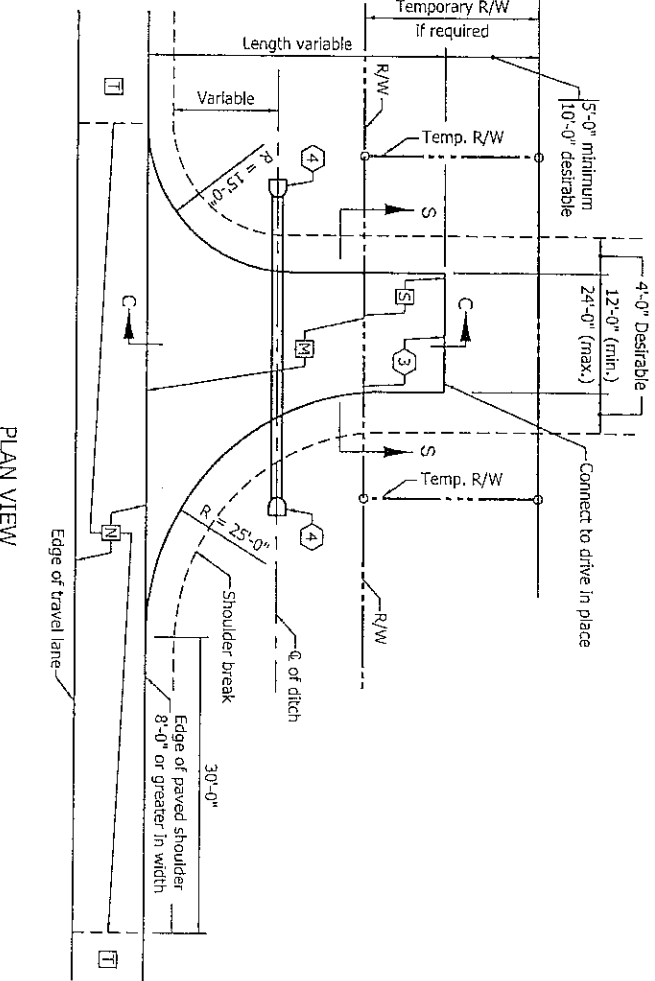


(PAVED SHOULDER LESS THAN 8'-0" IN WIDTH OR UNPAVED SHOULDER)



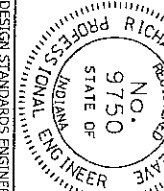
(PAVED SHOULDER 8'-0" OR GREATER IN WIDTH)

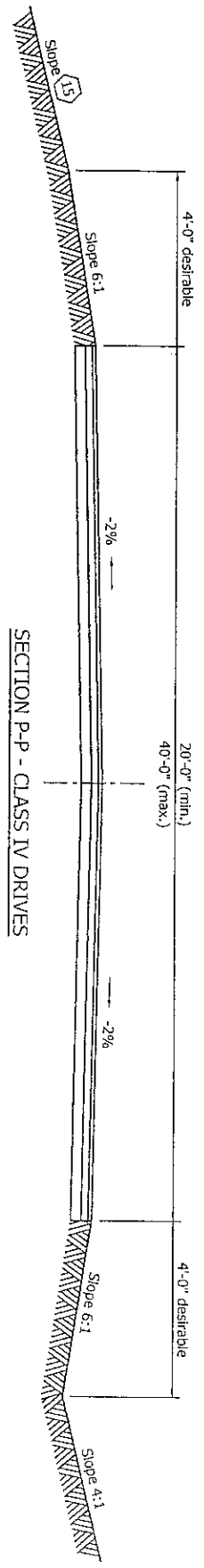
**NOTES:**

1. See Standard Drawing E 610-DRV-13 for General Notes and additional Legend.
2. See Standard Drawings E 610-DRV-10 for Sections A-A, B-B and C-C.
3. See Standard Drawings E 610-DRV-10 for approach grades.
4. See Standard Drawings E 610-DRV-09 for Section S-S.

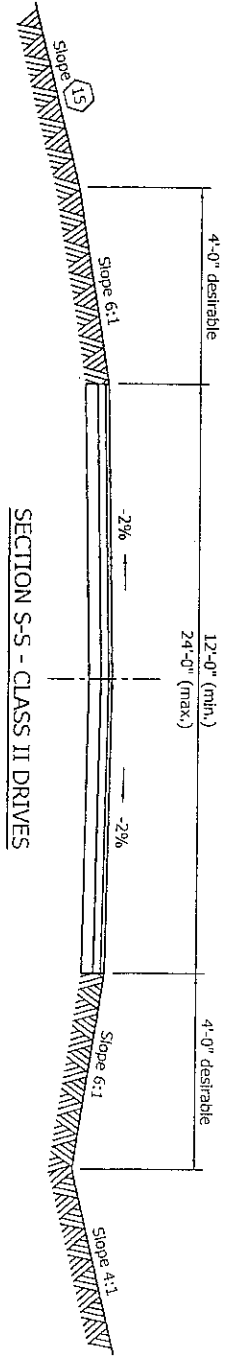
**LEGEND**

- M HMA for Approaches:  
155#/SYD HMA Surface Type B on  
385#/SYD HMA Intermediate Type B on  
subgrade treatment Type IIIA  
or  
PCCP for Approaches, 6",  
subgrade treatment Type IIIA
- N The greater thickness of either the drive M  
or the paved shoulder T section.
- T Plan shoulder section.
- S For type and thickness equivalent  
to surface in place, see plans.

|   |  |
|---|--|
| <b>INDIANA DEPARTMENT OF TRANSPORTATION</b>   |  |
| CLASS II DRIVE  |  |
| SEPTEMBER 2010  |  |
| STANDARD DRAWING NO. E 610-DRV-02   |  |
|  | /s/ Richard L. VanCleave<br>DESIGN STANDARDS ENGINEER<br>DATE 09/01/10 |
| /s/ Mark A. Miller<br>CHIEF HIGHWAY ENGINEER  | DATE 09/01/10  |



SECTION P-P - CLASS IV DRIVES

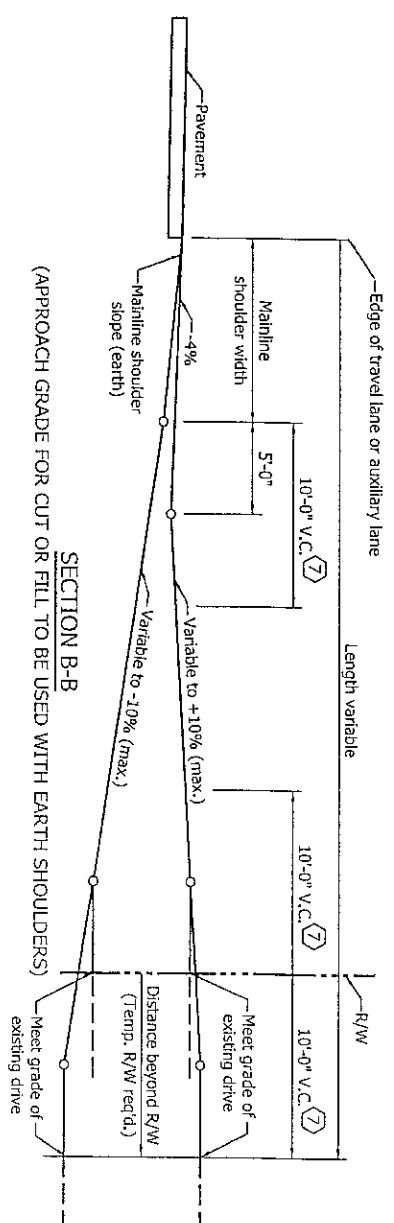


SECTION S-S - CLASS II DRIVES

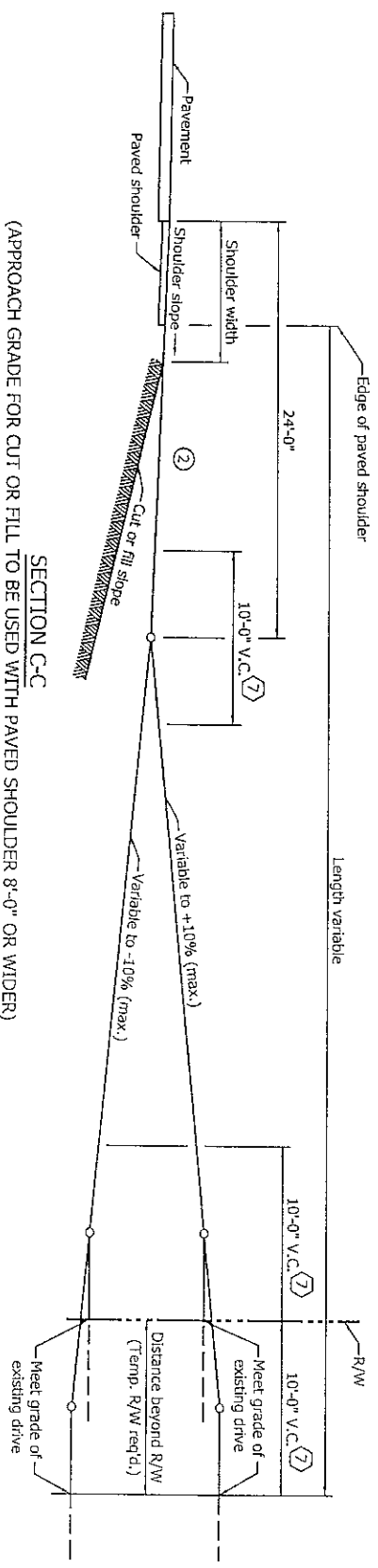
Notes:

1. See Standard Drawing E 610-DRV-02 for Class II Drive details.
2. See Standard Drawing E 610-DRV-04 for Class IV Drive details.
3. See Standard Drawing E 610-DRV-13 for General Notes.

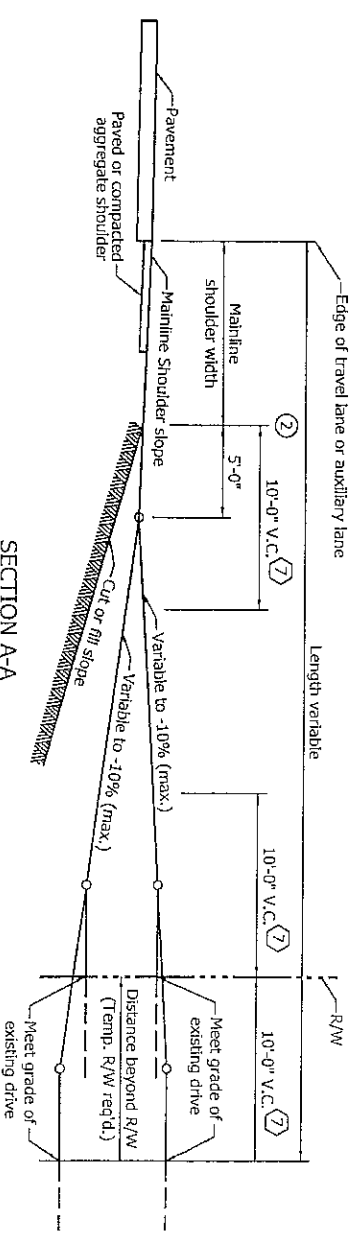
|                                      |  |
|--------------------------------------|--|
| INDIANA DEPARTMENT OF TRANSPORTATION |  |
| CLASS II AND CLASS IV SECTIONS       |  |
| SEPTEMBER 2010                       |  |
| STANDARD DRAWING NO. E 610-DRV-09    |  |
|                                      | /s/ Richard L. VanCleave<br>DESIGN STANDARDS ENGINEER<br>DATE 09/01/10 |
| DESIGN STANDARDS ENGINEER            | /s/ Mark A. Miller<br>CHIEF HIGHWAY ENGINEER<br>DATE 09/01/10          |



SECTION B-B  
(APPROACH GRADE FOR CUT OR FILL TO BE USED WITH EARTH SHOULDERS)



SECTION C-C  
(APPROACH GRADE FOR CUT OR FILL TO BE USED WITH PAVED SHOULDER 8'-0" OR WIDER)



SECTION A-A  
(APPROACH GRADE FOR CUT OR FILL TO BE USED WITH LESS THAN 8'-0" WIDTH PAVED OR COMPACTED AGGREGATE SHOULDERS)

- Notes:
- See Standard Drawing E 610-DRV-02, -04 and -05 for location of Sections A-A, B-B and C-C.
  - Where physical restrictions limit the space available for the construction of a drive from a roadway in an embankment section the downgrade breakpoint of the drive may begin at the edge of the shoulder without a crest vertical curve if the algebraic difference in grades meets the criteria in Note 7 on Standard Drawing E 610-DRV-13.

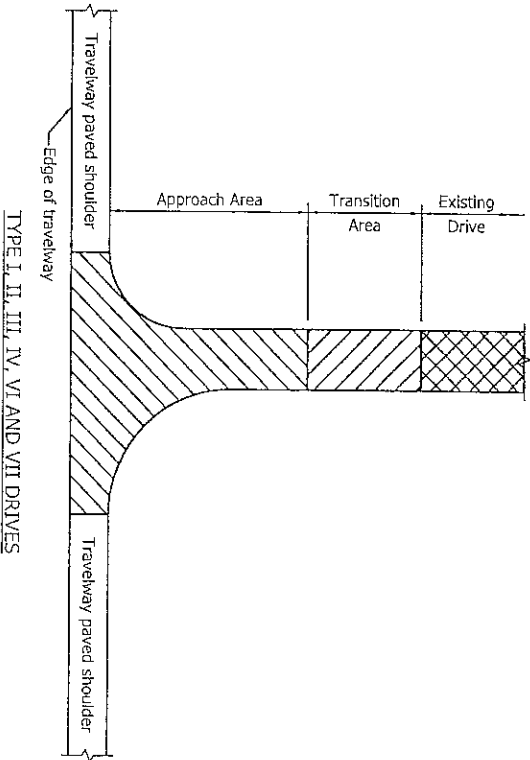
|   |                  |
|---|------------------|
| INDIANA DEPARTMENT OF TRANSPORTATION                  |                  |
| CLASS II, IV & V DRIVES<br>APPROACH GRADES            |                  |
| SEPTEMBER 2010  |                  |
| STANDARD DRAWING NO. E 610-DRV-10                     |                  |
|   |                  |
| /s/ Richard L. VanCleave<br>DESIGN STANDARDS ENGINEER | 09/01/10<br>DATE |
| /s/ Mark A. Miller<br>CHIEF HIGHWAY ENGINEER          | 09/01/10<br>DATE |

**GENERAL NOTES**

1. These notes apply to Standard Drawings E 610-DRV-01 through 12.
2. If a PCCP approach is Class III or Class IV, the radii shall be constructed using ear construction Type C as detailed on Standard Drawing E 605-ERCN-02.
3. When the maximum approach grade of  $\pm 10\%$  does not meet the grade of the existing drive before the R/W line, the approach grade of  $\pm 10\%$  shall extend beyond the R/W to the point of intersection with the existing driveway grade. Construction beyond the R/W line shall be done in temporary R/W.
4. The appropriate pipe end treatment should be provided for pipes located either inside the clear zone or outside the clear zone.
5. The maximum algebraic difference in grades shall not exceed 8% for crested grade nor 12% for sagged grades for Types I and III drives, nor 11% for crested grade and 14% for sagged grades for Types II, IV, and V drives.
6. The minimum driveway pavement sections for Class III, IV, VI and VII Drives have been designed for 400 trucks per day. If the truck traffic count is greater than 400 per day, the required pavement section shall be as shown elsewhere on the plans.
7. See Standard Drawing E 610-DRV-14 for shoulder treatment at driveways.
8. Curb Ramp Type H, as shown on Standard Drawing E 604-SWCR-09, when the approach is signalized, or a sidewalk elevation transition as shown on Standard Drawing E 604-SDWK-02 shall be used when sidewalk is adjacent to curb.
9. When X is equal to or greater than 2 ft but less than 6 ft, either a Curb Ramp Type G as shown on Standard Drawing E 604-SWCR-09, when the approach is signalized, or a sidewalk elevation transition as shown on Standard Drawing E 604-SDWK-01 shall be used.
10. When X is equal to or greater than 6 ft, no curb ramp or sidewalk elevation transition is required unless the curb height is in excess of 6 inches.
11. Embankment slopes within the mainline clear zone for new construction/reconstruction projects or within the obstruction-free zone for 3R projects should be as shown in the table on Standard Drawing E 610-RRAP-04. Outside the clear zone or the obstruction-free zone, the embankment slopes should be 4:1 but not steeper than 3:1.
12. H-c earth cover over culvert shall be 1 foot or greater.

**LEGEND**

- = Distance between back face of curb and sidewalk.
- = Width of sidewalk.
- = PCCP
- = Curb ramp, if signalized, or typically, sidewalk elevation transition.
- = Curb ramp or sidewalk elevation transition section view.



**NOTES**

1. The pay limits shown hereon generally apply to Type I, II, III, IV, VI and VII Drives as shown on Standard Drawings E 610-DRV-01, -02, -03, 04, -06 and -07 respectively.
2. Approach Area - HMA for Approaches or PCCP for Approaches. This area typically extends from the edge of an 8 foot or wider paved travelway shoulder to the right of way or property line or within a few feet of the right of way or property line where the new drive meets the grade of the existing drive, depending on the site-specific conditions. Where the travelway paved shoulder width is less than 8 feet, this area will be measured from the edge of travelway.
3. Transition Area - an equivalent pavement section to the existing drive. This area typically extends from the right of way or property line to a point on the property owner's drive where the new drive grade can match the existing drive grade.

**INDIANA DEPARTMENT OF TRANSPORTATION**

**DRIVES**  
**GENERAL NOTES AND LEGEND**

SEPTEMBER 2010

STANDARD DRAWING NO. E 610-DRV-13

|   |  |
|---|--|
| <p><b>RICHARD L. VANCLEAVE</b><br/>REGISTERED PROFESSIONAL ENGINEER<br/>NO. 9750<br/>STATE OF INDIANA</p> | <p>/s/ Richard L. VanCleave<br/>DESIGN STANDARDS ENGINEER</p> <p>09/01/10<br/>DATE</p> |
| <p>/s/ Skarol A. Miller<br/>CHIEF HIGHWAY ENGINEER</p> <p>09/01/10<br/>DATE</p>                           |  |