

**8' COMBINATION CURB & GUTTER**

**6' COMBINATION CURB & GUTTER**

**MODIFIED COMBINATION CURB & GUTTER**

NOTES:  
 1. JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER - 10'  
 2. JOINT SPACING FOR LOCATION AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USER  
 3. 5" AND NUMBER COMBINATION CURB AND GUTTER TO BE USED ONLY ON LOCAL ROADS OR MINOR COLLECTOR ROADS.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	COMBINATION CURB & GUTTER		R
APPROVED: <i>[Signature]</i>			2.22

**STANDARD BITUMINOUS CURB**

**STANDARD BARRIER CURB**

NOTES:  
 1. JOINT SPACING FOR STANDARD CURB - 10'  
 2. SEE SPECIFICATIONS FOR LOCATION AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	STANDARD CURBS		R
APPROVED: <i>[Signature]</i>			2.23

**DETAIL A**

NOTES:  
 1. SIDEWALK TO BE SLOPED IN 5' MAXIMUM SQUARES.  
 2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.  
 3. 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.  
 4. CONCRETE TO BE MIX NO. 2.  
 5. WHEN SIDEWALK ADJUTS CURB WALL SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL. BETWEEN SIDEWALK AND CURB AND RESTING ON A COMPACTED CRUSHED STONE BASE. SEE DETAIL "A" THIS SHEET.  
 6. IN LONGITUDINAL SIDEWALK DRAINAGE OF 5% OR GREATER, A CONCRETE HEADER, 4" THICK AND 6" DEEP BELOW THE SURFACE OF SIDEWALK, SHALL BE USED. THE SPACING SHALL BE 10' TO 12' ON 10' TO 12' INTERVALS OF 48 FEET. THE HEADERS SHALL BE PLACED AT EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE SIDEWALK.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	CONCRETE SIDEWALK		R
APPROVED: <i>[Signature]</i>			2.28

**SECTION A-A**

**PLAN**

NOTES:  
 1. RIGHT-OF-WAY INDICATION TO BE SET 20' FROM P.I. ALONG EACH OF THE INTERSECTING LINES.  
 2. MINIMUM DISTANCE BETWEEN BACK OF SIDEWALK AND RIGHT-OF-WAY LINE SHALL BE ONE FOOT.  
 3. SURFACE FINISH OF CONCRETE RAMP & FLARE SHALL BE COURSE BROOMING OR OTHER NON-SKID TYPE SURFACE.  
 4. STANDARD COMBINATION CURB AND GUTTER IS SHOWN. DETAILS TO BE SIMILAR FOR MODIFIED CURB & GUTTER EXCEPT THAT FLOW LINE IS TO BE OMITTED.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	PEDESTRIAN RAMP		R
APPROVED: <i>[Signature]</i>			2.29

**SECTION A-A**

**FRONT VIEW**

NOTES:  
 A. 1) FOR DRIVEWAYS SERVING ONE LOT THE MINIMUM WIDTH SHALL BE 10' & A MAXIMUM OF 20'.  
 2) FOR DRIVEWAYS SERVING TWO OR MORE LOTS THE MINIMUM WIDTH SHALL BE 16' PER SECTION 3.4.4.2.a OF THE ROAD ORDINANCE.

NOTE B: IF PRIVATE DRIVEWAY IS CONCRETE PROVIDE 1/2" PREFORMED EXPANSION JOINT FILLER AT R/W LINE.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	RESIDENTIAL ENTRANCE CLOSED SECTION WITH MODIFIED COMBINATION CURB & GUTTER & SIDEWALK SET BACK FROM CURB		R
APPROVED: <i>[Signature]</i>			2.37

THE ONLY EXCEPTION IS A REGULATION U.S. MAIL BOX AND/OR NEWSPAPER BOX AS INDICATED BELOW.

TO AVOID THE COST AND ACCORDANCE OF REMOVING STRUCTURES PLACED WITHIN THE ROAD RIGHTS-OF-WAY, PLEASE CONTACT THE PUBLIC UTILITIES DEPARTMENT AT (301)932-3450 PRIOR TO CONSTRUCTION TO DETERMINE THE RIGHT-OF-WAY WIDTH.

ADHERENCE TO THESE RULES WILL GREATLY REDUCE LIABILITY AND WILL ASSIST IN ASSURING THE SAFETY OF PEDESTRIANS AND VEHICLES.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	PLACEMENT OF PRIVATELY OWNED STRUCTURES WITHIN COUNTY ROAD RIGHTS-OF-WAY		R
APPROVED: <i>[Signature]</i>			2.46

**STAGE I - TEMPORARY PATCH**

**STAGE II - PERMANENT PATCH**

GENERAL NOTES:  
 1. The open pavement cut must be sealed to create a tight, neat, vertical joint immediately prior to the resurfacing of the permanent patch. Clean thoroughly before patching.  
 2. The original pavement cut and utility trench must be backfilled, compacted, and restored with 3" compacted depth of temporary seal patch or hot mix asphalt (HMA) to the same depth and width as the original pavement cut. The seal patch shall be placed in the center of the roadway to allow for water runoff. The seal patch shall be approved by the Highway Engineer and installed in accordance with the County's standard patching procedures as detailed in the Standard Specifications and Supplemental Specifications for Permanent Curb & Gutter.  
 3. The permanent patch must be installed on Charles County standards and compacted with the 100 working side of the roller open end. Expansion to the line shall be by hand/roller utility compaction with a smooth finish, which shall be done on the same day as the patching operation. The patching operation shall be completed within the same day as the patching operation. The patching operation shall be completed within the same day as the patching operation. The patching operation shall be completed within the same day as the patching operation.  
 4. The use of all vertical joints between existing base and existing hot mix asphalt shall be a minimum 12" apart. A minimum joint shall be 12" apart. A minimum joint shall be 12" apart. A minimum joint shall be 12" apart.  
 5. All work and materials used shall be tested in accordance with the Charles County Standard Specifications for Construction Materials, including but not limited to concrete, concrete aggregates, aggregate, surface treatments, etc. All work must be certified by a Professional Geotechnical Engineer registered in the State of Maryland.  
 6. Additional testing and analysis shall be evaluated on a case by case basis depending upon the number, size, and location of the proposed utility openings. The testing shall be performed by a Professional Geotechnical Engineer registered in the State of Maryland.  
 7. If applicable for the type of construction or repair, the trench technique may be used as an alternative to the conventional pavement cut, in accordance with section 305.05 of the Charles County Standard Specifications for Construction Materials.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES IN FLEXIBLE PAVING		R
APPROVED: <i>[Signature]</i>			2.48

**MANHOLE**

NOTE: MANHOLE SHALL BE CONSTRUCTED OF REINFORCED CONCRETE (MIX NO. 2), REINFORCING TO BE NO. 4 SPACING 12" ON 12" INTERVALS. LOCATION OF REINFORCING SHALL BE AS SHOWN IN THIS SHEET. REINFORCING SHALL BE USED IN NON-TRAFFIC AREAS ONLY.

MANHOLE WALL THICKNESS:  
 4" TO DEPTH OF 12'-0"  
 12" TO DEPTH OF 12'-0" TO 12'-6"  
 12" TO DEPTH OF 12'-6" TO 12'-10"

MANHOLE BASE THICKNESS:  
 8" WALL-USE 12" BASE  
 12" WALL-USE 12" BASE

MANHOLE RING GRADE OR APPROVED OTHER PREVIOUSLY APPROVED SUBGRADE (TRENCH BACKFILL)

MANHOLE RING GRADE OR APPROVED OTHER PREVIOUSLY APPROVED SUBGRADE (TRENCH BACKFILL)

MANHOLE RING GRADE OR APPROVED OTHER PREVIOUSLY APPROVED SUBGRADE (TRENCH BACKFILL)

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES IN FLEXIBLE PAVING		R
APPROVED: <i>[Signature]</i>			2.48

**SECTION A-A**

**SECTION B-B**

**SECTION C-C**

NOTE: DRAINAGE DIPS SHALL BE PREFERABLE BUT IF NOT AVAILABLE, DRAINAGE DIPS SHALL BE USED. LOCATION OF DIPS SHALL BE AS SHOWN IN THIS SHEET. DIPS SHALL BE USED IN NON-TRAFFIC AREAS ONLY.

WALL THICKNESS:  
 4" TO DEPTH OF 12'-0"  
 12" TO DEPTH OF 12'-0" TO 12'-6"  
 12" TO DEPTH OF 12'-6" TO 12'-10"

BASE THICKNESS:  
 8" WALL-USE 12" BASE  
 12" WALL-USE 12" BASE

MANHOLE RING GRADE OR APPROVED OTHER PREVIOUSLY APPROVED SUBGRADE (TRENCH BACKFILL)

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CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES		R
APPROVED: <i>[Signature]</i>			2.25

**TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION**

KEY:  
 CHANNELIZING DEVICES  
 SIGN SUPPORT  
 FACE OF SIGN  
 WORK SITE  
 DIRECTION OF TRAFFIC  
 FLASHER

NOTES:  
 1. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE GENERAL NOTES AND DETAILS MD 104.02-01 AND MD 104.02-02.  
 2. SHOULDER CLOSED SIGNS ARE REQUIRED IN PLACES OF SHOULDER WORK SITES WHEN THE SHOULDER IS CLOSED BY A PHYSICAL BARRIER REFER TO STANDARD NO. MD 104.06-01.  
 3. WHEN WORK INVOLVES A PAVEMENT EDGE DROP OFF, REFER TO STANDARD NO. MD 104.06-01 TO MD 104.06-04.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	SHOULDER WORK/2-LANE, 2-WAY EQL/LESS THAN 40 MPH		R
APPROVED: <i>[Signature]</i>			2.25

**TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION**

KEY:  
 CHANNELIZING DEVICES  
 SIGN SUPPORT  
 FACE OF SIGN  
 WORK SITE  
 DIRECTION OF TRAFFIC  
 FLASHER

NOTES:  
 1. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE GENERAL NOTES AND DETAILS MD 104.02-01 AND MD 104.02-02.  
 2. FLAGGERS SHALL NEVER BE STATIONED MORE THAN 1000' APART FROM THE ADVANCE FLAGGER SIGN.  
 3. FLAGGERS SHALL NEVER BE STATIONED MORE THAN 1000' APART FROM THE ADVANCE FLAGGER SIGN.

CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	FLAGGING OPERATION/2-LANE, 2-WAY EQL/LESS THAN 40 MPH		R
APPROVED: <i>[Signature]</i>			2.25

**NOSE DOWN CURB**

NOTE: MANHOLE SHALL BE CONSTRUCTED OF REINFORCED CONCRETE (MIX NO. 2), REINFORCING TO BE NO. 4 SPACING 12" ON 12" INTERVALS. LOCATION OF REINFORCING SHALL BE AS SHOWN IN THIS SHEET. REINFORCING SHALL BE USED IN NON-TRAFFIC AREAS ONLY.

MANHOLE WALL THICKNESS:  
 4" TO DEPTH OF 12'-0"  
 12" TO DEPTH OF 12'-0" TO 12'-6"  
 12" TO DEPTH OF 12'-6" TO 12'-10"

MANHOLE BASE THICKNESS:  
 8" WALL-USE 12" BASE  
 12" WALL-USE 12" BASE

MANHOLE RING GRADE OR APPROVED OTHER PREVIOUSLY APPROVED SUBGRADE (TRENCH BACKFILL)

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CHARLES COUNTY GOVERNMENT	STANDARD DETAIL	REVISIONS:	
DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT	NOSE DOWN CURB		R
APPROVED: <i>[Signature]</i>			2.25

**PROFESSIONAL CERTIFICATION:**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 36310, EXPIRATION DATE: 11/17/2012.

**CHARLES COUNTY GOVERNMENT**  
 DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT  
 DEVELOPMENT SERVICES DEPARTMENT

ACTIVITY	STATUS	DATE	REMARKS OR CONDITIONS
GRADING	CONSTRUCTION	AS-BUILT	
ROADS	CONSTRUCTION	AS-BUILT	
STORM DRAINAGE	CONSTRUCTION	AS-BUILT	
STORMWATER MANAGEMENT	CONSTRUCTION	AS-BUILT	
WATER	CONSTRUCTION	AS-BUILT	
SEWER	CONSTRUCTION	AS-BUILT	
OTHER	CONSTRUCTION	AS-BUILT	
SIGNED:			THIS PERMIT EXPIRES ON:
DATE:			DATE:

**PROJECT DATA**

DRAWN BY: **EZ**  
 CHECK BY: **RP**  
 CHARLES COUNTY  
 BRYANS ROAD, MARYLAND  
 FE. NO.: 00-00-00  
 T.M. NO.: 00-00-00-00  
 DATE: 05/20/10  
 SCALE: 1" = 10'

09-047  
 PROJ. NO.  
 CD 012210.dwg  
 File Name:  
 14  
 SHEET NO.

**STONE CHECK DAM DETAIL**

**CHANNEL PROFILE**

**CROSS SECTION**

**STANDARD STONE CHECK DAM DESIGN**

SLOPE	SPACING
2% OR LESS	80'-0"
2.1% - 4%	40'-0"
4.1% - 7%	25'-0"
7.1% - 10%	15'-0"

CONSTRUCTION SPECIFICATIONS:  
 1. PREPARE SWALES AND DITCHES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.  
 2. CONSTRUCT THE CHECK DAM OF 4 TO 7 INCH STONE WITH MINIMUM SIDE SLOPES OF 2:1 AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND IS KEPT INTO THE CHANNEL BANKS.  
 3. EXTEND GEOTEXTILE 12 INCHES BEYOND DOWNSTREAM FACE OF CHECK DAM. PROVIDE A 20 INCH LONG BY 8 INCH DEEP APRON OF 4 TO 7 INCH STONE EMBEDDED UNDER AND ALONG THE DOWNSTREAM SIDE OF THE DAM.

NOTE:  
 This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto applicable.

**Table B.3.3 Open Channel Systems and Filter Strip Materials Specifications**

Material	Specification	Size	Notes
dry swale soil	USCS: ML, SM, SC	n/a	soil with a higher percent organic content is preferred
dry swale sand	ASTM C-33 fine aggregate concrete sand	0.02" to 0.04"	
check dam (pressure treated)	AWPA Standard C6	6" by 6" or 8" by 8"	do not coat with creosote; embed at least 3" into side slopes
check dam (natural wood)	Black Locust, Red Mulberry, Cedars, Catalpa, White Oak, Chestnut Oak, Black Walnut	6" to 12" diameter; notch as necessary	do not use the following, as these species have a predisposition towards rot: Ash, Beech, Birch, Elm, Hackberry, hemlock, Hickories, Maples, Red and Black Oak, Pines, Poplar, Spruce, Sweetgum, Willow
filter strip sand/gravel pervious berm	sand: per dry swale sand gravel: AASHTO M-43	sand: 0.02" to 0.04" gravel: 1/2" to 1"	mix with approximately 25% loam soil to support grass cover crop; sand (35-60%), silt (30-55%), and gravel (10-25%) see Biorotation planting soil notes for more detail.
pca gravel diaphragm and curtain drain	ASTM D 448	varies (No. 6) or (1/8" to 3/8")	use clean bank-run gravel
underdrain gravel	AASHTO M-43	0.25" to 0.75"	
underdrain	F 758 Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4622), puncture resistance (ASTM-D-4833)	n/a	
rip rap	per county criteria; if none given, use MSHA Standards and Specs Section 905	size per county DOT requirements based on 10-year design flows	

**DETAILS**

REV. NO.	CONSTRUCTION REVISION	DATE

**VISTA DESIGN, INC.**  
 Landscape Architects, Land Planning Consultants, Engineers & Surveyors  
 11634 Worcester Hwy, Shovell, MD 21862  
 ph 410-352-3874 fax 410-352-3875 email vista@vistadesigninc.com