

Section 4 – Sidewalks

(A) Intent: Sidewalks are encouraged in areas of moderate to high pedestrian activity along public and private rights-of-way, particularly within and between the following areas:

1. High employment
2. Commercial (service) areas
3. Dense residential areas (multifamily and small-lot single-family residential subdivisions)
4. Public facilities (schools, libraries, parks, recreational centers)

(B) General standards (refer to current VDOT standards, as amended, for additional standards and detail)

1. Material: Concrete which may be stamped and colored or solid paving units
2. Concrete depth: 4 inches minimum
3. Width:
 - a. Not adjacent to curb: 5 feet minimum
 - b. Adjacent to curb: 8 feet minimum
4. Location:
 - a. Behind curb and gutter without plantings: 3 feet minimum
 - b. Behind curb and gutter with plantings: 6 feet minimum
 - c. Behind ditch section: see VDOT standards, as amended
5. Handicap Ramps: Provide at all road intersections

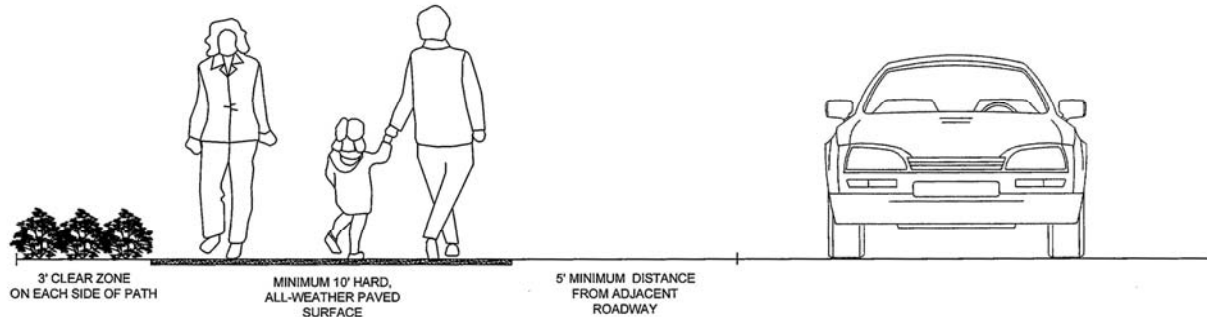
Section 5 – Shared Use Paths

(A) Intent: Two-directional shared use paths are encouraged to be constructed in locations along public roads where pedestrians, bicyclists and other non-motorized users (including motorized wheelchair users) can utilize the path either as a recreational amenity in itself or as a means to get from one location to another.

(B) General Standards (refer to current VDOT standards, as amended, for additional standards and detail)

1. Material: Hard, all-weather pavement surface

2. Width: 10 feet minimum with a 2-foot-wide graded area adjacent to both sides of the path
3. Location: 5 feet minimum from edge of pavement or less with a suitable physical barrier between the path and the edge of the shoulder
4. Grade: Generally 5 percent or less
5. Clear zone: 3 feet wide on either side of the path



Section 6 – Trails

(A) Intent: Private trails may be constructed in residential, commercial, industrial or other types of developments as recreational amenities or as a means to get from one location to another. Users may include pedestrians, bicyclists, equestrians, and persons in wheelchairs. These regulations are not intended for public trails which are typically located within public parks.

(B) General Standards

1. Hard Surface Trails

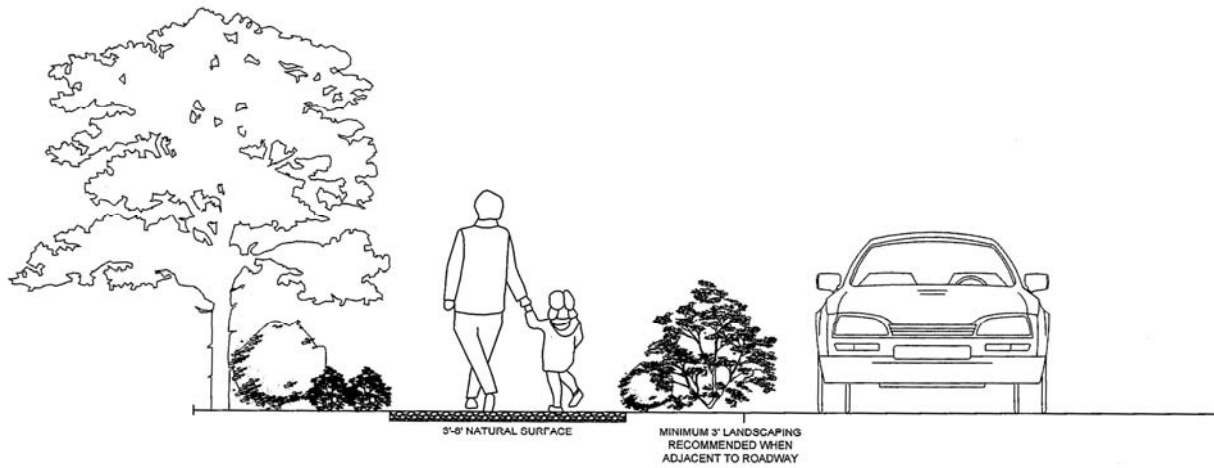
- a. Width: 8 to 10 feet wide, minimum
- b. Road Separation: 5 foot minimum grass strip or landscaped buffer recommended



HARD SURFACE TRAIL

2. Natural Surface Trails

- a. Width: 3 to 8 feet wide, minimum
- b. Road Separation: 3 foot minimum grass strip or landscaped buffer recommended



NATURAL SURFACE TRAIL

3. Acceptable Trail Materials

Material	Hard Surface	Natural Surface	Minimum Thickness	Accessible	Appropriate Uses
Asphalt	X		3 inches	yes	Pedestrian, Bicycle
Concrete	X		4 inches	yes	Pedestrian, Bicycle
Synthetic Rubber	X		3 inches	yes	Exercise/Fitness
Aggregate: 3/8" Natural Fines		X	6 inches	yes	Pedestrian, Bicycle, Equestrian
Aggregate: Road Mix (1/2" maximum)		X	6 inches	no	Pedestrian, Mountain Bicycle, Equestrian
Wood Chip		X	3 inches	no	Pedestrian, Mountain Bicycle, Equestrian
Compacted Soil		X	N/A	no	Pedestrian, Bicycle, Equestrian
Grass		X	N/A	no	Pedestrian, Mountain Bicycle, Equestrian

4. Stairs

a. Stairs may be utilized to climb trails with steeper grades due to varying topography. The material used to construct stairs shall match or complement the trail type. For example, flagstone steps would complement a gravel trail or wooden railroad ties would complement a wood chip trail.

5. Easements

a. Access easements shall be recorded with a width five feet greater than the trail width.

Section 7 – Bicycle Accommodations

(A) Applicable regulations for bicycle accommodations:

1. Current VDOT standards, as amended
1. AASHTO Guide for the Development of Bicycle Facilities, as amended
2. Regional bikeway plans, as amended, available from the Roanoke Valley Alleghany Regional Commission and the Roanoke Valley Area Metropolitan Planning Organization

Section 8 – Private Roads

(A) Intent

1. The intent of this section is to provide adequate standards for Roanoke County private roads. Such roads may be provided only in selected urban residential developments including the Cluster Subdivision Option and the Planned Residential Development District.
2. For related topics not covered in this section, refer to other County, State or Federal regulations.

(B) Definitions

1. *Alley*: An open way that affords a service (i.e. garbage collection, delivery, mail) means of access to an abutting property, but is not maintained by any local, state, or federal government. (Roanoke County Subdivision Ordinance and Zoning Ordinance)
2. *Driveway*: A private roadway providing access for vehicles to a parking space, garage, dwelling, or other structure. (Roanoke County Zoning Ordinance)
3. *Easement*: A right expressed in recorded writing, given by the owner of land to another party of specific limited use of that land (i.e., access, pedestrian, greenway, drainage, water, sewer, public utility). (Roanoke County Subdivision Ordinance)
4. *Plat, Final*: The plat of a proposed subdivision of land that has been preliminarily approved and signed by the agent as a preliminary plat, subsequently recorded or to be recorded with the Clerk's Office. (Roanoke County Subdivision Ordinance)
5. *Private Street/Road*: A vehicular way owned, operated, provided, and maintained by an individual, developer, homeowners' association, or any other entity other than a local, state, or federal government. (Roanoke County Subdivision Ordinance)
6. *Right-of-Way*: A legally established area or strip of land on which an irrevocable public right of passage has been or is to be recorded, and which may be occupied or intended to be occupied by a street, utility service, water main, sanitary or storm sewer main, or other similar use. (Roanoke County Subdivision Ordinance)
7. *VDOT*: The Virginia Department of Transportation (Roanoke County Subdivision Ordinance)

(C) Design

1. Shoulder and Ditch Section Requirements, Narrower Road

Projected Traffic Volume (ADT)	Minimum Road Surface Width (ft)			Minimum Shoulder Width (ft) Each Side	Maximum Grade (%)
	No Parking and One Way	Parking One Side	Parking Two Sides		
<i>up to 30</i>	14	19	24	4	10
<i>31 - 400</i>	18	23	28	4	10
<i>401 - 750</i>	18	23	28	4	10
<i>over 750</i>	Refer to current VDOT standards, as amended				

2. Shoulder and Ditch Section Requirements, Steeper Grade

Projected Traffic Volume (ADT)	Minimum Road Surface Width (ft)			Minimum Shoulder Width (ft) Each Side	Maximum Grade (%)
	No Parking and One Way	Parking One Side	Parking Two Sides		
<i>up to 30</i>	24	Not permitted	Not permitted	6	16
<i>31 - 400</i>	24	Not permitted	Not permitted	6	16
<i>401 - 750</i>	24	Not permitted	Not permitted	6	14
<i>over 750</i>	Refer to current VDOT standards, as amended				

3. Curb and Gutter Section Requirements, Narrower Road

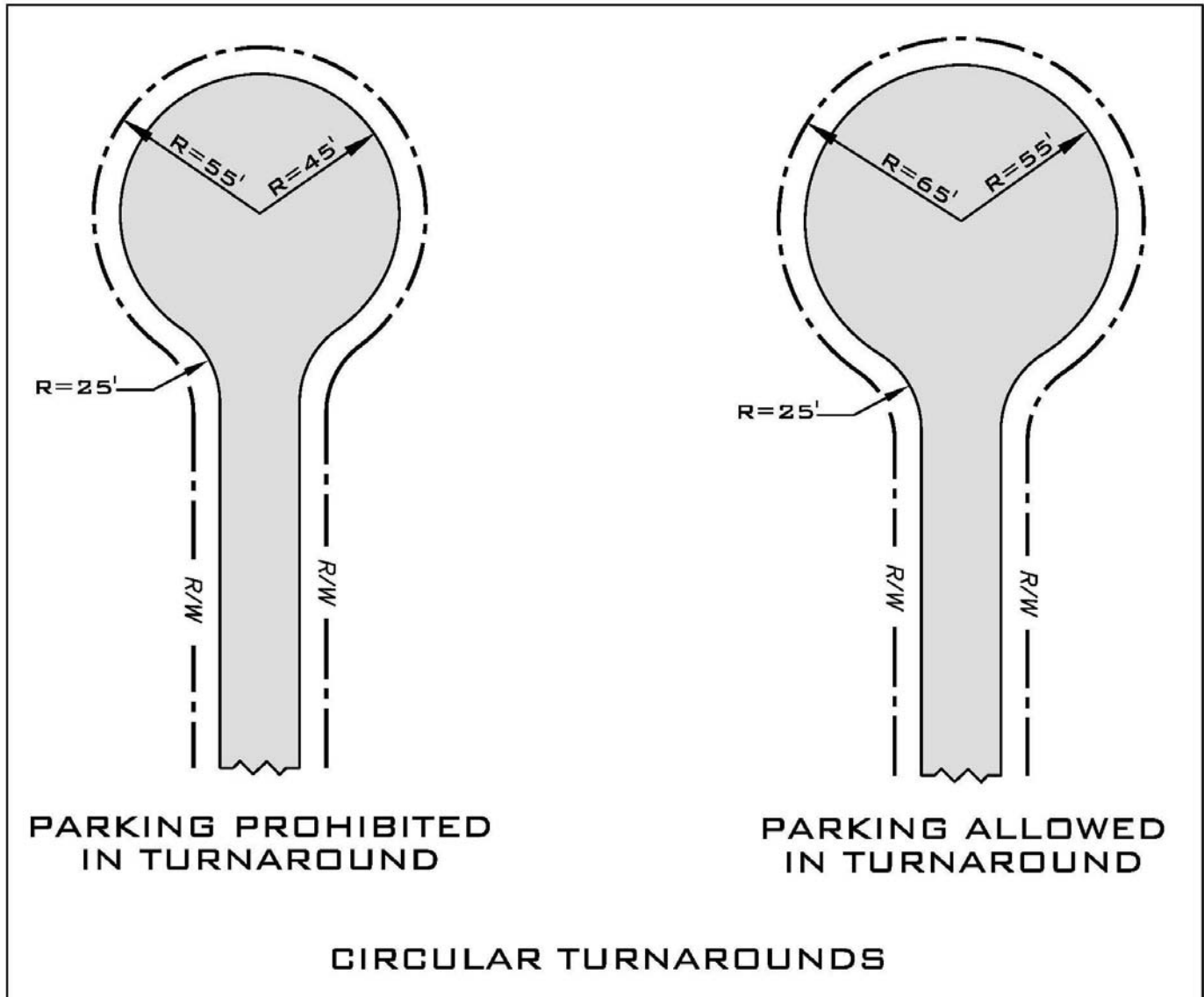
Projected Traffic Volume (ADT)	Minimum Road Surface Width (ft), Face-To-Face			Maximum Grade (%)
	No Parking and One Way	Parking One Side	Parking Two Sides	
<i>up to 30</i>	14	19	24	10
<i>31 - 400</i>	18	23	28	10
<i>401 - 750</i>	18	23	28	10
<i>over 750</i>	Refer to current VDOT standards, as amended			

4. Curb and Gutter Section Requirements, Steeper Grade

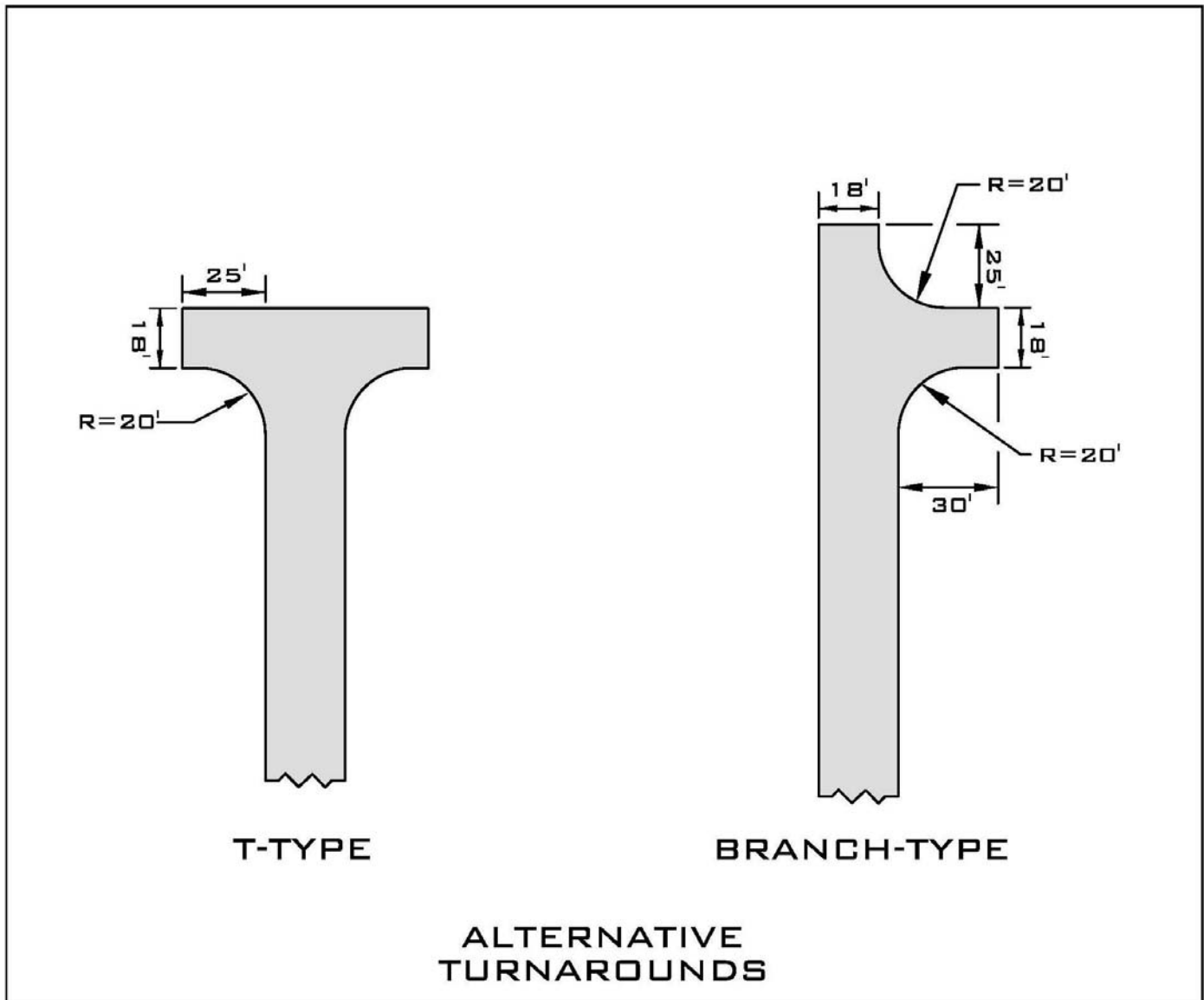
Projected Traffic Volume (ADT)	Minimum Road Surface Width (ft), Face-To-Face			Maximum Grade (%)
	No Parking and One Way	Parking One Side	Parking Two Sides	
<i>up to 30</i>	24	24	29	18
<i>31 - 400</i>	24	24	29	16
<i>401 - 750</i>	24	24	29	14
<i>over 750</i>	Refer to current VDOT standards, as amended			

5. Turnarounds shall be required at the end of all private streets and are encouraged at the end of all shared driveways.

- a. Circular Turnarounds



b. Alternative Turnarounds



6. Refer to current VDOT standards, as amended, for the following:

- a. Bridge and Culvert Design Criteria. Additionally, bridge vehicle load limits shall be established by the Design Engineer and signs noting this limit shall be posted at each end of the bridge.
- b. Cul-de-sacs and Turnarounds
- c. Curb and Gutter Design
- d. Green Shoulders

- e. Guardrail
- f. Horizontal and Vertical Controls (2004 AASHTO Green Book; pages 147, 272, 277)
- g. Intersections. Additionally, a landing shall have a minimum length of 50 feet and a maximum vertical grade of 2 percent. Intersection cross grades shall not exceed 8 percent.
- h. Pavement Design
- i. Right-of-Way. Additionally, a minimum width of 40 feet shall be provided
- j. Sight Distance to include Stopping Sight Distance, Intersection Sight Distance and Sight Distance Triangles
- k. Superelevation (2004 AASHTO Green Book; page 151)
- l. Traffic Control Devices and Signage. Additional regulations:
 - i. Installation and Maintenance: The developer shall be responsible for installing and maintaining all signs. When the private road is turned over to the Homeowners' Association it shall then be the responsibility of the Homeowners' Association to maintain all signs.
 - ii. Enforcement: The Roanoke County Police Department is unable to enforce traffic regulations on private roads. Parking enforcement shall be the responsibility of the owner of the private road or the Homeowners' Association.

(D) Easements

1. *Drainage Easements:*
 - a. The width and location of drainage easements are to be determined by the Roanoke County Department of Community Development.
 - b. Private drainage easements shall be platted and dedicated to the homeowners' association for maintenance.
 - c. Public drainage easements shall be platted and dedicated for public use.
2. *Sight Distance Easements:* Width and location to be determined by VDOT

3. *Water and Sewer Easements:* Width and location to be determined by the Western Virginia Water Authority or the Town of Vinton Department of Public Works depending upon the service provider
4. *Public/Private Utility Easements:* Width and location to be determined by the appropriate utility company(ies)

(E) Other Design Features

1. *Alleys:* Refer to AASHTO standards, as amended, for design requirements. Additionally, alleys should measure between 16 and 20 feet wide. Alleys shall be owned and maintained by the Homeowners' Association, and notes to this effect shall be indicated on the final plat.
2. *Drainage:* The crown, or cross-slope, of the road's surface shall be 2 percent (1/4 inch to 1 foot) in tangent sections to convey run-off to the shoulders and ditches.
3. *Lighting:* The installation, maintenance and operating expenses of lighting shall be provided by and at the sole expense of the developer or Homeowners' Association.
4. *One-Way Streets:* One-way streets shall meet the dimensional requirements above and shall have two access points.
5. *Plat Covenant Language:* Add the following note to each page of the plat of subdivision:

"The road serving this lot is private and its maintenance, including snow removal, is not a public responsibility. It shall not be eligible for acceptance into the state secondary system for maintenance until such time as it is constructed and otherwise complies with all requirements of the Virginia Department of Transportation for the addition of subdivision streets current at the time of such request. Any costs required to cause this street to become eligible for addition into the state system shall be provided with funds other than those administered by the Virginia Department of Transportation."
6. *Shared Driveways:* Shared driveways shall be permitted to serve no more than two houses. Shared driveways shall be created using access easements measuring 20 feet in width. Access easements shall be shown on the Final Plat.
7. *Sidewalks:* Sidewalks shall be permitted within the right-of-way or within a public access easement and maintained by the Homeowners' Association. See Section 4, Sidewalks, for additional information.

8. *Speed Control/Traffic Calming Design Features*: Speed control design features such as speed bumps, speed humps, etc., shall not be installed unless approved by Roanoke County Community Development with input from the staff of County Schools, County General Services, and Fire and Rescue Departments.
9. *Stormwater Management Facilities*: Entry to privately owned and maintained stormwater management facilities and accesses shall be provided per the latest County of Roanoke Stormwater Management Design Manual.
10. *Trip Generation (ADT)*: Refer to the Institute of Transportation Engineers (ITE) *Trip Generation* manual, as amended.
11. *Vertical Clearance Height*: Private roads through forested areas or under other overhead obstructions must maintain proper clearance heights above the traveled way to allow passage of emergency vehicles. Tree branches must be trimmed and maintained to obtain a minimum overhead clearance of 14 feet.

(F) Public Services

1. *School Bus Service*: A written request shall be sent to the Operations Department of Roanoke County Public Schools for consideration of school bus service per Roanoke County Public Schools Administration requirements. If the proposed design does not meet standards for school bus service, the final subdivision plat shall contain the following notation on each page of the plat of subdivision:

“The proposed private streets do not meet the standards for school bus service and the Roanoke County School Board shall not be obligated to provide service on the private streets.”
2. *Solid Waste*: A representative of Roanoke County General Services shall review the design and location of all proposed private streets, and shall advise the applicant whether or not the proposed private streets meet the standards for public solid waste collection. If the proposed design does not meet standards for public solid waste collection, the final subdivision plat shall contain the following notation on each page of the plat of subdivision:

“The proposed private streets do not meet the standards for solid waste collection services and Roanoke County General Services shall not be obligated to provide service on the private streets.”

If it is deemed that the County General Services will not collect solid waste on said streets, the homeowners and/or homeowners’ association has the responsibility for addressing the collection of solid waste.

3. *Fire and Rescue Service:* A representative of the Fire and Rescue Department shall review the design and location of all proposed private streets, and shall advise the applicant whether or not the proposed private streets meet the standards for emergency services.

(G) Process

1. *Plan Submittal Requirements:* Refer to the Roanoke County Land Development Procedures, as amended.
2. *Standard Notes:* Include a notation on the construction plans and on the subdivision plat identifying the proposed private roads.
3. *Compaction Testing:* Third-party inspections are required. Submit California Bearing Ratio (CBR) results to County staff. Subgrade shall be compacted to 100 percent of the maximum theoretical density to achieve a uniform subgrade condition throughout the project. The higher the CBR the less pavement structure is needed and the more economical the design.
4. *Construction Standards and Requirements:* County staff shall be provided with as-built drawings of the private streets and certification of materials and methods of construction, prepared and stamped by a Professional Engineer, upon completion of the project.
5. *Turnover to Homeowners' Association:* To insure that the Homeowners' Association does not receive substandard private roads, include the following notation on the plans:

“Immediately prior to the turnover of the private roads to the Homeowners' Association, Roanoke County shall inspect the private roads and any defects shall be repaired by the responsible party before the turnover occurs.”