SECTION 200
CURBS, MEDIANS &
ENTRANCE GUTTERS
<table>
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<td>ASPHALT CONCRETE CURB AND MEDIAN (FOR TEMPORARY OR PERMANENT INSTALLATION)</td>
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<td>STANDARD ENTRANCE GUTTER (FOR USE WITH UNPAVED SPACE BETWEEN CURB AND GUTTER)</td>
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<td>CG-12A</td>
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<td>CG-13</td>
<td>COMMERICAL ENTRANCE (HEAVY TRUCK TRAFFIC ANTICIPATED)</td>
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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" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" 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 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, IN THE SECTION ON GS URBAN STANDARDS.

ACCEPTABLE ALTERNATIVE IF CURB IS EXTRUDED

STANDARD 6" CURB

VIRGINIA DEPARTMENT OF TRANSPORTATION
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" (13" DEPTH) OR INCREASED AS MUCH AS 3" (19" DEPTH) IN ORDER THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 16" 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 IN THE SECTION ON GS URBAN STANDARDS.

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 CAN BE 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 PAID FOR AS RADIAL COMBINATION CURB & GUTTER.

4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & 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 ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.

COMBINATION 6" CURB AND GUTTER

THIS AREA MAY BE CONCRETE AT THE OPTION OF THE CONTRACTOR

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

CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 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 2' OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL 1.

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 IN THE SECTION ON URBAN GS STANDARDS.
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 CAN BE 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.

This area may be concrete at the option of the contractor.

The bottom of the curb and gutter may be constructed parallel to the slope of subbase courses provided a min. depth of 7" is maintained.
RIGID PAVEMENT

BACKFILL

FLEXIBLE PAVEMENT OR RIGID BASE WITH ASPHALT SURFACE

SHOULDER STABILIZATION AS SHOWN ON PLANS.

VIRGINIA DEPARTMENT OF TRANSPORTATION

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

• ASPHALT TOP FOR MEDIAN TO BE SAME MIX AS CURB.
ASPHALT CURB
RIGID PAVEMENT
2" R
1" R

ASPHALT CURB
FLEXIBLE PAVEMENT OR RIGID BASE WITH ASPHALT SURFACE
5" 4"
2" R
1" R

ASPHALT CURB
SHOULDER STABILIZATION AS SHOWN ON PLANS.
5" 2"
2" R
1" R

ASPHALT MEDIAN
MC-3B AND MC-3C ARE TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-7 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL IN THE SECTION ON GS STANDARDS.

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

SPECIFICATION REFERENCE
105 502

ROAD AND BRIDGE STANDARDS
REVISION DATE  SHEET 1 OF 2  20107

ASPHALT CURB AND GUTTER
(ASPHALT PAVING UNDER GUARDRAIL)
VIRGINIA DEPARTMENT OF TRANSPORTATION

LEFT OF TRAFFIC

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<thead>
<tr>
<th>SHOULDER WIDTH L</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
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<tbody>
<tr>
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</table>

RIGHT OF TRAFFIC

<table>
<thead>
<tr>
<th>SHOULDER WIDTH R</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
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<td>9'</td>
<td>6'</td>
<td>3'</td>
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*LIMIT OF SURFACE TREATMENT IF SHOULDER IS TO RECEIVE A PRIME & SEAL. THE PRIME AND SEAL IS TO BE APPLIED TO THE SHOULDER AND GUTTER AFTER THE CURB HAS BEEN INSTALLED.

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

FACE OF GUARDRAIL IS TO BE ALIGNED WITH TOE OF THE CURB.
NOTES:

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

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

   ALLOWABLE DEPTHS OF ASPHALT MATERIAL

   BM-19.0A OR BM-19.0D 2" MIN
   BM-25.0 3" MIN

3. 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.

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

5. FOR ADDITIONAL DESIGN AND PLACEMENT INFORMATION SEE SHEET 1 OF 2.
CONCRETE MEDIAN CURB

The depth of curb may be reduced as much as 3" (15" depth) or increased as much as 3" (21" 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 18" as shown.

No adjustment in the price bid is to be made for a decrease or an increase in depth.
HALF SECTION ON EXISTING CONCRETE PAVEMENT

VARIABLE

CLASS A3 CONCRETE

1/4" SLOPE

EXISTING CONCRETE PAVEMENT

DOWELS

12" SQUARE HOLE FOR SIGN POST TO BE FORMED INTO INTRODUCED MEDIAN NOSES A MINIMUM OF 5' FROM THE NOSE.

CIRCULAR NOSE

W = 4' MINIMUM

NON-SYMMETRICAL NOSE

ADDITIONAL HOLES OF ADEQUATE SIZE TO BE PROVIDED FOR SIGN POSTS, DELINEATOR POSTS, ETC. AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.

NOTE:

EXISTING ASPHALT SURFACE COURSE AND BINDER COURSE, IF ANY, TO BE REMOVED UNDER MEDIAN STRIP.

DOWEL SPACING LONGITUALLY AT 2'-0" C-C FROM NOSE TO FIRST JOINT.

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

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.

EXISTING ASPHALT SURFACE COURSE

3" MAX

EXISTING ASPHALT BASE

PROPOSED ASPHALT SURFACE COURSE

3" MAX

EXISTING ASPHALT BASE

HALF SECTION ON EXISTING FLEXIBLE PAVEMENT

HALF SECTION ON EXISTING FLEXIBLE PAVEMENT TO BE RESURFACED

STANDARD SOLID CONCRETE RAISED MEDIAN STRIP

VIRGINIA DEPARTMENT OF TRANSPORTATION

502
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

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

(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.
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%.
STANDARD ENTRANCE GUTTER WITH FLARED OPENING
(FOR USE ACROSS SIDEWALK)

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.
7. INDICATES POINT OF GRADE CHANGE.
**STANDARD ENTRANCE GUTTER**

**PEDESTRIAN ACCESS ROUTE DETAIL WITH & WITHOUT UNPAVED SPACE**

Additional right-of-way is required if the limits of pedestrian access route extend beyond existing or proposed VDOT right-of-way. Pedestrian access 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. If access route is adjacent to back of curb, minimum width should be 6'.

* If pedestrian access routes are being provided, a minimum 4' traversable width is required with a max. 2% cross slope.

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.

* No change to 10% change

- 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
**Standard Entrance Gutter**

**Entrance Width**
- Absolute Minimum: 12'
- Desirable Minimum: 16'

**Entrance Gutter Details**
- Unpaved Space
- Non-Traversable Slope

**Pedestrian Access Route**
- Additional Right-Of-Way Required if the limits of pedestrian access route extend beyond existing or proposed VDOT Right-Of-Way.
- Built Concurrently for Sidewalk, Curb and Gutter.
- Parabolic Curve
- 6" Aggregate Base Type I Size 2B
- 12% Max. Slope for Curb and Gutter Only
- 5'-0" for Sidewalk, Curb and Gutter Built Concurrently

**Point of Grade Change**
- 0% to 10% Change

**Maximum Increase in Slope**
- 12% Maximum Increase at Minimum 10' Intervals

**Maximum Decrease in Slope**
- 3% Maximum Decrease in Slope for First 10' Interval
- 8% Maximum Decrease for Succeeding Minimum 10' Intervals

**Virginia Department of Transportation**

**Reference Specification**
- 502

**Revision Date**
- 07/15

**Sheet 1 of 1**

**Road and Bridge Standards**
GENERAL NOTES

1. 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.

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

3. 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.)

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

ENTRANCE NOTES

5. 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". (SEE CG-13)

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

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

INTERSECTION NOTES

8. 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 STOPPING SIGHT DISTANCE AND K VALUE REQUIREMENTS.

9. OPTIONAL FLOW LINE MAY REQUIRE WARPING OF A PORTION OF GUTTER TO PROVIDE POSITIVE DRAINAGE ACROSS THE INTERSECTION.

ALLOWABLE ENTRANCE GRADE CHANGES

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<tr>
<th>ENTRANCE VOLUME</th>
<th>GRADE CHANGE &quot;D&quot;</th>
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<tr>
<td></td>
<td>DESIRABLE</td>
</tr>
<tr>
<td>HIGH MORE THAN 1500 VPD</td>
<td>0 %</td>
</tr>
<tr>
<td>MEDIUM 500-1500 VPD</td>
<td>≤ 3 %</td>
</tr>
<tr>
<td>LOW LESS THAN 500 VPD</td>
<td>≤ 6 %</td>
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NOTE: ALLOWABLE ENTRANCE GRADE TABLE IS NOT APPLICABLE TO STREET CONNECTIONS

SECTION A - A

- Construct grade changes with a parabolic curve.

SECTION C - C

PLAN VIEW

- Plan view of entrance volume and grade changes.

NOTE: WHEN A PEDESTRIAN ACCESS ROUTE CROSSES A COMMERCIAL ENTRANCE, THE CROSS SLOPE SHALL BE 2% FOR A WIDTH OF 5 FEET.

METHOD OF TREATMENT

(CONNECTION FOR STREET INTERSECTIONS AND COMMERCIAL ENTRANCES)

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

502
GENERAL NOTES:

1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. DETECTABLE WARNING SHALL BE FROM THE MATERIALS APPROVED LIST FOR DETECTABLE WARNING SURFACE PRODUCTS NOT LISTED SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION FOR CG-12 DETECTABLE WARNING SURFACE AND SHALL BE SUBMITTED TO THE STANDARDS AND SPECIAL DESIGN SECTION FOR APPROVAL.
3. SLOPING SIDES OF CURB RAMPS 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 REMOVAL OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
5. REQUIRED BARS ARE TO BE NO. 5 X 8" PLACED 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 LIMITS 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 UNOBRSTUCTED, STABLE, Pме 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 RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, REFER TO STANDARD CG-13, COMMERCIAL ENTRANCE (HEAVY TRUCK TRAFFIC) FOR CONCRETE DEPTH.
10. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.
11. WHEN ONLY ONE CURB RAMP IS PROVIDED FOR TWO CROSSINGS (DIAGONAL), A 4' x 4' LANDING AREA SHALL BE PROVIDED TO MANEUVER A WHEELCHAIR INTO THE CROSSWALK WITHOUT GOING INTO THE TRAVELWAY. THIS 4' x 4' LANDING AREA MAY INCLUDE THE GUTTER PANEL.
12. ALL CASES WHERE CURB RAMPS INTERSECT A RADIAL SECTION OF CURB AT ENTRANCES OR STREET CONNECTIONS THE DETECTABLE WARNING SURFACE SHALL HAVE A FACTORY RADIUS OR BE FIELD MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.

NOTE: COMPONENTS OF CURB RAMPS CONSIST OF THE FOLLOWING:
- HYDRAULIC CEMENT SIDEWALK (DEPTH IN INCHES, AREA IN SQUARE YARDS)
- CURB WHEN REQUIRED (CG-2 OR CG-3 IN LINEAR FEET)
- DETECTABLE WARNING SURFACE (AREA IN SQUARE YARDS)

EACH OF THE ABOVE ITEMS IS A SEPARATE PAY ITEM AND SHOULD BE SUMMARIZED FOR EACH CURB CUT RAMP.

CG-12 DETECTABLE WARNING SURFACE

(VIRGINIA DEPARTMENT OF TRANSPORTATION)

SHEET 1 OF 5  REVISION DATE  07/15
203.05  SPECIFICATION REFERENCE  105  502
CG-12 DETECTABLE WARNING SURFACE

TYPE A (PERPENDICULAR) APPLICATION

VIRGINIA DEPARTMENT OF TRANSPORTATION

NOTES:

FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.

THIS DESIGN TO BE USED FOR CONSTRUCTION THAT INCORPORATES WIDER SIDEWALK, LANDING (4' WIDE) REQUIRED AT TOP OF CURB RAMP. MINIMUM CURB RAMP LENGTH 8 FEET FOR NEW CONSTRUCTION.
CG-12 DETECTABLE WARNING SURFACE

TYPE B (PARALLEL) APPLICATION

VIRGINIA DEPARTMENT OF TRANSPORTATION

NOTES:
- FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
- THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

<table>
<thead>
<tr>
<th>ROADWAY GRADE IN PERCENT</th>
<th>MINIMUM RAMP LENGTH IN FEET</th>
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<tbody>
<tr>
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<td>4&quot; CURB</td>
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SECTION A-A

SECTION B-B

TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK

DIAGONAL PLACEMENT

WITH BUFFER STRIP

WITHOUT BUFFER STRIP

CR O S S W A L K

CR O S S W A L K AREA.

WITHIN THE MARKED PERPENDICULAR CROSSWALK SHALL BE PROVIDED FOR OUTSIDE OF TRAVELWAY A 4' SQUARE LANDING AREA.

ROAD AND BRIDGE STANDARDS

SHEET 3 OF 5

REVISION DATE

07/15

SPECIFICATION REFERENCE

105

S02
**LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.**

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

**MINIMUM RAMP LENGTH IN FEET**

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<tr>
<th>ROADWAY GRADE IN PERCENT</th>
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<th>6&quot; CURB</th>
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The required length of a parallel ramp is limited to 15 feet, regardless of the slope.

**NOTES:**

- For general notes on the detectable warning surface, see Sheet 1 of 5.
- The selection of curb type and the configuration of the buffer strip may vary to meet existing field conditions and roadway geometrics providing the dimensions and slopes are as noted.
- This combined (parallel & perpendicular) design can be used with adjoining buffer strip. Landing at bottom of two sloping sides with 6" x 6" min. dimensions, the short perpendicular run to the street can be protected by a landscaped setback or connected to the sidewalk with a warped surface.

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**CG-12 DETECTABLE WARNING SURFACE**

**TYPE C (PARALLEL & PERPENDICULAR) APPLICATION**

**VIRGINIA DEPARTMENT OF TRANSPORTATION**

**ROAD AND BRIDGE STANDARDS**

**REFERENCE**

105
502
CG-12 DETECTABLE WARNING SURFACE
MEDIAN AND REFUGE ISLAND APPLICATIONS

NOTES:
1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. CURB SHALL BE SHAPED TO MATCH THE FACE OF ROADWAY CURB.
3. SEE ROADWAY PLANS FOR MEDIAN AND REFUGE ISLAND DIMENSIONS
4. RAMPS AND CUT THROUGH'S SHALL BE ALIGNED WITH CROSSWALKS.
5. THE RAMPS AND CUT THROUGH'S SHALL BE INSTALLED AND PAID FOR AS 4" HYDRAULIC CEMENT CONCRETE SIDEWALK IN ACCORDANCE WITH SECTION 504 OF THE ROAD & BRIDGE SPECIFICATIONS. EXCAVATION OF MATERIAL FOR THE INSTALLATION OF THE SIDEWALK SHALL BE INCLUDED IN THE PRICE BID FOR 4" HYDRAULIC CEMENT CONCRETE SIDEWALK.
6. CUT THROUGH'S LESS THAN 6' IN WIDTH SHALL NOT HAVE DETECTABLE WARNINGS INSTALLED.

Virginia Department of Transportation

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COMMERCIAL ENTRANCE
(HEAVY TRUCK TRAFFIC ANTICIPATED)

PEDESTRIAN ACCESS ROUTE DETAIL
ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF-WAY.

PEDESTRIAN ACCESS 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. IF ACCESS ROUTE IS ADJACENT TO BACK OF CURB, MINIMUM WIDTH SHOULD BE 6'.

X IF PEDESTRIAN ACCESS ROUTES ARE BEING PROVIDED, A MINIMUM 4" TRAVERSABLE WIDTH IS REQUIRED WITH MAX. 2% CROSS SLOPE.

NOTES:
1. PROPOSED 7" SIDEWALK IS TO BE POURED MONOLITHICALLY WITH ENTRANCE OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
2. PROPOSED 7" SIDEWALK TO BE CLASS A-3 CONCRETE.
3. REQUIRED BARS ARE TO BE NO. 5X8" PLACED 1 CENTER TO CENTER ALONG BACK OF CURB, MID-DEPTH OF SIDEWALK. MINIMUM CONCRETE COVER 1 1/2".
4. ALL DETAILS AND DIMENSIONS NOT SHOWN ARE THE SAME AS STANDARD CG-90.
5. THIS DESIGN MAY ALSO BE APPLIED TO OTHER ENTRANCE STANDARDS AS THE NEED ARISES.
6. 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.
7. SEE STANDARD CG-12 FOR DETECTABLE WARNING DETAILS.

SPECIFICATION REFERENCE
502

ROAD AND BRIDGE STANDARDS
REVISION DATE
203.09