

VDOT Sample Subdivision Checklist

To be used by Citizens, Developers, Engineers, Surveyors, other Interested Parties, and VDOT

This checklist provides an itemized list of plans, documents, design calculations and other requirements for proposed subdivision roadway improvements to be submitted to VDOT for review and approval.

Subdivision Name / Phase: _____

Nearest State Route No.: _____	County / Town: _____
Plan Date: _____	Latest Revision Date: _____
Submittal Date: _____	Submittal No. (1st, 2nd): _____
Name of Firm, Designer, Phone No.: _____	

The following items should be shown or addressed in subdivision roadway plans and documents submitted to VDOT for approval. Check appropriate blank next to each item, sign last page, and submit checklist with plans. Right blank is for VDOT use only.

A. GENERAL

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Three (3) copies of submittal letter attached outlining proposed development & discussing any waivers or modifications from VDOT Standards either being requested or previously agreed upon.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Three (3) copies of traffic study, erosion & sediment control narrative and drainage calculations, pavement & typical road section design calculations. Bound, pages numbered, no loose pages, table of contents. May combine in one report.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Four (4) copies of plans (if rolled, please have print facing out)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	All plans are to be in accordance with VDOT Subdivision Street Requirements, Road & Bridge Standards, Road & Bridge Specifications, Minimum Standards of Entrances to State Highways, Road Design Manual, L&D Instructional and Informational Memoranda, Drainage Manual, Hydraulic Design Advisories and other applicable VDOT and Federal polices.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Plans should be self-explanatory with sufficient notes to explain the intent or purpose of the design.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Title Sheet
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Subdivision name, phase, owner w/ address and phone number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Designer with address, phone number, and professional stamp
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	Tax Map number, Magisterial District, County, City or Town
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	10.	Master Plan (show which roads built, which roads in system)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	11.	Plat, if available, showing rights-of-way, lots, & easements.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	12.	Type of development (i.e., industrial, commercial, single-family residential, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	13.	Current and proposed zoning of property & adjacent parcels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	14.	Location map with scale
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	15.	General Notes including required VDOT general notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	16.	Date, revision dates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	17.	Sheet Index with all sheets numbered and dated
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	18.	All lines and symbols clear & labeled; all text legible
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	19.	Existing vs. proposed items easily distinguishable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	20.	Plans must clearly indicate which roads are to be built for acceptance into VDOT Secondary System of Highways

B. REVISIONS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Letter from designer must accompany revised plans submitted to VDOT for re-evaluation, describe changes made on revised plans, and provide dates of old & revised plans. Letter should discuss any items that were not changed as requested and modifications that were made due to request of other agencies.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Mark changed items with highlighter on 2 of the 5 sets of plans. Large revised areas need only be circled with a highlighter.

C. TRAFFIC ANALYSIS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Traffic Impact Analysis must be included with land development subdivision submitted. (completely replaces existing 1.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Traffic Impact Analyses are to be prepared in accordance with VDOT Land Development Manual-Volume 1, dated December 1, 1995 Chapter 5 "Guidelines For a Traffic Impact Study" (or latest revision). Developer is responsible for roadway improvements to accommodate the acceptable level of service. (Developer responsible for supplying sufficient information to support designs shown.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Detailed plans and studies may be required that address: <ul style="list-style-type: none"> • traffic analysis of existing and proposed conditions • intersection analysis including need for signalization / channelization / turn lanes & modification to existing signals • proposed roadway improvements to accommodate traffic generated by proposed development

D. PLAN SHEETS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	North arrow, scale
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Match lines clearly keyed to adjoining sheets w/ stationing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Limits of subdivision, limits of each phase
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Both edges of pavement (EP), shoulder width, and right-of-way (R/W) of connecting or adjacent streets along entire development plus 200' minimum each way. Show existing road spot elevations of both EPs and centerline @ 25' intervals near connection. Pavement design of existing streets.

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Existing crossovers, entrances, utilities, storm sewers, etc., that may be affected by proposed development.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Street names and state route numbers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Distance reference (to 0.01 mile) to nearest intersection
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Centerline: <ul style="list-style-type: none"> • stationed w/ 50' ticks, 100' or 500' labels • stations of begin / end, intersections, PC, PI, PT • curve data
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	Proposed EP, curb, and R/W lines and construction limits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	10.	Intersection sight distances, especially at connection to existing state route (field measure w/ target 10' off EP)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	11.	Posted speed limit of existing adjacent roads
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	12.	Lengths of turn lanes and tapers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	13.	EP and R/W radii for cul-de-sac and flares (fillets)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	14.	Lots: <ul style="list-style-type: none"> • lot lines and numbers • entrances per Standard PE-1 or CG-9 • * entrance pipe size, type, & length (can show in schedule)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	15.	Preliminary guardrail design, where needed, shown with lengths & terminals per VDOT standards. Final approval of layout to be provided by VDOT's Traffic Engineering Section after grading is mostly complete.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	16.	Relevant on-site & off-site topographic features / structures
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	17.	All existing and proposed utilities (See K. UTILITIES)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	18.	All existing and proposed drainage facilities (See I. DRAINAGE)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	19.	Include Erosion & Sediment Control Plan Sheets

E. TYPICAL ROAD SECTIONS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Road and stations to which each applies
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Proposed traffic count and design speed for each street (can be shown in a schedule)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Centerline and R/W width
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Width & slope of pavement, shoulder, ditch, etc.; type shoulder and cut and fill slopes.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Curb type, sidewalk, utility strip, etc., if applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Pavement design in accordance with VDOT Subdivision Street Requirements, Superpave Asphalt Design Mixes, and Pavement Design Guide for Subdivision & Secondary Roads in Virginia.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Show types, depths, and application rates of all pavement and aggregate layers and prime coats.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	All aggregate layers are to extend 1' beyond EP or back of curb.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	The connections for intersections and commercial entrances (including Std. CG-11) shall be modified such that the street approach pavement is the same as the new roadway / entrance or mainline pavement, whichever has the highest structural value, or as determined by the District Materials Engineer.

F. OTHER TYPICAL SECTIONS / DETAILS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Where each applies
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Pavement widening or overlays of existing roads; crossovers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Special ditches: show shape, depth, slope, lining, min./max. grade. If paved, show details or reference VDOT Standard.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Entrances (internal, commercial, or private)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Special undercut or fill measures for unsuitable material, existing ponds, sinkholes, controlled fill, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Special drainage designs, structures, basins, berms, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Details of all items that are not a VDOT Standard or are a modification of a VDOT Standard.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Cross sections of road, drainage, or other proposed construction may be required at areas of concern such as at connections to primary roads, when work is close to exterior property lines, at other constricted areas, etc.

G. ROAD PROFILES

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Street name
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Horizontal and vertical scale and grid
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Existing ground line (extended 100' minimum beyond slope tie-in)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Proposed finished grade line
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Percent grade, vertical curve data including K value (=L/A)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Stations and elevations at begin / end, 50' min. intervals high & low points, PVC, PVI (CG), PVT, @ intersecting roads EPs and centerline (include super), & at subdivision phase limits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Provide adequate landing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Intersection sight distances: eye = 3.5', object = 3.5'
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	Stopping sight distance (crest curves): eye = 3.5', object = 2.0'
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	10.	Culverts: size, type, invert, pipe number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	11.	Storm sewer profiles and drainage structures (within R/W)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	12.	Ditch profile (where non-standard)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	13.	Water lines, sanitary sewer, and existing underground utilities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	14.	Special undercut or fill areas

H. OTHER PROFILES

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Special ditches, storm sewers, outfalls - extend ground line 100' minimum beyond tie-in
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Entrances needing special attention, i.e. steep, constricted. (Tie proposed grade to edge of shoulder, not EP).

I. DRAINAGE (shown on plan & profile sheet, supplemental or detail sheet)

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Contour plan of entire development and adjacent area: <ul style="list-style-type: none"> • *every 5th contour highlighted & elevation clearly labeled • minimum contour interval usually two feet • shown on road plans or as separate sheet showing entire drainage system design • stationed centerline and R/W lines shown • drainage sub-areas outlined, labeled and areas shown • * showing topographic features, existing buildings, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Existing and relocated streams and drainage ways.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Existing and proposed pipes, storm sewers, and drainage structures with location, size, type, lengths, inverts, design cover, and flow arrows.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Proposed ditches (center of all shown graphically accurate by either flow arrows, finished contours, lining symbols or other methods). Show where linings begin and end.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Std. CD-1 or CD-2 underdrains @ lower ends of cuts, vertical sags, and bridge approaches.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Storm sewer system w/ VDOT standard structures. Show top, rim, height, grate, & invert elevations and throat lengths.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Plan, profile and typical section of all ditches other than standard roadside ditches
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Proposed drainage easements to natural watercourses (usually 20' minimum width).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	Existing drainage facilities possibly affected by proposed development: location, size, inverts, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	10.	Erosion & sediment control measures
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	11.	Stormwater management plans and computations, where necessary.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	12.	Stormwater management low impact development (LID) or other water quality techniques for the roadway are shown within the R/W detail sheets and computations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	13.	Have Maintenance agreements for LID or other water quality techniques, between the county, developer and VDOT been executed.

J. DRAINAGE COMPUTATIONS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Should be self-explanatory. (See Item A.2)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Subdivision name, date, author, professional stamp
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	In accordance with VDOT's current criteria including VDOT's Drainage Manual. Discuss any methods or references used that are not generally used by VDOT.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Sufficient background, supporting information and summary of any computer printouts submitted
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Copy of USGS topo map showing drainage patterns of area.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Discuss whether future sections are considered in design.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Hydrology: drainage sub-areas to agree with contour plan, design discharge calculations, pre- & post-development flows.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Hydraulics: Pipe, ditch, storm sewer & inlet computations.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	Outfall analysis (evaluation of receiving channel / structure)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	10.	MS4 outfall data for the new street is provided to VDOT

K. UTILITIES

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Show all existing underground and overhead utilities and easements, proposed water and sanitary mains, service laterals, types, sizes, and appurtenances.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Utilities should be located off R/W, where possible.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Utilities should be located out of pavement, where possible.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Adjustment of existing utilities, where needed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Proposed utility crossings of existing roads: show location, alignment, size, type, encasements, lengths, crossing methods
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Route utilities under culverts where possible
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Set fire hydrants at R/W on lot lines, where possible.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Set manholes, valves, etc. in shoulder, utility strip or behind sidewalk, where possible.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	Set streetlights at R/W line, outside clear zone.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	10.	Check for conflicts between utilities, road and drainage.

L. TEMPORARY CUL-DE-SACS / ROADS TO BE EXTENDED

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Traffic study must address ultimate projected traffic. If master plan of future area to be served is unavailable, give information on & discuss acreage, access & zoning of adjacent land. Discuss any County Comprehensive Plan available.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Indicate pavement design.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Provide adequate temporary easement.

- | | | | | | |
|--------------------------|--------------------------|--------------------------|-------|----|--------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ | 4. | On profile, extend existing ground line and future grade line enough to show a satisfactory extension is possible. |
|--------------------------|--------------------------|--------------------------|-------|----|--------------------------------------------------------------------------------------------------------------------|

M. CURB & GUTTER STREETS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Show street widths and radii to face of curb
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Show entrance type
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Show Std. CG-12's @ intersections & other req'd. locations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Tie standard CD-1 underdrains into drop inlets
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Intersection and cul-de-sac details are usually needed to show: type of intersection (i.e., Std. CG-11), how drainage is handled, top of curb and EP elevations around radii, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Provide necessary drainage computations

N. MISCELLANEOUS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	If subdivision identification sign is desired, provide for in easement off R/W
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	If any special use of R/W is desired such as bike paths, landscaping, irrigation system, lighting, parking, retaining walls, etc., provide full details and technical specs. These may need to be shown on separate plan sheets.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Details of any special entrance road design (i.e., one-way, islands, medians, etc. Details of cluster mailbox pull-offs.

O. GEOTECHNICAL – General Information

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Soil Technician / Engineer qualification statement.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Statement that investigation was completed under the direction of VDOT personnel.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Contact information for developer, designer, soil testing laboratory, and soil technician.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Site Map showing project location.

P. PAVEMENT DESIGN

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Contact information for developer, designer, soil testing laboratory, and soil technician.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Statement that samples were obtained according to the frequencies provided in the VDOT Pavement Design Guide for Subdivisions and Secondary Roads, Page 4, Section A.2.a.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Sample Location Map showing borehole, test pit, and/or surface sample collection sites in reference to proposed alignment.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Sieve Analysis Report in accordance with VTM-25.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Atterberg Limits Report in accordance with VTM-7 (for soils with more than 35% passing No. 200 sieve).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Maximum Density / Optimum Moisture (Proctor) Report in accordance with VTM-1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	CBR Report in accordance with VTM-8.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Reports should include sample location, depth and natural water content
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	9.	Documentation that the projected average daily traffic (ADT) volume to be used for design purposes follows the VDOT Road Design Manual, Appendix B, including %HCV and adjusted by Pavement Design Guide for Subdivision and Secondary Roads, Appendix IV
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	10.	Complete Flexible Pavement Design Worksheet for New Subdivision Streets (Pavement Design Guide for Subdivision & Secondary Roads in Virginia)
			_____	11.	Please note that there are design, subgrade, and drainage considerations in addition to the procedure described in Appendix IV. Also, where locality requirements exceed the pavement design determined by Appendix IV, that locality's design method governs. No checklist or worksheet will relieve the designer's responsibility for the proper use and application of the design methods provided, or adherence to VDOT standards and specifications.

Q. PIPE/BOX CULVERT FOUNDATION DESIGN REQUIREMENTS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Contact information for developer, designer, testing laboratory, and soil technician.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	For box culverts or pipes with diameter 36" or greater, a minimum of one boring shall be advanced at each endwall and at 200-foot intervals along the alignment of pipe or culvert. Borings should extend at least one pipe diameter below the invert elevation, fully penetrating unsuitable material or fill and extending at least 5 feet into underlying natural soils.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Sample Location Map showing borehole, test pit, and/or surface sample collection sites in reference to proposed box culvert location.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Logs indicating sample location (station & offset), SPT data, Unified Soil Classification System (USCS) description of subsurface materials, as well as natural water content.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Test reports should include soil pH and soil resistivity results.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Provide box culvert foundation design in accordance with VDOT Road & Bridge Standards and Specifications.
					Additional review may be required. Please contact the District Structure & Bridge, Environmental and Hydraulics Offices.

R. BRIDGE FOUNDATION DESIGN REQUIREMENTS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Contact information for developer, designer, testing laboratory, and soil technician.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	For bridges less than 100 feet wide, a minimum of two borings shall be advanced within the proposed footprint of each, abutment and pier. For bridges over 100 feet wide, advance three borings per each abutment and pier.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	For shallow foundations, borings should be advanced to a depth at least twice the estimated width of the pier footing, or 4 times the width of the strip footing (L/B>10). Borings shall fully penetrate unsuitable material or fill, and extend at least 10 feet into material with suitable bearing capacity. If rock is encountered, it shall be cored to a depth of at least 5 feet.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	For deep foundations, borings should extend at least 15 feet below the anticipated pile or shaft tip elevation or a minimum of 2 times the maximum pile group dimension, whichever is greater. For piles bearing on rock, at least 10 feet of core shall be taken from each boring. For drilled shafts bearing on rock, at least 10 feet or 3 times the shaft diameter of rock core shall be taken from each boring.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Sample Location Map showing borehole locations in reference to footprints of proposed locations for bridge substructure units.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Borehole logs indicating location (station & offset, northing & easting, <u>and</u> latitude & longitude), SPT data, RQD for cored rock, USCS description of subsurface materials, initial and static groundwater elevations (if encountered), color digital photographs of individual rock cores, and any associated in-situ and lab test reports
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Provide bridge foundation design for each bridge substructure unit. Include the estimated allowable bearing capacity of the materials encountered at the proposed foundation elevation.
					Additional review may be required. Please contact the District Structure & Bridge, Environmental and Hydraulics Offices.

S. RETAINING WALL / SOUND WALL FOUNDATION DESIGN REQUIREMENTS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Contact information for developer, designer, testing laboratory, and soil technician.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	Borings shall be advanced for each 100-200 feet along the proposed alignment over the full length of the wall, with a minimum of two borings. Borings shall be advanced to a depth of

					twice the proposed wall height, should fully penetrate unsuitable material or fill, and extend 10 feet into competent material or 5 feet into rock..
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Sample Location Map showing borehole locations in reference to wall alignment.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Borehole logs indicating location (station & offset), SPT data, RQD for cored rock, USCS description of subsurface materials, natural water content, and any associated in-situ and lab test reports.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Provide retaining wall foundation design in accordance with VDOT Standards and Specifications. Include the estimated allowable bearing capacity of the materials encountered at the proposed foundation elevation.
					Additional review may be required. Please contact the District Structure & Bridge Office

T. STORM WATER MANAGEMENT BASIN DESIGN REQUIREMENTS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Contact information for developer, designer, testing laboratory, and soil technician.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	A minimum of two borings shall be advanced for basins less than 2 acres in extent (one additional boring for each additional acre), one in the impoundment area and another in the dam. Borings shall be advanced 5 feet below the proposed bottom elevation of the impoundment area and to a depth twice the embankment height at the dam, should fully penetrate unsuitable material or fill, and extend 10 feet into competent material or 5 feet into rock. A groundwater observation well should be installed to monitor long-term groundwater levels
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	Sample Location Map showing borehole locations in reference to basin layout and dam location
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Borehole logs indicating location (station & offset), SPT data, RQD for cored rock, USCS description of subsurface materials, natural water content, and any associated in-situ and lab test reports.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Test reports to include gradation, Atterberg, USCS description and natural water content. A minimum of one sample from the impoundment subgrade should be tested for permeability
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Provide stormwater management basin design in accordance with VDOT Standards and Specifications.
					Additional review may be required. Please contact the District Environmental and Hydraulics Offices.

U. SOIL SLOPE DESIGN REQUIREMENTS

Yes	No	N/A	VDOT	Item	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	1.	Contact information for developer, designer, testing laboratory, and soil technician.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	2.	In fill embankments, advance one boring every 200 feet along the toe of the proposed slope. Borings should be advanced to a depth twice the height of embankment for embankments over 15 feet in height; to a depth equal to the height of embankment for smaller embankments, but at least 5 feet below subgrade elevation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	3.	In cut slopes, advance one boring every 200 feet along the top of the proposed slope. Borings should be advanced to a depth at least 10 feet below the proposed minimum elevation of cut for slopes greater than 15 feet in height; at least 5 feet below subgrade elevation for smaller slopes.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	4.	Borings should fully penetrate unsuitable material or fill and extend at least 15 feet (for large slopes) or 5 feet (small slopes) into underlying suitable soils. At least one groundwater observation well should be installed to monitor long-term groundwater levels. If rock is encountered above design grade, it should be cored to the full depth of the planned cut
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	5.	Sample Location Map showing borehole locations in reference to slope alignment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	6.	Borehole logs indicating location (station & offset), SPT data, RQD for cored rock, USCS description of subsurface materials, natural water content, and any associated in-situ and lab test reports.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	7.	Test reports to include gradation, Atterberg Limits and USCS descriptions. May require advanced geotechnical tests to include direct and/or triaxial shear and consolidation testing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	8.	Provided soil slope design in accordance with VDOT Standards and Specifications.

CERTIFICATION

I hereby certify to the best of my knowledge that the above stated information is included in the submitted plans and attachments.

Designer's Signature: _____ Date: _____

 Designer's Name (printed): _____
 Design Firm: _____