>
</table>

NOT TO SCALE
PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
RIPRAP ENERGY DISSIPATOR
AND APRON AT STRAIGHT
HEADWALL OUTFALL

STANDARD No. 314 (3 OF 4)
# Riprap Energy Dissipater Sizing Table

<table>
<thead>
<tr>
<th>Design Velocity (ft/sec)</th>
<th>Riprap Class</th>
<th>Riprap Thickness (t) Placement Method A</th>
<th>Riprap Thickness (t) Placement Method B</th>
<th>Filter Material **</th>
<th>Filter Thickness (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-8</td>
<td>NO. 2 BACKING</td>
<td>N/A</td>
<td>1.25'</td>
<td>1&quot; CRUSHED ROCK</td>
<td>0.5'</td>
</tr>
<tr>
<td>8-13</td>
<td>1/4 TON</td>
<td>N/A</td>
<td>3.3'</td>
<td>1&quot; CRUSHED ROCK</td>
<td>0.75'</td>
</tr>
<tr>
<td>13-15</td>
<td>1/2 TON</td>
<td>3.4'</td>
<td>4.3'</td>
<td>1&quot; CRUSHED ROCK</td>
<td>1.0'</td>
</tr>
<tr>
<td>15-17</td>
<td>1 TON</td>
<td>4.3'</td>
<td>5.4'</td>
<td>1&quot; CRUSHED ROCK</td>
<td>1.0'</td>
</tr>
<tr>
<td>17-20</td>
<td>2 TON</td>
<td>5.4'</td>
<td>N/A</td>
<td>1&quot; CRUSHED ROCK</td>
<td>1.0'</td>
</tr>
</tbody>
</table>

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

** SEE 1" CRUSHED ROCK GRADATION THIS SHEET

## 1" Crushed Rock Gradation

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent (%) Passing</th>
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<tbody>
<tr>
<td>1-1/2&quot; (37.5 mm)</td>
<td>100</td>
</tr>
<tr>
<td>1&quot; (25.0 mm)</td>
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<tr>
<td>3/4&quot; (19.0 mm)</td>
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<td>1/2&quot; (12.5 mm)</td>
<td>0-20</td>
</tr>
<tr>
<td>3/8&quot; (9.5 mm)</td>
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</tr>
<tr>
<td>No. 4 (4.75 mm)</td>
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</tr>
<tr>
<td>No. 8 (2.36 mm)</td>
<td>-</td>
</tr>
<tr>
<td>ASTM C131 Testing Grading</td>
<td>A</td>
</tr>
</tbody>
</table>

[Diagram of concrete sill and riprap installation]

**NOT TO SCALE**

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster, P.E.

Director of Transportation

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.

SIDEWALK ON INSIDE OF KNuckle

UTILITY POLE, WHEN ALLOWED, SHALL BE PLACED BEHIND SIDEWALK EXCEPT: 1. TRANSMISSION POWER POLES (SEE BELOW). 2. AERIAL CONDUCTORS ARE TYPICALLY REQUIRED TO BE RELOCATED TO AN UNDERGROUND LOCATION FOR NEW DEVELOPMENT & REDEVELOPMENT.

FIRE HYDRANT 7.5 FEET MIN FROM FLOWLINE & 1 FOOT FROM CURB RETURN LINE, SEE STANDARD No. 701. NO PORTION OF FIRE HYDRANT TO EXTEND OVER SIDEWALK.

STREET LIGHT OR TRANSMISSION POWER POLE (GUY AND LIfe, FOR CIRCUITS THAT EXCEED 34KV):
1. FACE OF POLE SHALL BE PLACED 1'-6" BEHIND FLOWLINE. 2. SIDEWALK WIDENING REQUIRED, SEE ABOVE. 3. PREFERRED LOCATION IS BEHIND SIDEWALK (AS ABOVE), WHEN FEASIBLE.

SIDEWALK AT INTERSECTION

PREPARED UNDER THE SUPERVISION OF:
MARK LANCASTER, P.E.

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

REGISTERED PROFESSIONAL ENGINEER
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.

**SIDEWALK ON INSIDE OF KNUCKLE**

- WEAKENED PLANE JOINT AT APPROXIMATELY 5' INTERVALS
- *1/2" EXPANSION MATERIAL

**SIDEWALK AT INTERSECTION**

- Utility Pole, when allowed, shall be placed behind sidewalk except: 1. Transmission power poles (see below).
- 2. Aerial conductors are typically required to be relocated to an underground location for new development & redevelopment.

- NEAREST POINT OF FIRE HYDRANT SHALL BE 1'-6" MIN FROM FLOWLINE & 1 FOOT FROM CURB RETURN LINE, SEE STANDARD No. 701.

- FACE OF STREET LIGHT OR TRANSMISSION POLE SHALL BE PLACED 1'-6" MIN BEHIND FLOWLINE

*1/2" EXPANSION MATERIAL*
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 18.04.
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.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

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

WEAKENED PLANE JOINT

EXPANSION JOINT
SEE STANDARD No. 205

BACK OF CURB

EG

1 1/2" x 3/16" TOOLED JOINT AT ALL RAMP GRADE BREAKS
CURB AND GUTTER DETAILS PER STANDARD No. 200 OR 201
WEAKENED PLANE JOINT ALIGNS WITH 1/4 DELTA RADIAL AT BACK OF CURB

PLAN

Y (SEE TABLE Y BELOW)

36" MIN DETECTABLE WARNING SEE DETAILS ON SHEET 2

1 1/2" x 3/16" TOOLED JOINT

CATALOG WARNING PANEL SET IN WET CONCRETE AT TIME OF POUR. SEE NOTES 12 AND 13

SECTION "A-A"

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 INTO PRIVATE PROPERTY.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

REVISION DESCRIPTION MARK DATE APPROVED

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

WEAKENED PLANE JOINT
SEE STANDARD NO. 805 FOR CURB RETURN RADIUS

BACK OF WALK
BACK OF CURB
CURB AND GUTTER DETAILS PER STANDARD NO. 200 OR 201
1 1/2" x 3/16" TOOLED JOINT AT ALL RAMP GRADE BREAKS

1/2 DELTA
1/4 DELTA
1/4 DELTA
1/4 DELTA

BCR
RADIAL
RADIUS = 25' OR 35'
WB
RECESSED
cs
CS
CS
CS

CROSSWALK SEE NOTE 15
SEE TABLE Z ON SHEET 3
FOR PUBLIC WORKS PROJECTS, PAY QUANTITY FOR CURB RAMP CONSTRUCTION SHALL INCLUDE CURB AND GUTTER AND SIDEWALK FROM BCR TO ECR AND BOTH RAMPS.

PLAN

2.3" TO 2.4" CENTER TO CENTER SPACING

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

COLD JOINT

DETECTABLE WARNING PANEL SET IN WET CONCRETE AT TIME OF POUR, SEE NOTES 12 AND 13

SECTIONS "A-A"

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
PREPARED UNDER THE SUPERVISION OF:
DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
CURB RAMP CASE B
STANDARD NO. 403 (2 OF 7)
TABLE X - CASE "A" TRANSITION LENGTH ALONG CURB RETURN (FEET)

<table>
<thead>
<tr>
<th>CF</th>
<th>TRANSITION SLOPE</th>
<th>X</th>
<th>FLOWLINE SLOPE (ALONG CURB RETURN)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>6&quot;</td>
<td>9.0%</td>
<td>$X_S$</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X_L$</td>
<td>6.25</td>
</tr>
<tr>
<td>8&quot;</td>
<td>9.0%</td>
<td>$X_S$</td>
<td>6.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$X_L$</td>
<td>8.33</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>CF</th>
<th>RAMP SLOPE</th>
<th>Z</th>
<th>FLOWLINE SLOPE (ALONG CURB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>6&quot;</td>
<td>7.5%</td>
<td>$Z_S$</td>
<td>5.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$Z_L$</td>
<td>7.69</td>
</tr>
<tr>
<td>8&quot;</td>
<td>7.5%</td>
<td>$Z_S$</td>
<td>7.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$Z_L$</td>
<td>10.26</td>
</tr>
</tbody>
</table>

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

TO CALCULATE "X" OR "Z" LENGTH:

\[
X_S \text{ OR } Z_S(\text{FT}) = \frac{\text{CURB FACE (FEET)}}{\text{TRANS OR RAMP SLOPE + FL SLOPE}}
\]

\[
X_L \text{ OR } Z_L(\text{FT}) = \frac{\text{CURB FACE (FEET)}}{\text{TRANS OR RAMP SLOPE - FL SLOPE}}
\]

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

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

C48048
REGISTRATION NO.

CIVIL
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

CURB RAMP PROFILE

STANDARD No. 403 (3 OF 7)
SECTION "B-B"

RESIDENTIAL DRIVEWAY PER STANDARD No. 213

1 1/2' x 3/16" TOOLED JOINT AT ALL GRADE BREAKS

6" OR 8" RETAINING CURB

TOP OF RAMP

COMMERCIAL DRIVEWAY PER STANDARD No. 207A (1 OF 4)

R/W

BCR

RESIDENTIAL DRIVEWAY PER STANDARD No. 213

BACK OF CURB

FLOW LINE

EDGE OF GUTTER

PLAN

2' MIN

10' MIN (INSIDE)

CROSSWALK IF SPECIFIED

CENTERLINE OF RAMP

SEE SHEET 6 FOR LOCATION AT T-INTERSECTION

2' MIN

ECR DRIVEWAY OR TOP OF "X"

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%.

SECTION "A-A"

ABBREVIATIONS AND VALUES: SEE SHEET 1

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

DIRECTOR OF TRANSPORTATION

MARK LANCASTER, P.E.

11/30/22

DATE

COUNTY OF RIVERSIDE

Curb Ramp - Case C

"T" Intersection With Sidewalk At Curb

STANDARD No. 403 (4 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.
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 PERMITTED AT THE GUTTER FLOWLINE OR EDGE OF PAVEMENT.

5. THE TOP OF CURB WIDTH IS NOT INCLUDED IN THE MEASUREMENT OF MINIMUM SIDEWALK WIDTH.


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:

[Signature]
11/30/22

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

Curb Ramp
NOTES

REVISION DESCRIPTION MARK DATE APPROVED

STATE OF CALIFORNIA

C48048

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.
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.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
MULTIPURPOSE TRAIL

STANDARD No. 405
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 8 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.
SECTION "A-A"

FLOW LINE ELEVATION

TOP OF CURB ELEVATION

DISTANCE "B"

FLOW LINE ELEVATION

30" MIN WITHOUT CONCRETE ENCASMENT

C OF SEWER MAIN

VARIES

45° BEND

WYE BRANCH

4" MIN VCP
1/4" TO 1' MIN GRADE
(UNLESS OTHERWISE APPROVED)

SECTION "A-A"

90° OPTIMUM

HOUSE CONNECTION LATERAL

SEWER MAIN

4" MIN VCP
1/4" TO 1' MIN GRADE
(UNLESS OTHERWISE APPROVED)

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

CAST IRON FRAME

EARTH FILL

CONCRETE COLAR WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD

CAST IRON COVER

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

SECTION "A-A"

1/8 BEND VITRIFIED CLAY PIPE

JOINTS TO BE FILLED W/ JOINTING COMPOUND

BURNT CLAY DISC PLUG

6" VCP
SECTION "A-A"

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

CONCRETE WITH MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD

PAVEMENT OR GROUND SURFACE

STANDARD MANHOLE FRAME AND COVER

ADJUSTING RINGS AS REQUIRED
MAX = 21°
MIN = 15°
TOP 9° = 3-3" RINGS

WHERE POSSIBLE PLACE STEPS UPSTREAM.
SYMMETRICAL OR OFFSET DESIGN.
HOT-DIP GALVANIZED STEEL MANHOLE STEPS.
SPACING NOT TO EXCEED 17°

DROP INLET

INLET PIPE

OUTLET PIPE

DIRECTION OF FLOW

SHELF

PLAN SECTION

CONCRETE ENCASEMENT

DIRECTION OF FLOW

INLET PIPE

SHELF

1" MIN COVER

SLOPE 1:12, TYP

VARIES

36' OR 48'

16' OR 24'

6'

12'

32'

6'

4'-0'

6'

VAR

5'-0" DIA

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster, P.E.

DIRECTOR OF TRANSPORTATION

COUNTY OF RIVERSIDE

PRE-CAST CONCRETE MANHOLE (ECCENTRIC)

STANDARD No. 606

C48048

MARK LANCASTER, P.E.

RECEIVED DESCRIPTION

MARK DATE APPROVED

11/30/22
NOTE:
CONCRETE MINIMUM CEMENTITIOUS MATERIAL CONTENT = 590 LB / CU YD.

24" x 2 1/2" GRADE RING

24" x 6" GRADE RING

24" x 8" GRADE RING

48" x 24" CONCENTRIC CONE

48" x 30" MANHOLE PIPE

48" x 15" MANHOLE PIPE

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

PREPARED UNDER THE SUPERVISION OF:

COUNTY OF RIVERSIDE

PRE-CAST CONCRETE MANHOLE
(CONCENTRIC)

STANDARD No. 607
SLIP RESISTANT 2" x 1" DIAMOND MAT, 1/8" DEEP

ONE OF TWO LOCKING LUGS

3/4" DIA PICK HOLE

6 RIBS

SMOOTH MACHINE FINISH

PICK HOLE

LOCKING LUG

1/16"

PLAN TOP OF COVER

3/4"

1 1/4"

SEE DETAIL "A"

PLAN BOTTOM OF COVER

SECTION - FRAME AND COVER

PARKWAY

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

SECTION - COVER

ROADWAY

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

PREPARED UNDER THE SUPERVISION OF:
Mark Lancaster, P.E.
11/30/22

COUNTY OF RIVERSIDE

MANHOLE FRAMES AND COVERS

STANDARD No. 608
Frame and Cover Per Standard No. 611

GROUT

HOT-DIP GALV MH STEPS

FLOW

Base to be poured in field

VIEW "A-A"

16" NOM

1 1/2"

DROP STEP DETAIL

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

ALTERNATE PLACEMENT OF CHANNELS

CASE B

CASE A

CASE C

CASE D

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

PRECAST RECTANGULAR SHALLOW MANHOLE

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.
MANHOLE COVER
(2 COVERS REQUIRED PER FRAME)

SECTION "A-A"

SECTION "B-B"

SECTION "C-C"

SECTION "D-D"

SECTION "E-E"

NOTE:
EXPOSED METAL & COVER TO BE OT-DIP GALVANIZED AFTER FABRICATION.
NOTE:
SLOPE WILL CONFORM WITH COUNTY OF RIVERSIDE ROAD IMPROVEMENT STANDARDS AND SPECIFICATIONS, OR MEET EXISTING CONDITIONS AS DIRECTED BY THE COUNTY ENGINEER.
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:

COUNTY OF RIVERSIDE

WATER METER INSTALLATION

STANDARD No. 700
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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

DATE
11/30/22

REVISION DESCRIPTION

COUNTY OF RIVERSIDE

FIRE HYDRANT INSTALLATION

STANDARD No. 701
NOTE:
HYDRANTS TO BE INSTALLED IN ACCORDANCE WITH ORDINANCES 460 AND 787.4.
1/2 PLAN OF COVER
HOT-DIP GALVANIZED STEEL

3/8" RADIUS NOTCH

SECTION "A-A"

COVER
FRAME

PAVEMENT

STREET SURFACE

6" PIPE OF PROPER LENGTH
TO SERVE AS VALVE BOX

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

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.

<table>
<thead>
<tr>
<th>Curve 1</th>
<th>Curve 2</th>
</tr>
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<tbody>
<tr>
<td>RW</td>
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<td>66'</td>
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<tr>
<td>74'</td>
<td>37'</td>
</tr>
<tr>
<td>78'</td>
<td>39'</td>
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<table>
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<tr>
<th>Schedule &quot;H&quot;</th>
<th>Curve 1 - Edge of Aggregate Base</th>
<th>Curve 2 - Edge of Aggregate Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>12°</td>
<td>90.00</td>
<td>21°02'30&quot;</td>
</tr>
</tbody>
</table>

NOT TO SCALE
PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster
11/30/22
DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

REGISTERED PROFESSIONAL ENGINEER
C48048

STANDARD No. 800
NOTE:
REQUIREMENT PER COUNTY PLAN
CHECK POLICIES AND GUIDELINES:
MINIMUM FALL AROUND CUL-DE-SAC
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

<table>
<thead>
<tr>
<th>R/W</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>FL</th>
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<tr>
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<td>16'</td>
<td>9'</td>
<td>116.19</td>
<td>32.00'</td>
<td>29°39'</td>
<td>31°</td>
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<tr>
<td>56'</td>
<td>28'</td>
<td>18'</td>
<td>10'</td>
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<td>27°35'</td>
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<td>10'</td>
<td>108.90</td>
<td>29.45'</td>
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<td>33'</td>
<td>22'</td>
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<td>104.94</td>
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<td>19°</td>
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<tr>
<td>74'</td>
<td>37'</td>
<td>22'</td>
<td>15'</td>
<td>106.15</td>
<td>28.08'</td>
<td>23°09'</td>
<td>45°</td>
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<tr>
<td>78'</td>
<td>39'</td>
<td>28'</td>
<td>11'</td>
<td>121.38</td>
<td>35.69'</td>
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<th>SCHEDULE &quot;H&quot;</th>
<th>CURVE 1 - EDGE OF AB</th>
<th>CURVE 2 - EDGE OF AB</th>
<th>CURVE 3 - EDGE OF AB</th>
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<tbody>
<tr>
<td>12'</td>
<td>113.58'</td>
<td>31.79'</td>
<td>31°24'</td>
</tr>
</tbody>
</table>

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

MARK DATE APPROVED

COUNTY OF RIVERSIDE
OFFSET CUL-DE-SAC

STANDARD No. 800A
\[ \Delta_3 = \Delta_1 \text{ (VARIABLE)} + 2\Delta_2 \]
\[ Y = E + T \]
\[ R_3 = 2A + 10' \]
\[ D + T_1 = 50.00' \]

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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
KNUCKLE

STANDARD No. 801 (1 OF 2)
## KNUCKLE DIMENSION TABLE

<table>
<thead>
<tr>
<th>R/W</th>
<th>ROADWAY IMPROVEMENT WIDTH</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>R₁</th>
<th>R₂</th>
<th>R₃</th>
<th>Δ₂</th>
<th>R₄</th>
<th>T₁</th>
<th>R₅</th>
<th>T₂</th>
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<tr>
<td>50'</td>
<td>32'</td>
<td>25'</td>
<td>16'</td>
<td>9'</td>
<td>40.91'</td>
<td>69.09'</td>
<td>35'</td>
<td>51'</td>
<td>60'</td>
<td>10'23'19''</td>
<td>100'</td>
<td>9.09'</td>
<td>109'</td>
<td>9.91'</td>
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<tr>
<td>56'</td>
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<td>28'</td>
<td>18'</td>
<td>10'</td>
<td>40.99'</td>
<td>70.00'</td>
<td>35'</td>
<td>56'</td>
<td>66'</td>
<td>10'17'48''</td>
<td>100'</td>
<td>9.01'</td>
<td>110'</td>
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<tr>
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<td>30'</td>
<td>20'</td>
<td>10'</td>
<td>41.04'</td>
<td>70.60'</td>
<td>35'</td>
<td>60'</td>
<td>70'</td>
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<tr>
<td>66'</td>
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<td>22'</td>
<td>11'</td>
<td>41.12'</td>
<td>71.49'</td>
<td>36'</td>
<td>65'</td>
<td>76'</td>
<td>10'08'58''</td>
<td>100'</td>
<td>8.88'</td>
<td>111'</td>
<td>9.86'</td>
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<tr>
<td>74'</td>
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<td>15'</td>
<td>41.22'</td>
<td>72.66'</td>
<td>40'</td>
<td>69'</td>
<td>84'</td>
<td>10'02'13''</td>
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<td>8.88'</td>
<td>115'</td>
<td>10.10'</td>
</tr>
<tr>
<td>78'</td>
<td>56'</td>
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<td>28'</td>
<td>11'</td>
<td>41.27'</td>
<td>73.23'</td>
<td>36'</td>
<td>77'</td>
<td>88'</td>
<td>9'58'58''</td>
<td>100'</td>
<td>8.73'</td>
<td>111'</td>
<td>9.69'</td>
</tr>
</tbody>
</table>

**NOT TO SCALE**

PREPARED UNDER THE SUPERVISION OF:

[Signature]

11/30/22

DIRECTOR OF TRANSPORTATION

MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

KNUCKLE

STANDARD No. 801 (2 OF 2)
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.

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

* R = 35° IF EITHER STREET HAS A ROADBED WIDTH GREATER THAN OR EQUAL TO STANDARD No. 111 FULL WIDTH SECTION (INDUSTRIAL COLLECTOR 78' RW)
NOTE:
DELTA = TOTAL ANGLE BETWEEN BCR AND ECR

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 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
DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.
11/30/22
DATE
COUNTY OF RIVERSIDE
PROPERTY LINE
CORNER CUT-BACK,
CURB RETURN RADIUS
STANDARD No. 805 (2 OF 2)
GENERAL PLAN HIGHWAY

SECTION "A-A"

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

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

DETAIL "A"
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.

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.

TERMINAL SECTION

SAME AS RAIL ELEMENT SECTION

STANDARD No. W31 (Ca)

ELEVATION

END OF RIGHT OF WAY OR BEGINNING OF BUFFER STRIP

PLAN

C48048

BARRICADE

COUNTY OF RIVERSIDE

STANDARD No. 810

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

MARK LANCASTER, P.E.

11/30/22

REV ISI ON DESCRIPTION MARK DATE APPROVED
MULTIPLE MAILBOX TO MEET REQUIREMENTS OF U.S. POSTAL SERVICE AND BE FURNISHED BY PRIVATE OWNER (NOT COUNTY MAINTAINED)

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

PREPARED UNDER THE SUPERVISION OF:

11/30/22
DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
MULTIPLE MAILBOX INSTALLATION FOR NEW SIDEWALK
STANDARD No. 812
MULTIPLE MAILBOX TO MEET REQUIREMENTS OF U.S. POSTAL SERVICE AND BE FURNISHED BY PRIVATE OWNER (NOT COUNTY MAINTAINED)

4" THICK CONCRETE SLAB

THE DEDICATION OF ADDITIONAL RIGHT OF WAY MAY BE REQUIRED

1/2" EXPANSION JOINT PER STANDARD No. 205

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.
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.

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

STANDARD No. 814
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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22

COUNTY OF RIVERSIDE
UNDERGROUND UTILITY LOCATIONS

STANDARD No. 817 (1 OF 2)
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 RW SHALL BE MINIMUM OF 2.5' BELOW TOP OF CURB GRADE.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

COUNTY OF RIVERSIDE
UNDERGROUND UTILITY LOCATIONS
STANDARD No. 817 (2 OF 2)
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.
REVISION DESCRIPTION
MARK DATE APPROVED
11/30/22

STATE REGISTERED PROFESSIONAL CIVIL ENGINEER
MARK ALAN LANCASTER
C48048

COUNTY OF RIVERSIDE
STANDARD No. 818

TRENCH BACKFILL

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 (GEORIGID) IS ENCOUNTERED, TRENCH THROUGH GEORIGID AND PERFORM ONE OF THE FOLLOWING:
   1) REPLACE GEORIGID AT SAME ELEVATION WITH BUTTED JOINT;
   2) DOUBLE THE THICKNESS OF EXISTING BASE; OR
   3) REPLACE EXISTING BASE WITH CEMENT SLURRY.
2. NO PONDOING 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 GRINDING OF THE EXISTING ASPHALT BEYOND THE EXCAVATION LIMIT OF THE TRENCH SHALL BE REQUIRED AND AS DETERMINED BY THE COUNTY.

ASPHALT SURFACED STREET WITHOUT OVERLAY PERPENDICULAR INSTALLATION
CASE 3

NON-ASPHALT SURFACED AREAS
CASE 1

PLACE CEMENT SLURRY UP TO BOTTOM OF AB 2 BASE
TACK COAT ALL EDGES TYP
3" MIN ASPHALT SURFACING SEE NOTE 1
BACKFILL COMPACTED TO 90% RELATIVE COMPACTION SEE NOTE 2
BEDDING AND UTILITY BACKFILL PER UTILITY COMPANY OR MANUFACTURERS SPECIFICATIONS SEE NOTE 3

6" MIN CLASS 2 BASE, SEE NOTE 1
6" MIN SUBGRADE WITH R-VALUE OF 40 OR BETTER
TACK COAT ALL EDGES VARIABLE

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 (GEORIGID) IS ENCOUNTERED, TRENCH THROUGH GEORIGID AND PERFORM ONE OF THE FOLLOWING:
   1) REPLACE GEORIGID AT SAME ELEVATION WITH BUTTED JOINT;
   2) DOUBLE THE THICKNESS OF EXISTING BASE; OR
   3) REPLACE EXISTING BASE WITH CEMENT SLURRY.
2. NO PONDOING 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.
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TYPICAL CROSS SECTION

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

PREPARED UNDER THE SUPERVISION OF:

COUNTY OF RIVERSIDE

LOCATION OF CABLE TV DUCTS AT STREET INTERSECTIONS

STANDARD No. 819
8 FEET MINIMUM FROM EDGE OF TRAVELED WAY INCLUDING 4 FEET MINIMUM FROM EDGE OF PAVEMENT AS RIGHT OF WAY ALLOWS

FIXED OBJECT (UTILITY POLE, FIRE HYDRANT, ETC)

ON A CASE BY CASE BASIS, DISTANCE MAY BE LESS FOR UNUSUAL CONDITIONS, AS APPROVED BY THE DIRECTOR OF TRANSPORTATION.

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.
**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

* STANDARD "A" OR "B" MONUMENTS IN PAVEMENT

* STANDARD "A" OR "B" MONUMENTS IN PAVEMENT

TIE TO STANDARD "D" MONUMENT IF STREETS ARE NOT PAVED

* STANDARD "A" OR "B" MONUMENTS IN PAVEMENT

* STANDARD "A" OR "B" MONUMENTS IN PAVEMENT

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, P.E. 11/30/22
DIRECTOR OF TRANSPORTATION

COUNTY OF RIVERSIDE

TIE-OUT STANDARDS

STANDARD No. 900
MONUMENTING STREET INTERSECTIONS WHERE CURBS AND GUTTERS ARE INSTALLED

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.

MONUMENTING BEGINNING AND ENDING OF CURVE

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

STREET CENTERLINE MONUMENT

STANDARD No. 901
### Light Pole Table

<table>
<thead>
<tr>
<th>Roadway Classification</th>
<th>Pole Height</th>
<th>Luminaire Mounting Height</th>
<th>Pole Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>36' Local</td>
<td>23' +/-</td>
<td>26' +/-</td>
<td></td>
</tr>
<tr>
<td>40' Local</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44' Enhanced Local</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44' Collector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56' Industrial Collector</td>
<td>28' +/-</td>
<td>31' +/-</td>
<td>200' staggered</td>
</tr>
<tr>
<td>64' Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76' Major</td>
<td>31' +/-</td>
<td>34' +/-</td>
<td></td>
</tr>
<tr>
<td>86' Arterial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110' Urban Arterial</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Light-Emitting Diode (LED) Luminaire Table

<table>
<thead>
<tr>
<th>Roadway Classification</th>
<th>HPSV Equivalent 4000k CT LED</th>
<th>HPSV Equivalent 3000k CT LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>36' Local</td>
<td>50 W</td>
<td>50 W</td>
</tr>
<tr>
<td>40' Local</td>
<td>70 W</td>
<td>50 W</td>
</tr>
<tr>
<td>44' Enhanced Local</td>
<td>100 W</td>
<td>100 W</td>
</tr>
<tr>
<td>44' Collector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56' Industrial Collector</td>
<td>150 W</td>
<td>100 W</td>
</tr>
<tr>
<td>64' Secondary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76' Major</td>
<td>250 W</td>
<td>150 W</td>
</tr>
<tr>
<td>86' Arterial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110' Urban Arterial</td>
<td>310 W</td>
<td>200 W</td>
</tr>
</tbody>
</table>

### 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.
LIGHT POLE TABLE

<table>
<thead>
<tr>
<th>ROADWAY CLASSIFICATION</th>
<th>POLE TYPE / HEIGHT</th>
<th>LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>36' LOCAL</td>
<td>CALTRANS TYPE 15</td>
<td>31 W</td>
</tr>
<tr>
<td>40' LOCAL</td>
<td>30'</td>
<td></td>
</tr>
<tr>
<td>44' ENHANCED LOCAL</td>
<td>CALTRANS TYPE 21</td>
<td>39 W</td>
</tr>
<tr>
<td>44' COLLECTOR</td>
<td>35'</td>
<td></td>
</tr>
<tr>
<td>56' INDUSTRIAL COLLECTOR</td>
<td></td>
<td>58 W</td>
</tr>
<tr>
<td>64' SECONDARY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76' MAJOR</td>
<td></td>
<td>98 W</td>
</tr>
<tr>
<td>86' ARTERIAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110' URBAN ARTERIAL</td>
<td></td>
<td>149 W</td>
</tr>
</tbody>
</table>

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.
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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE
STREET LIGHTING

STANDARD No. 1000 (3 OF 3)
**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.

**PREPARED UNDER THE SUPERVISION OF:**

Mark Lancaster, P.E.  
11/30/22

**DIRECTOR OF TRANSPORTATION**

**REVISION DESCRIPTION**

**DATE**

**APPROVED**

**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:

11/30/22
DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

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
IISNS DETAIL

STANDARD No. 1201

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

COUNTY OF RIVERSIDE

NOTE:
FOR 6" AND 8" IISNS, FONT TYPE CANNOT BE CHANGED BUT WORD SPACING CAN BE REDUCED UP TO 60% TO FIT STREET NAME WITHIN THE ALLOCATED 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 ABBREViating STREET NAME CAN BE INSTITUTED TO ACCOMMODATE LENGTHY STREET NAME ON THE IISNS.

MARK LANCASTER, P.E.
DIRECTOR OF TRANSPORTATION

11/30/22

DATE

C48048

MARK

REVISION DESCRIPTION

DATE

APPROVED

0.5" BORDER WITH 1.5" CORNER radius

10" UPPER CASE AND 8" LOWER CASE SERIES E(MODIFIED) HIGH-WAY GOTHIC FONT

SIGN BACKGROUND SHALL BE 3M SERIES 1177 (GREEN) ELECTROCUIT FILM

IISNS MAST ARM PER STANDARD NO. 1200

EDGE-LIT LED IISNS IN 3 SIZES:
6' x 2', 8' x 2' AND 10' x 2'

SIGN FRAME

Street Name

10" IISNS (108" MAX FOR STREET NAME)

6" IISNS

8" IISNS (84" MAX FOR STREET NAME)

6' MAX

6' MIN

2'

7" MIN

7" MAX

10" MIN

10" MAX

0.69
STRAIGHT LUMINAIRE MAST ARM DETAIL

DUAL PEC WIRING DIAGRAM

MOUNTING CLAMP FOR EVP OPTICAL DETECTOR

NOT TO SCALE
BATTERY BACKUP SYSTEM SCHEMATIC DIAGRAM

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22

COUNTY OF RIVERSIDE

TRAFFIC SIGNAL DETAIL

STANDARD No. 1202 (2 OF 3)
VIDEO/RADAR DETECTION ZONE DETAIL

USE STANDARD TYPE E DETECTOR LOOP IF ADVANCED DETECTION ZONE(S) IS NOT WITHIN THE RANGE OF RADAR SENSOR

ADVANCE AND MID-DETECTION ZONES SETBACK DISTANCE FROM LIMIT LINE

<table>
<thead>
<tr>
<th>SPEED</th>
<th>ADVANCED</th>
<th>MID (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 MPH</td>
<td>105'</td>
<td>-</td>
</tr>
<tr>
<td>30 MPH</td>
<td>140'</td>
<td>-</td>
</tr>
<tr>
<td>35 MPH</td>
<td>165'</td>
<td>100'</td>
</tr>
<tr>
<td>40 MPH</td>
<td>230'</td>
<td>120'</td>
</tr>
<tr>
<td>45 MPH</td>
<td>265'</td>
<td>150'</td>
</tr>
<tr>
<td>50 MPH</td>
<td>345'</td>
<td>180'</td>
</tr>
<tr>
<td>55 MPH</td>
<td>405'</td>
<td>210'</td>
</tr>
<tr>
<td>60 MPH</td>
<td>475'</td>
<td>245'</td>
</tr>
<tr>
<td>65 MPH</td>
<td>550'</td>
<td>280'</td>
</tr>
</tbody>
</table>

SENSOR MOUNTING DETAIL

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION

CIVIL

COUNTY OF RIVERSIDE

VIDEO/RADAR DETECTION DETAIL

STANDARD No. 1205
LOOPE DETECTOR PLACEMENT DETAIL

TYPE "A" CURB TERMINATION PER CALTRANS STANDARD PLAN No. ES-5D
FOR SETBACK DISTANCE SEE TABLE BELOW

ADVANCE AND MID-DETECTION ZONES SETBACK DISTANCE FROM LIMIT LINE

<table>
<thead>
<tr>
<th>SPEED</th>
<th>ADVANCED</th>
<th>MID (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 MPH</td>
<td>105'</td>
<td>-</td>
</tr>
<tr>
<td>30 MPH</td>
<td>140'</td>
<td>-</td>
</tr>
<tr>
<td>35 MPH</td>
<td>185'</td>
<td>100'</td>
</tr>
<tr>
<td>40 MPH</td>
<td>230'</td>
<td>120'</td>
</tr>
<tr>
<td>45 MPH</td>
<td>285'</td>
<td>150'</td>
</tr>
<tr>
<td>50 MPH</td>
<td>345'</td>
<td>180'</td>
</tr>
<tr>
<td>55 MPH</td>
<td>405'</td>
<td>210'</td>
</tr>
<tr>
<td>60 MPH</td>
<td>475'</td>
<td>245'</td>
</tr>
<tr>
<td>65 MPH</td>
<td>550'</td>
<td>280'</td>
</tr>
</tbody>
</table>

NOT TO SCALE
PREPARED UNDER THE SUPERVISION OF:
MARK LANCANTER, P.E.
DIRECTOR OF TRANSPORTATION

C48048
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

LOOPE DETECTOR DETAIL
STANDARD No. 1206
ADD ADDITIONAL DETECTION ZONE WHEN CURB LANE IS 20’ OR GREATER

BIKE DETECTION

PRESENCE DETECTION

MID DETECTION

ADVANCE DETECTION

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:

COUNTY OF RIVERSIDE

ATS DETECTION INPUT ASSIGNMENTS

STANDARD No. 1207 (1 OF 2)
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:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

11/30/22

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 (###)**
- **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**
- **INSTALL 12' WHITE LINE LIMIT PER CALTRANS STD PLAN A24E**
- **INSTALL PAVEMENT MARKINGS AS SHOWN, UNLESS NOTED OTHERWISE**
- **REMOVE CONFLICTING TRAFFIC STRIPES, PAVEMENT MARKERS AND/OR PAVEMENT MARKINGS**
- **INSTALL 12" CROSSWALK STRIPES PER CALTRANS STD PLAN A24F, WHITE UNLESS NOTED OTHERWISE**
- **INSTALL 2ND ARROW IN MIDDLE WHEN POCKET LENGTH IS 150' OR LONGER**
- **100' TYPICAL: 200' WHEN APPROACHING GENERAL PLAN ROAD**

**LEGEND:**
- BIKE LANE SYMBOL W/ ARROW
- TYPE IV(R) ARROW
- TYPE IV(L) ARROW

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

*SEE COUNTY ROAD IMPROVEMENT STANDARD FOR LANE WIDTH REQUIREMENTS*

**PAVEMENT MARKING WORD SPACING**

<table>
<thead>
<tr>
<th>SPEED</th>
<th>SPACING</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 MPH</td>
<td>32'</td>
</tr>
<tr>
<td>30 MPH</td>
<td>40'</td>
</tr>
<tr>
<td>35 MPH</td>
<td>48'</td>
</tr>
<tr>
<td>40 MPH</td>
<td>56'</td>
</tr>
<tr>
<td>45 MPH</td>
<td>64'</td>
</tr>
<tr>
<td>50 MPH</td>
<td>72'</td>
</tr>
<tr>
<td>≥ 55 MPH</td>
<td>80'</td>
</tr>
</tbody>
</table>

**NOT TO SCALE**

PREPARED UNDER THE SUPERVISION OF:

**COUNTY OF RIVERSIDE**

**STRIPING DETAILS AND CONSTRUCTION NOTES**

**STANDARD No. 1210**
MAJOR STREET

MINOR STREET

MINOR STREET

OPTIONAL WIDER CROSSWALK AT SIGNALIZED INTERSECTION ONLY

RAISED MEDIAN

STANDARD CORNER CUTOFF

4.00' FROM FLOWLINE TO EDGE OF CROSSWALK STRIPE

35' RADIUS CURB RETURN

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.

LEGEND:
- MIN 4' x 4' LANDING WITHIN THE CROSSWALK

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

CROSSWALK AND LIMIT LINE DETAIL

STANDARD No. 1211
SOLAR PANEL AND ENGINE PER COUNTY SPECIFICATIONS

12' VEHICLE SIGNAL HOUSING WITH BACKPLATE, VISOR AND 12" AMBER LED SIGNAL

SIGN MOUNTING PER CALTRANS STANDARD PLAN RS4

TYPE 1-A STANDARD

FINISHED GRADE OR EXISTIGN GROUND

TYPE 1-A STANDARD FOOUNDATION PER CALTRANS STANDARD PLAN ES-7B DETAIL A-1

2" PERFORATED SQUARE POST ANCHOR PER COUNTY STANDARD NO. 1222

2" PERFORATED SQUARE POST

FRONT VIEW

SIDE VIEW

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

MARK LANCASTER, P.E.

11/30/22

DIRECTOR OF TRANSPORTATION DATE

C48048

SOLAR POWERED FLASHING BEACON

COUNTY OF RIVERSIDE

STANDARD No. 1215
SOLAR PANEL(S) PER COUNTY SPECIFICATIONS

INSTALL PER 48" x 60" R2-1 SIGN PER CALTRANS STANDARD PLANS RS2

48" x 72" LED RADAR SPEED FEEDBACK MESSAGE DISPLAY PER COUNTY SPECIFICATIONS

DISPLAY MOUNTING PER MANUFACTURER RECOMMENDATION

6" x 6" WOOD POST

WOOD POST DETAILS AND INSTALLATION PER CALTRANS STANDARD PLAN RS2

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION MARK LANCASTER, P.E.

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.

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

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

FOR ABBREVIATIONS SEE SHEET 2

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

COUNTY OF RIVERSIDE

STANDARD No. 1220 (1 OF 2)
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:

<table>
<thead>
<tr>
<th>SUFFIX</th>
<th>ABBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVE</td>
<td>Ave</td>
</tr>
<tr>
<td>BOULEVARD</td>
<td>Blvd</td>
</tr>
<tr>
<td>CANYON</td>
<td>Cyn</td>
</tr>
<tr>
<td>CENTER</td>
<td>Ctr</td>
</tr>
<tr>
<td>CIRCLE</td>
<td>Cir</td>
</tr>
<tr>
<td>COURT</td>
<td>Ct</td>
</tr>
<tr>
<td>DRIVE</td>
<td>Dr</td>
</tr>
<tr>
<td>LANE</td>
<td>Ln</td>
</tr>
<tr>
<td>LOOP</td>
<td>Lp</td>
</tr>
<tr>
<td>PARKWAY</td>
<td>Pkwy</td>
</tr>
<tr>
<td>PLACE</td>
<td>Pl</td>
</tr>
<tr>
<td>RANCH</td>
<td>Rch</td>
</tr>
<tr>
<td>ROAD</td>
<td>Rd</td>
</tr>
<tr>
<td>SCHOOL</td>
<td>Sch</td>
</tr>
<tr>
<td>SPRING</td>
<td>Spr</td>
</tr>
<tr>
<td>STREET</td>
<td>St</td>
</tr>
<tr>
<td>TERRACE</td>
<td>Ter</td>
</tr>
<tr>
<td>TRAIL</td>
<td>Tr</td>
</tr>
<tr>
<td>WAY</td>
<td>Way</td>
</tr>
</tbody>
</table>

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.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

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

STANDARD No. 1220 (2 OF 2)
WHITE HIGH INTENSITY PRISMATIC (HIP) REFLECTIVE LETTERS ON GREEN (HIP) SHEETING

SEE STANDARD No. 1222 FOR SIGN POST INSTALLATION

SIDEWALK

COMPACTED EARTH

7.0' MIN CLEARANCE

TYPE 6D FHWA STD ALPHABET FONT

24", 30", 36", 42" OR 48"

2.25' |

Regency Ranch Rd

3'

3'

1.5" |

3'

0.125'

TYPE 3D FHWA STD ALPHABET FONT

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

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

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

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

FOR ABBREVIATIONS SEE SHEET 2

STANDARD No. 1221 (1 OF 2)
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:

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

CORE DRILL CONCRETE

TYPICAL INSTALLATION THROUGH CORED CONCRETE

2-1/2" x 2-1/2" x 18" PERFORATED SLEEVE (12 GAUGE)

2-1/4" x 2-1/4" x 30" ANCHOR
OR 2-1/4" x 2-1/4" x 36" (12 GAUGE)

2" x 2" x 10', SIGN POST
OR 2" x 2" x 12'
OR 2" x 2" x 14'
(12 GAUGE)

UNIVERSAL HEAD DRIVE RIVET

0.750"

0.500"

0.375"

ANCHOR ABOVE GROUND
4" MIN
6" MIN

SIGN POST

30" ANCHOR WHEN THROUGH CONCRETE

36" ANCHOR WHEN THROUGH DIRT

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

MARK LANCASTER, P.E.  11/30/22

DIRECTOR OF TRANSPORTATION

CITY 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.
NO PARKING
RV'S / TRAILERS
WITHIN
RESIDENTIAL AREAS
RIV. CNTY. ORD. 413

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 HOLE, 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 | X
2 | 4" | C | RED | FHWA | X | X
3-5 | 3" | B | RED | FHWA | X | X
6 | 1.5" | C | RED | FHWA | X | X

PREPARED UNDER THE SUPERVISION OF:

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

COUNTY OF RIVERSIDE

NO PARKING SIGN
RV'S / TRAILERS

STANDARD No. 1223
W2 SERIES OR W3 SERIES SIGN; 36" X 36" OR SIZE AS SHOWN ON PLAN

G7-2(CA), ADVANCE STREET NAME SIGN
8" UC / 6" LC SERIES E(M) FONTS, VAR X 24"

ABBREVIATE STREET SUFFIX

Main St

14', 2"-SQUARE PERFORATED STEEL POST

INSTALL A SECOND 2"-SQUARE PERFORATED STEEL POST WHEN THE ADVANCE STREET NAME SIGN IS 60" OR WIDER, OR AS DIRECTED BY THE ENGINEER

PERFORATED STEEL POST ANCHOR PER COUNTY STANDARD 1222

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

MARK LANCASTER, P.E.

11/30/22

DIRECTOR OF TRANSPORTATION

COUNTY OF RIVERSIDE

ADVANCE STREET NAME SIGN

STANDARD No. 1225