



**ENGINEERS AND SURVEYORS INSTITUTE**  
 "A public/private partnership"  
**LOUDOUN COUNTY, VIRGINIA**  
**MINIMUM SUBMISSION REQUIREMENTS**



**Revised 1/11/10**  
**SITE PLAN**

PROJECT NAME & NUMBER \_\_\_\_\_  
 SUBMITTING FIRM \_\_\_\_\_ PHONE #. \_\_\_\_\_  
 PROJ. COORD: \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_  
 DPE NAME: \_\_\_\_\_ DPE # \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_  
 REVIEW DATE \_\_\_\_\_ ESI REVIEW TEAM \_\_\_\_\_

Note: The following information is required for every submission. Additional sheets and information should be provided where necessary to demonstrate compliance with County requirements or conditions of approval. Peer Review dates are determined by Loudoun County Staff once the plan has been submitted following an acceptable MSR review. (Column abbreviations: Acc. = Accurate; RR = Revisions Required; NA = Not Applicable)

**FSM CHAPTER 8.101, 8.106 AND 8.107**

Code Reference	Description	Sheet	OK	RR	N/A	Line
8.101.A.1	Scale					1
8.101.A.2	Proposed name of site plan					2
8.101.A.3	Revision block					3
8.101.A.4	Source of title					4
8.101.A.5	Zoning requirements					5
8.101.A.6	Reference (Plan number and approval dates) to plans relevant to the subject property.					6
8.101.A.7	Vicinity map, scale 1" – 2000' min.					7
8.101.A.8	Coordinate grid lines – min. four per sheet					8
8.101.A.9	Adjoining property information					9
8.101.A.10	Zoning district and jurisdictional boundaries					10
8.101.A.11	Yard and setback lines					11
8.101.A.12	Stakeout plan or alternate note					12
8.101.A.13	Approval block					13
8.106.A.13	Tax Map Reference No.; MCPI No.					14
8.101.A.17	Topography info, NGVD 1929 ref.					15
8.101.A.18	Professional seal, signature and date					16
8.106.A.3	North arrow					17
8.106.A.6.a	Name and address of the owner of record					18
8.106.A.6.b	Name of Engineer or Surveyor					19
8.106.A.7	No. of sheets					20
<b>Comments:</b>						

Code Reference	Description	Sheet	OK	RR	N/A	Line
8.106.A12	Election District & Loudon County, VA in title block					21
8.106.A.17	Soils map certification					22
8.106.A.18.v.1	CBR subbase note					23
8.106.A.18.v.2	A smoothing grade note					24
8.106.A.18.v.3	Standard guardrail note					25
8.106.A.18.v.4	Applicable local, state and federal requirements note					26
8.107.A.1	The title "Site Plan" on the cover sheet					27
8.107.A.4	Location, type, size, and height of fencing screening and retaining walls					28
8.107.A.5	Off road parking and parking bays, loading spaces, walkways, and bike paths, type of surfacing, size, angle of stalls, width of aisles and number of parking and loading spaces required and provided					29
8.107.A.6	Number of floors, floor area, height, exterior dimensions, location and proposed use of each building					30
8.107.A.7	Designation of ADU units					31
8.107.A.8	Proffers and conditions of approval (in plan or attached)					
	<b>EROSION AND SEDIMENT CONTROLS</b> VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK					
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
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FSM 7.600.E.4	Off-site areas (stockpiles, site access, etc.)					48
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County Policy	When SSF is used, provide detail					56
VESCH 3.14	Computations provided for sediment basin					57
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
FSM 7.120.B.1	Lighting w/in SFA or MF developments in accordance with Table I, p.7-3					69
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FSM 7.304	Proposed planting within RSB is in accordance with Tables 2-6, sec. 7.304					76
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ZO 5-1303.C	Tree canopy exclusions are calculated properly					70
ZO 5-1413	Interior and peripheral parking lot landscaping is adequately addressed					71
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FSM 5.100.C FSM 5.230.A.6	Adequate storm drainage outfall w/computations and adequate channel narrative and analysis					135
<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
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FSM	Appropriate “c” factors are used					74
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FSM 5.220.B.1	Design computations as req’d by VDOT Drainage Manual					79
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FSM 5.220.B.3	Capacity of all storm conveyances are shown					82
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FSM 5.220.B.5	Minimum pipe size within public (FHA or VDOT method) right of way is 15 in.					85
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
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<b>Comments:</b>						
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
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FSM 5.320.D.4	BMP credits are in compliance with the Virginia Stormwater Management Handbook					157
FSM 5.320.D.5	Vegetated filter strips located w/in esmt.					158
<b>FSM CH. 4.00</b>	<b>TRANSPORTATION</b>					
Loudoun County Ch. 527 Memo of August 24, 2007 &VDOT Ch. 527	All site plans shall include: 1. Backup AM & PM peak hour vehicle trips & total daily ADT 2. Reference comps to ITE Trip Gen. Hand bk, latest ed. 3. List of all applicable VDOT ch.527 threshold reqs. For this dev. 4. Statement by engineer as to whether a TIA is req'd or not.					159
Code of Virginia 15.2-2222 & 24 VAC 30-155	If TIA is req'd, provide all required documentation necessary for a complete TIA submission (excluding VDOT fee checks)					160
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
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FSM 4.310.L	On roads > 4000 VPD, no direct access from D/W or pipestem					180
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
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<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
FSM 4.330.D.3.c	C3 roads constructed of gravel include a 50 foot paved apron when accessing an existing paved road					209
FSM 4.330.D.3.d	C3 and C4 roads include signage for road names, private road identification, and traffic control as appropriate					210
FSM 4.330.D.3.e	The following criteria applies to the design of C1 and C2 roads constructed as pipestem drives: <ul style="list-style-type: none"> <li>i. Lots sharing a pipestem driveway provide <math>\geq 3</math> parking spaces per dwelling outside of the travelway. Driveways clearly labeled or noted “no parking along driveway.”</li> <li>ii. The design of the pipestems serving more than one lot shown in typical section and on grading plan together with turn-a-round and required utilities</li> <li>iii. Each pipestem clearly identified as a private drive (sign at entry w/ words “Private Drive” &amp; addresses)</li> <li>iv. No pipestem extends a distance of <math>&gt; 400</math> feet from public road to property which it serves or <math>&gt; 800'</math> total if a loop</li> </ul>					211
FSM 4.340	<b>PAVEMENT THICKNESS DESIGN STANDARDS</b>					
FSM 4.340.A	Methods and materials shall conform to VDOT standards. Provide note.					212
FSM 4.340.C	Preliminary subbase and pavement design shall be based on an assumed design CBR value of 6. Provide note.					213
FSM 4.340.F	The minimum pavement section for privately owned and maintained parking lots with a projected ADT of less than 400 VPD shall consist of 1.5” bituminous surface course, 3” bit. base course and 6” aggregate subbase course					214
FSM 4.340.G	Pavements in commercial areas shall be of a heavy-duty design in major cartways and loading areas and at dumpster pads. A minimum 6” depth 3000 psi concrete section with steel reinforcement over 4” of aggregate shall be used for loading areas and dumpster pad areas.					215
FSM 4.400	<b>PARKING GEOMETRIC STANDARDS</b>					216
FSM 4.400.A.2	Paved parking areas are required for four or more parking spaces and all parking spaces shall be delineated and striped					217
FSM 4.400.B.1	Minimum parking space sizes: Standard head-in 9’x 18’ Parallel parking 8’ x 22’					218
<b>Comments:</b>						

Code Reference	Description	Sheet	AD	RR	N/A	Line
FSM 4.400.B.2	Aisle widths for standard car parking spaces: 90 - 22' 60 - 20' 45 - 18' A minimum aisle width of 25 feet shall be maintained adjacent to buildings. Min. travel aisle width = 18'					219
FSM 4.400.B.4	Where wheel stops or curbing are provided for parking spaces, a 1 foot reduction in the stall length will be allowed					220
FSM 4.400.B.5	Parking spaces for handicapped persons and related access aisles, accessibility routes and signage for physically handicapped persons shall be provided					221
FSM 4.400.B.6.a	Entrances to parking bays shall be located along the site access way to avoid blockage of the public right-of-way. No parking shall be allowed within 30 feet of the entrance					222
FSM 4.400.B.6.b	The major site access ways shall be clearly defined, with a minimum aisle width of 25 feet. No direct angle parking shall be allowed where ADT's exceed 1500 VFD					223
FSM 4.400.B.6.c	Retaining walls, screens, landscaping and building walls shall be protected from vehicle contact					224
FSM 4.400.B.6.d	Overhang areas which are a part of the required parking space graded $\leq 2''$ above top of curb not encroached by landscape plantings, signs, or obstructions.					225
FSM 4.400.B.6.e	Loading spaces and dumpster pads shall be accessible by the design vehicle with all parking spaces occupied					226
FSM 4.400.B.6.f	For drive-through facilities are proposed, the travelway width shall be a minimum of 10 feet and shall provide safe vehicle stacking					227
FSM 4.400.B.10	A Permanent turn-a-round shall be required when the dead-end aisle exceeds 500 feet					228
FSM 4.400.C	<b>LOADING SPACES</b>					228
FSM 4.400.C	Commercial building sites shall provide for loading spaces in accordance w/ the Zoning Ordinance					229
FSM 4.400.C.1.a	Single unit loading space: 15' x 30'; 15' minimum horizon. clearance. When more than one space is provided adjacent to each other, additional spaces: 12 feet wide.					230
FSM 4.400.C.2.a	Semi-trailer loading sp: 15' x 55'; 15' min. horiz. clearance					231
<b>Comments:</b>						

<b>Code Reference</b>	<b>Description</b>	<b>Sheet</b>	<b>AD</b>	<b>RR</b>	<b>N/A</b>	<b>Line</b>
FSM 4.400.C.4	No off-roadway loading area shall be located within any front yard. Loading areas shall be designed and located such that they do not interfere with the free circulation of vehicles within parking and stacking areas					232
FSM 4.500	<b>DRIVEWAYS</b>					233
FSM 4.500.B.1	Driveway slopes shall be 12% or less					234
FSM 4.500.B.2	Driveways in Minside Dev. Overlay district or in steep slope areas – 16%max.					235
FSM 4.500.B.3	Driveways maintain full width of garage doors to property line or a distance of 18 feet outside of garage, whichever is less.					236
FSM 4.500.B.4	Skewed driveways cannot exceed a 10:1 angle with the driveway apron or garage					237
FSM 4.500.B.5	Curved driveways must be designed with a 10 foot minimum inside radius and a 24 foot outside radius					238
FSM 4.500.B.6	Tapered driveways cannot exceed a 10:1 taper					239
FSM 4.500.B.8	Roll top curbs not allowed as D/W entrances					240
FSM 4.600	<b>PEDESTRIAN AND BICYCLEACCOMMODATIONS</b>					
FSM 4.600.A.3.a	NCUS provides access to destinations such as recreation, school, retail & commercial locations within subdivision					241
FSM 4.600.A.3.b	NUCS extends to property boundaries of project, ties into existing systems & previously approved planned systems and provides for future additions. When walkways are located outside of VDOT right-of-way, they shall be contained within a public access easement 1' beyond outside both sides of s/w or trail.					242
FSM 4.600.A.3.c	Sidewalks shall be provided on both sides of curb and gutter roadways for single family detached lots					243
FSM 4.600.A.3.d	Sidewalks shall be provided in front of all units and to the parking areas for townhouses and multi-family units					244
FSM 4.600.A.3.e	Sidewalks or trails shall be provided leading to activity centers and/or crosswalks such as play grounds, pools, tot lots and rec. centers					245
FSM 4.600.A.3.f	Office and commercial areas: Sidewalks leading to facility and/or crosswalks					246
FSM 4.600.A.3.g	NUCS provided along road frontages to provide pedestrian interparcel access where such access is set forth in the Zoning Ordinance as a performance standard					247
FSM 4.600.A.3.h	Sidewalks provided on both sides of roadway where they conform to VDOT standards and allowances					248
<b>Comments:</b>						

Code Reference	Description	Sheet	AD	REV	N/A	Line
FSM 4.600.A.3.i	Shared use trails provided w/ shoulder and ditch rds. in Suburban Policy Areas, transition Policy Areas, Joint Land Mgmt. Areas & Rural Villages. S/Ws may be provided in lieu of shared use trails in devs. of lots of 1 acre or less.					249
FSM 4.600.B	<b>SIDEWALKS</b>					
FSM 4.600.B.1.a	Sidewalk and trails shall be constructed on a subgrade compacted to 95% density					250
FSM 4.600.B.1.b	Sidewalk and trails shall be constructed to one of the following cross-sections: <ul style="list-style-type: none"> <li>i. VDOT Type A-3 concrete, 4" thick</li> <li>ii. Four inch thick crushed stone (21-A) topped with 1.5" asphalt</li> <li>iii. On well-drained soil, 4" of asphalt</li> <li>iv. Alternative sections may be approved By the Director and VDOT</li> </ul>					251
FSM 4.600.B.1.c	The maximum cross-slope allowed shall be 1/4" per foot					252
FSM 4.600.B.1.d	Sidewalks shall be constructed to VDOT standards-note					253
FSM 4.600.B.1.e	Sidewalk longitudinal slope shall be consistent with the adjacent roadway					254
FSM 4.600.B.1.f	VDOT standards for CG-12 shall be provided at pedestrian roadway crossings on curb and gutter roadway sections (includes trails)					255
FSM 4.600.B.1.g	Sidewalks shall have a minimum unobstructive width of 5 feet for residential developments where the average density exceeds 10 units per acre, for non-resid. dev. & for dev. Adj. to rds in Countywide Trans. Plan. For all other applications a minimum width of 4 feet shall be maintained <ul style="list-style-type: none"> <li>i. Travelways up to 24' total width-F.L. signs both sides</li> <li>ii. Travelways &gt;24' to 29' -F.L. signs both sides</li> <li>iii. Travelways &gt; 29' -F.L. signs not req'd</li> </ul>					256
FSM 4.600.B.2	<b>SHARED-USE TRAILS</b>					
FSM 4.600.B.2.d	Shared-use trails outside of VDOT R.O.W.: Min. width 6'					257
FSM 4.800	<b>SIGNS</b>					258
FSM 4.810	<b>FIRE LANE SIGNS</b>					259
FSM 4.810.A	Fire lane sign specifications provided					260
FSM 4.810.B & C	Fire lane sign placements shown correctly; curb painting noted w/in TH & MF devs.					261
FSM 4.810.C.5	Commercial buildings shall require fire lane signs along the frontage of the building and at other building access points as designated by Fire Marshal.					262
FSM 4.810.C.6	Public pools shall provide fire lane signs at the entrance to the secured entrance/access for emergency vehicles					263
<b>Comments:</b>						