

GENERAL NOTES

- 1. All construction and materials shall be in accordance with the current Virginia Department of Transportation Road and Bridge Specifications, Virginia Department of Transportation Road and Bridge Standards, and Henrico County Specifications and Standards where applicable.
2. Incidental Concrete must be Class A3 in accordance with VDOT specifications.
3. A permit must be secured from the Henrico County Department of Public Works before any work is performed within an existing county right-of-way or easement.
4. The Department of Public Works must be notified at least 24 hours prior to beginning any construction work.
5. The contractor shall notify the Henrico County Department of Public Utilities Prior to doing any utility work.
6. The location of existing utilities, as shown, is approximate. The contractor shall verify the location of existing utilities prior to any construction work.
7. A permit must be obtained from the Virginia Department of Transportation for any work performed within the State right-of-way.
8. The contractor shall notify "Miss Utility" at 1-800-552-7001 prior to any construction work in this area.
9. When it appears that the proposed work may have some impact to adjacent private or commercial properties, the applicant must inform the property owners of the proposed work and keep them apprised of time schedules, delays, impacts, changes in pedestrian and vehicle access or traffic patterns, and final restoration plans.
10. When a temporary cul-de-sac is no longer required due to a road extension, the developer of the road being extended is responsible for removing the temporary cul-de-sac and extending the road and property components (curb and gutter, gravel driveways, paved driveways, sidewalks, mailboxes, etc.) to the new road section, and re-grading areas to finished contours acceptable to the adjacent property owners and to Henrico County.
11. No driveway access points shall be allowed within the radius of a public road intersection.
12. When driveways are located within roll face curb and gutter, transitions to a drop inlet, curb cuts, and aprons are required.
13. Prior to the issuance of any building permits, all signs and barricades for dead end stub roads must be in place.

CURB AND GUTTER

- 1. All curb and gutter and storm sewer/inlets located within the existing county right-of-way shall be staked by the County upon written request being made to the County engineer by calling 501-4619.
2. All curb and gutter shall be Henrico County standard curb and gutter, except as noted.
3. This plan approval does not establish the curb and gutter elevations along the public right-of-way. The elevations will be set by Henrico County.
4. All curb and gutter in the County right-of-way must be wet curb and gutter. The use of dry curb and gutter is prohibited in the County right-of-way.
5. The transition from standard six (6) inch curb to roll faced curb shall be at intersections at the point of curvature (PC) of curb returns.
6. Where sidewalks are present or proposed, all driveways must be concrete from the back of the curb to at least the rear of the sidewalk.
7. Class 57 stone must be placed under all curb and gutter and must extend one foot beyond the back of the curb.
8. CG-12's must be installed at curb returns where there is existing or proposed sidewalks. In locations where there is no sidewalk being proposed, the curb must be depressed for the future location of a CG-12, if noted.

CONDITIONS FOR GUARDRAIL

Guardrail is typically required on sections of roadway when any of the following conditions exist within the clear zone:

- 1. A roadside parallel embankment (fill slope) of 3:1 or steeper and a depth of four feet or more.
2. A water hazard with a depth of two feet or more.
3. A ditch section with a depth of three feet or more. (As measured from the near edge of pavement).
4. A fixed object, (such as a culvert, pipe, headwall, retaining wall, bridge pier, or abutment).
5. Other hazards, as determined by the Traffic Engineer.
6. Additional right-of-way or permanent easements may be required to accommodate the guardrail in its entirety.

All guardrails must be approved by the Department of Public Works and shown on the plans, including any necessary details, type, and lengths of rail.

WHERE CONFLICTS EXIST, THE NOTES AND DETAILS ON THIS SHEET SUPERCEDE THE CURRENT VERSION OF THE HENRICO COUNTY DESIGN MANUAL.

REFER TO THE PLANS FOR SPECIFIC INFORMATION THAT MAY BE REFERENCED BY THESE NOTES. IN MANY CASES THE PLANS WILL EXPAND UPON MINIMUM STANDARDS AND/OR DETAILS SHOWN ON THIS SHEET.

PAVEMENT

- 1. The pavement section is subject to change based on soil conditions at the time of construction, as determined by the Construction Engineer for Henrico County.
2. Any necessary pavement widening between the existing pavement and the proposed improvements is the responsibility of the developer.
3. All medians for turn lanes must be VDOT Std. MS-1. For turn lanes being constructed on existing roads, the old median must be removed entirely and the solid raised median poured on the asphalt base course in accordance with the standards for MS-1 Median. Standard MS-1A or variations of the same will not be permitted.
4. Pavement sections for through lanes and turn lanes must be the same as the existing pavement section. These turn lanes must have underdrains.
5. No pavement open cuts are allowed on existing County maintained roads unless specifically approved by the Construction Engineer for Henrico County.
6. If utility connections are located outside of the pavement and right-of-way, no pavement disturbance is required, and all utility crossings must be bored.
7. Soil tests and CBR information, with an appropriate pavement design, must be performed and made available to the Construction Engineer prior to subgrade approval.

DRAINAGE

- 1. All storm sewers within the county right-of-way and easements must be ASTM C-76, Class III or better, reinforced concrete pipe with sealed joints in accordance with VDOT specifications.
2. Precast drop inlets are not permitted at locations where the grade of the adjacent curb and gutter is less than 1.5%. Precast drop inlets with flat inverts are not permitted in sag locations when the total length of the required throat opening exceeds six (6) feet.
3. All storm sewers within a County easement or right-of-way must have a minimum of four (4) inches of aggregate bedding material and must be backfilled in accordance with the detail on this sheet.
4. All drop inlets must have type B noses.
5. Drop inlets on grade must be poured with the throat on the same grade as the adjoining curb and gutter.
6. #4x8" dowels must be placed at approximately 12" c-c in all areas adjacent to abutting concrete to prevent settlement.
7. When using non-concrete pipe for private areas, the connection to the structure in the County easement or right-of-way must be concrete. Non-concrete pipe must terminate in a concrete structure and continue concrete to the point where it ties into the County easement or right-of-way. All manholes and inlets must be concrete.
8. UD-4 underdrains are required along the entire length of all proposed roads and/or road widening within the public right-of-way unless waived by the director of public works.
9. Irrigation is not permitted in the shoulder area within the County right-of-way unless specifically approved by the County engineer.
10. CD-1 underdrains are required on all vertical sags.
11. UD-2 underdrains are required in all raised grass medians and islands with the public right-of-way.
12. The outlet end of all underdrains must terminate in drainage structures or daylight out of fill slopes with a standard EW-12 endwall placed at the outlet end of the underdrain.

GRADING

- 1. The subgrade area shall be scarified to a depth of eight inches for a minimum of two feet beyond the proposed edges of the pavement on both sides (or from the curb and gutter) and compacted to a density of not less than 95 percent.
2. When materials which are unsuitable for foundation, subgrade, or other roadway purposes occur within the roadway limits, such materials must be excavated below the grade shown on the plans as directed by the geotechnical engineer, or as approved by the Henrico County Construction Engineer and the areas must be backfilled with suitable material.
3. All solid rock or boulders found in the roadway shall be excavated to the full roadway width to a depth of on foot below subgrade, and then backfilled to the proper grade with suitable materials.
4. A six (6) feet wide pedestrian shelf is required behind all curb and gutter in the County right-of-way. The shelf must be cleared/constructed at the time of road construction; including the relocation of all power poles and other above ground obstacles.
5. All graded islands must be graded to 1/4" - 1' rise to minimize sight distance problems.
6. All areas to be filled within the buildable area (ponds, sediment basins, sediment traps, wetlands, etc.) must be backfilled with structural fill and compacted to 95% compaction.
7. All grading shown on lots must be done prior to building permit issuance.
8. The design and construction of basins must be in compliance with the general requirements for dams in the Virginia Stormwater Management Program Manual. A geotechnical engineer must certify that the construction compaction requirements have been achieved. BMPs for subdivisions will not be accepted for county maintenance until the geotechnical certification is provided and accepted by the Department of Public works.

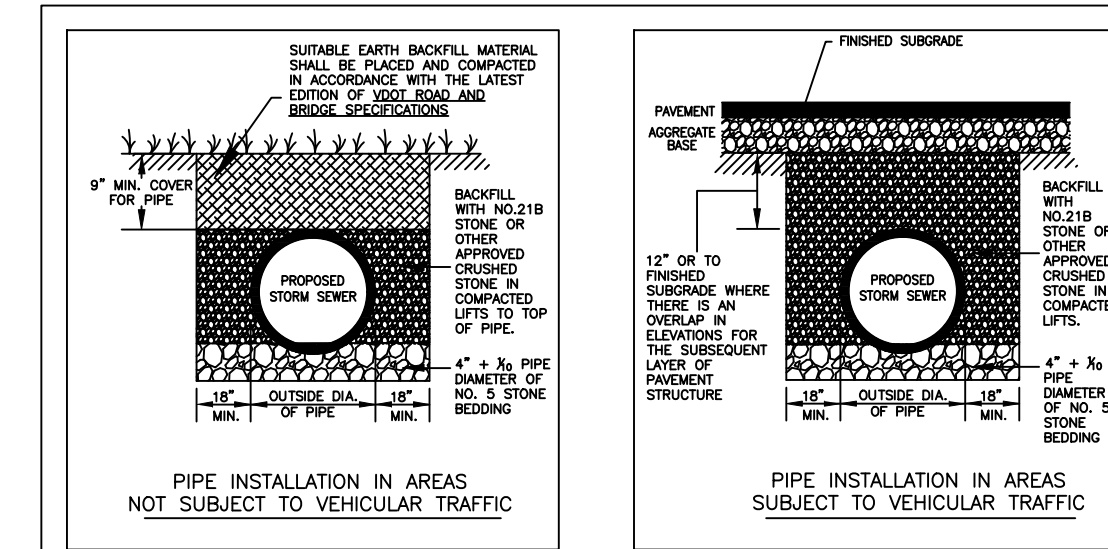
SURVEY

- 1. All roadways must be cleared in the area of proposed construction prior to requesting staking from the county.
2. All utility poles, fire hydrants, and other above ground obstacles located within the public right-of-way, and in conflict with the proposed sidewalk self, curb and gutter, and/or the pavement widening shall be relocated at the developer's expense prior to Henrico County staking the curb and gutter.
3. All curb and gutter and storm sewer/inlets located within the existing County right-of way shall be staked by the county upon written request being made to the County Engineer, or by calling 501-4619.
4. Prior to requesting County stakeout, all appropriate information necessary for stakeout must be provided to the Henrico County survey department.
Right-of-way and baseline information must be established in the field and clearly tied to monuments/benchmarks prior to requesting stakeout by the County.

VIRGINIA DEPARTMENT OF TRANSPORTATION

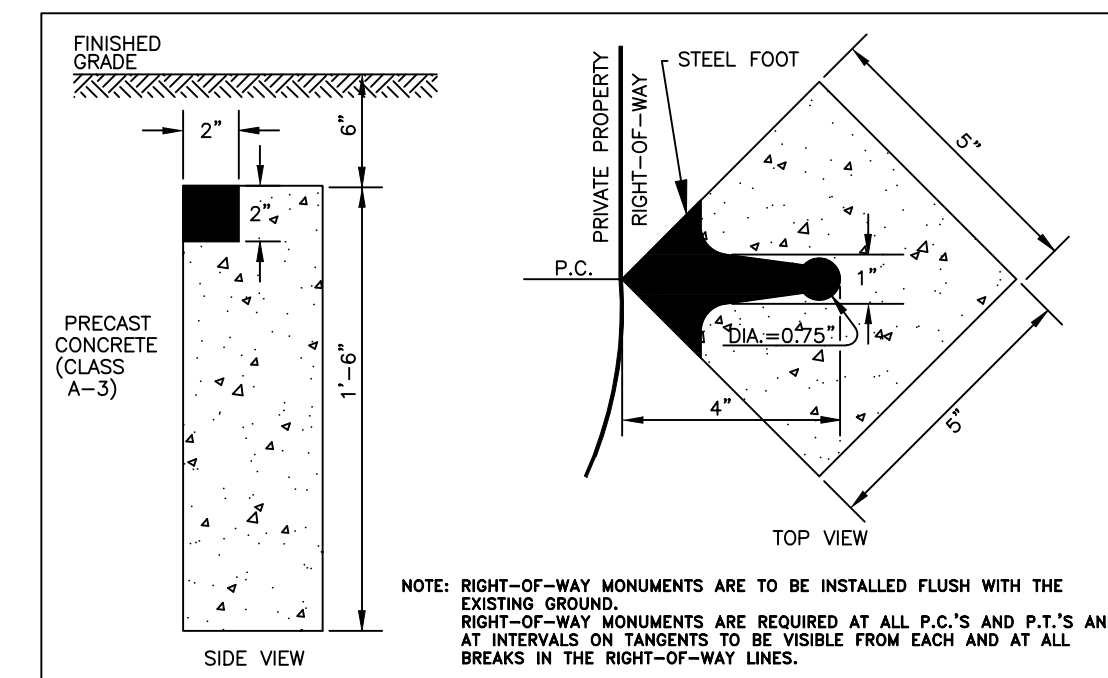
SUBDIVISION AND SITE CONSTRUCTION PLAN GENERAL NOTES

- 1. All materials and construction within the public right of way shall be in accordance with current Virginia Department of Transportation's specifications and standards.
2. Land Use Permits (CE-7P) must be obtained from the Virginia Department of Transportation prior to beginning any construction within the existing state maintained right of way (including access).
3. VDOT is to receive written notification 48 hours prior to commencing with initial construction activities.
4. Prior to any construction, the contractor shall consult the engineer and verify the approval of the plans by all federal, state, and local agencies.
5. Preliminary design of the pavement structure for all subdivision streets shall be in accordance with the current edition of The Pavement Design Guide for Subdivision and Secondary Roads in Virginia.
6. The contractor shall verify the elevations of all points of connection or proposed work to existing curbs, sanitary lines, water lines, etc., prior to construction.
7. Upon discovery of soils that are unsuitable for foundations, subgrades, or other roadway construction purposes, the contractor shall immediately contact a geotechnical engineer and VDOT. These areas shall be excavated below plan grade as directed by the geotechnical engineer, backfilled with suitable material and compacted in accordance with current VDOT specifications.
8. All storm sewer design and construction to be in accordance with VDOT I & I LD-94 (D) 121.13.
9. All storm sewer pipes shall be reinforced tongue and groove concrete pipe in accordance with ASTM-C-76. Pipe within the right-of-way shall be a minimum CL-III or greater in accordance with current VDOT standards and specifications.
10. If pre-cast units are to be used, VDOT shall be notified and the manufacturer shall submit drawing details for review. Certification and VDOT stamp will be required on all units.
11. All concrete shall be A3-AE (air entrained 3,000 PSI).
12. All entrances are to be designed and constructed in accordance with current VDOT standards. Residential lot access shall be provided per the following criteria:
- All driveway entrance culverts are to be 15" diameter x 20' long pipe and shall conform to PE-1 private entrance standards unless otherwise directed by the Resident Engineer. No entrance culverts are to be installed within five (5) feet of a property line.
- VDOT standard CG-9D entrances shall be installed in curb and gutter neighborhoods. The sawcutting removal of the standing curb is unacceptable when installing an entrance on existing curb and gutter. Contact VDOT for inspection 48 hours prior to entrance installation.
13. The developer is responsible for furnishing and installing stop signs at street intersections.
14. Design changes, specified materials changes and/or field changes from the approved plans need to be re-submitted to VDOT prior to proceeding with the work. A letter of explanation shall accompany the revised plans and/or drainage calculations, which must be submitted, to VDOT for review and approval by the Resident Engineer.
15. Contractor shall verify location and elevation of all underground utilities shown on plans in areas of construction prior to starting work. Contact engineer immediately if location or elevation is different from that shown on plan. If there appears to be a conflict, and/or upon discovery of any utility not shown on this plan, call Miss Utility of Central Virginia at 1-800-552-7001. The developer shall be responsible for the relocation of any utility within existing and/or proposed right-of-way required by the development.
16. All streetlights shall be located a minimum of 9.5' from the edge of pavement on curb and gutter streets and/or located a minimum of 5.5' behind the ditch line on open ditch streets.
17. Casing sleeves shall be placed at all road crossings for gas, power, telephone, and cable TV service trunk lines.
18. The installation of sewer, water, and gas mains (including service laterals and sleeves) shall be completed prior to placement of aggregate base course.
19. All roadside ditches shown as paved on the plan are to be paved in accordance with the standard typical section as shown on the plans. Generally, all ditches with slopes exceeding 5% or less than 0.75% shall be paved unless otherwise directed by the Resident Engineer. Any additional paving of the ditches, other than those shown on the road plans will be determined prior to acceptance of the roads into the VDOT secondary road system.
20. VDOT approval of construction plans does not preclude the right to require additional facilities as deemed necessary to insure positive drainage and the safety of traveling public at the time of final inspection.
21. VDOT approval of these plans will expire three (3) years from the date of approval.
22. VDOT shall have performed the required field inspection (proof-roll) prior to placement of the aggregate base course(s). Contact VDOT for subgrade inspection 48 hours prior to scheduling placement of aggregate base course(s).
23. A prime coat seal between the aggregate base and bituminous concrete will be required at a rate of 0.30 gallons per square yard (REC-250 Prime Coat) per VDOT standards and specifications.
24. The scheduling of aggregate base installation and subsequent paving activities shall accommodate forecast weather conditions per Section 315 of The Road and Bridge Specifications.
25. VDOT shall have approved the aggregate base course(s) for depth, template, and performed the required field inspection (proof-roll) prior to placement of any surface course(s). Contact VDOT for inspection of the aggregate base course(s) 48 hours prior to application of the surface course(s).
26. An actual copy of the complete CBR report is to be submitted to VDOT in conjunction with final pavement designs. All pavement design recommendations shall be performed in accordance with the current edition of The Pavement Design Guide for Subdivision and Secondary Roads in Virginia.
27. A geotechnical engineer is to ascertain cause and certify recommended method of repair for all pavement structural failures prior to state acceptance.
28. All vegetation and organic material is to be removed from the right of way limits prior to conditioning of the subgrade.
29. Certification and source of materials are to be submitted to VDOT for all materials and be in accordance with the Road and Bridge Specifications and Road and Bridge Standards.
30. Dry gutter is not allowed in VDOT right of way.
31. The developer will be responsible for the design costs of any traffic signal installation and/or modification under an account receivable with VDOT.
32. The necessity and locations for additional VDOT standard underdrains to be determined at time of subgrade inspection.
33. Approval of a detailed construction sequencing/maintenance of traffic narrative for the work zone is a prerequisite for issuance of a Land Use Permit allowing access to and from construction sites within VDOT maintained right of way.
34. VDOT shall be provided documentation that in-place pavements meet or exceed the approved pavement design thickness prior to state acceptance.

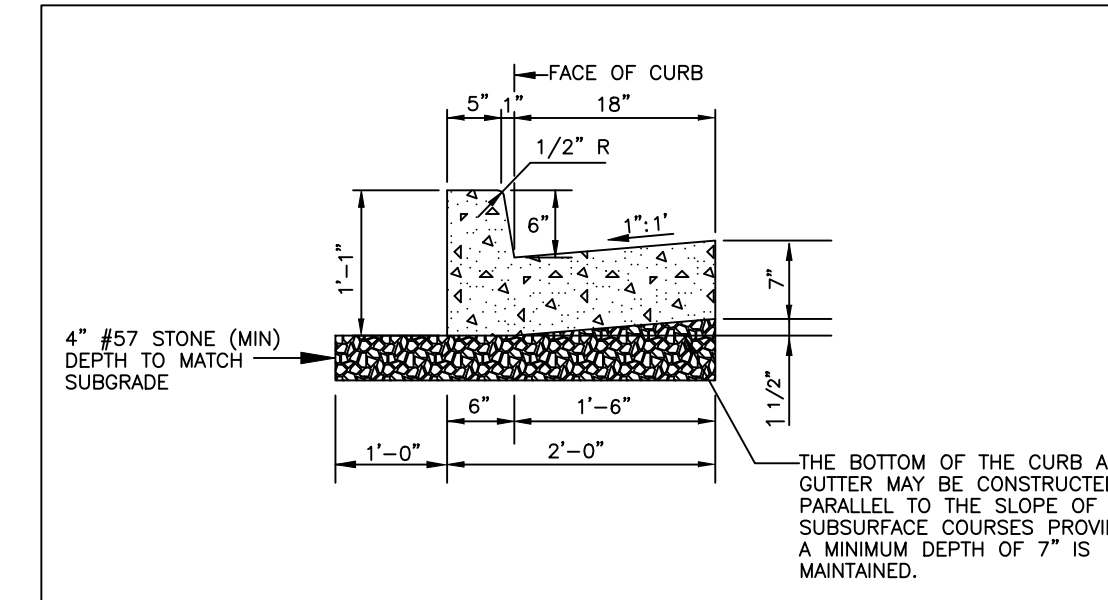


NOTES: SEE APPENDIX C FOR BEDDING AND BACKFILL DETAILS FOR PIPES IN EXISTING ROADWAYS.

PIPE BEDDING & BACKFILL (For New Development & New Road Construction) County of Henrico Department of Public Works JANUARY 1, 2002 PIPE-INSTALLING



RIGHT-OF-WAY MONUMENT County of Henrico Department of Public Works JANUARY 1, 2002 RW\_MONUMENT.DWG



CURB AND GUTTER County of Henrico Department of Public Works JANUARY 1, 2002 HSCG.DWG

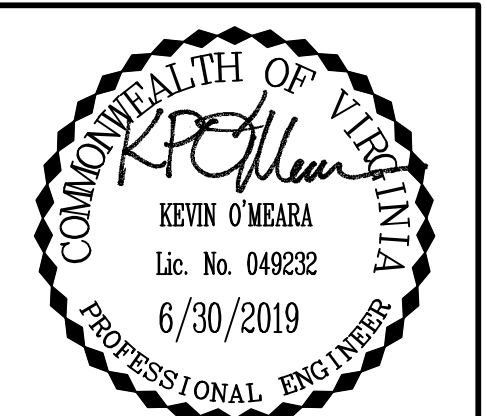


Table with columns for DATE, REVISION DESCRIPTION, and DATE. Includes a date entry of 6/30/2019.

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