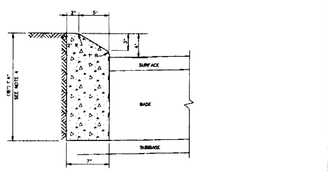
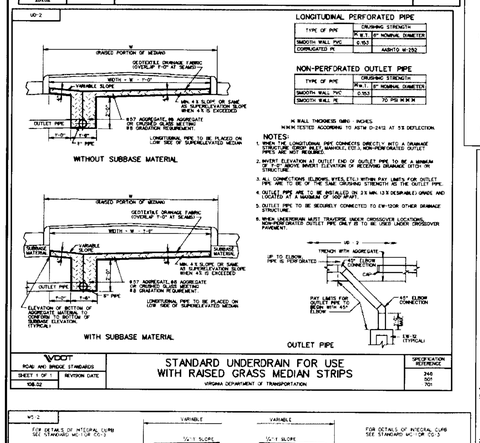
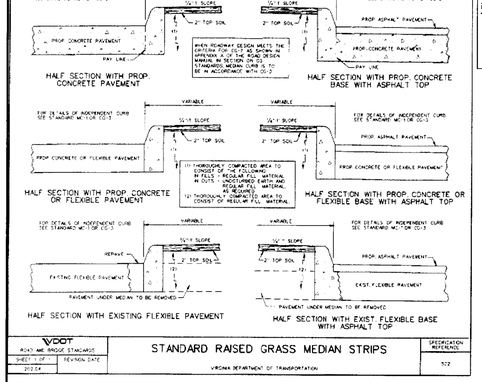
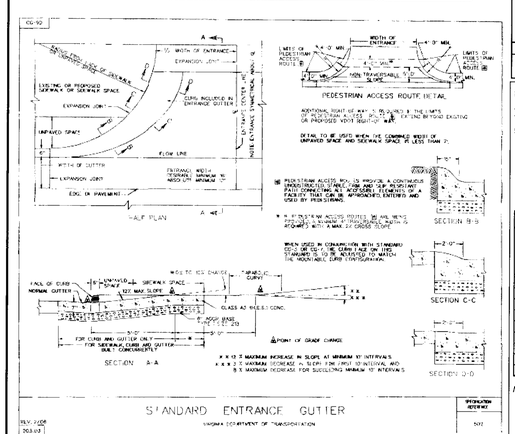






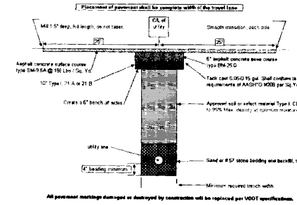


Commonwealth of Virginia
Department of Transportation
8/2009

LUP-OC
LAND USE PERMIT
Special Provisions for Open Cuts

1. All patches are to be replaced in accordance with the following requirements and as shown in Figure 1.
2. All Excavations or Open Cuts shall comply with OSHA Technical Manual, Chapter 2, Title Excavation: Hazard Recognition in Trenching and Shoring.
3. The permit proprietor will be required to replace the surface and base of the roads included under this permit in accordance with VDOT Road and Bridge Specifications, VDOT Road and Bridge Standards, and this Special Provision.
4. Backfill material shall include a minimum of four (4") inches bedding materials, sand or stone. The balance of the backfill shall be approved soil compacted to the bottom of subbase layer (Type I, Size 21 A or 21 B). The entire backfill shall be free from wood, decaying material, asphalt, concrete, ice, frost, large clods, stone and debris.
5. Backfill material shall be compacted to a minimum of 95% of the theoretical maximum density at optimum moisture content, as determine by the Virginia Department of Transportation testing procedures (VTM1), use mechanical tamping throughout the depth of the trench in six (6") layers to ensure that adequate support is provided for the subbase layer (Type I, Size 21 A or 21 B).
6. It shall be the decision of the Resident Engineer to request and review the backfill compaction test results and/or authorize an inspector to monitor the compaction.
7. Cuts in roads with Surface Course (SM) and Asphalt Concrete Base (BM) shall be replaced with ten (10") inches of Type I, Size 21 A or 21 B aggregate compacted to 100 percent of the theoretical maximum density at optimum moisture content covering the entire trench width in addition to a bench of six (6") inches minimum on each side. The asphalt base (BM-25.0) designed at 3% laboratory air void) having a thickness of 6 inches minimum or match the existing base thickness, shall be placed over the sub-base and match the elevation of the existing pavement surface. A surface asphalt concrete course (SM-9.5) of a minimum of 1.5" inches shall be placed on top of the base) covering the trench width and extending 25 feet on each side.
8. Cuts in surface treated roads with aggregate base course shall be replaced with the same layers as roads with asphalt base (BM) except the sub-base layer (Type I, Size 21 A or 21 B) is reduced to six (6") inches and the (BM) layer to four (4") inches but still keeping a six inch bench. The surface course shall be a surface treatment matching the existing surface.
9. The cut to be back filled shall be made as dry as practicable at the time of back filling by pumping, bailing, draining, or other approved dewatering.
10. All sides cuts shall be trimmed to neat straight lines and a tack coat shall be applied at a rate of 0.1 gallon per square yard of RC-250 before placing the plant mix.
11. Replacement of pavement shall be from edge of pavement to edge of pavement except when individual cuts are made and not covering the entire width of the pavement.
12. Replacement of all Asphalt Concrete and surface treated courses shall be rolled where possible with a unit having a manufacturer's rating of ten (10) tons, and rolled until the aggregate is keyed into the bitumen. Where rolling is not possible, a mechanical tamp will be used. In all cuts stone is to be placed in the trench daily up to maximum length of 500 feet, at which time the pavement shall be covered with a temporary or permanent asphalt patch. If the application of the bituminous layer is delayed for adverse weather conditions, the contractor shall provide and maintain a base course that is acceptable to the VDOT until such time as the appropriate pavement patch can be applied and completed. If the installation of the gas, sewer, and water lines, contractor shall restore pavement in the manner prescribed on the VDOT permit within (10) days.
13. Contractor will be responsible for any depression greater than ¼" that occurs within three years of completion of patching. Correction shall consist of milling and replacing 1.5" of surface course mix (SM).

Pavement Patching Detail



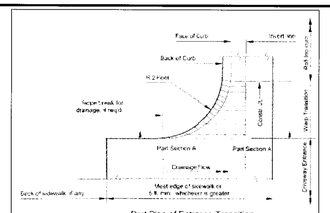


FIGURE 7 - ROLL TOP CURB ENTRANCE DETAIL

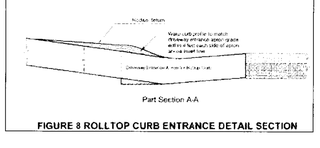
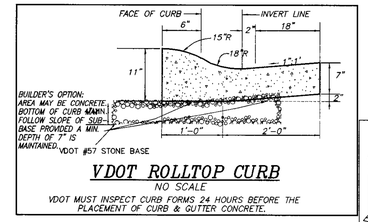
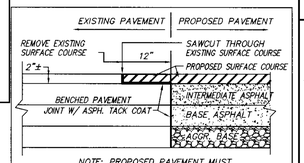


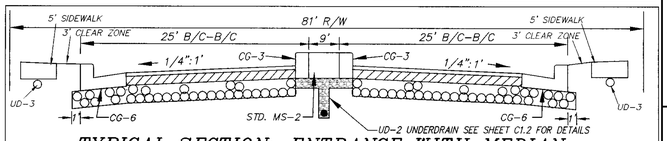
FIGURE 8 ROLLTOP CURB ENTRANCE DETAIL SECTION



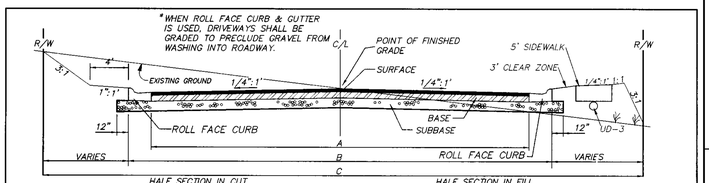
VDOT ROLLTOP CURB
NO SCALE
VDOT MUST INSPECT CURB FORMS 24 HOURS BEFORE THE PLACEMENT OF CURB & GUTTER CONCRETE.



PAVEMENT JOINT DETAIL

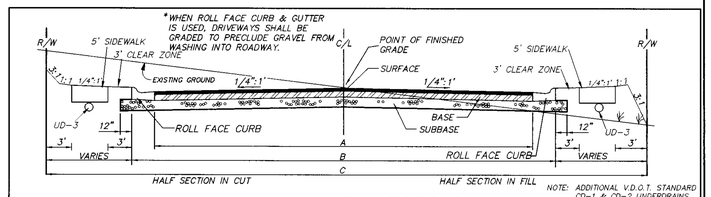


TYPICAL SECTION: ENTRANCE WITH MEDIAN
CHAPPELL CREEK CIRCLE
STA. 0+00 TO STA. 2+00
NO SCALE



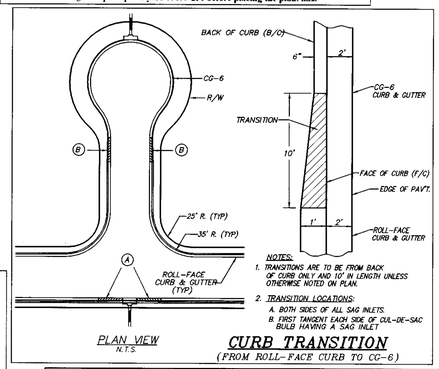
NOTE: ADDITIONAL V.D.O.T. STANDARD CD-1 & CD-2 UNDERDRAINS SHALL BE INSTALLED AS REQUIRED BY VDOT.

TYPICAL SECTION
NO SCALE



NOTE: ADDITIONAL V.D.O.T. STANDARD CD-1 & CD-2 UNDERDRAINS SHALL BE INSTALLED AS REQUIRED BY VDOT.

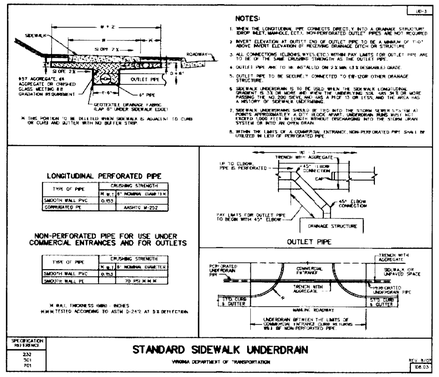
TYPICAL SECTION
NO SCALE
CHAPPELL POND CROSSING STA 4+25 TO STA 7+00

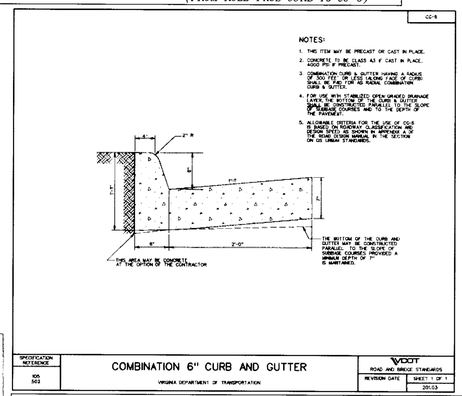


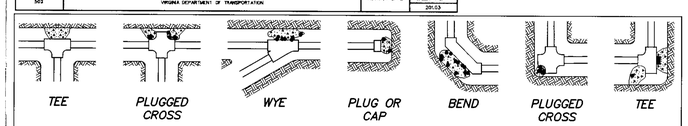
NOTES:
1. TRANSITIONS ARE TO BE FROM BACK OF CURB ONLY AND 10' IN LENGTH UNLESS OTHERWISE NOTED ON PLAN.
2. TRANSITION LOCATIONS:
A. BOTH SIDES OF ALL SAG INLETS.
B. FIRST TANGENT EACH SIDE OF CUL-DE-SAC BULB HAVING A SAG INLET.

PLAN VIEW
N.T.S.

CURB TRANSITION
(FROM ROLL-FACE CURB TO CG-6)







BEARING AREA OF THRUST BLOCKS IN SQ. FT.

FITTING SIZE	TEE, WYE PLUG OR CAP	90° BEND PLUGGED CROSS	TEE PLUGGED ON RUN A_1	TEE PLUGGED ON RUN A_2	45° BEND	22-1/2° BEND	11-1/4° BEND
6	2.1	3.0	4.3	3.0	2.0	2.0	–
8	3.8	5.3	7.6	5.4	2.9	2.0	2.0
10	5.9	8.4	11.8	8.4	4.6	2.4	2.0
12	8.5	12.0	17.0	12.0	6.6	3.4	2.0
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0
18	19.0	27.0	38.0	27.0	14.6	7.6	3.8
20	23.5	33.3	47.0	33.3	18.1	9.4	4.7
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8

NOTE: ABOVE BEARING AREAS BASED ON TEST PRESSURES OF 200 PSI AND ON ALLOWABLE SOIL BEARING STRESS OF 3500 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION:
BEARING AREA = (TEST PRESSURE / 200) x (3500 / SOIL BEARING STRESS) x (TABLE VALUE)

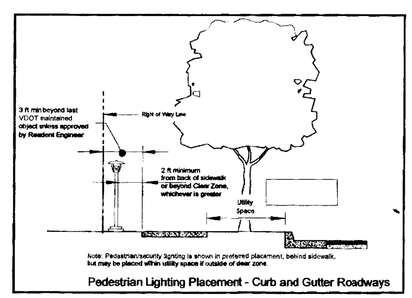
NOTES

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.

SIZE OF FITTING	MIN. C.Y. CONC. FOR BLOCKING
3"–6"	3/4
10"–12"	1–1/2
16"–24"	2

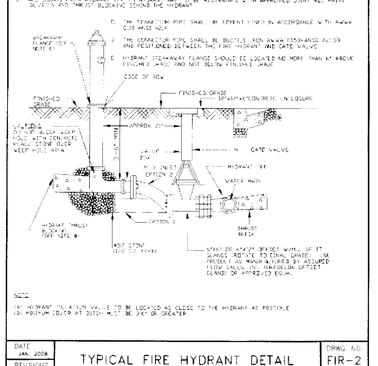
CONCRETE SHALL BE A-3 CONCRETE MEETING REQUIREMENTS OF ASTM C94

STANDARD THRUST BLOCKING DETAILS



Pedestrian Lighting Placement - Curb and Gutter Roadways

PRINCE GEORGE COUNTY
DEPARTMENT OF PUBLIC UTILITIES



ROAD CLASSIFICATION SCHEDULE

ROAD NAMES (*3) STA. TO STA.	VPD	PAVEMENT DESIGN (*1, *2) SUBBASE	BASE	SURFACE	"A" PVM'T WIDTH E/P–E/P	"B" B/C–B/C	"C" R/W WIDTH
CHAPPELL CREEK CIRCLE 0+00 TO 2+50	1000	8.5" 21–B	3.0" BM–25.0	1.5" SM–9.5A	SEE ABOVE	SEE ABOVE	81
CHAPPELL CREEK CIRCLE 2+50 TO 5+75	610	6" 21–B	3.0" BM–25.0	1.5" SM–9.5A	31	37	54.5
CHAPPELL CREEK CIRCLE 5+75 16+75	210	–	6" 21–B	2" SM–9.5A	23	29	50.5
CHAPPELL CREEK CIRCLE 16+75 TO 27+50	340	–	6" 21–B	2" SM–9.5A	23	29	50.5
CHAPPELL CREEK CIRCLE 27+50 TO 30+12	370	–	6" 21–B	2" SM–9.5A	23	29	50.5
CHAPPELL POND CROSSING 0+00 TO 3+50	70	–	6" 21–B	2" SM–9.5A	23	29	50.5
CHAPPELL POND CROSSING 3+50 TO 6+80	230	–	6" 21–B	2" SM–9.5A	23	29	51
CHAPPELL POND CROSSING 8+13 TO 17+00	160	–	6" 21–B	2" SM–9.5A	23	29	50.5
HERON CREEK DRIVE 0+00 TO 6+00	130	–	6" 21–B	2" SM–9.5A	23	29	50.5
RIVER BLUFF LANE 0+00 TO 1+50	50	–	6" 21–B	2" SM–9.5A	23	29	50
EAGLE CROSSING ROAD 0+00 TO 3+00	90	–	6" 21–B	2" SM–9.5A	23	29	50.5
RIVER VISTA ROAD 0+00 TO 3+50	20	–	6" 21–B	2" SM–9.5A	23	29	50.5
RIVER VISTA ROAD 3+50 TO 8+50	100	–	6" 21–B	2" SM–9.5A	23	29	50.5

*1 PAVEMENT SECTIONS ARE BASED ON A MINIMUM DESIGN CBR VALUE OF 8. PAVEMENT DESIGN MAY BE REVISED DUE TO ACTUAL SUBGRADE CONDITIONS.
*2 A PRIME COAT SHALL BE APPLIED BETWEEN THE AGGREGATE BASE AND ASPHALT COURSES IN ACCORDANCE WITH V.D.O.T. STANDARDS.

COMMONWEALTH OF VIRGINIA
DERRICK A. JOHNSON
Lic. No. 24761
5-5-10
PROFESSIONAL ENGINEER

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05-05-10	COUNTY COMMENTS

DATE	REVISION DESCRIPTION
02-16-06	COUNTY COMMENTS
02-01-08	COUNTY COMMENTS
09-30-09	COUNTY COMMENTS
11-23-09	COUNTY COMMENTS

DATE 12/12/05
DRAWN BY K. HALPAUS
DESIGNED BY K. HALPAUS
CHECKED BY D. JOHNSON
SCALE NONE

TIMMONS GROUP

CHAPPELL CREEK ON THE JAMES
BLAND DISTRICT * PRINCE GEORGE COUNTY, VIRGINIA
GENERAL DETAILS

JOB NO. 22595
SHEET NO. C1.2

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