NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE,
   4000 PSI IF PRECAST.

3. CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG
   FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.

4. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3"
   (7.5" DEPTH) OR INCREASED AS MUCH AS 3" (7.5" DEPTH)
   IN ORDER THAT THE BOTTOM OF CURB WILL CONDICT
   WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE.
   OTHERWISE THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT
   IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN
   INCREASE IN DEPTH.

5. CG-2 IS TO BE USED ON ROADWAYS MEETING THE
   REQUIREMENTS FOR CG-6 AS SHOWN IN
   APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.
NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.

3. CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.

4. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (18" DEPTH) OR INCREASED AS MUCH AS 3" (18" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL CONCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.

5. CG-3 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-7 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.

6. WHEN THIS STANDARD IS TO BE TIED INTO EXISTING BARRIER CURB, THE TRANSITION IS TO BE MADE WITHIN 10' OR THE CHANGE IN STANDARDS MADE AT REGULAR OPENINGS.
NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAIRED FOR AS RADIAL COMBINATION CURBS & GUTTERS.
4. 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.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.

THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.

THIS AREA MAY BE CONCRETE AT THE OPTION OF THE CONTRACTOR.
NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.

3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER.

4. 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.

5. ALLOWABLE CRITERIA FOR THE USE OF CG-7 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.

6. WHEN THIS STANDARD IS TO BE TIED INTO EXISTING BARRIER CURB, THE TRANSITION IS TO BE MADE WITHIN 10' OR THE CHANGE IN STANDARDS MADE AT REGULAR OPENINGS.

7. 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.
ASPHALT CONCRETE CURB AND MEDIAN
FOR TEMPORARY OR PERMANENT INSTALLATION

ASPHALT CURB
RIGID PAVEMENT
6" 7" 9"
2" R

FLEXIBLE PAVEMENT OR
RIGID BASE WITH ASPHALT SURFACE
6" 7" 9"
2" R

SHOULDER STABILIZATION
AS SHOWN ON PLANS

ASPHALT CURB
FOR SLOPE EROSION CONTROL ONLY

VARIABLE

ASPHALT MEDIAN
MC-3 AND MC-3A IS TO BE USED ON ROADWAYS MEETING THE
REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE
VDO T ROAD DESIGN MANUAL

MC-3 AND MC-3A IS TO BE USED ON ROADWAYS MEETING THE
REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE
VDO T ROAD DESIGN MANUAL

ASPHALT MEDIAN

VARIABLE

ASPHALT MEDIAN

* ASPHALT TOP FOR MEDIAN TO BE SAME MIX AS CURB.
ASPHALT Curb

MC-38

RIGID PAVEMENT

1" R

MC-38

FLEXIBLE PAVEMENT OR RIGID BASE WITH ASPHALT SURFACE

ASPHALT CURB

ASPHALT Curb

SHOULDER STABILIZATION AS SHOWN ON PLANS.

FOR SLOPE EROSION CONTROL ONLY

ASPHALT Curb

MC-38

VARIABLE VARIABLE

2" R 5" 4"

TOP SOIL 3/4"-1"

RIGID PAVEMENT BACKFILL

1" R

MC-38

FLEXIBLE PAVEMENT OR RIGID BASE WITH ASPHALT SURFACE

ASPHALT MEDIAN

ASPHALT Curb

MC-38 AND MC-3C IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-7 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.

ASPHALT MEDIAN

* ASPHALT TOP FOR MEDIAN TO BE SAME MIX AS CURB.
ST&D. GR-2 & MC-3B (11") ASPHALT CURB INSTALLATION

LIMIT OF SURFACE TREATMENT IF SHOULDER IS TO RECEIVE A PRIME & SEAL. THE PRIME & SEAL IS TO BE APPLIED TO THE SHOULDER AND GUTTER AFTER THE CURB HAS BEEN INSTALLED.

X TO BE CONSTRUCTED WITH THE SAME MATERIAL AND TO THE SAME DEPTH AS THE PAVED SHOULDER, SHOULDER AND GUTTER TO BE PLACED SIMULTANEOUSLY.

FACE OF GUARDRAIL IS TO BE ALIGNED WITH TOE OF THE CURB

SPECIFICATION
REFERENCE 105 5G2

ASPHALT CURB AND GUTTER & ASPHALT PAVING UNDER GUARDRAIL

VIRGINIA DEPARTMENT OF TRANSPORTATION 201.07
ASPHALT PAVING UNDER GUARDRAIL

(COR: USE WHERE ASPHALT CURB IS NOT REQUIRED)

NOTES:

1. TO BE CONSTRUCTED WITH THE SAME MATERIAL AND TO THE SAME DEPTH AS THE PAVED SHOULDER.

2. TO BE CONSTRUCTED WITH THE SAME ASPHALT MATERIALS AS THE PAVED SHOULDER TO THE FOLLOWING DEPTHS:

   ALLOWABLE DEPTHS OF ASPHALT MATERIAL
   IM-19.01A OR IM-19.0D  2" MIN.
   BM-25.0  3" MIN.
   BM-37.5  4" MIN.

3. DEPTH OF ASPHALT MATERIAL MAY BE EXTENDED AT THE CONTRACTOR’S OPTION TO CONFORM WITH THE BOTTOM OF THE PAVED SHOULDER COURSE AT NO INCREASE IN THE QUANTITY OF ASPHALT MATERIAL COMPUTED USING THE ABOVE SPECIFIED DEPTHS.

   ADDITIONAL 5 FEET ASPHALT PAVING BEYOND POINT WHERE GUARDRAIL TOSS SHOULDER LINE.

   FOR ADDITIONAL DESIGN AND PLACEMENT INFORMATION SEE SHEET 1 OF 2.

GR-6 TERMINAL

ASPHALT PAVING UNDER G.R.

E.P.

PAVED SHOULDER

5'

DITCH LINE

GR-6

SHOULDER LINE

10:1 SLOPE OR FLATTER

PAVED SHOULDER

E.P.

GR-7 & GR-9 TERMINALS

METHODS FOR BEGINNING & ENDING ASPHALT PAVING UNDER GUARDRAIL AND GUARDRAIL INSTALLATION SITE PREPARATION REQUIREMENTS FOR GR-7 AND GR-9, SEE STANDARD GR-S?
FOR SPECIFIC SITE PREPARATION REQUIREMENTS.

SHEET 2 OF 2

ASPHALT CURB AND GUTTER & ASPHALT PAVING UNDER GUARDRAIL

VIRGINIA DEPARTMENT OF TRANSPORTATION

201.08

SPECIFICATION REFERENCE

105
502
CONCRETE MEDIAN CURB

FOR USE WITH CONCRETE PAVEMENT

The depth of curb may be reduced as much as 3" (76 mm) or increased as much as 3" (76 mm) 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 18" as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.

INTEGRAL

FOR USE WITH CONCRETE WITH ASPHALT TOP COURSE

The depth of curb may be reduced as much as 3" (76 mm) or increased as much as 3" (76 mm) 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 18" as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.

INDEPENDENT
HALF SECTION ON EXISTING CONCRETE PAVEMENT

When roadway design meets the criteria for CO-7 as shown in Appendix A of the Roadway Design Manual, median curb is to be in accordance with CO-3.

Dowel spacing Longitudinally at 2'-0" c-c from nose to first joint.

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

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

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

12" square hole for sign post to be formed into introduced median noses a minimum of 5' from the nose. W = 4 Min.

When median is installed over existing pavement, hole for sign post is to extended to the subbase.

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

HALF SECTION ON EXISTING FLEXIBLE PAVEMENT

STANDARD SOLID CONCRETE RAISED MEDIAN STRIP

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV. 9/06
202.02
SUGGESTED CONSTRUCTION METHOD IF TOP SLAB IS Poured SEPARATELY

When roadway design meets the criteria for CG-7 as shown in Appendix A of the Road Design Manual, median curb is to be in accordance with Standard CG-3.

ALTERNATE CONSTRUCTION METHOD IF TOP SLAB IS Poured SEPARATELY

The depth of curb may be reduced as much as 3" (90 depth) or increased as much as 3" (150 depth) in order that the bottom of curb will coincide with the top of a cause of the pavement structure. Otherwise the depth is to be 12" as shown. No adjustment in the price bid is to be made for a decrease or an increase in depth.

CIRCULAR NOSE

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

NON-SYMETRICAL NOSE

When median width is 3 feet or greater a longitudinal contraction joint shall be provided along 6 of median strip.

When median width is 3 feet or greater a longitudinal contraction joint shall be provided along 6 of median strip.

ALTERNATE WITH EXTRUDED CURB
FOR DETAILS OF INTEGRAL CURB
SEE STANDARD MC-1 OR CG-3

HALF SECTION WITH PROP.
CONCRETE PAVEMENT

WHEN ROADWAY DESIGN MEETS THE
CRITERIA FOR CG-7 AS SHOWN IN
APPENDIX A OF THE ROAD DESIGN
MANUAL, MEDIAN CURB IS TO BE IN
ACCORDANCE WITH CG-3.

HALF SECTION WITH PROP.
CONCRETE
BASE WITH ASPHALT TOP

FOR DETAILS OF INDEPENDENT CURB
SEE STANDARD MC-1 OR CG-3

HALF SECTION WITH PROP.
CONCRETE OR FLEXIBLE PAVEMENT

PROPRIETARY.

1/4"" SLOPE
2" TOP SOIL
(1)

1/4"" SLOPE
2" TOP SOIL
(1)

1/4"" SLOPE
2" TOP SOIL
(1)

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH PROP.
CONCRETE OR FLEXIBLE PAVEMENT

PROP. CONCRETE OR FLEXIBLE PAVEMENT

HALF SECTION WITH PROP.
CONCRETE OR FLEXIBLE PAVEMENT

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH PROP.
CONCRETE OR FLEXIBLE PAVEMENT

EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

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PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

PAY LINE

PROPRIETARY.

PROPRIETARY.
2" ASPHALT CONCRETE TYPE SM-9.5 A OR D

FOR DETAILS OF INTEGRAL CURB
SEE STANDARD MC-1 OR CG-3

HALF SECTION WITH PROPOSED
CONCRETE PAVEMENT

WHEN ROADWAY DESIGN MEETS THE
CRITERIA FOR CG-7 AS SHOWN IN
APPENDIX A OF THE ROADWAY DESIGN
MANUAL, MEDIAN CURB IS TO BE IN
ACCORDANCE WITH CG-3.

2" ASPHALT CONCRETE TYPE SM-9.5 A OR D

FOR DETAILS OF INDEPENDENT CURB
SEE STANDARD MC-1 OR CG-3

HALF SECTION WITH PROP. CONCRETE
OR FLEXIBLE PAVEMENT

(1) THOROUGHLY COMPACTED AREA TO
CONSIST OF THE FOLLOWING:
IN FILLS - REGULAR FILL MATERIAL
IN CUTS - UNDISTURBED EARTH AND
REGULAR FILL MATERIAL
AS REQUIRED.

(2) THOROUGHLY COMPACTED AREA TO
CONSIST OF REGULAR FILL MATERIAL.

2" ASPHALT CONCRETE TYPE SM-9.5 A OR D

FOR DETAILS OF INDEPENDENT CURB
SEE STANDARD MC-1 OR CG-3

HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

NOTE: THE ASPHALT CONCRETE SURFACE SLAB IS TO CONFORM TO THE CURRENT ROAD & BRIDGE SPECIFICATIONS FOR
SM-9.5 A OR D MATERIAL EXCEPT THAT THE MINIMUM BITUMEN CONTENT IS TO BE 6.5%.
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 10' intervals**

**3% maximum decrease in slope for first 10' interval and 8% maximum decrease for succeeding minimum 10' intervals**

1. For sidewalk, curb and gutter - built concurrently.
2. For initial curb and gutter only.
3. For initial sidewalk only - 7" sidewalk to be dipped.
4. For pedestrian access route - minimum 4"-0" traversable width is required with a maximum 2% cross slope.
5. For curb and gutter only - after initial sidewalk.
6. For curb and sidewalk only - without gutter.

⚠ Indicates point of grade change.
STANDARD ENTRANCE GUTTER
FOR USE WITH UNPAVED SPACE BETWEEN CURB & SIDEWALK

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV. 2/06
203.02
STANDARD ENTRANCE GUTTER

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV. 2/08
203.03

SPECIFICATION REFERENCE 502
GENERAL NOTES

1. WHEN CG-11 IS USED FOR STREET CONNECTIONS, THE CONNECTION MUST BE DESIGNED IN ACCORDANCE WITH AASHTO POLICY AND THE APPLICABLE REQUIREMENTS OF THE VDOT ROAD DESIGN MANUAL, INCLUDING SIGHT DISTANCE REQUIREMENTS.

2. 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 7".

3. 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.

4. SEE STANDARD CG-12 FOR CURB RAMP DESIGN TO BE USED WITH THIS STANDARD.

5. OPTIONAL FLOWLINE MAY REQUIRE WARPING OF A PORTION OF GUTTER TO PRECLUDE PONDING OF WATER.

ENTRANCE NOTES

6. PLANS ARE TO INDICATE WHEN CONSTRUCTION OF A FLOW LINE IS REQUIRED TO PROVIDE POSITIVE DRAINAGE ACROSS THE ENTRANCE.

7. 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)

8. RADIAL CURB OR COMBINATION CURB AND GUTTER SHALL NOT BE CONSTRUCTED BEYOND THE R/W LINE EXCEPT FOR REPLACEMENT PURPOSES.

9. THE DESIRABLE AND MAXIMUM ENTRANCE GRADE CHANGES "O" ARE LISTED IN THE ALLOWABLE ENTRANCE GRADE TABLE. THESE VALUES ARE NOT APPLICABLE TO STREET CONNECTIONS.

ALLOWABLE ENTRANCE GRADE CHANGES

<table>
<thead>
<tr>
<th>ENTRANCE VOLUME</th>
<th>GRADE CHANGE &quot;O&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>0 X</td>
</tr>
<tr>
<td>MEDIUM 500-1500 VPD</td>
<td>≤ 3 X</td>
</tr>
<tr>
<td>LOW</td>
<td>≤ 6 X</td>
</tr>
</tbody>
</table>

NOTE: ALLOWABLE ENTRANCE GRADE TABLE IS NOT APPLICABLE TO STREET CONNECTIONS.
GENERAL NOTES:

1. The detectable warning shall be provided by truncated domes.

2. Detectable warning to be Class A-3 concrete (Class A-1 if cast-in-place) with slip resistant integral surface covering the full width of the ramp floor by 2 feet in length in the direction of pedestrian travel, other types of material with the truncated domes. Detectable warning may be used with the approval of the Engineer.

3. Sloping sides of curb ramp may be poured monolithically with ramp floor or by using permissible construction joint with required bars.

4. 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 A-4.

5. Required bars are to be no. 5 x 8" placed 1 center to center along both sides of the ramp floor. Mid-depth of ramp floor, minimum concrete cover 1/2".

6. Curb / curb and gutter slope transitions adjacent to curb ramps are included in payment for curb / curb and gutter.

7. 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 a highway facility crosses a curb regardless of whether sidewalk is existing, proposed, or nonexistent. They must be located within pedestrian crosswalks as shown on plans or as directed by the Engineer, and should not be located behind vehicle stop lines, existing light poles, fire hydrants, drop inlets, etc. Accessible routes provide a continuous unobstructed, stable, firm, and slip resistant path connecting all accessible elements of a facility that can be approached, entered, and used by pedestrians.

8. Ramps may be placed on radial, or tangential sections provided that the curb opening is placed within the limits of the crosswalk and that the slope at the connection of the curb opening is perpendicular to the curb.

9. Typical concrete sidewalk is 4" thick, when the entrance radius cannot accommodate the turning requirements of anticipated truck traffic, refer to standardCG-13, commercial entrance (heavy truck traffic) for concrete depth.

10. When curbs ramps are used in conjunction with a shared use path, the minimum width shall be the width of the shared use path.
PERMISSIBLE CONSTRUCTION JOINT

#5 DOWELS, 8" LONG
#12" C-C

TRUNCATED DOMES
SEE SHEET 1 OF 4 FOR DETAILS

SECTION A-A

BACK OF CURB
20:1

2' MIN

SECTION B-B

PERMISSIBLE CONSTRUCTION JOINT

NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 4.

A 4" SQUARE LANDING AREA OUTSIDE OF TRAVELWAY SHALL BE PROVIDED WITHIN THE MARKED CROSSWALK AREA

TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK

TYPICAL PLACE ME

CROSSWALK

CROSSWALK

CROSSWALK DIAGONAL VARIATION

TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK (WITH BUFFER STRIP)

THIS DESIGN TO BE USED FOR CONSTRUCTION THAT INCORPORATES WIDER SIDEWALK, LANDING (48" WIDE) REQUIRED AT TOP OF CURB RAMP. MINIMUM CURB RAMP LENGTH 8 FEET FOR NEW CONSTRUCTION, 6 FEET FOR ALTERATIONS.

CG-12 DETECTABLE WARNING SURFACE
TYPE A (PERPENDICULAR) APPLICATION

VIRGINIA DEPARTMENT OF TRANSPORTATION

105 502

SHEET 2 OF 4

NEW 7/05 205.05A
CG-12 DETECTABLE WARNING SURFACE
TYPE B (PARALLEL) APPLICATION
VIRGINIA DEPARTMENT OF TRANSPORTATION

SECTION A-A

SECTION B-B

NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 4.

TYPE B PARALLEL APPLICATION

<table>
<thead>
<tr>
<th>ROADWAY GRADE IN PERCENT</th>
<th>MINIMUM RAMP LENGTH IN FEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4(^\circ) Curb</td>
</tr>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
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</tr>
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<td>5</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>14</td>
</tr>
</tbody>
</table>

NOTE: THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

PERMISSIBLE CONSTRUCTION JOINT

PERMISSIBLE CONSTRUCTION JOINT

SHAPE TO MATCH FACE OF ROADWAY CURB 48:1 MAX

BACK OF CURB 20:1

RAMP (SEE TABLE)

NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 4.

PERMISSIBLE CONSTRUCTION JOINT

PERMISSIBLE CONSTRUCTION JOINT

5'-0" MIN.

TRUNCATED DOMES SEE SHEET 1 OF 4 FOR DETAILS

5'-0" MIN.

A 4\(^\circ\) SQUARE LANDING AREA OUTSIDE OF TRAVELWAY SHALL BE PROVIDED FOR PERPENDICULAR CROSSWALK WITHIN THE MARKED CROSSWALK AREA.

CROSSWALK TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK

A 4\(^\circ\) SQUARE LANDING AREA OUTSIDE OF TRAVELWAY SHALL BE PROVIDED FOR PERPENDICULAR CROSSWALK WITHIN THE MARKED CROSSWALK AREA.
NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 4.

### TYPE C PARALLEL & PERPENDICULAR APPLICATION

<table>
<thead>
<tr>
<th>ROADWAY GRADE IN PERCENT</th>
<th>MINIMUM RAMP LENGTH IN FEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4&quot; CURB</td>
</tr>
<tr>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
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<td>3</td>
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<td>7</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>15</td>
</tr>
</tbody>
</table>

**NOTE:**

The required length of a parallel ramp is limited to 15 feet, regardless of the slope.

---

**CG-12 DETECTABLE WARNING SURFACE**  
**TYPE C (PARALLEL & PERPENDICULAR) APPLICATION**  
**VIRGINIA DEPARTMENT OF TRANSPORTATION**

**SPECIFICATION REFERENCE**  
105  
502
COMMERICAL ENTRANCE
(HEAVY TRUCK TRAFFIC ANTICIPATED)

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE 502

REV. 2/06
203.08