STANDARD	TITLE	PAGE
CG-2	STANDARD 6" CURB	201.01
CG-3	STANDARD 4" CURB	201.02
CG-6	COMBINATION 6" CURB AND GUTTER	201.03
CG-7	COMBINATION 4" CURB AND GUTTER	201.04
MC-3, 3A	ASPHALT CONCRETE CURB AND MEDIAN (FOR TEMPORARY OR PERMANENT INSTALLATION)	201.05
MC-3B, 3C	ASPHALT CONCRETE CURB AND MEDIAN (FOR TEMPORARY OR PERMANENT INSTALLATION)	201.06
MC-4	ASPHALT CURB AND GUTTER (ASPHALT PAVING UNDER GUARDRAIL)	201.07
	ASPHALT CURB AND GUTTER (ASPHALT PAVING UNDER GUARDRAIL)	201.08
MC-1	CONCRETE MEDIAN CURB	202.01
MS-1	STANDARD SOLID CONCRETE RAISED MEDIAN STRIP	202.02
MS-1A	STANDARD SOLID CONCRETE RAISED MEDIAN STRIP	202.03
MS-2	STANDARD RAISED GRASS MEDIAN STRIP	202.04
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CG-9A	STANDARD ENTRANCE GUTTER WITH FLARED OPENING (FOR USE ACROSS SIDEWALK)	203.01
CG-9B	STANDARD ENTRANCE GUTTER (FOR USE WITH UNPAVED SPACE BETWEEN CURB AND GUTTER)	203.02
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CG-11	METHOD OF TREATMENT (CONNECTION FOR STREET INTERSECTIONS)	203.04
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	CG-12 DETECTABLE WARNING SURFACE (TYPE A, PERPENDICULAR APPLICATION)	203.06
	CG-12 DETECTABLE WARNING SURFACE (TYPE B, PARALLEL APPLICATION)	203.07
	CG-12 DETECTABLE WARNING SURFACE (TYPE C, PARALLEL & PERPENDICULAR APPLICATION)	203.08
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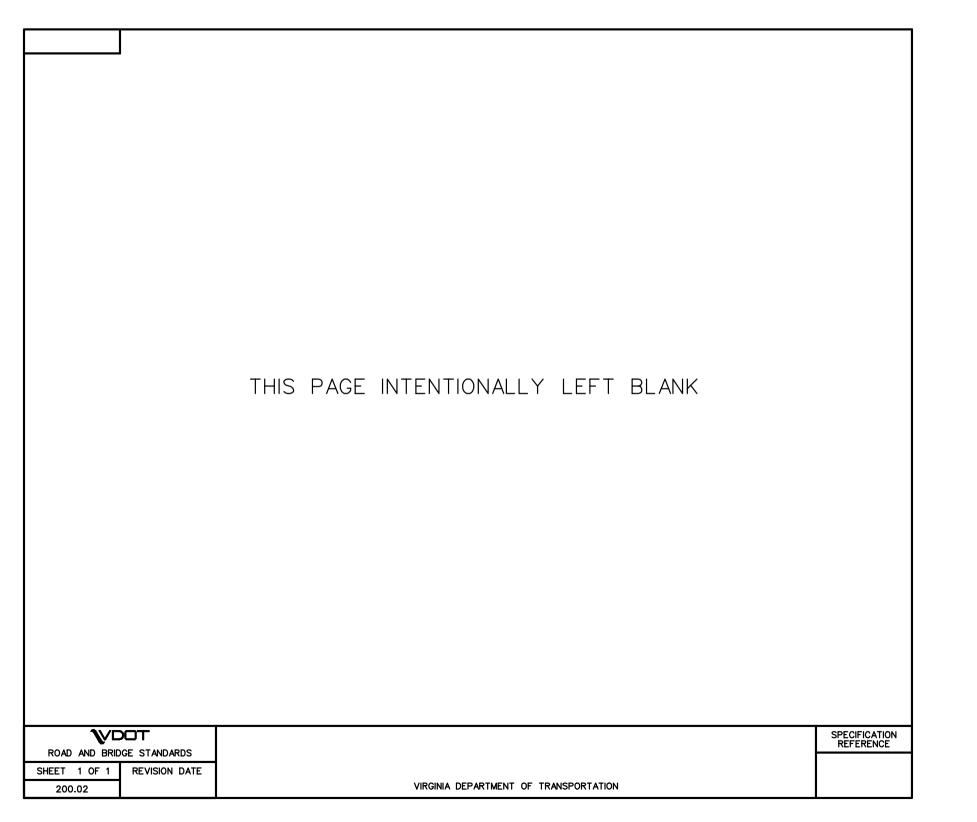
VIRGINIA DEPARTMENT OF TRANSPORTATION

ROAD AND BRIDGE STANDARDS

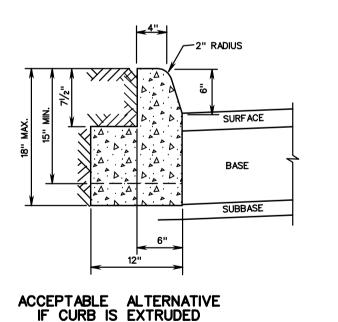
REVISION DATE 04/09

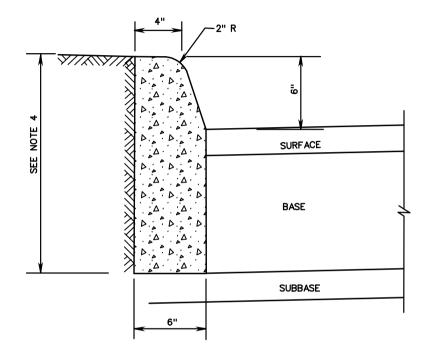
SHEET 1 OF 1

200.01



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





SPECIFICATION REFERENCE	

105

502

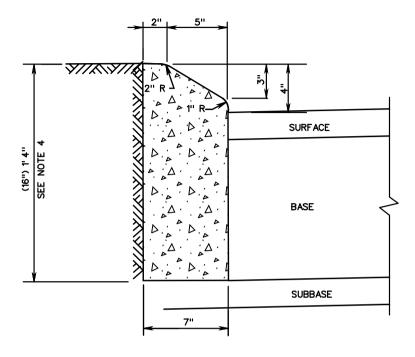
STANDARD 6" CURB

VIRGINIA DEPARTMENT OF TRANSPORTATION

<b>V</b> DOT				
ROAD AND BRIDGE STANDARDS				
DENUGION DATE - 011557 4 05 4				

REVISION DATE

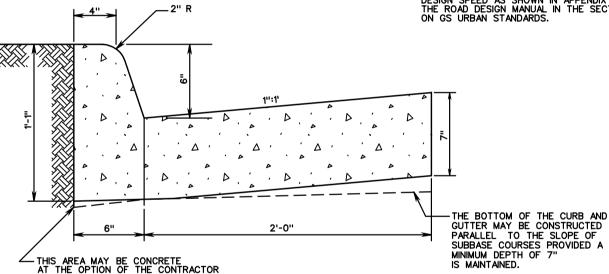
201.01



- 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.

ROAD AND BRID	<b>,</b>	STANDARD 4" CURB	SPECIFICATION REFERENCE
ROAD AND BRID	GE STANDARDS		
SHEET 1 OF 1	REVISION DATE	WIREHAN DEPARTMENT OF TRANSPORTATION	105 502
201.02		VIRGINIA DEPARTMENT OF TRANSPORTATION	502

- 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.



SPECIFICATION REFERENCE

COMBINATION 6" CURB AND GUTTER

ROAD AND BRIDGE STANDARDS

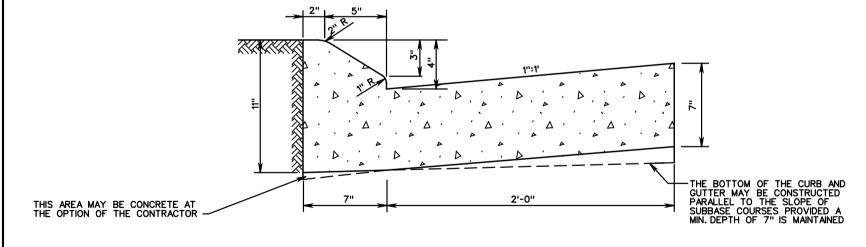
105 502

VIRGINIA DEPARTMENT OF TRANSPORTATION

REVISION DATE

201.03

- 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 PAYEMENT.
- 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.



<b>V</b> DOT				
ROAD AND BRIDGE STANDARDS				
SHEET 1 OF 1 REVISION DATE				

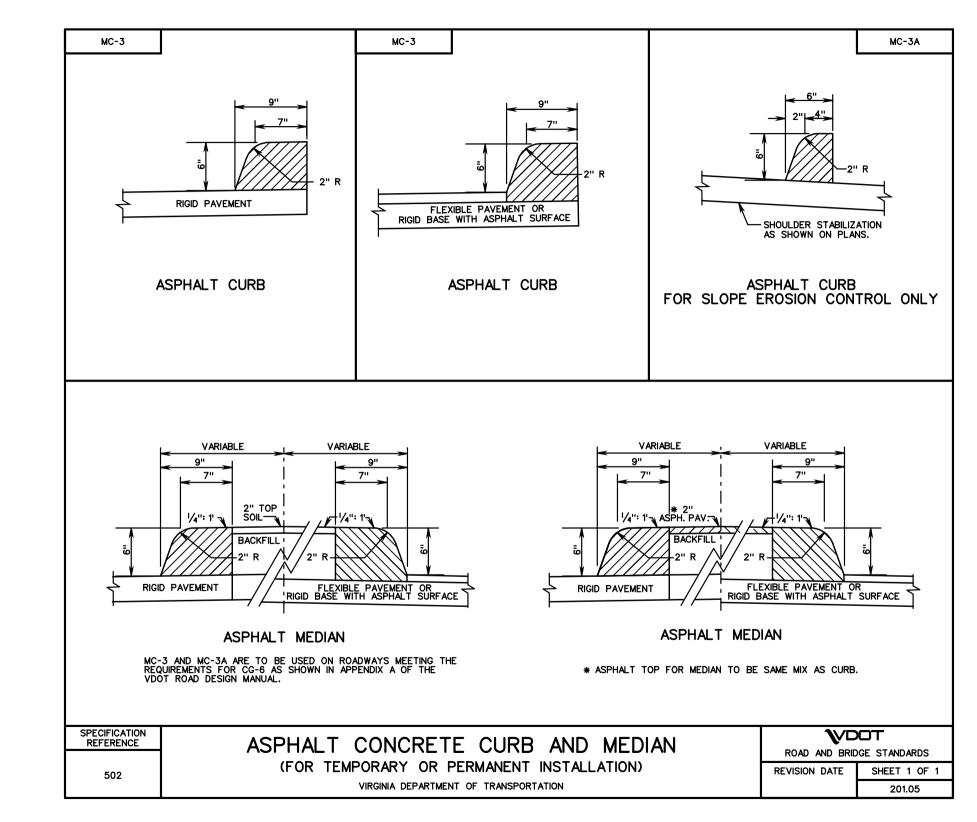
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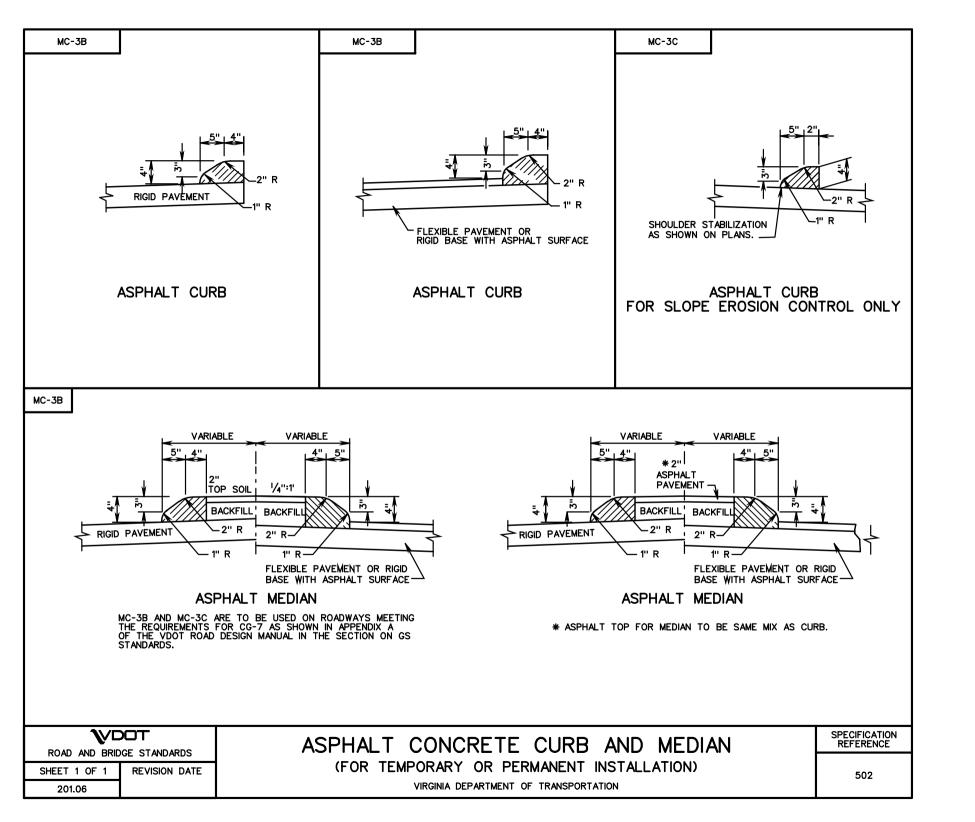
# COMBINATION 4" CURB AND GUTTER

SPECIFICATION REFERENCE

VIRGINIA DEPARTMENT OF TRANSPORTATION

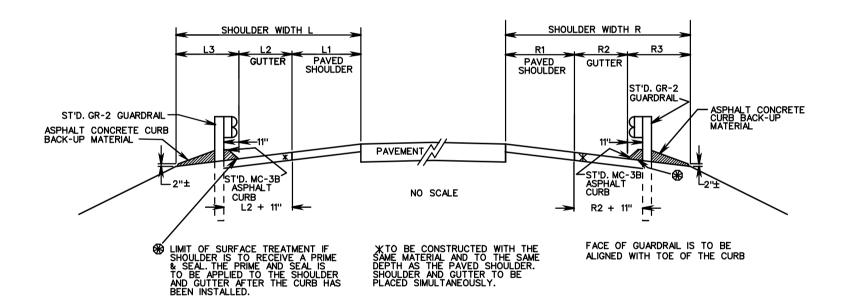
105 502





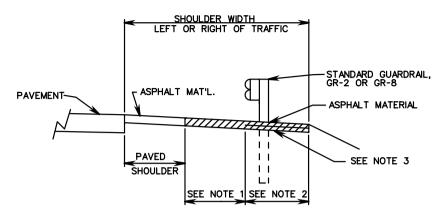
LEFT OF TRAFFIC			
SHOULDER WIDTH L	L1	L2	L3
15'	10'	2'	3'
15'	4'	8'	3'
15'	3'	9'	3'
13'	3'	7'	3'
12'	10'	—	2'
1 1'	3'	5'	3'
8'	4'	2'	2'
8'	3'	3'	2'

RIGHT OF TRAFFIC			
SHOULDER WIDTH R	R1	R2	R3
15'	10'	2'	3'
15'	6'	6'	3'
13'	8'	2'	3'
1 1'	6	2'	3'
9'	6'		3'



ST'D. GR-2 & MC-3B (11") ASPHALT CURB INSTALLATION

SPECIFICATION REFERENCE	ASPHALT CURB AND GUTTER	<b>VDOT</b> ROAD AND BRIDGE STANDARDS	
105	(ASPHALT PAVING UNDER GUARDRAIL)	-	SHEET 1 OF 2
502	VIRGINIA DEPARTMENT OF TRANSPORTATION		201.07



### ASPHALT PAVING UNDER GUARDRAIL

(FOR USE WHERE ASPHALT CURB IS NOT REQUIRED)

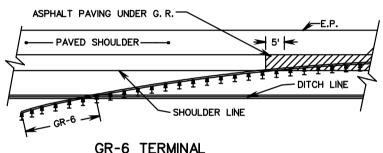
### NOTES:

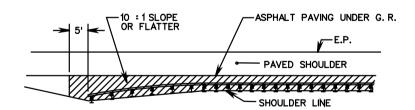
- TO BE CONSTRUCTED WITH THE SAME MATERIAL AND TO THE SAME DEPTH AS THE PAVED SHOULDER.
- 2. TO BE CONSTRUCTED WITH THE SAME ASPHALT MATERIALS AS THE PAVED SHOULDER TO THE FOLLOWING DEPTHS:

ALLOWABLE DEPTHS OF ASPHALT MATERIAL

IM-19.0A 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 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.





# 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-SP FOR SPECIFIC SITE PREPARATION REQUIREMENTS.

**V**DOT

SHEET 2 OF 2

201.08

ROAD AND BRIDGE STANDARDS

REVISION DATE

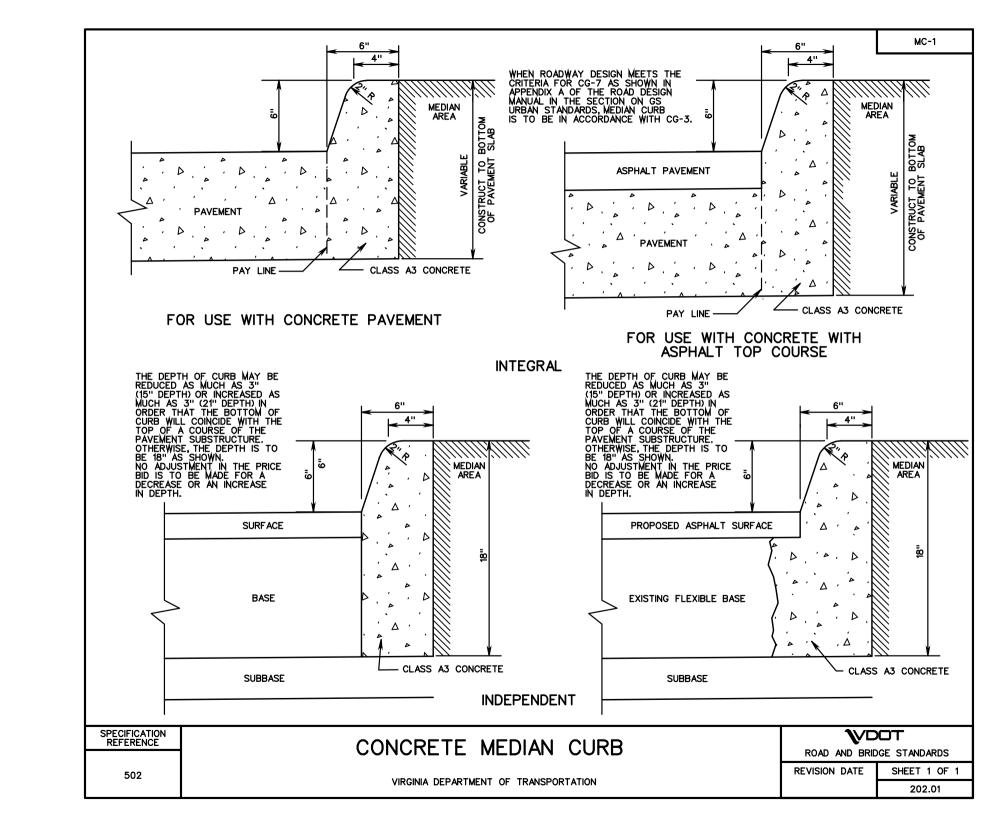
# ASPHALT CURB AND GUTTER

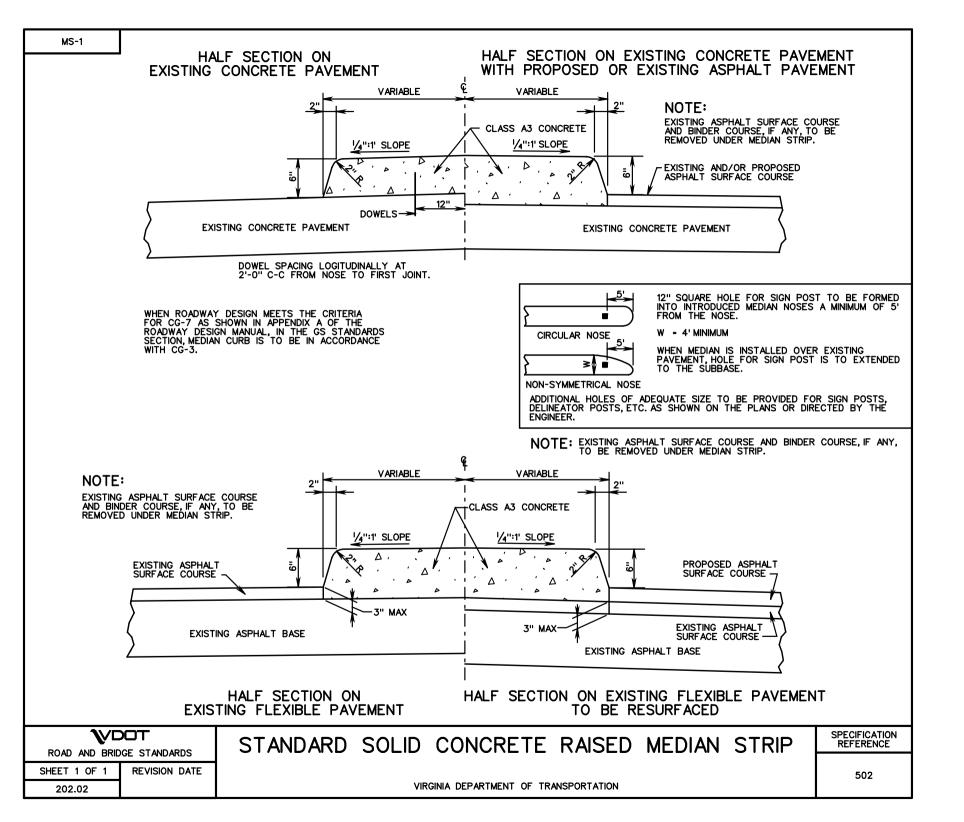
(ASPHALT PAVING UNDER GUARDRAIL)

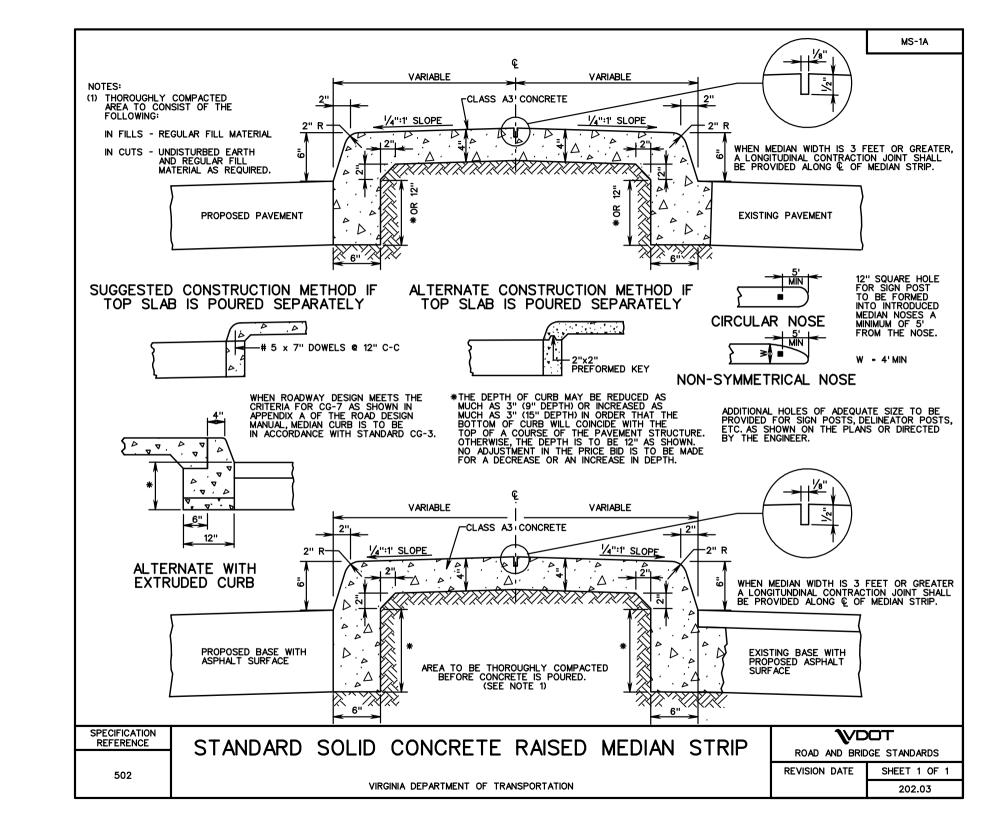
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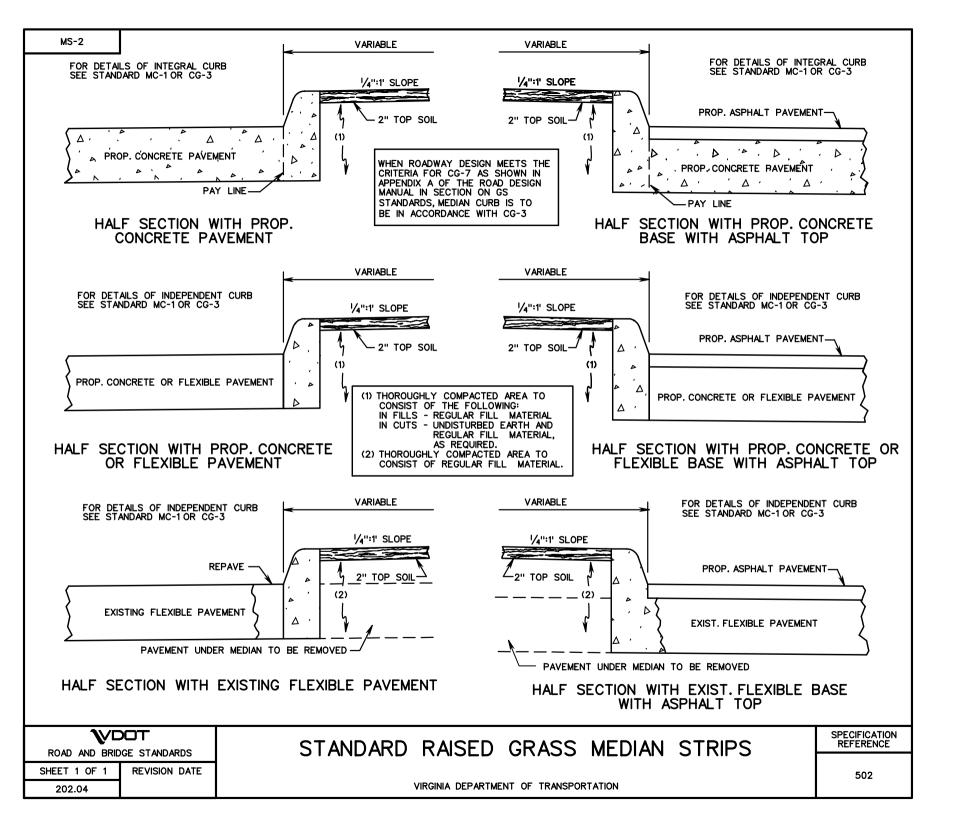
105 502

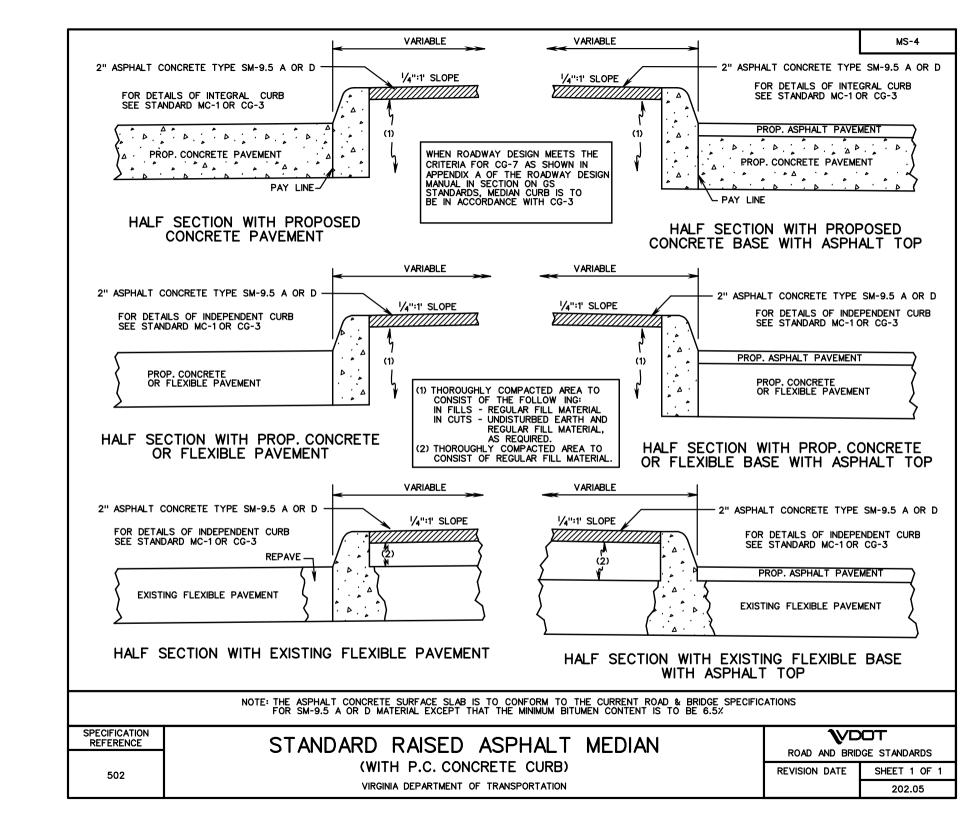
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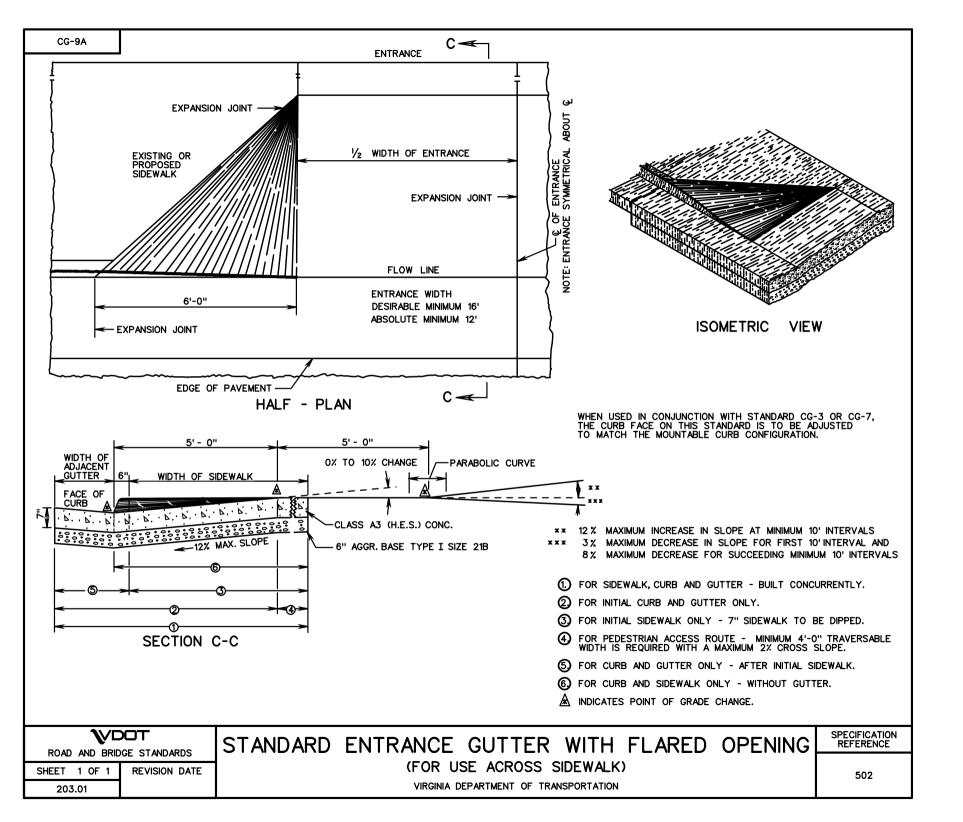


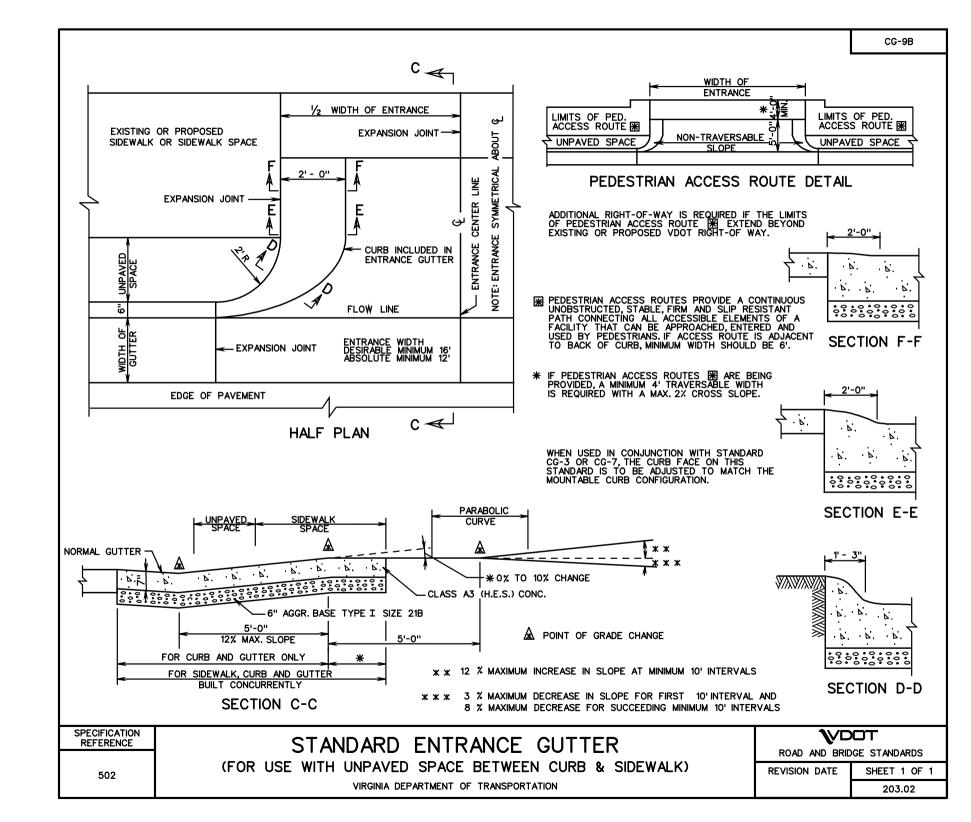


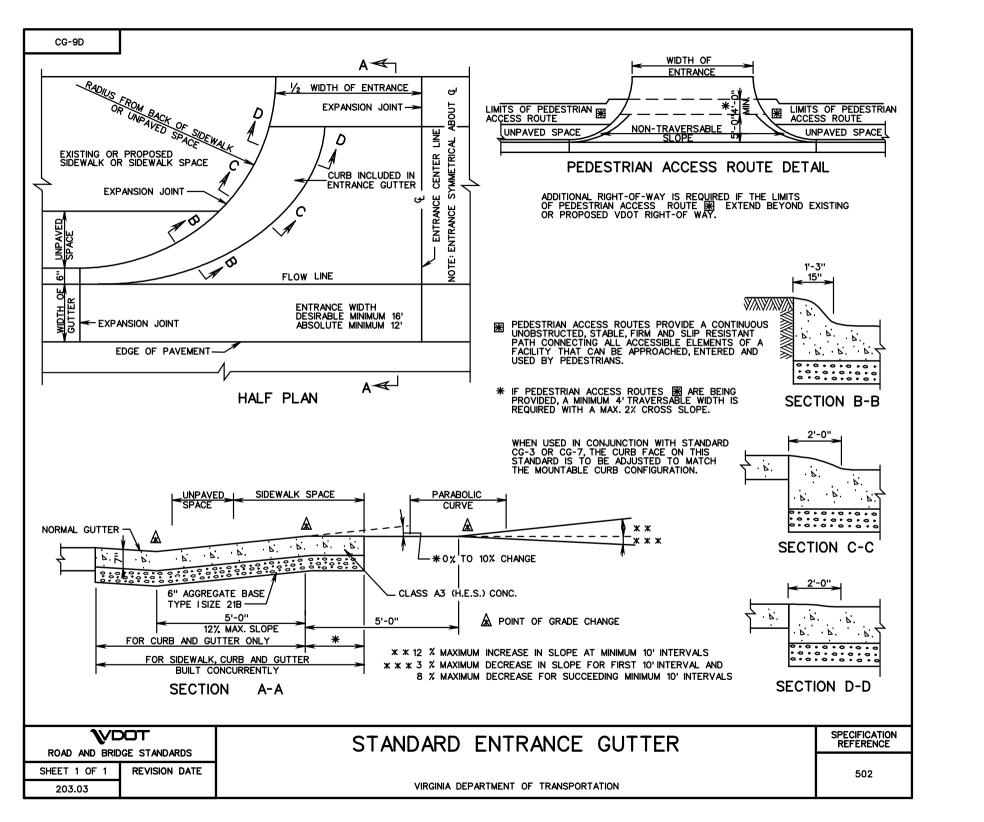


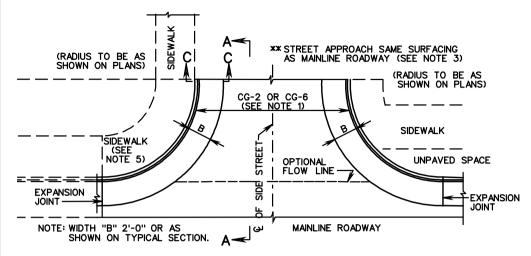




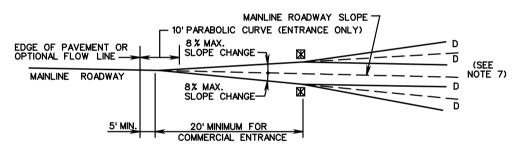






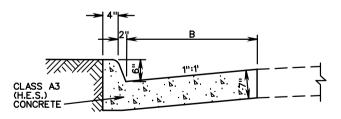


### PLAN VIEW



CONSTRUCT GRADE CHANGES WITH A PARABOLIC CURVE.

# SECTION A - A



SECTION C-C

### **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)
- 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 FLOWLINE MAY REQUIRE WARPING OF A PORTION OF GUTTER TO PROVIDE POSITIVE DRAINAGE ACROSS THE INTERSECTION.

### ALLOWABLE ENTRANCE GRADE CHANGES

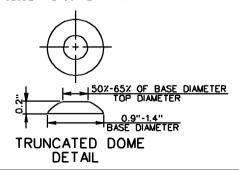
ENTRANCE VOLUME		GRADE CHANGE	
		DESIRABLE	MAXIMUM
HIGH	MORE THAN 1500 VPD	0%	3 %
MEDIUM	500-1500 VPD	≤3%	6 %
LOW	LESS THAN 500 VPD	≤6%	8 %

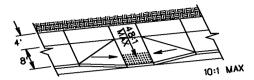
NOTE: ALLOWABLE ENTRANCE GRADE TABLE IS NOT APPLICABLE TO STREET CONNECTIONS

	ECIFICATION EFERENCE	METHOD OF TREATMENT	VD	
	502	(CONNECTION FOR STREET INTERSECTIONS AND COMMERCIAL ENTRANCES)	ROAD AND BRID REVISION DATE	SHEET 1 OF 1
VIRGINIA DEPARTMENT OF TRANSPORTATION			203.04	

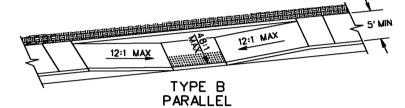
# **GENERAL NOTES:**

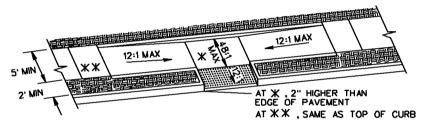
- 1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
- 2. DETECTABLE WARNING TO BE CLASS A-3 CONCRETE (CLASS A-4 IF PRECAST) WITH SLIP RESISTANT INTEGRAL SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2 FOOT IN LENGTH IN THE DIRECTION OF PEDESTRIAN TRAVEL. OTHER TYPES OF MATERIAL WITH THE TRUNCATED DOMES DETECTABLE WARNING MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
- SLOPING SIDES OF CURB RAMP MAY 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 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".
- 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.
- 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 PAN.



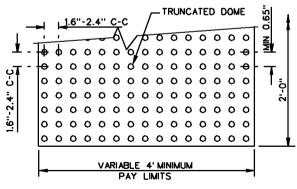


TYPE A
PERPENDICULAR





TYPE C
PARALLEL & PERPENDICULAR



DETECTABLE WARNING DETAIL

**\**VDOT

ROAD AND BRIDGE STANDARDS

SHEET 1 OF 5

203.05

REVISION DATE

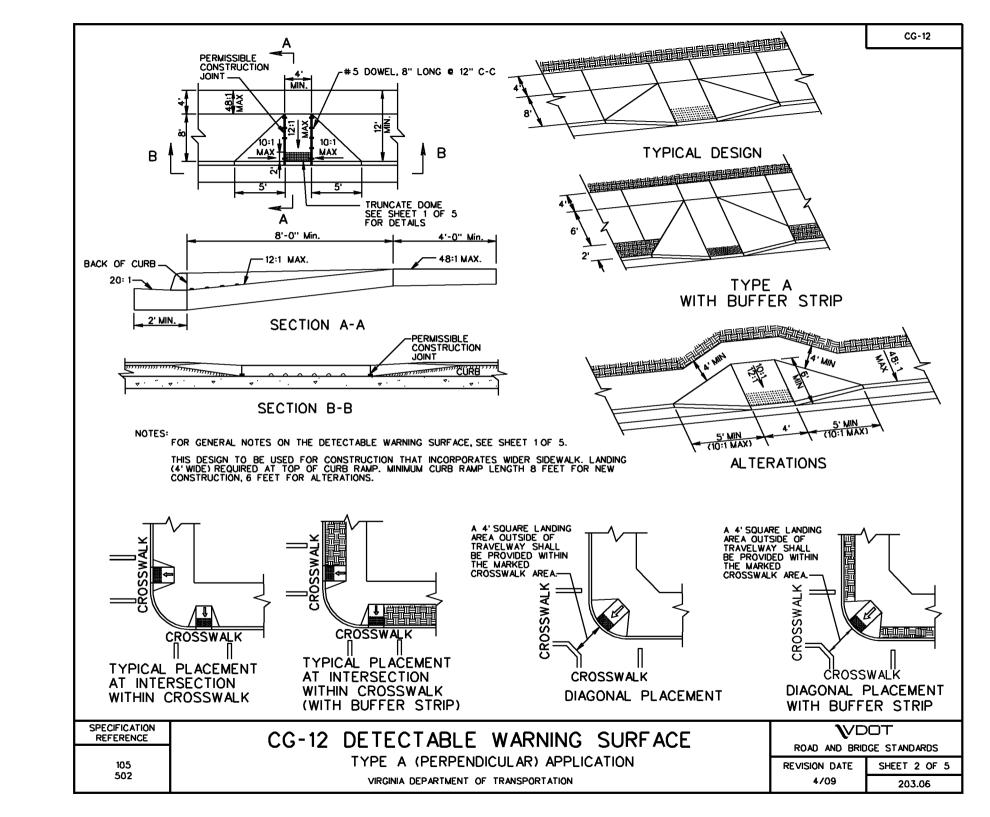
CG-12 DETECTABLE WARNING SURFACE

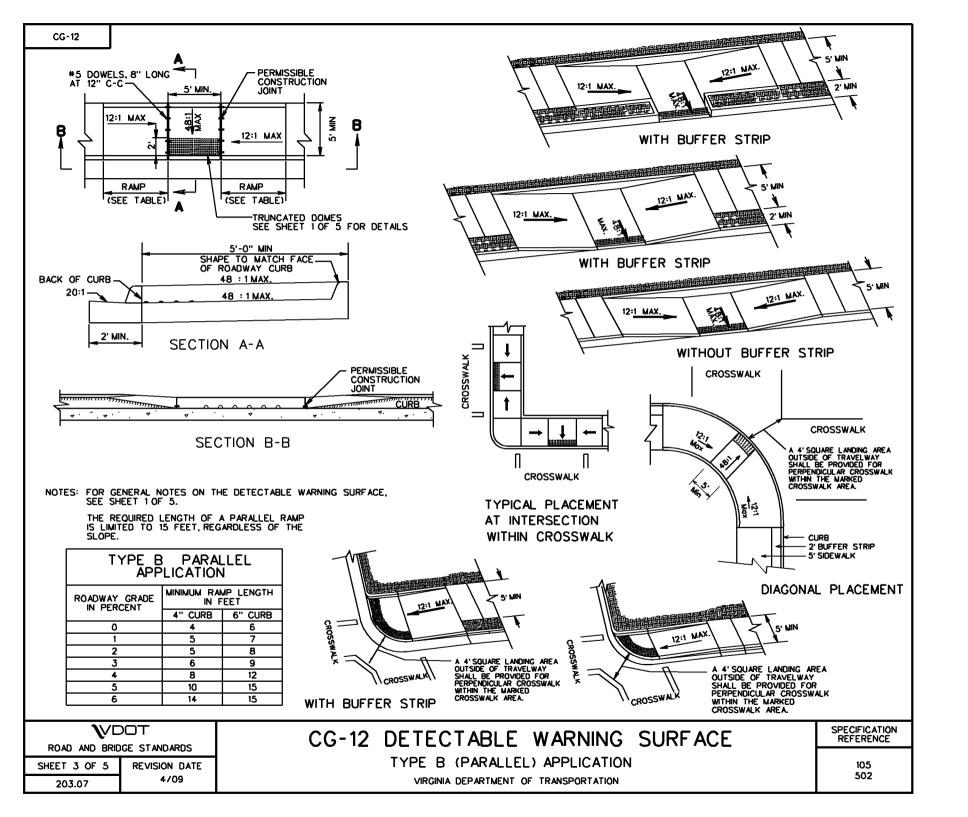
(GENERAL NOTES)

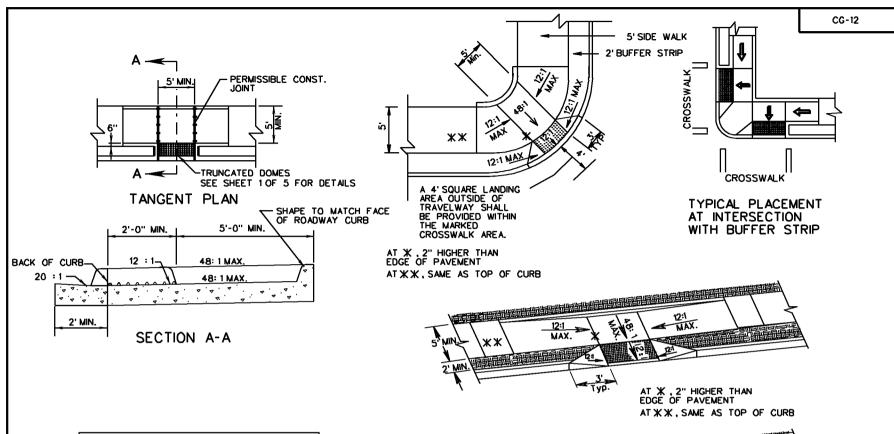
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

105 502

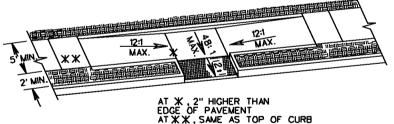






TYPE C PARALLEL & PERPENDICULAR APPLICATION				
ROADWAY GRADE MINIMUM RAMP LENGTH IN PERCENT				
III I CINOCINI	4" CURB	6" CURB		
0	2	4		
1	2	5		
2 3 5		5		
3	3	6		
4	4	8		
5	5	10		
6	7	14		
7	13	15		
8	15	15		

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 5'X 5'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.

	SPECIFICATION REFERENCE 105 502	CG-12 DETECTABLE WARNING SURFACE TYPE C (PARALLEL & PERPENDICULAR) APPLICATION	VDOT ROAD AND BRIDGE STANDARDS	
			REVISION DATE	SHEET 4 OF 5
		VIRGINIA DEPARTMENT OF TRANSPORTATION	4/09	203.08

