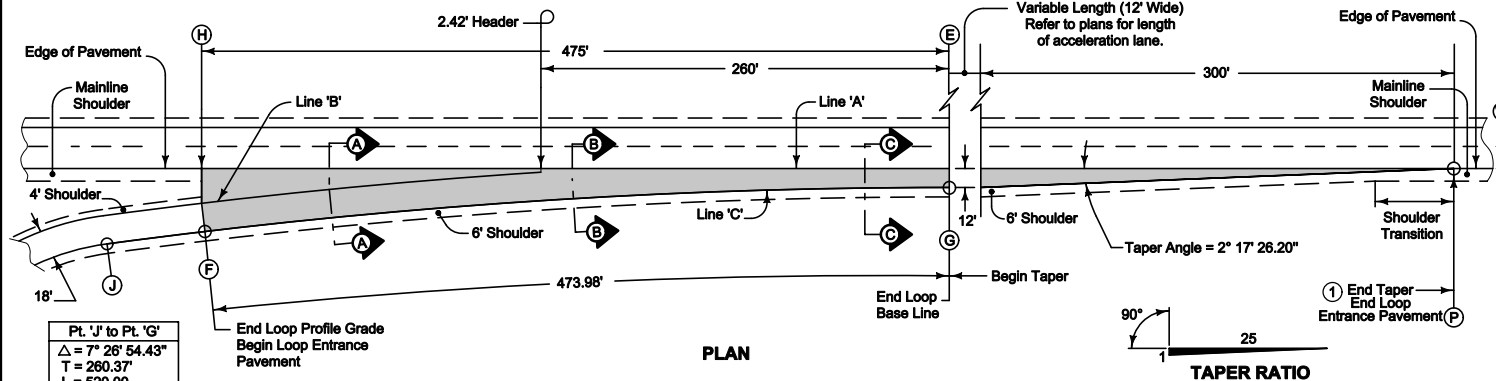




Construct loop entrance pavement the same thickness as mainline pavement.

Loop entrance pavement shown by shaded area is 1329 square yards.

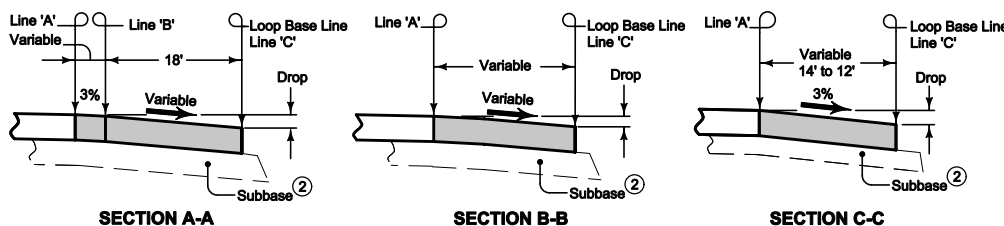
For joint details, see PV-1.

- ① For header construction details at the end of taper, see Typical 7101 or Typical 7102.
- ② Construct subbase for loop entrance pavement the same thickness as mainline subbase.

## PROFILE

|                                           |              | TABLE OF OFFSETS AND DROPS FOR 18' LOOP TAPER |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |       |       |
|-------------------------------------------|--------------|-----------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| Distance From Point(E)Along Line 'A' (FL) |              | 475                                           | 450    | 425    | 400    | 375    | 350    | 325    | 300    | 275    | 250    | 225    | 200    | 175    | 150    | 125    | 100    | 75    | 50    | 25    | 0     |
| From Line 'A'<br>To Line 'B'              | Offset (Ft.) | 22.18                                         | 19.28  | 16.54  | 13.96  | 11.54  | 9.27   | 7.17   | 5.22   | 3.42   | 2.42   |        |        |        |        |        |        |       |       |       |       |
|                                           | Slope (%)    | 3.00                                          | 3.00   | 3.00   | 3.00   | 3.00   | 3.00   | 3.00   | 3.00   | 3.00   | 3.00   |        |        |        |        |        |        |       |       |       |       |
|                                           | Drop (Ft.)   | 0.67                                          | 0.58   | 0.50   | 0.42   | 0.35   | 0.28   | 0.22   | 0.16   | 0.10   | 0.07   |        |        |        |        |        |        |       |       |       |       |
| From Line 'B'<br>To Line 'C'              | Offset (Ft.) | 18.0                                          | 18.0   | 18.0   | 18.0   | 18.0   | 18.0   | 18.0   | 18.0   | 18.0   | 18.0   |        |        |        |        |        |        |       |       |       |       |
|                                           | Slope (%)    | 4.00                                          | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 4.00   | 3.38   | 3.00   |        |        |        |        |        |        |       |       |       |       |
|                                           | Drop (Ft.)   | 0.72                                          | 0.72   | 0.72   | 0.72   | 0.72   | 0.72   | 0.72   | 0.72   | 0.61   | 0.54   |        |        |        |        |        |        |       |       |       |       |
| From Line 'A'<br>To Line 'C'              | Offset (Ft.) |                                               |        |        |        |        |        |        |        |        |        | 18.33  | 17.00  | 15.83  | 14.81  | 13.95  | 13.25  | 12.70 | 12.31 | 12.08 | 12.00 |
|                                           | Slope (%)    |                                               |        |        |        |        |        |        |        |        |        | 3.00   | 3.00   | 3.00   | 3.00   | 3.00   | 3.00   | 3.00  | 3.00  | 3.00  | 3.00  |
|                                           | Drop (Ft.)   | 1.39                                          | 1.30   | 1.22   | 1.14   | 1.07   | 1.00   | 0.94   | 0.88   | 0.71   | 0.61   | 0.55   | 0.51   | 0.47   | 0.44   | 0.42   | 0.40   | 0.38  | 0.37  | 0.36  | 0.36  |
| Distance From Point(G)Along Line 'C' (FL) |              | 473.98                                        | 448.93 | 423.89 | 398.87 | 373.86 | 348.87 | 323.90 | 298.93 | 273.98 | 250.18 | 225.12 | 200.08 | 175.06 | 150.03 | 125.02 | 100.01 | 75.00 | 50.00 | 25.00 | 0.00  |

NOTE: From (G) to (P) cross-slope between Line 'A' and Line 'C' is a constant 3%.



| TABLE OF SHOULDER TRANSITION LENGTHS |                                                 |      |      |
|--------------------------------------|-------------------------------------------------|------|------|
| W <sub>1</sub>                       | Shoulder Width beyond Edge of Mainline Pavement |      |      |
|                                      | 8'                                              | 10'  | 12'  |
| 12'                                  | NA                                              | 100' | 150' |
| 14'                                  | 50'                                             | 100' | NA   |

NOTE: W<sub>1</sub> is the width of the outside lane to the Edge of Pavement.

Iowa Department of Transportation

REVISION

New 04-20-10

**STANDARD ROAD PLAN**

REVISIONS: New. Replaces RV-9 and RV-11. Modified length and pavement area.

*Deanna McFadden*

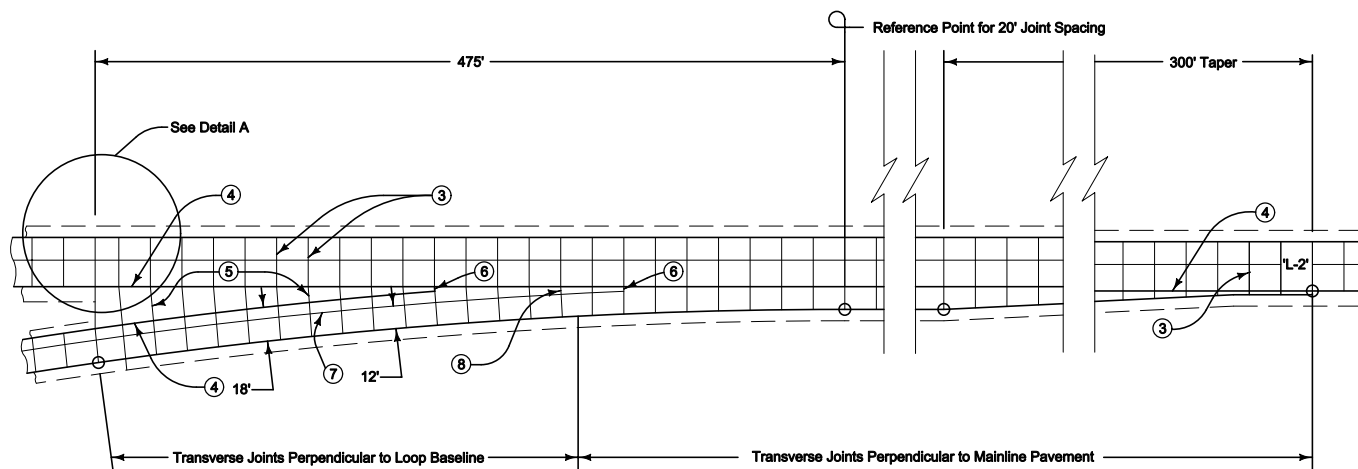
APPROVED BY DESIGN METHODS ENGINEER

**PV-414**

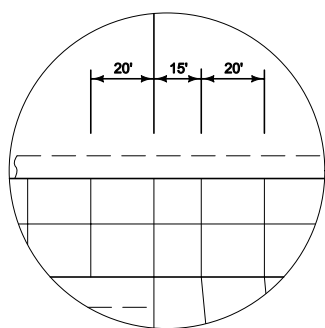
SHEET 1 of 2

**ACCELERATION TAPER**

**FOR 18' ENTRANCE LOOP**



**18' ENTRANCE LOOP**



**Detail A**

- ③ 'CD' Joints at 20' spacing.
- ④ 'BT-2' or 'KT-2' Joint.
- ⑤ 'C' Joint.
- ⑥ 'B' Joint.
- ⑦ 'L-2' Joint.
- ⑧ Construct transverse joints on the exit ramp taper perpendicular to the ramp baseline where the gore area is 4 feet or greater.

|                                                                                                                                |               |          |
|--------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
|  <b>Iowa Department of Transportation</b> | REVISION      |          |
|                                                                                                                                | New           | 04-20-10 |
|                                                                                                                                | <b>PV-414</b> |          |
| <b>STANDARD ROAD PLAN</b>                                                                                                      |               |          |
| REVISIONS: New. Replaces RV-9 and RV-11. Modified length and pavement area.                                                    |               |          |
| APPROVED BY DESIGN METHODS ENGINEER<br><i>Deanna Mifflin</i>                                                                   |               |          |
| <b>ACCELERATION TAPER<br/>FOR 18' ENTRANCE LOOP</b>                                                                            |               |          |