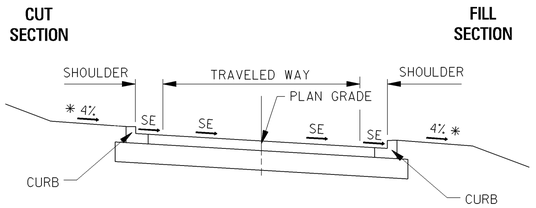
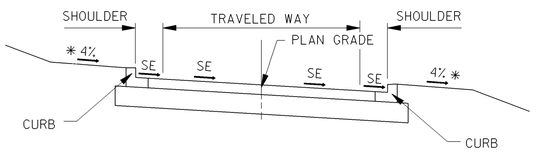
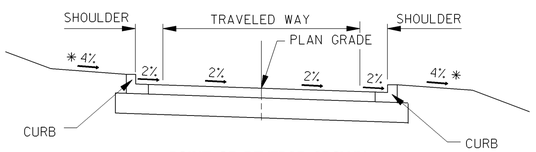
| STATE | PROJECT NO. |
|---|---|
| MISS. | |



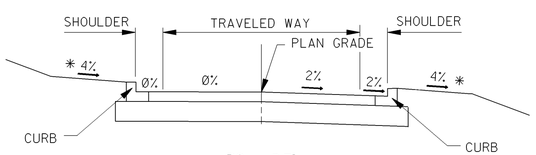

SE = 3% TO 6%



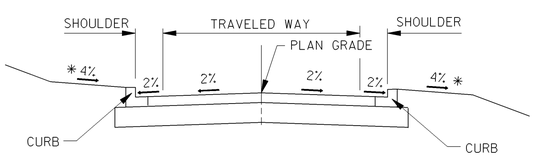

SE = 2% TO 3%




POINT OF REVERSE CROWN



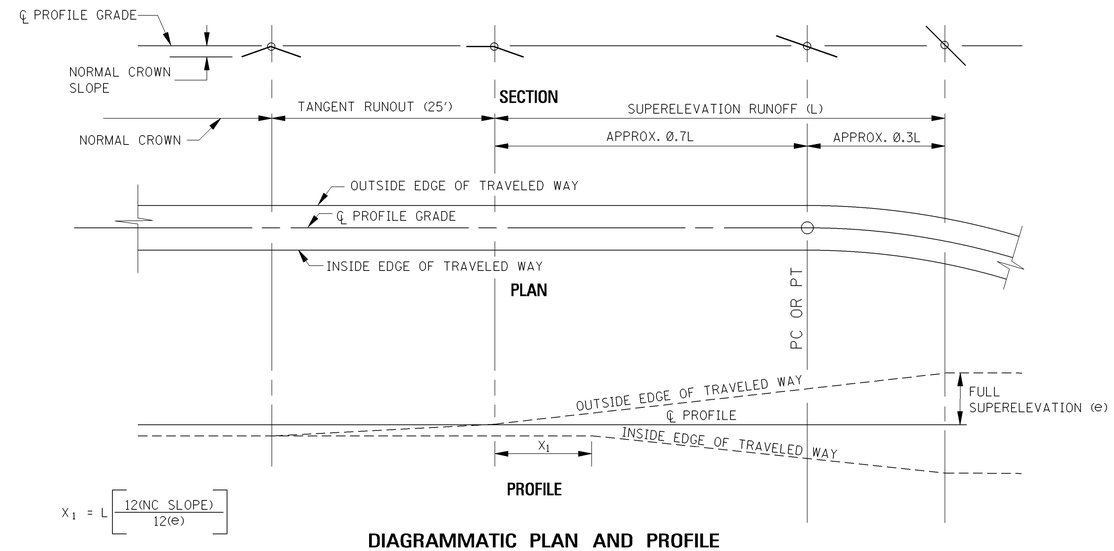

PC – 0.7L




NORMAL CROWN

NOTE: TYPICAL, OR AS SHOWN ELSEWHERE ON PLANS.

## DETAILS OF SHOULDER TREATMENT




$$X_1 = L\left[\frac{12(\text{NC SLOPE})}{12(e)}\right]$$

## DIAGRAMMATIC PLAN AND PROFILE

| e | V = 20 mph | | V = 25 mph | | V = 30 mph | | V = 35 mph | | V = 40 mph | | V = 45 mph | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R (ft) | L(ft) | R (ft) | L(ft) | R (ft) | L(ft) | R (ft) | L(ft) | R (ft) | L(ft) | R (ft) | L(ft) |
| NC | 107 | 0 | 198 | 0 | 333 | 0 | 510 | 0 | 762 | 0 | 1039 | 0 |
| 0.020 | 92 | 32 | 167 | 34 | 273 | 36 | 408 | 39 | 593 | 41 | 794 | 44 |
| 0.022 | 91 | 36 | 165 | 38 | 270 | 40 | 404 | 43 | 586 | 46 | 785 | 49 |
| 0.024 | 91 | 39 | 164 | 41 | 268 | 44 | 400 | 46 | 580 | 50 | 776 | 53 |
| 0.026 | 90 | 42 | 163 | 45 | 265 | 47 | 396 | 50 | 573 | 54 | 767 | 58 |
| 0.028 | 89 | 45 | 161 | 48 | 263 | 51 | 393 | 54 | 567 | 58 | 758 | 62 |
| 0.030 | 89 | 49 | 160 | 51 | 261 | 55 | 389 | 58 | 561 | 62 | 750 | 67 |
| 0.032 | 88 | 52 | 159 | 55 | 259 | 58 | 385 | 62 | 556 | 66 | 742 | 71 |
| 0.034 | 88 | 55 | 158 | 58 | 256 | 62 | 382 | 66 | 550 | 70 | 734 | 76 |
| 0.036 | 87 | 58 | 157 | 62 | 254 | 65 | 378 | 70 | 544 | 74 | 726 | 80 |
| 0.038 | 87 | 62 | 155 | 65 | 252 | 69 | 375 | 74 | 539 | 79 | 718 | 84 |
| 0.040 | 86 | 65 | 154 | 69 | 250 | 73 | 371 | 77 | 533 | 83 | 711 | 89 |
| 0.042 | 85 | 68 | 153 | 72 | 248 | 76 | 368 | 81 | 528 | 87 | 703 | 93 |
| 0.044 | 85 | 71 | 152 | 75 | 246 | 80 | 365 | 85 | 523 | 91 | 696 | 98 |
| 0.046 | 84 | 75 | 151 | 79 | 244 | 84 | 361 | 89 | 518 | 95 | 689 | 102 |
| 0.048 | 84 | 78 | 150 | 82 | 242 | 87 | 358 | 93 | 513 | 99 | 682 | 107 |
| 0.050 | 83 | 81 | 149 | 86 | 240 | 91 | 355 | 97 | 508 | 103 | 675 | 111 |
| 0.052 | 83 | 84 | 148 | 89 | 238 | 95 | 352 | 101 | 503 | 108 | 668 | 116 |
| 0.054 | 82 | 88 | 147 | 93 | 236 | 98 | 349 | 105 | 498 | 112 | 662 | 120 |
| 0.056 | 82 | 91 | 146 | 96 | 234 | 102 | 346 | 108 | 494 | 116 | 655 | 124 |
| 0.058 | 81 | 94 | 145 | 99 | 233 | 105 | 343 | 112 | 489 | 120 | 649 | 129 |
| $e_{max}$ =0.060 | $R_{min}$ = 81 | 97 | $R_{min}$ = 144 | 103 | $R_{min}$ = 231 | 109 | $R_{min}$ = 340 | 116 | $R_{min}$ = 485 | 124 | $R_{min}$ = 643 | 133 |

KEY:

R = RADIUS OF CURVE (ft)
V = DESIGN SPEED (mph)
e = FULL SUPERELEVATION RATE (ft/ft)
L = MINIMUM LENGTH OF SUPERELEVATION RUNOFF (FROM ADVERSE CROWN REMOVED TO FULL SUPER)(ft)
NC = NORMAL CROWN

GENERAL NOTES:

1. SE RATE IS DETERMINED FROM A RADIUS EQUAL TO OR SLIGHTLY SMALLER THAN, THE RADIUS OF THE CURVE.
2. SUPERELEVATION RUNOFF LENGTH (L) FROM TABLE IS USED DIRECTLY FOR ROTATION OF 1-LANE WIDTH (i.e., TWO 12' LANES ROTATED ABOUT THE CENTERLINE). FOR GREATER WIDTHS OF ROTATION:
   L (2 LANES) = 1.5(L) (TABLE)
   L (3 LANES) = 2.0(L) (TABLE)
3. A VERTICAL CURVE WITH A LENGTH (IN FEET) EQUAL TO THE DESIGN SPEED (IN mph) SHOULD BE PLACED AT EXCESSIVE ANGULAR BREAKS.

*4. THE MAXIMUM CROSS SLOPE ALLOWED WILL BE 2% WHERE A SIDEWALK IS REQUIRED.

| DATE | REVISION | BY |
|---|---|---|
| | | |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

# SUPERELEVATION TRANSITION ROTATION ABOUT CENTERLINE

**(URBAN FACILITY, V≤45 mph)**

WORKING NUMBER
SDSE-2G

SHEET NUMBER

ISSUE DATE: _____