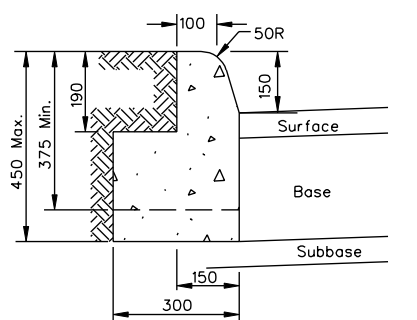


This item may be precast or cast in place.



ACCEPTABLE ALTERNATE IF CURB IS USED

This curb may be used when design speed is 60 km/h or less on Rural highways and 70 km/h or less in developed urban and suburban areas. If these design speeds are exceeded Standard CG-7 is required.

Note:

Curb having a radius of 90 m or less (along face of curb) will be paid for as radial curb.

⊗ The depth of curb may be reduced as much as 75 mm (375 mm depth) or increased as much as 75 mm (525 mm depth) in order that the bottom of curb will coincide with the top of a course of the pavement substructure. Otherwise the depth is to be 450 mm as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.

SPECIFICATION REFERENCE
105 502

## STANDARD 150 mm CURB

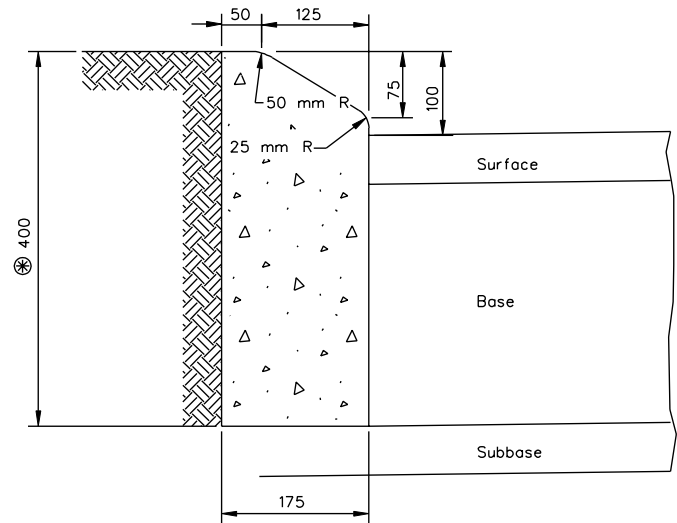
VIRGINIA DEPARTMENT OF TRANSPORTATION

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

201.01

REVISED ON 9/97

CG-3



Notes:

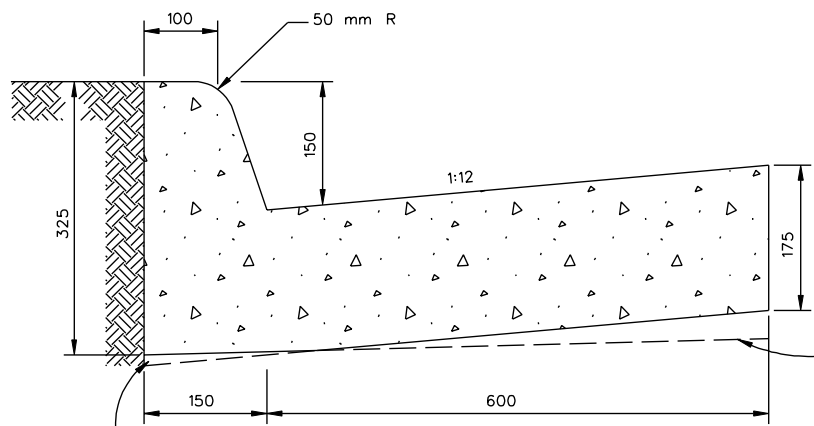
- This item may be precast or cast in place.
- Concrete to be Class 20 if cast in place, 30 MPa if precast.
- Curb having a radius of 90 m or less (along face of curb) will be paid for as radial curb.
- ⊗ The depth of curb may be reduced as much as 75 mm (375 mm depth) or increased as much as 75 mm (525 mm depth) in order that the bottom of curb will coincide with the top of a course of the pavement substructure. Otherwise the depth is to be 450 mm as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.
- When this standard is to be tied into existing barrier curb, the transition is to be made within 3.0 m or the change in standards made at regular openings.
- This curb may be used with any design speed but is required when design speed is greater than 60 km/h on Rural highways and 70 km/h in developed urban & suburban areas.

STANDARD 100 mm CURB

VIRGINIA DEPARTMENT OF TRANSPORTATION

201.02 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

SPECIFICATION REFERENCE
105 502



This area may be concrete at the option of the contractor

This curb may be used when design speed is 60 km/h or less on Rural highways and 70 km/h or less in developed urban & suburban areas. If these design speeds are exceeded Standard CG-7 is required.

The bottom of the curb and gutter may be constructed parallel to the slope of subbase courses provided a minimum depth of 175 mm is maintained.

For use with stabilized open-graded drainage layer, the bottom of the curb and gutter shall be constructed parallel to the slope of subbase courses and to the depth of the pavement.

Note:

Combination curb & gutter having a radius of 90 m or less (along face of curb) shall be paid for as radial combination curb & gutter.  
 This item may be precast or cast in place.  
 Concrete to be Class 20 if cast in place, 30 MPa if precast.

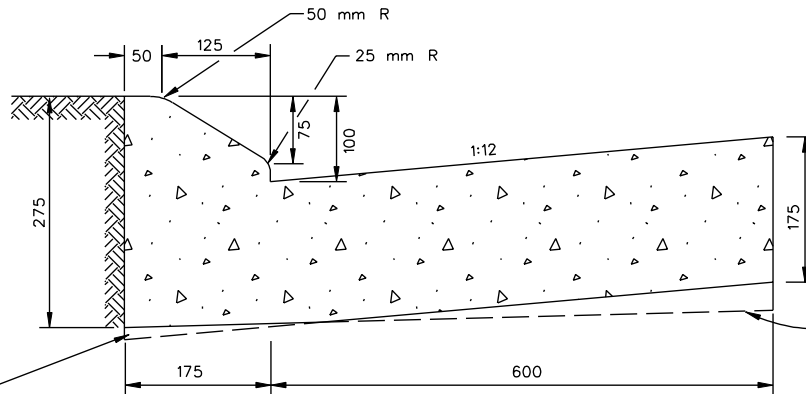
SPECIFICATION REFERENCE
105 502

COMBINATION 150 mm CURB & GUTTER

VIRGINIA DEPARTMENT OF TRANSPORTATION

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

201.03



This area may be concrete at the option of the contractor

This curb may be used with any design speed but is required when design speed is greater than 60 km/h on Rural highways and 70 km/h in developed urban & suburban areas.

When combination mountable curb and gutter is used, the Standard Entrance Gutters or Standard Connection for Street Intersections are to have the mountable curb configuration incorporated.

When this standard is to be tied into existing barrier curb, the transition is to be made within 3 m or the change in standards made at regular openings.

The bottom of the curb and gutter may be constructed parallel to the slope of subbase courses provided a minimum depth of 175 mm is maintained

For use with stabilized open-graded drainage layer, the bottom of the curb and gutter shall be constructed parallel to the slope of subbase courses and to the depth of the pavement

Note: Combination curb & gutter having a radius of 90 m or less (along face of curb) shall be paid for as radial combination curb & gutter.

This item may be precast or cast in place. Concrete to be Class 20 if cast in place, 30 MPa if precast.

## COMBINATION 100 mm CURB & GUTTER

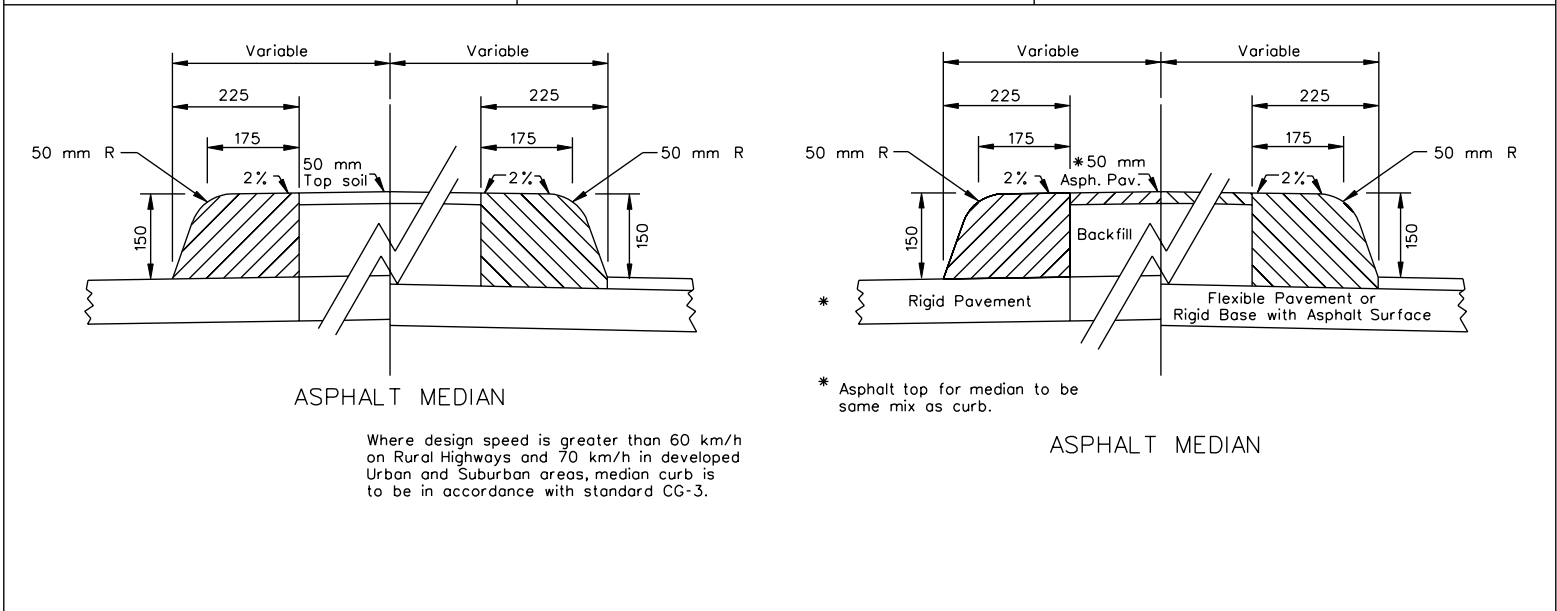
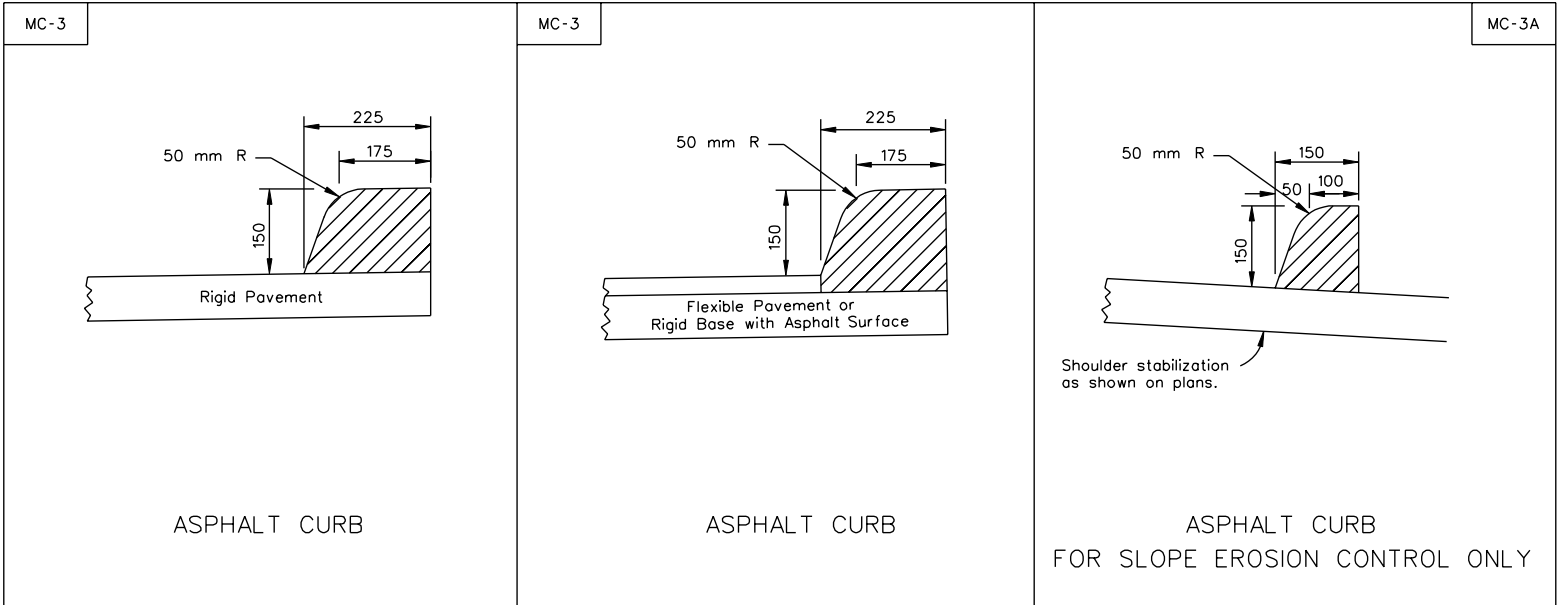
VIRGINIA DEPARTMENT OF TRANSPORTATION

201.04

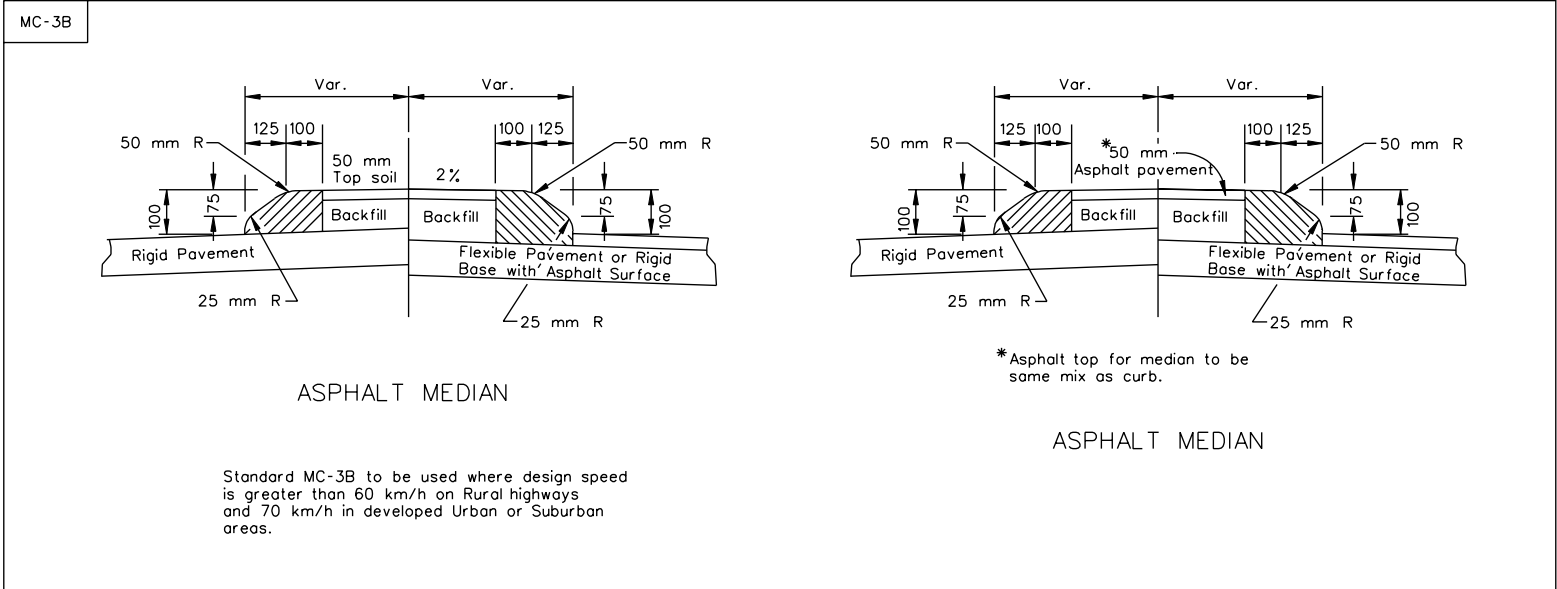
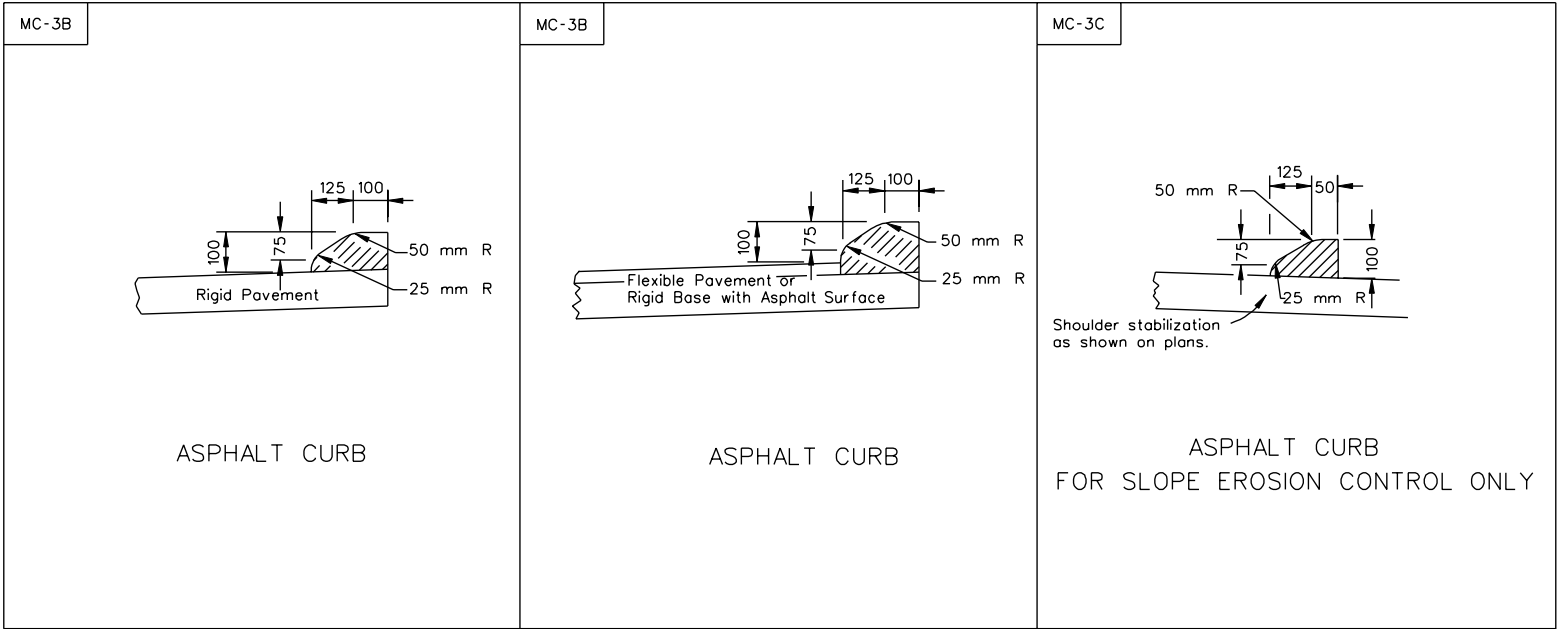
UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

SPECIFICATION REFERENCE

105  
502



SPECIFICATION REFERENCE	<h2 style="margin: 0;">ASPHALT CONCRETE CURB AND MEDIAN FOR TEMPORARY OR PERMANENT INSTALLATION</h2>
502	VIRGINIA DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS	
201.05	



ASPHALT CONCRETE CURB AND MEDIAN  
FOR TEMPORARY OR PERMANENT INSTALLATION

201.06 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

VIRGINIA DEPARTMENT OF TRANSPORTATION

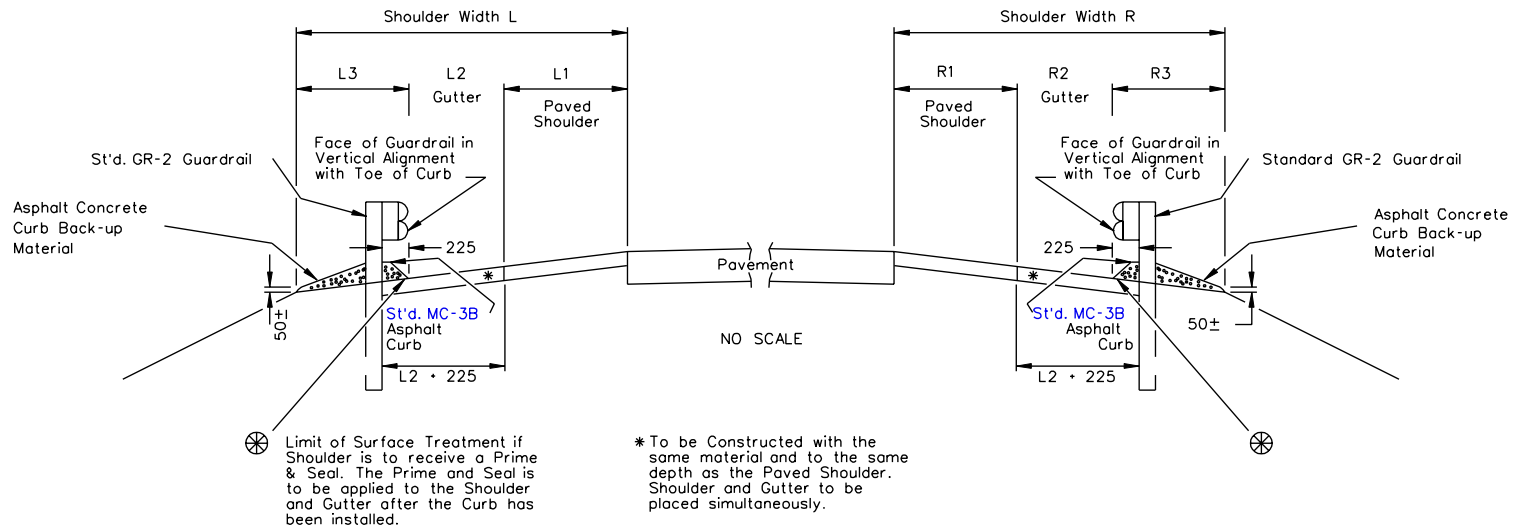
SPECIFICATION REFERENCE
502

REVISED ON 12/99

MC-4

LEFT OF TRAFFIC			
Shoulder Width L (m)	L1 (m)	L2 (m)	L3 (m)
4.5	3.0	0.6	0.9
4.5	1.2	2.4	0.9
4.5	0.9	2.7	0.9
3.9	0.9	2.1	0.9
3.6	3.0	—	0.6
3.3	0.9	1.5	0.9
2.4	1.2	0.6	0.6
2.4	0.9	0.9	0.6

RIGHT OF TRAFFIC			
Shoulder Width R (m)	R1 (m)	R2 (m)	R3 (m)
4.5	3.0	0.6	0.9
4.5	1.8	1.8	0.9
3.9	1.8	1.2	0.9
3.3	1.8	0.6	0.9
2.7	1.8	—	0.9



STANDARD GR-2 & MC-3B (225) ASPHALT CURB INSTALLATION

Sheet 1 of 2

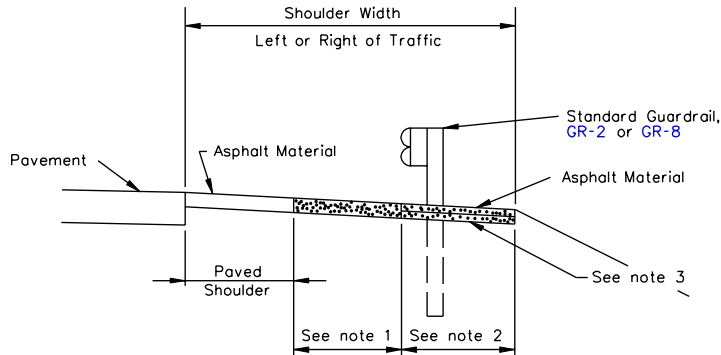
ASPHALT CURB AND GUTTER  
& ASPHALT PAVING UNDER GUARDRAIL

SPECIFICATION REFERENCE

201.07 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

VIRGINIA DEPARTMENT OF TRANSPORTATION

Note:  
See Standard GR-2 and GR-8 details here-on for Guardrail Placement Details.



ASPHALT PAVING UNDER GUARDRAIL  
(For Use Where Asphalt Curb Is Not Required)

Notes:

- To be Constructed with the same material and to the same depth as the Paved Shoulder.
- To be Constructed with the same Asphalt Materials as the Paved Shoulder to the following depths:

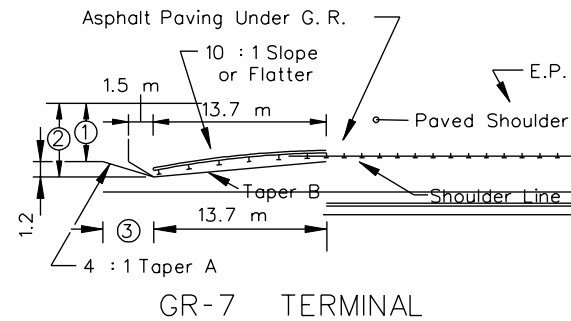
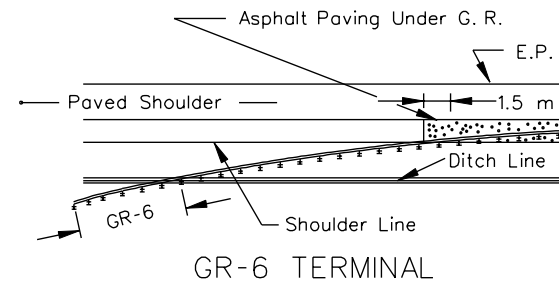
Allowable Depths of Asphalt Material		
IM-1A or 1B	50 mm	Minimum
BM-2	75 mm	Minimum
BM-3	100 mm	Minimum

- Depth of Asphalt material may be extended at the Contractor's option to coincide with the bottom of the Paved Shoulder course at no increase in the quantity of Asphalt Material computed using the above specified depth.

Additional 1.5 m Asphalt Paving beyond point where guardrail crosses Shoulder Line.

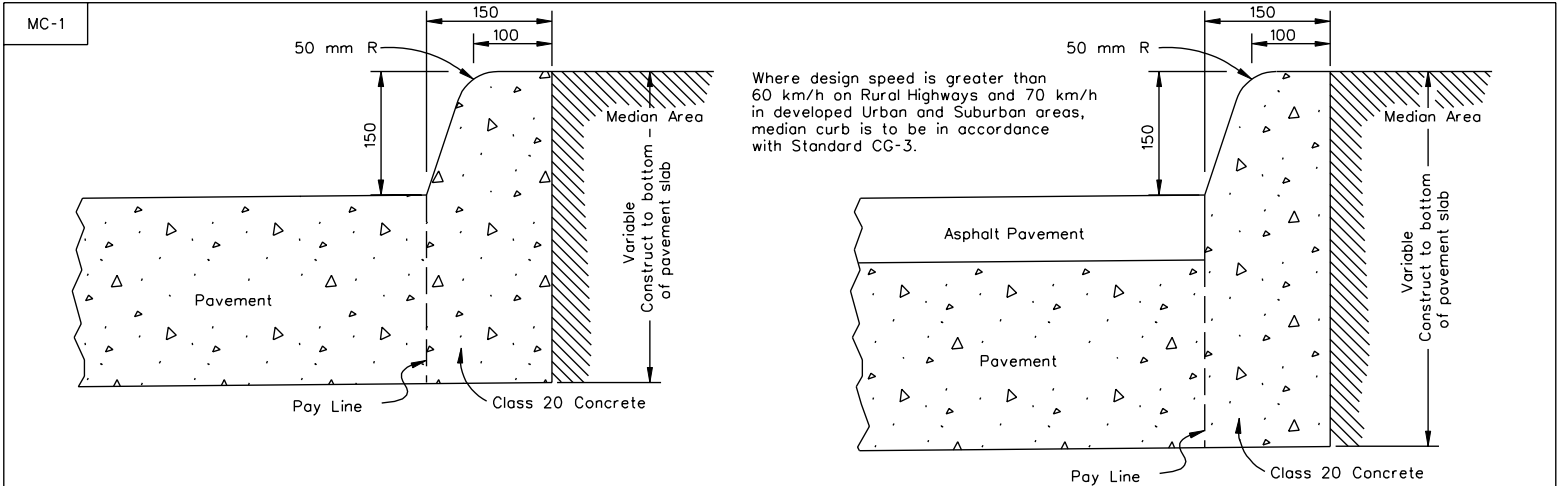
For additional design and placement information see sheet 1 Of 2.

SHOULDER WIDTHS AND TAPER REQUIREMENTS		
Normal Width For G. R. ①	Width @ Terminal ②	Taper A ③
m	m	m
4.5	5.7	4.8
3.9	5.1	4.8
3.6	4.8	4.8
3.3	4.5	4.8
2.7	3.9	4.8
2.4	3.6	4.8



Methods for Beginning & Ending Asphalt Paving under Guardrail and Guardrail installation site preparation requirements for GR-7.





Where design speed is greater than 60 km/h on Rural Highways and 70 km/h in developed Urban and Suburban areas, median curb is to be in accordance with Standard CG-3.

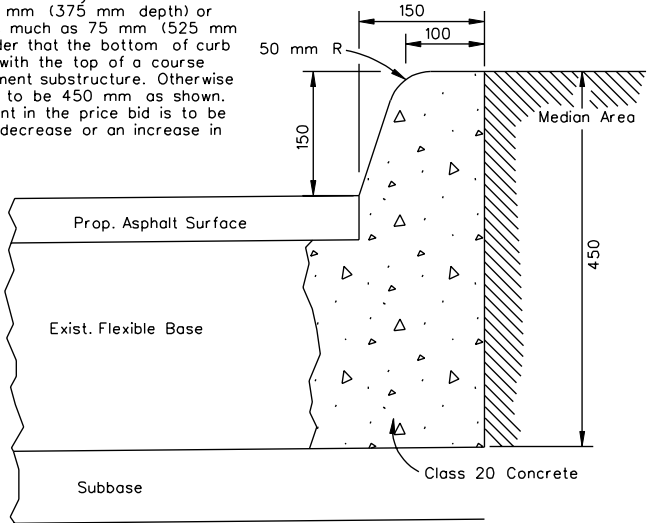
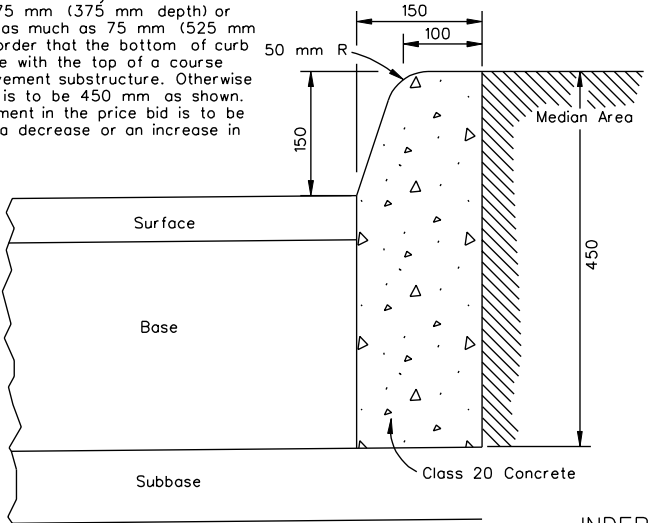
FOR USE WITH CONCRETE PAVEMENT

FOR USE WITH CONCRETE WITH ASPHALT TOP COURSE

INTEGRAL

The depth of curb may be reduced as much as 75 mm (375 mm depth) or increased as much as 75 mm (525 mm depth) in order that the bottom of curb will coincide with the top of a course of the pavement substructure. Otherwise the depth is to be 450 mm as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.

The depth of curb may be reduced as much as 75 mm (375 mm depth) or increased as much as 75 mm (525 mm depth) in order that the bottom of curb will coincide with the top of a course of the pavement substructure. Otherwise the depth is to be 450 mm as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.



INDEPENDENT

CONCRETE MEDIAN CURB

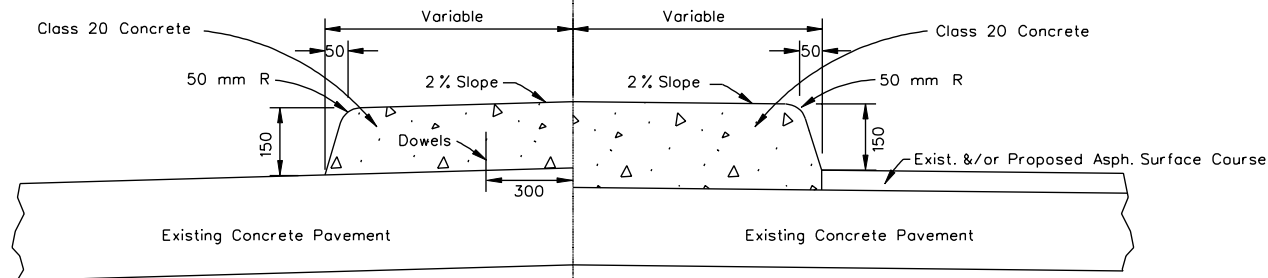
VIRGINIA DEPARTMENT OF TRANSPORTATION

202.01 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

SPECIFICATION REFERENCE
502

HALF SECTION ON EXISTING CONCRETE PAVEMENT

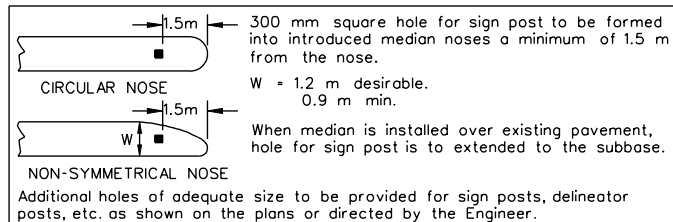
HALF SECTION ON EXISTING CONCRETE PAVEMENT WITH PROPOSED OR EXISTING ASPHALT PAVEMENT



Dowel spacing  
Longitudinally at 600 mm  
c-c from nose to first  
joint.

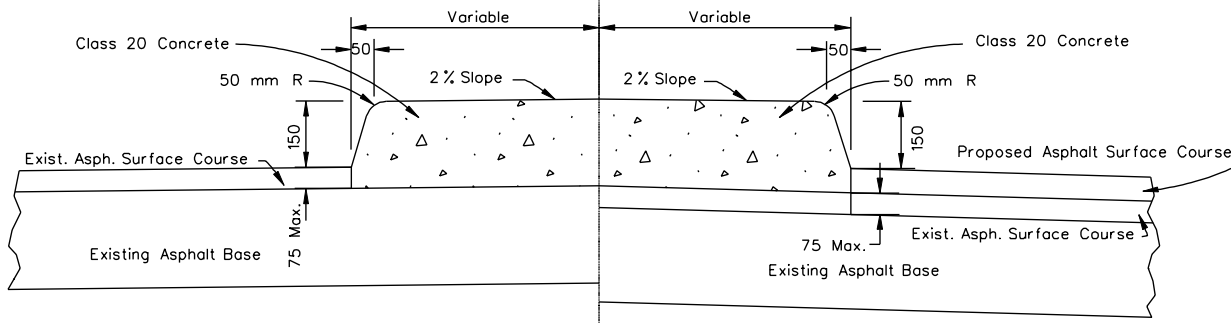
Where design speed is greater than  
60 km/h on Rural Highways and 70 km/h  
in developed Urban and Suburban areas,  
median curb is to be in accordance  
with Standard CG-3.

Note: Existing Asphalt Surface Course and Binder Course, if any, to be removed under median strip.



Note: Existing Asphalt Surface Course and Binder Course, if any, to be removed under median strip.

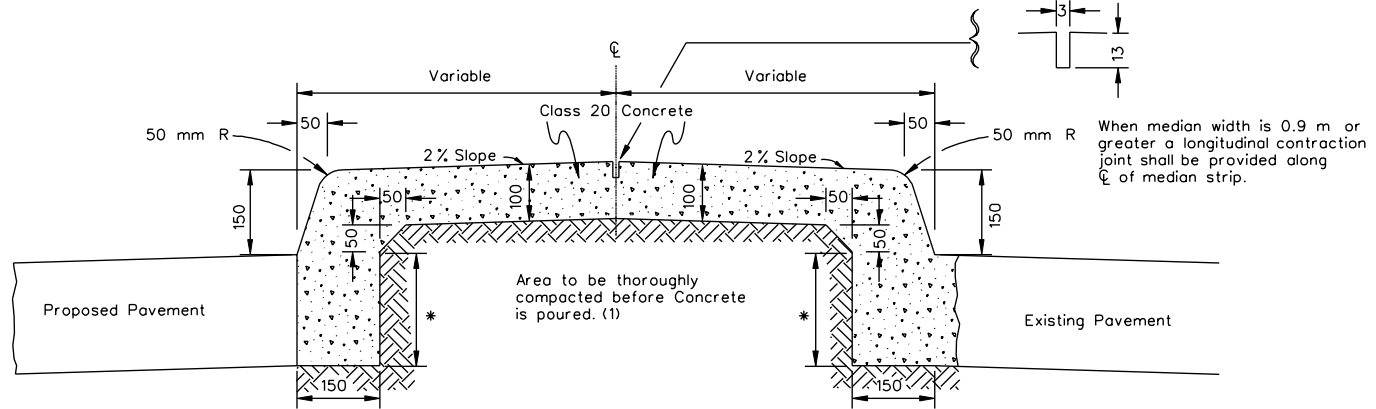
Note: Existing Asphalt Surface Course and Binder Course, if any, to be removed under median strip.



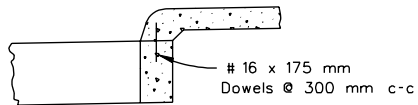
HALF SECTION ON EXISTING FLEXIBLE PAVE.

HALF SECTION ON EXISTING FLEXIBLE PAVE. TO BE RESURFACED

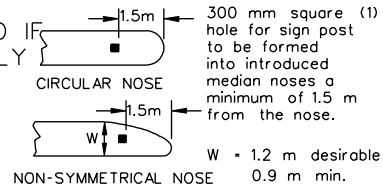
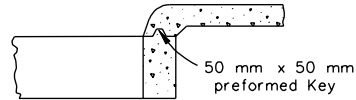
SPECIFICATION REFERENCE	STANDARD SOLID CONCRETE RAISED MEDIAN STRIP		
502	VIRGINIA DEPARTMENT OF TRANSPORTATION		
	UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS		202.02



SUGGESTED CONSTRUCTION METHOD IF TOP SLAB IS POURED SEPARATELY



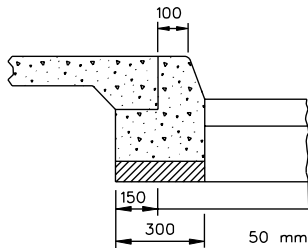
ALTERNATE CONSTRUCTION METHOD IF TOP SLAB IS POURED SEPARATELY



(1) Thoroughly compacted area to consist of the following:  
 In Fills-Regular fill material.  
 In Cuts-Undisturbed earth and regular fill material as required.

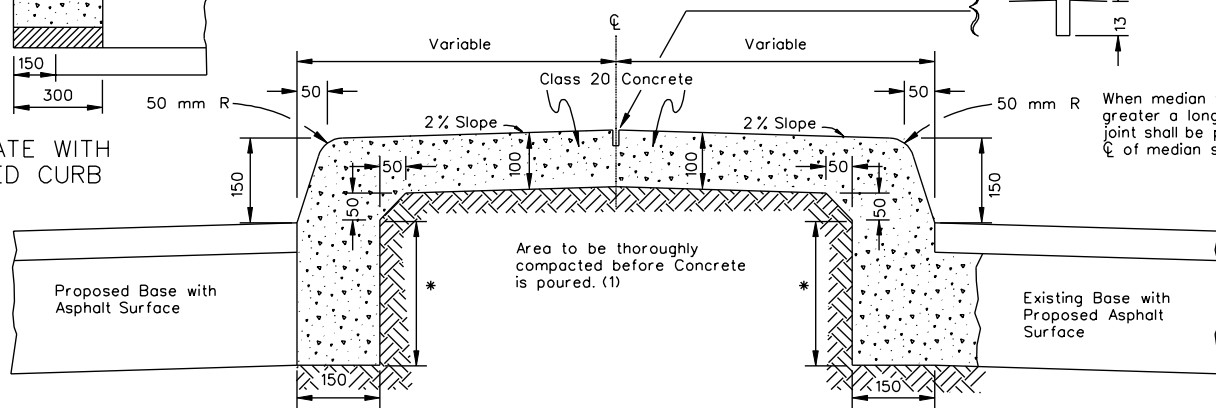
\* The depth of curb may be reduced as much as 75 mm (225 mm depth) or increased as much as 75 mm (375 mm depth) in order that the bottom of curb will coincide with the top of a course of the pavement substructure. Otherwise the depth is to be 300 mm as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.

Additional holes of adequate size to be provided for sign posts, delineator posts, etc. as shown on the plans or directed by the Engineer.



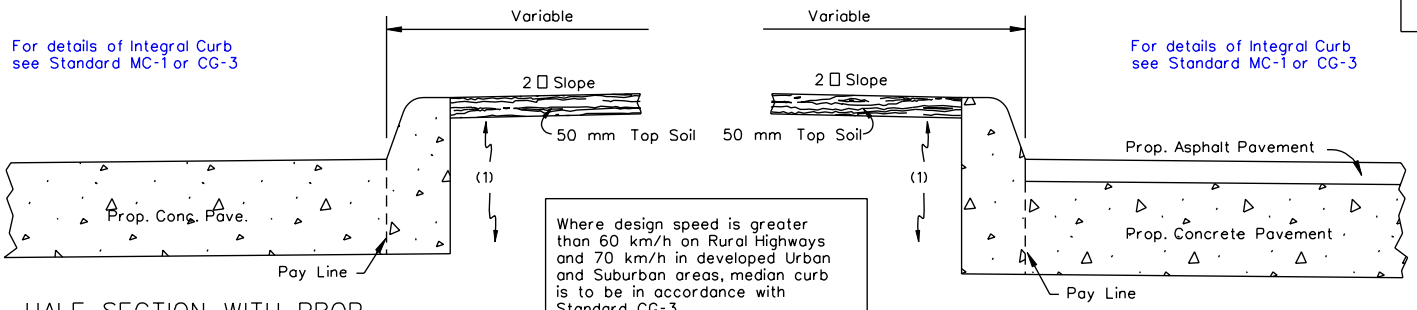
ALTERNATE WITH EXTRUDED CURB

Where design speed is greater than 60 km/h on Rural Highways and 70 km/h in developed Urban and Suburban areas, median curb is to be in accordance with Standard CG-3.



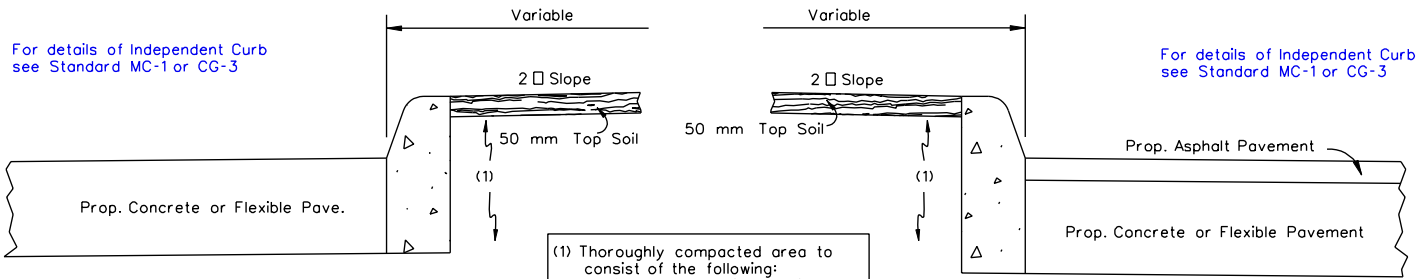
# STANDARD SOLID CONCRETE RAISED MEDIAN STRIP

VIRGINIA DEPARTMENT OF TRANSPORTATION



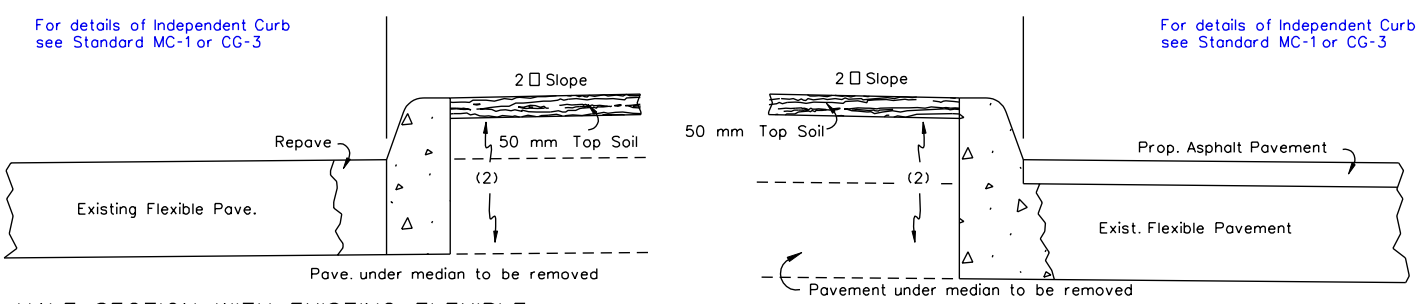
HALF SECTION WITH PROP. CONCRETE PAVEMENT

HALF SECTION WITH PROP. CONCRETE BASE WITH ASPHALT TOP



HALF SECTION WITH PROP. CONCRETE OR FLEXIBLE PAVEMENT

HALF SECTION WITH PROP. CONCRETE OR FLEXIBLE BASE WITH ASPHALT TOP



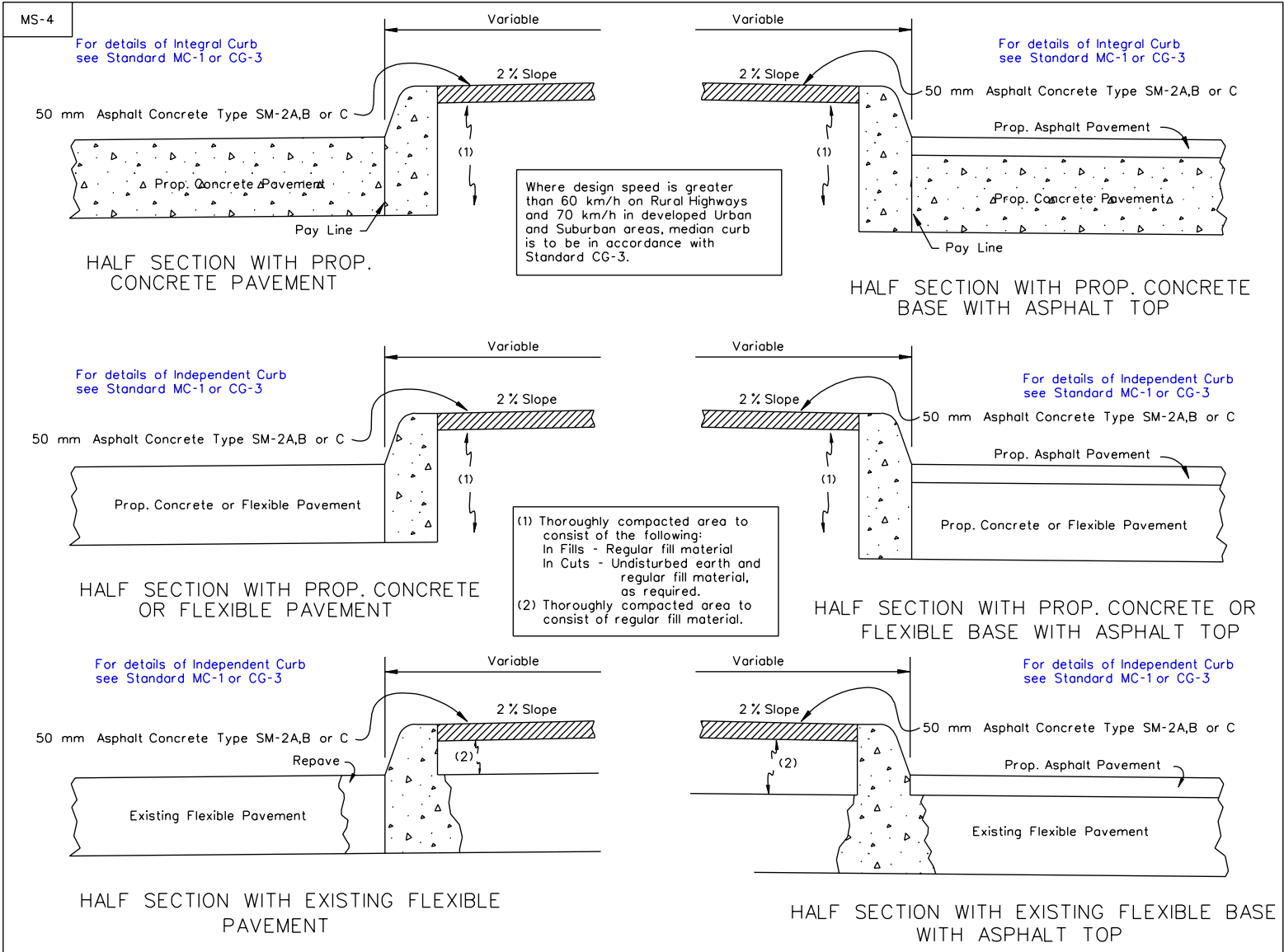
HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

HALF SECTION WITH EXIST. FLEXIBLE BASE WITH ASPHALT TOP

SPECIFICATION REFERENCE
502

STANDARD RAISED GRASS MEDIAN STRIPS  
VIRGINIA DEPARTMENT OF TRANSPORTATION

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS



Note: The asphalt concrete surface slab is to conform to the current Road & Bridge Specifications for SM-2A,B, or C material except that the minimum bitumen content is to be 6.5%.

## STANDARD RAISED ASPHALT MEDIAN WITH P.C. CONCRETE CURB

VIRGINIA DEPARTMENT OF TRANSPORTATION

202.05

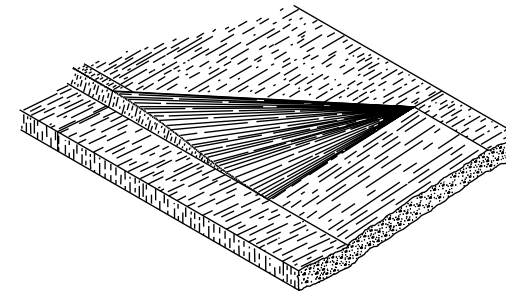
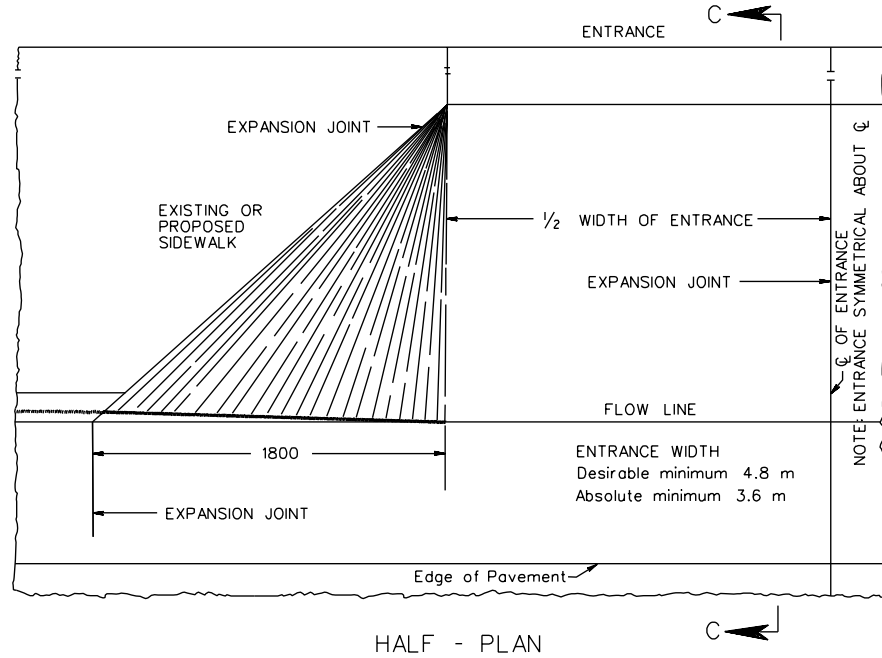
UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

SPECIFICATION  
REFERENCE

502

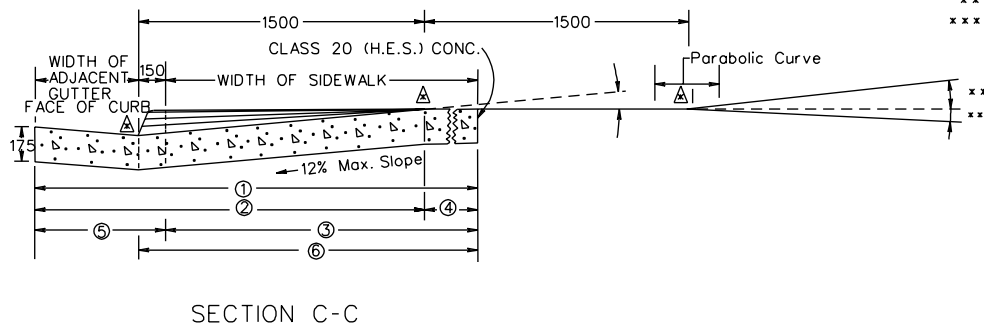
REVISED ON 5/99

CG-9A



ISOMETRIC VIEW

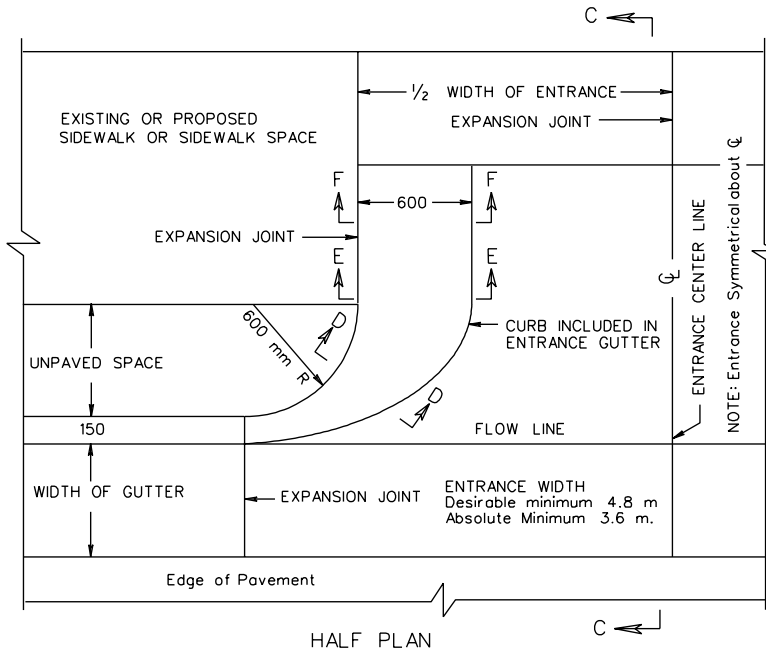
When used in conjunction with Standard CG-3 or CG-7, the curb face on this Standard is to be adjusted to match the mountable curb configuration.



xx 12 % maximum increase in slope at 3 m intervals  
 \*\*\* 3 % maximum decrease in slope for first 3 m interval and  
 8 % maximum decrease for succeeding minimum 3 m intervals

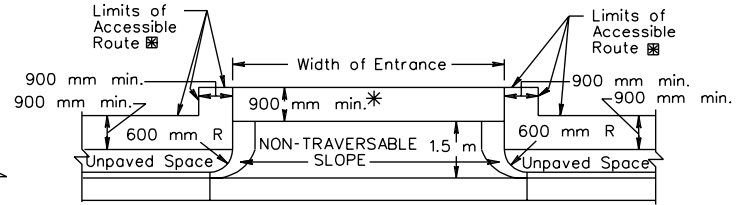
- ① For sidewalk, curb and gutter - Built concurrently.
- ② For initial curb and gutter only.
- ③ For initial sidewalk only - 175 mm sidewalk to be dipped.
- ④ For sidewalk only - after initial curb and gutter.
- ⑤ For curb and gutter only - after initial sidewalk.
- ⑥ For curb and sidewalk only - without gutter.
- △ Indicates point of grade change.

SPECIFICATION REFERENCE	STANDARD ENTRANCE GUTTER WITH FLARED OPENING FOR USE ACROSS SIDEWALK		UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS
502	VIRGINIA DEPARTMENT OF TRANSPORTATION		

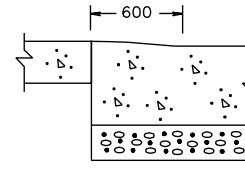


HALF PLAN

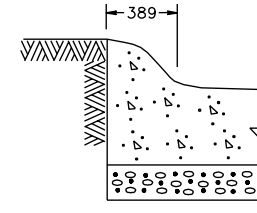
Additional right-of-way is required if the limits of Accessible Route  $\boxtimes$  extend beyond existing or proposed VDOT Right-Of Way.



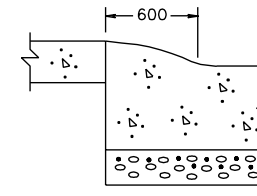
ACCESSIBLE ROUTE  $\boxtimes$  DETAIL



SECTION F-F



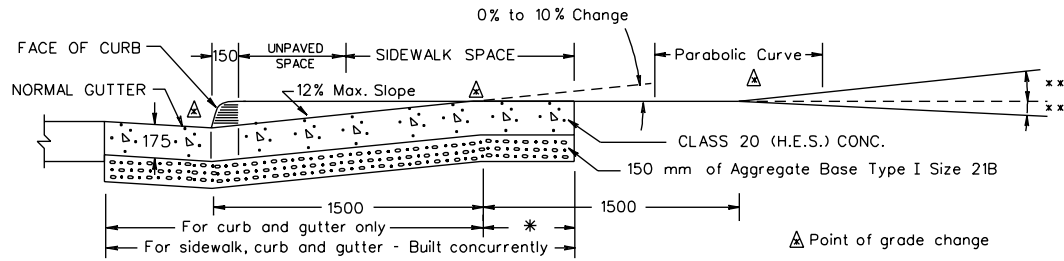
SECTION D-D



SECTION E-E

$\boxtimes$  Accessible route is defined as a continuous unobstructed, stable, firm and slip resistant path connecting all accessible elements of a facility that can be approached, entered and used by persons with mobility impairments.

\* If accessible routes  $\boxtimes$  are being provided, a minimum 900 mm traversable width is required.



SECTION C-C

When used in conjunction with Standard CG-3 or CG-7, the curb face on this Standard is to be adjusted to match the mountable curb configuration.

\*\* 12 % maximum increase in slope at minimum 3 m intervals  
 \*\*\* 3 % maximum decrease in slope for first 3 m interval  
 8 % maximum decrease for succeeding minimum 3 m intervals

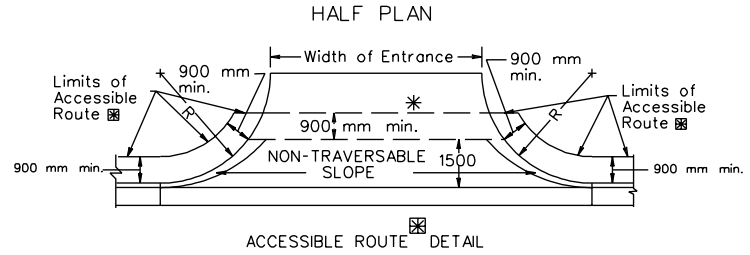
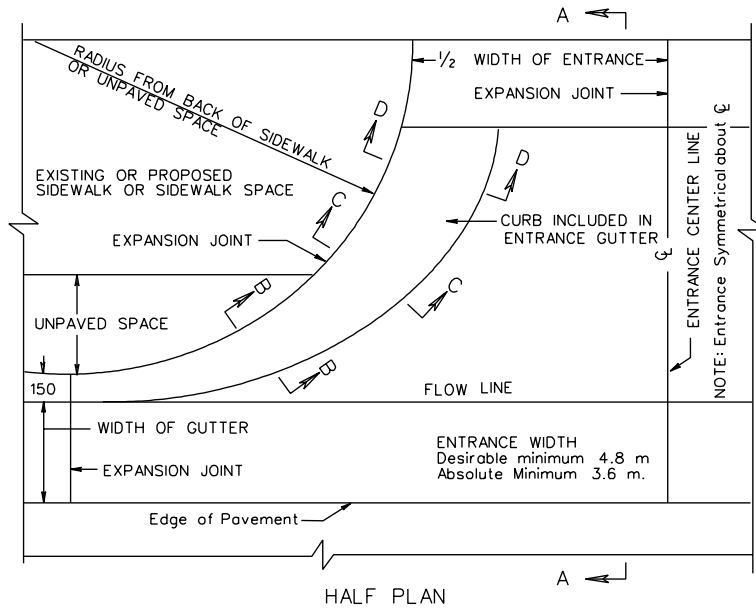
## STANDARD ENTRANCE GUTTER FOR USE WITH UNPAVED SPACE BETWEEN CURB & SIDEWALK

SPECIFICATION REFERENCE

502

REVISED ON 8/97

CG-9D

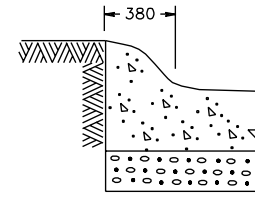


Additional right-of-way is required if the limits of Accessible Route extend beyond existing or proposed VDOT Right-Of Way.

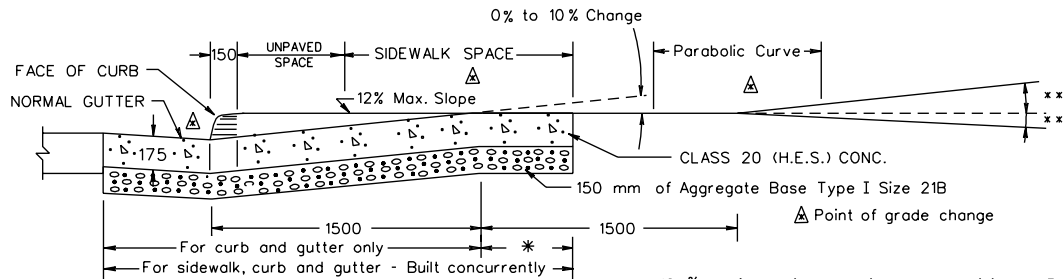
Detail to be used when the combined width of unpaved space and sidewalk space is less than 2.1 m.

Accessible route is defined as a continuous unobstructed, stable, firm and slip resistant path connecting all accessible elements of a facility that can be approached, entered and used by persons with mobility impairments.

If accessible routes are being provided, a minimum 900 mm traversable width is required.



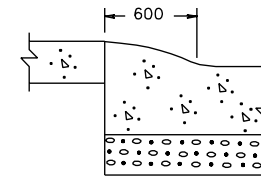
SECTION B-B



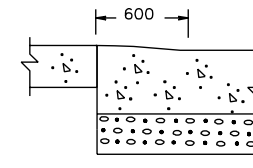
SECTION A-A

xx 12 % maximum increase in slope at minimum 3 m intervals  
 xxx 3 % maximum decrease in slope for first 3 m interval and  
 8 % maximum decrease for succeeding minimum 3 m intervals

When used in conjunction with Standard CG-3 or CG-7, the curb face on this Standard is to be adjusted to match the mountable curb configuration.



SECTION C-C



SECTION D-D

SPECIFICATION REFERENCE

502

# STANDARD ENTRANCE GUTTER

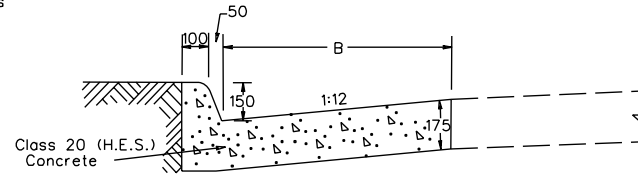
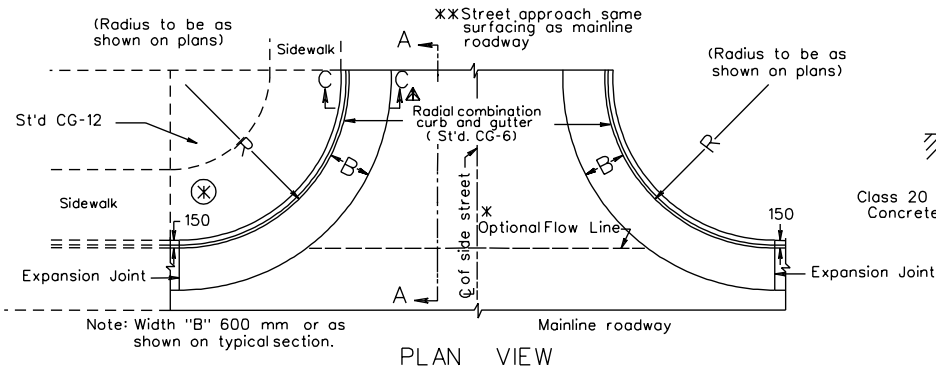
VIRGINIA DEPARTMENT OF TRANSPORTATION

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

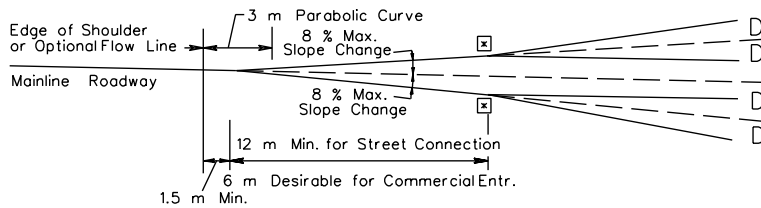
203.03



CG-11



☒ Construct Grade changes with a parabolic curve.



SECTION A - A  
Guidelines for Grade Change D

Entrance Volume	Desirable	Maximum
High (more than 1500 VPD)	0 %	3 %
Medium (500-1500 VPD)	≤ 3 %	6 %
Low (less than 500 VPD)	≤ 6 %	8 %

⊗ When the entrance radii cannot accommodate the turning requirements of anticipated heavy truck traffic, the depth for sidewalk & curb ramps within the limits of the radii should be increased to 175 mm.

When St'd. CG-11 is used for entrances built in conjunction with VDOT projects, please note the following:

⊗ Mainline pavement shall be constructed to the R/W line (except any subgrade stabilization required for mainline pavement which can be omitted in the entrance.)

⚠ Radial curb or combination curb and gutter shall not be constructed beyond the R/W line except for replacement purposes.

When used in conjunction with Standard CG-3 or CG-7, the curb face on this Standard is to be adjusted to match the mountable curb configuration.

See Standard CG-12 for Curb Ramp design to be used with this Standard.

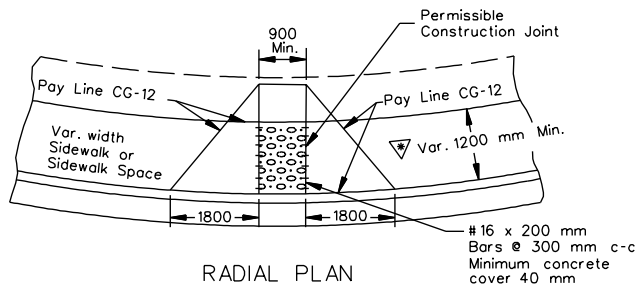
⊗ Optional flowline may be used for entrances in cut sections.

Optional flowline may require warping of a portion of gutter to preclude ponding of water.

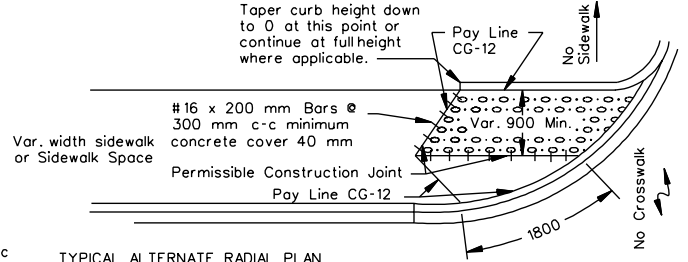
METHOD OF TREATMENT-  
CONNECTION FOR STREET INTERSECTIONS  
AND COMMERCIAL ENTRANCES

SPECIFICATION  
REFERENCE

502

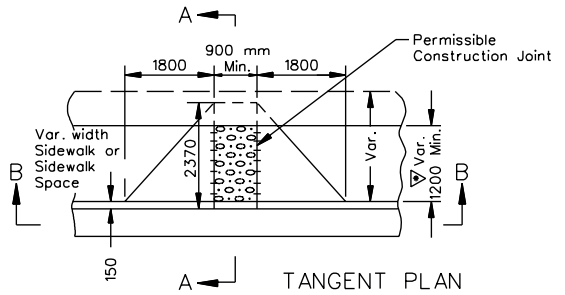


RADIAL PLAN

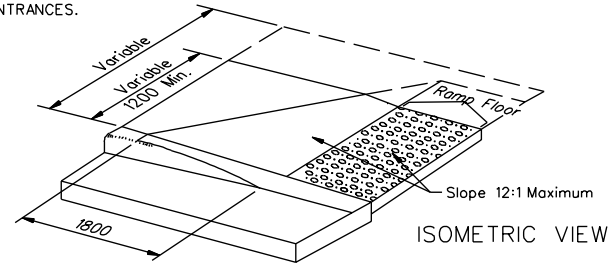


TYPICAL ALTERNATE RADIAL PLAN  
FOR USE AT APPLICABLE STREET  
CONNECTIONS AND COMMERCIAL  
ENTRANCES.

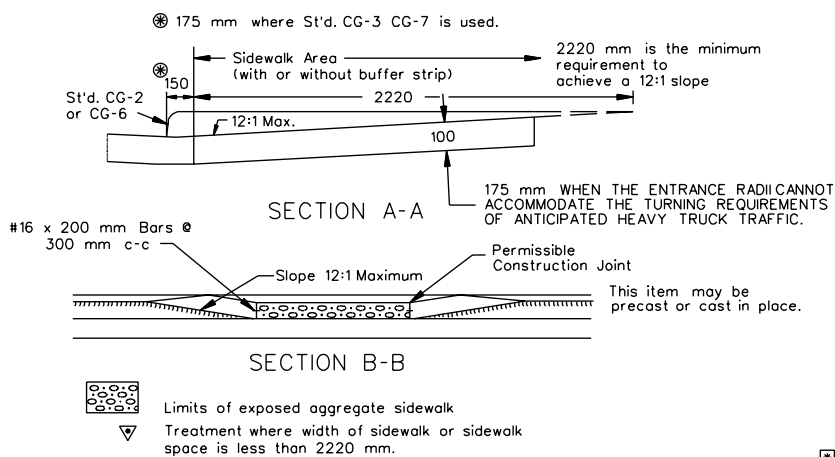
\* For Commercial Entrance  
(Heavy Truck Traffic Anticipated)  
see Standard CG-13 sheet 203.10



TANGENT PLAN



ISOMETRIC VIEW



SECTION A-A

SECTION B-B

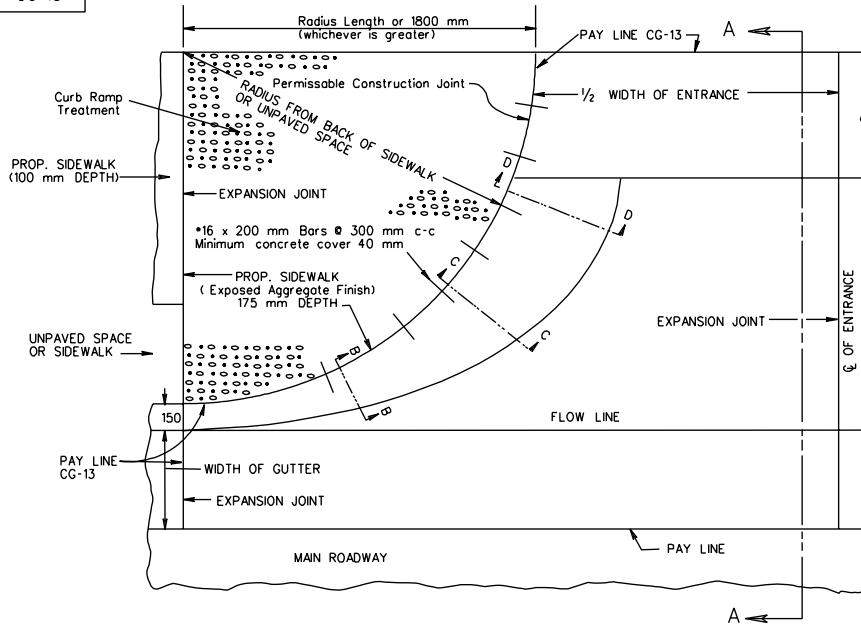
Limits of exposed aggregate sidewalk  
Treatment where width of sidewalk or sidewalk space is less than 2220 mm.

- Notes:
- Curb ramp floor to be class 20 Concrete (30 MPa if precast) with slip-resistant integral detectable warning surface covering the entire width of the ramp floor (ramp floor may be precast or cast in place). The detectable warning shall be provided by an exposed aggregate finish. Ramp shall not exceed a maximum slope of 12:1.
  - Flared sides of curb ramp to be poured monolithically with ramp floor or by using permissible construction joint with required bars.
  - If ramp floor is precast, holes must be provided for dowel bars so that adjoining flared sides can be cast in place after placement of precast ramp floor. Precast concrete shall be class 30.
  - Required bars are to be #16 x 200 mm placed 300 mm center to center along both sides of the ramp floor, mid-depth of ramp floor. Minimum concrete cover 40 mm.
  - Curb ramps will be measured and paid for at the contract unit prices for Hydraulic cement concrete sidewalk and Exposed aggregate sidewalk, complete-in-place.
  - Curb/curb and gutter slope transitions adjacent to curb ramps are included in payment for curb/curb and gutter.
  - When used in conjunction with Standard CG-3 or CG-7, the curb face on this Standard is to be adjusted to match the mountable curb configuration.
  - Curb Ramps are to be located as shown on the plans or as directed by the Engineer. They are to be provided at intersections wherever an accessible route within the right-of-way of highway facility crosses a curb regardless of whether sidewalk is existing, proposed or nonexistent. They may be offset from pedestrian crosswalks as shown on plans or as directed by the Engineer, but should not be located behind vehicle stop lines. Existing light poles, fire hydrants, drop inlets, etc. will also affect placement.
  - Accessible route is defined as a continuous unobstructed, stable, firm and slip resistant path connecting all accessible elements of a facility that can be approached, entered and used by persons with mobility impairments.

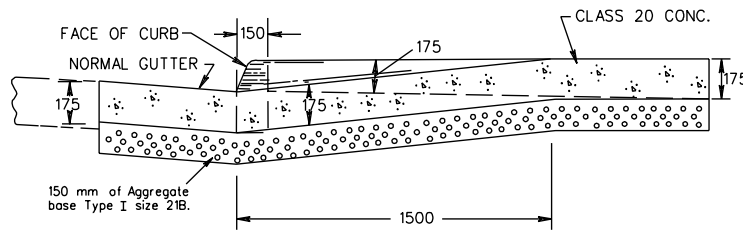
SPECIFICATION REFERENCE	CURB RAMP (PERSONS WITH MOBILITY IMPAIRMENTS)		
502 504	VIRGINIA DEPARTMENT OF TRANSPORTATION		UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS
			203.05

REVISED ON 3/03

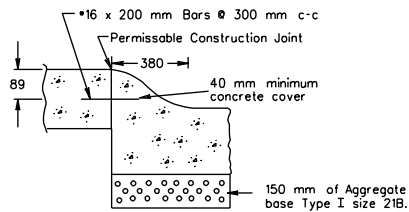
CG-13



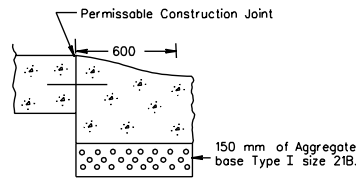
HALF PLAN



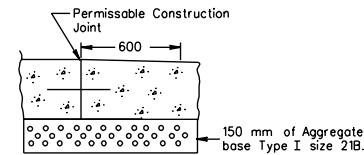
SECTION A-A



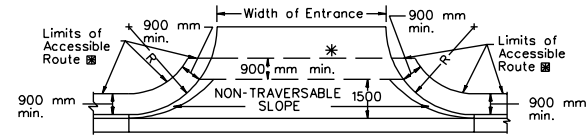
SECTION B-B



SECTION C-C



SECTION D-D



ACCESSIBLE ROUTE DETAIL

Additional right-of-way is required if the limits of Accessible Route extend beyond existing or proposed VDOT Right-Of-Way.

Detail to be used when the combined width of unpaved space and sidewalk space is less than 2.1 m.

Accessible route is defined as a continuous unobstructed, stable, firm and slip resistant path connecting all accessible elements of a facility that can be approached, entered and used by persons with mobility impairments.

If accessible routes are being provided, a minimum 900 mm traversable width is required.

NOTES

Prop. 175 mm Sidewalk is to be poured monolithically with Entrance or by using permissible construction joint with required bars.

Proposed 175 mm sidewalk to be class A-3 concrete with exposed aggregate finish.

Required bars are to be No. 16 x 200 mm placed 300 mm center to center along back of curb, mid-depth of sidewalk. Minimum Concrete cover 20 mm.

All details and dimensions not shown are the same as Standard CG-9D.

This design may also be applied to other Entrance Standards as the need arises.

Limits of Exposed aggregate sidewalk for curb ramp treatment

When used in conjunction with Standard CG-3 or CG-7, the curb face on. This Standard is to be adjusted to match the mountable curb configuration.

COMMERCIAL ENTRANCE

(HEAVY TRUCK TRAFFIC ANTICIPATED)

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

502

203.06 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS