

SITE PLAN SUBMITTAL CHECKLIST

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Date: \_\_\_\_\_

Applicant Name: \_\_\_\_\_

Contact Phone #: \_\_\_\_\_ Contact Email: \_\_\_\_\_

The site plan process is in place for developers to show in one comprehensive package how proposed site development work meets the requirements of Gloucester County Ordinance Chapter 15.5, Site Plans. This ordinance requires applicants to meet the requirements of several County Ordinances and Commonwealth Requirements including, where applicable, the following:

*County Ordinance* ([www.municode.com/library/va/gloucester\\_county/codes/code\\_of\\_ordinances](http://www.municode.com/library/va/gloucester_county/codes/code_of_ordinances))

*Requirements of:*

- Chapter 5 – Buildings
- Chapter 5.5 - Chesapeake Bay Preservation
- Chapter 6 – Stormwater Management
- Chapter 7.5 – Erosion and Sediment Control
- Chapter 8.5 – Floodplain Management
- Chapter 15 – Subdivisions
- Chapter 19 – Water, Sewers and Sewage
- Chapter 20 – Wetlands Zoning Ordinance
- Chapter 20.5 – Coastal Primary Sand Dune Zoning Ordinance
- Appendix B - Zoning

*Commonwealth Regulation Requirements of:*

- Virginia Department of Transportation
- Virginia Department of Health

The following listing is provided to assist applicants/developers to provide a complete site plan package by highlighting major components of a site plan. Applicants are encouraged to review each ordinance referenced and confer with representatives from each referenced department/agency. Please check that each item has been provided/incorporated. Requirements are organized into subsections administered by independent County Departments and Commonwealth Agencies:

Site Plan Coordination (Chapter 15.5 – Site Plans); contact (804) 824-2458; visit the Community Development webpage for detailed information on the Site Plan process and links to all development related department web pages: <http://www.gloucesterva.info/CommunityDevelopment> :

- Site Plan application which can be found at:  
<http://gloucesterva.info/CommunityDevelopment/CommercialSitePlans/tabid/572/Default.aspx>
- Site plan application fee of \$500.00 plus \$50.00 per acre or fraction thereof
- Eleven (11) Sets of the complete site plan drawings signed and sealed by the licensed design professional having responsible charge for preparing the plans (original signature on cover sheet)
- Provide a narrative description of the existing site conditions and proposed project
- Include on the cover sheet the current zoning, tax map #, parcel # (RPC), and address (if applicable) of the property clearly identified on the cover sheet
- Identify within the site plan the existing and proposed site conditions per County Ordinance chapter 15.5, sections 2.2 and 2.3
- Identify within the site plan existing and proposed buildings depicted with the floor area (square footage) and existing and proposed uses. Identify the location of existing and proposed defined exterior areas (storage, display, seating)
- When resubmitting in response to review comments provide a narrative response to comments directing reviewers' attention to the reason for and location of revisions resulting from each review comment.

Building Inspections (Chapter 5 – Buildings & Chapter 8.5 - Floodplain Management); contact (804) 693-2744:

- Demonstrate that the proposed buildings and site development meet applicable building code requirements including exterior accessibility requirements
- Demonstrate that where necessary the building is served by a fire suppression sprinkler system and identify the location of source water and fire department connection
- Identify the limits of the 100-year floodplain if present at the site and the delineation between different flood zones (AE, VE, etc.) if present

Environmental Programs (Chapter 5.5 – Chesapeake Bay Preservation, Chapter 6 – Stormwater Management, Chapter 7.5 – Erosion and Sediment Control, Chapter 20, Wetlands Zoning Ordinance, & Chapter 20.5 – Coastal Primary Sand Dune Zoning Ordinance); contact (804) 693-1217:

- Provide Stormwater Management & Erosion and Sediment Control plan and detail sheets and supporting documents in accordance with the VSMP Administrative Guidance Manual (AGM) and its incorporated Checklist. The AGM, checklist, and completeness documents can be accessed by selecting the “Stormwater” page here: <http://gloucesterva.info/EnvironmentalPrograms> Highlights of items required by this document include the following:

- Plan and detail sheets incorporating the requirements of the AGM including the following
  - Clearly identify on the cover sheet of the site plan submittal the total surface area of site disturbance
  - Provide US Army Corps of Engineers wetland delineation where there are onsite wetland indicators and show extent on the site plan
  - Identify all Resource Protection Areas and Resource Management Areas and show their extent on the site plan
- VSMP Runoff Reduction Method Spreadsheets V.3 in their native Microsoft Excel file format and printed on a sheet or sheets of the site plan
- VSMP General Permit Registration Statement and payment of first half of requisite fee at time of application (second half of fee is due at time of disturbance permit issuance)
- Erosion and Sediment Control and Stormwater Management Surety estimate prior to VSMP permit approval. Incorporate the surety amount on the site plan sheet notes
- A BMP Maintenance Agreement developed in cooperation with the Environmental Programs Department. The agreement must be properly recorded in the Circuit Court Clerk's office prior to permit issuance
- A Pollution Prevention Plan (P2) that is retained onsite during the project
- Geotechnical supporting material

Planning & Zoning (Appendix B – Zoning) contact (804) 693-1224:

- Identify zoning district(s) for property and adjacent parcels
- Identify all special requirements associated with the property (Special Exception, Conditional Use Permit, Rezoning Proffers, etc.)
- Identify Parking plan meeting the requirements of Article 11 of the zoning ordinance including a clear accounting of parking spaces required and provided as well as the required parking area landscape plan
- When the project is located within the Highway Corridor Development District (HCDD) clearly identify how the project meets the requirements of Article 6A of the Zoning Ordinance
- Where nonresidential uses are proposed to abut a residential district, provide a perimeter landscaping plan in accordance with Article 9, Section 9-8 (Supplementary district regulations) of the zoning ordinance
- Show the location of free-standing signs on the site plan, however note that a separate sign permit application will be required for both free-standing and on-structure signs in accordance with Article 12 of the Zoning Ordinance. An application for a sign permit can be found on the Planning and Zoning website on the "Forms & Policies" page: <http://gloucesterva.info/PlanningandZoning>

Public Utilities (Chapter 19 – Water, Sewers and Sewerage); (804) 693-4044:

- Incorporate Water & Sewage system plan, profile, and detail sheets in accordance with Chapter 19 (Water, Sewers, & Sewage) of the Gloucester county ordinance, the Public Utilities *Water and Sewer Design and Construction Standards*, and the Hampton Roads Planning District Commission *Regional Construction Standards*.
- Provide a hydrant flow study/analysis when requested by the Director of Public Utilities per the requirements of County Ordinance Section 19-126(d)
- The Public Utilities Department will serve as a liaison between the applicant/designer and the following entities. Requirements imposed by these entities must be incorporated into the site plan for the project
  - Hampton Roads Sanitation District (HRSD) who must review the plan if a direct connection to an HRSD force main is proposed and who must review a Flow Acceptance Letter if a direct connection to an HRSD or County force main is proposed  
<http://www.hrsd.com/FlowAcceptance.shtml>
  - Virginia Department of Health, Office of Drinking Water (VDH-ODW) who must review and permit extensions of the County's water supply system:  
<http://www.vdh.virginia.gov/ODW/PermitandDesign.htm>
  - Virginia Department of Environmental Quality (VDEQ) who must review and approve proposed sewerage pump stations and issue a "Certificate to Construct Wastewater Improvements"  
<http://www.deq.virginia.gov/Programs/Water/WastewaterEngineering/RegulationsCertificates.aspx>

Virginia Department of Health; 804-693-6130:

- Provide a sanitary survey for the proposed area of disturbance and areas located within 200 feet of proposed area of disturbance and identify the location of wells and septic systems (or the distances thereto when located off site) on the site plan

Virginia Department of Transportation; 804-761-2148:

- Connections to public roads and new roads (whether public or private) must meet the requirements of VDOT's Road Design Manual  
[http://www.extranet.vdot.state.va.us/locdes/Electronic\\_Pubs/2005%20RDM/roaddesigncovervol.1.pdf](http://www.extranet.vdot.state.va.us/locdes/Electronic_Pubs/2005%20RDM/roaddesigncovervol.1.pdf) Provide the following to show compliance with the Road Design Manual:
  - Completed VDOT Submittal checklist (attached)
  - Completed VDOT Development Plan checklist (attached)
  - Completed VDOT Hydraulic Calculations checklist (attached)



## SUBMITTAL CHECKLIST

Project Name: \_\_\_\_\_

Connecting Roadway Name/Route Number: \_\_\_\_\_

County: \_\_\_\_\_ County Project Number: \_\_\_\_\_

Submittal Number: \_\_\_\_\_ Date of Submittal: \_\_\_\_\_ Date Received (VDOT Use): \_\_\_\_\_

Plan Designer: \_\_\_\_\_ Plan Designer Phone Number: \_\_\_\_\_

Plan Designer Address: \_\_\_\_\_

		Check Box	If Check Box is left unchecked, provide explanation below
<b>Submittal Narrative</b>	Total of (____) copies including a detailed description of project. Include proposed use, proposed trip generation, number of lots, etc. If resubmittal, include responses to review comments.	<input type="checkbox"/>	
<b>Development Plan</b>	Total of (____) copies development and/or site plan as applicable	<input type="checkbox"/>	
<b>Traffic Management Plan</b>	Total of (____) copies. Note in the space to the right if included in Development/Site Plan.	<input type="checkbox"/>	
<b>Hydraulic Calculations</b>	Total of (____) bound copies including summary of results, all applicable calculations, Drainage Area Maps be included in Development Plan	<input type="checkbox"/>	
<b>Erosion and Sediment Control Plan</b>	Total of (____) copies including E&SC narrative, E&SC measures in plan view, appropriate VDOT E&SC details. May be included as part of Development Plan.	<input type="checkbox"/>	
<b>Geotechnical Report</b>	Total of (____) bound copies, as applicable	<input type="checkbox"/>	
<b>Pavement Design Calculations</b>	Total of (____) bound copies shall be submitted in accordance with the current Pavement Design Guide for Subdivision and Secondary Roads in Virginia. May be included in Development/Site Plan.	<input type="checkbox"/>	
<b>Traffic Analysis</b>	Total of (____) bound copies including functional classification of roadways, existing AADT, ITE Code, Trip Generation Report, Turn Lane and Taper Warrant Analysis, and Intersection Analysis, as applicable. In addition, digital copy of any traffic analyses to be provided.	<input type="checkbox"/>	
<b>Waivers/ Exceptions</b>	Total of (____) appropriate forms. Appropriate form(s) signed, sealed, and completed in its entirety. Include index listing the form(s) and all attachments.	<input type="checkbox"/>	
<b>Locally Required Checklists</b>	Plan designer acknowledges local VDOT Land Use requirements concerning required area specific checklists	<input type="checkbox"/>	

**I hereby certify to the best of my knowledge that the information shown on this checklist, any referenced checklist or any locally required checklists is included in the submitted plans and attachments.**

Plan Designer Signature: \_\_\_\_\_

License Number: \_\_\_\_\_



Project Name: \_\_\_\_\_ Date of Submittal: \_\_\_\_\_ Plan Designer: \_\_\_\_\_

<b>DEVELOPMENT PLAN</b>		Check Box	Sheet Number	If Check Box is left unchecked, provide explanation below
<b>1.0 GENERAL</b>				
1.1	Additional information as required by specific Land Use Section	<input type="checkbox"/>		
1.2	All sheets to include sheet number (Sheet ___ of ___)	<input type="checkbox"/>		
1.3	Seal and signature on each sheet by a professional engineer or land surveyor, or clearly marked "Preliminary"	<input type="checkbox"/>		
1.4	All plan/profile sheets to include a graphic scale (horizontal - 1" = 50' or larger; vertical - 1" = 5' or larger)	<input type="checkbox"/>		
1.5	All sheets to include date of plan preparation.	<input type="checkbox"/>		
1.6	All sheets to include revision date(s).	<input type="checkbox"/>		
1.7	All sheets to include a title block that has at a minimum the title of the project.	<input type="checkbox"/>		
<b>2.0 COVER SHEET</b>				
2.1	Name of development and phase/block as applicable.	<input type="checkbox"/>		
2.2	Seal and signature by a professional engineer or land surveyor, or clearly marked "Preliminary"	<input type="checkbox"/>		
2.3	Title block including Owner/Developer Name, telephone number, address, e-mail; Engineer Name, telephone number, address, e-mail.	<input type="checkbox"/>		
2.4	Parcel identification including legal reference, tax map number(s), present zoning, total acreage, County, and magisterial district.	<input type="checkbox"/>		
2.5	Plan sheet index.	<input type="checkbox"/>		
2.6	Vicinity map (1" = 2,000') with north arrow.	<input type="checkbox"/>		
2.7	Reference of all previously approved master plans, waivers, variances, rezonings or proffers approved for this site including date of approval, approving entity, and zoning reference number. Location of this information may vary per locality.	<input type="checkbox"/>		
2.8	Latitude and longitude of connection to all VDOT maintained roadways.	<input type="checkbox"/>		
2.9	Tabulation of total number of lots/units to account for the total site acreage.	<input type="checkbox"/>		
2.10	VDOT Standard Notes. May be on Sheet 2.	<input type="checkbox"/>		
2.11	Plan Legend. May be on Sheet 2.	<input type="checkbox"/>		
<b>3.0 PLAN SHEETS</b>				
3.1	Survey and mapping control information including north arrow, benchmark, datum, elevations, and connection distance to nearest intersection of a state route or commercial entrance.	<input type="checkbox"/>		
3.2	Parcel information for development and adjacent parcels including tax map numbers, owners' names, present zoning.	<input type="checkbox"/>		

3.3	Existing and proposed contours with differing and distinguishable line types at a maximum of 5' intervals.	<input type="checkbox"/>		
3.4	Elevation labels for index contours. Minimum of 2 labels per index contour.	<input type="checkbox"/>		
3.5	Proposed street names.	<input type="checkbox"/>		
3.6	Road names and route numbers of all existing VDOT maintained roadways that are being connected to with the development.	<input type="checkbox"/>		
3.7	Posted or regulatory speed limit of all existing VDOT maintained roadways that are being connected to with the development.	<input type="checkbox"/>		
3.8	Design speed for proposed roadways.	<input type="checkbox"/>		
3.9	Clearly identified site layout including lot numbers and acreage.	<input type="checkbox"/>		
3.10	Clearly label all existing and proposed right-of-way, including width.	<input type="checkbox"/>		
3.11	Clearly label existing and proposed edge of pavement, roadway centerline, roadway width, curb type, storm structures, signage as appropriate, existing and proposed utilities within existing and proposed right-of-way.	<input type="checkbox"/>		
3.12	Clearly label radius of all intersection returns measured from face of curb or edge of pavement as appropriate.	<input type="checkbox"/>		
3.13	Clearly label the angle between road centerlines at each skew intersection.	<input type="checkbox"/>		
3.14	Clearly label the angle between each upstream pipe and downstream pipe at each drainage structure as applicable.	<input type="checkbox"/>		
3.15	Clearly label all roadway centerline radii.	<input type="checkbox"/>		
3.16	Clearly label the distance to the nearest state route intersection, commercial entrance, or cross-over on each side of the proposed street connection measured to the nearest foot center to center	<input type="checkbox"/>		
3.17	Clearly label all existing and proposed turn lane and taper widths and lengths.	<input type="checkbox"/>		
3.18	Provide stations tick marks and labels at 100 foot intervals along the roadway centerline and at points of curvature and tangent, intersections, section limits, and turnarounds. Provide tick marks only at each intermediate 50 foot station.	<input type="checkbox"/>		
3.19	Clearly identify all existing and proposed easements within or immediately adjacent to State maintained right-of-way. Include use, legal reference, and bearings and distances.	<input type="checkbox"/>		
3.20	Clearly identify all roadways to remain privately maintained	<input type="checkbox"/>		
3.21	For on-street parking on one side only, clearly identify side of street parking will be located including location of No Parking Signs.	<input type="checkbox"/>		
3.22	Show intersection sight line triangles at each intersection. Include available sight distance, offset from edge of travel way, centerline offset, and sight line profiles.	<input type="checkbox"/>		
<b>4.0 PROFILE SHEETS</b>				
4.1	Clearly label existing and proposed elevations at 25 foot interval.	<input type="checkbox"/>		
4.2	Design Speed of proposed roadway	<input type="checkbox"/>		
4.3	Existing grade line at roadway centerline	<input type="checkbox"/>		
4.4	Finished grade line of centerline, mainline and connections	<input type="checkbox"/>		

4.5	Percent grade of centerline, elevation and station of PVI, PVC, and PVT, Length of vertical curve, and K value of vertical curve	<input type="checkbox"/>		
4.6	Provide adequate landing at each intersection as defined in Appendix B or B(1) as applicable in the VDOT Road Design Manual.	<input type="checkbox"/>		
4.7	Station and finished elevation of high point (crest) and low point (sag)	<input type="checkbox"/>		
4.8	Stations on profiles in agreement with stations on plan view	<input type="checkbox"/>		
4.9	Invert elevations (In and Out), type of structure, and rim elevations for storm sewer structures	<input type="checkbox"/>		
4.10	Pipe material, diameter, length, and slope for storm sewer	<input type="checkbox"/>		
4.11	Show sanitary sewer, waterline, and storm sewer crossings to scale and at correct invert elevation at the centerline of roadway	<input type="checkbox"/>		
4.12	Profile and grade for outfall channels shown and/or special channels	<input type="checkbox"/>		
4.13	Show HGL of the governing design storm at each storm structure	<input type="checkbox"/>		
4.14	Sight line, available sight distance, height of eye (3.5') and height of object (3.5' feet intersection sight distance, 2' stopping sight distance) for sight distance profiles	<input type="checkbox"/>		
4.15	Location, finished elevation, and station of cross-street intersections	<input type="checkbox"/>		
<b>5.0 DETAILS</b>				
5.1	Standard details from current versions of Road Design Manual, Road and Bridge Standards, VDOT Drainage Manual, etc. as appropriate and required by local Land Development office.	<input type="checkbox"/>		
5.2	Details showing method of connecting to existing storm sewer structures	<input type="checkbox"/>		
5.3	Detail showing roadway layout with ADT of each roadway labeled	<input type="checkbox"/>		
5.4	Include potential ADT of adjacent parcels at stub streets based on potential density of existing zoning	<input type="checkbox"/>		
5.5	Provide structure schedule including top elevation, invert in/out elevation, structure type, inlet length as appropriate, height of structure, hydraulic grade line elevation for each structure	<input type="checkbox"/>		
5.6	Provide pipe schedule including material, diameter, upstream/downstream invert elevation, grade	<input type="checkbox"/>		
<b>6.0 ROADWAY TYPICAL SECTION</b>				
6.1	Pavement structure including thickness and material of each layer shown graphically	<input type="checkbox"/>		
6.2	Width of each travel lane from edge of pavement to edge of pavement	<input type="checkbox"/>		
6.3	Width of each bicycle lane as appropriate	<input type="checkbox"/>		
6.4	Curb and gutter type as applicable, labeled and shown graphically	<input type="checkbox"/>		
6.5	Shoulder cross-slope and width as applicable shown graphically	<input type="checkbox"/>		
6.6	Roadside ditch typical section as applicable shown graphically	<input type="checkbox"/>		
6.7	Sidewalk width and cross-slope as applicable shown graphically	<input type="checkbox"/>		
6.8	Buffer width and cross-slope between back of curb and sidewalk as applicable	<input type="checkbox"/>		



6.9	Street tree graphically shown with dimension to back of curb as applicable	<input type="checkbox"/>		
6.10	Location and width of proposed right-of-way lines	<input type="checkbox"/>		
6.11	Show clear zone as defined in Appendix A of the Road Design Manual	<input type="checkbox"/>		
6.12	Clearly label road name with applicable typical section	<input type="checkbox"/>		
6.13	Clearly identify roadway design speed	<input type="checkbox"/>		
6.14	Clearly label design standard used (SSAR or appropriate GS)	<input type="checkbox"/>		
6.15	Clearly label whether there will be on-street parking (one side, both sides, or none)	<input type="checkbox"/>		
<b>7.0 MAINTENANCE OF TRAFFIC (MOT)</b>				
7.1	Appropriate TTCs from the current version of the Virginia Work Area Protection Manual	<input type="checkbox"/>		
7.2	Regulatory speed limit of roadway	<input type="checkbox"/>		
7.3	Locations of channelizing devices and signage shown to scale and in plan view in accordance with appropriate TTC	<input type="checkbox"/>		
7.4	Certification and signature of MOT plan preparer	<input type="checkbox"/>		
7.5	Lane width(s) and number of travel lane(s) and turn lane(s) to be maintained	<input type="checkbox"/>		
7.6	Identify all detour/alternate routes	<input type="checkbox"/>		
7.7	List allowable work activity hours	<input type="checkbox"/>		
7.8	Clearly show access to all businesses and private dwellings	<input type="checkbox"/>		
7.9	Provide note with contact information for Transportation Operations Center (TOC) and incident management	<input type="checkbox"/>		
7.10	Provide note indicating requirement for TOC to be contacted prior to any lane closure	<input type="checkbox"/>		
7.11	MOT has been prepared in accordance with the VA Work Area Protection Manual and IIM-LD-241.5	<input type="checkbox"/>		
<b>8.0 DRAINAGE PROFILES</b>				
8.1	Existing grade line at storm sewer/ditch centerline.	<input type="checkbox"/>		
8.2	Finished grade line of centerline at storm sewer/ditch centerline.	<input type="checkbox"/>		
8.3	Stations on profiles in agreement with stations of storm sewer/ditch on plan view. Note, stationing for storm sewer/ditch typically different than stationing for road centerline.	<input type="checkbox"/>		
8.4	Invert elevations (In and Out), type of structure, and rim elevations for storm sewer structures.	<input type="checkbox"/>		
8.5	Clearly indicate "From" structure for each Invert In and "To" structure for each Invert Out at each storm structure.	<input type="checkbox"/>		
8.6	Pipe material, diameter, length, and slope for storm sewer/culverts.	<input type="checkbox"/>		
8.7	Show sanitary sewer, waterline, and any known utility crossings to scale and at correct invert elevation at the centerline of storm sewer/ditch.	<input type="checkbox"/>		
8.8	Show HGL of the governing design storm at each storm structure.	<input type="checkbox"/>		
8.9	Show grade/grade break of ditch centerline for each section of grade change.	<input type="checkbox"/>		
8.10	Show station of each grade break on ditch centerline.	<input type="checkbox"/>		

8.11	Show clearance between storm sewer/ditch centerline for each crossing utility as applicable.	<input type="checkbox"/>		
8.12	Show minimum cover for each section of storm sewer as applicable.	<input type="checkbox"/>		
<b>9.0 EROSION AND SEDIMENT CONTROL</b>				
9.1	Narrative with description of project including, but not excluded to erosion/drainage impact to existing and/or proposed public right-of-way	<input type="checkbox"/>		
9.2	Description of E&SC measures proposed in existing and/or proposed public right-of-way. Description should include installation, maintenance, and removal procedures for each measure.	<input type="checkbox"/>		
9.3	Legend of E&SC measure symbols.	<input type="checkbox"/>		
9.4	Location of E&SC measures shown in plan view.	<input type="checkbox"/>		
9.5	VDOT standard details for E&SC measures.	<input type="checkbox"/>		
9.6	Drainage map showing offsite runoff that flows to existing and/or proposed right-of-way.	<input type="checkbox"/>		
<b>10.0 PAVEMENT MARKING AND SIGNAGE PLAN</b>				
10.1	Locations shown in plan view, to scale, of all pavement markings including, but not excluded to Stop Bars, Edge Striping, Skips, Directional Arrows, Sharrows, Bike Lanes, Crosswalks, Stop Signs, No Parking Signs, Speed Limit Signs, Advisory Signs, School Zone Signs, End of State Maintenance, etc.	<input type="checkbox"/>		
10.2	All markings and appropriate signage have been shown in accordance with the current version of the MUTCD and/or the Virginia Supplement to the MUTCD. Individual signs should have MUTCD sign label reference included on the plan.	<input type="checkbox"/>		
10.3	Regional Traffic Operations may have additional requirements	<input type="checkbox"/>		

Project Name: \_\_\_\_\_ Date of Submittal: \_\_\_\_\_ Plan Designer: \_\_\_\_\_

<b>HYDRAULIC CALCULATIONS</b>		Check Box	Sheet Number	If Check Box is left unchecked, provide explanation below
<b>1.0 GENERAL</b>				
<b>1.1</b>	Additional information as required by specific Land Use Section	<input type="checkbox"/>		
<b>2.0 DRAINAGE MAP</b>				
<b>2.1</b>	Provide a scaled map delineating the subareas draining to each inlet and/or hydraulic analysis point. Include all off-site areas draining to proposed storm drainage system within dedicated right-of-way. Note, drainage subareas to be based on actual total <b>drainage area rather than drainage area on site.</b>	<input type="checkbox"/>		
<b>2.2</b>	Provide on map "C-value" or "CN – value" as appropriate that is used for each drainage subarea.	<input type="checkbox"/>		
<b>2.3</b>	Provide area (in acres) of each drainage subarea.	<input type="checkbox"/>		
<b>2.4</b>	Provide time of concentration for each drainage subarea.	<input type="checkbox"/>		
<b>2.5</b>	Provide existing and proposed contours for each drainage subarea.	<input type="checkbox"/>		
<b>2.6</b>	Provide typical section roadside ditches as appropriate including lining, side slopes, depth of ditch, width of bottom if not a V-ditch.	<input type="checkbox"/>		
<b>3.0 DRAINAGE PROFILES IF NOT INCLUDED IN DEVELOPMENT PLAN</b>				
<b>3.1</b>	Sheet number (Sheet __ of __)	<input type="checkbox"/>		
<b>3.2</b>	Seal and signature on each sheet by a professional engineer or land surveyor, or clearly marked "Preliminary"	<input type="checkbox"/>		
<b>3.3</b>	Graphic Scale: 1" = 50' or larger horizontal; 1" = 5' or larger vertical	<input type="checkbox"/>		
<b>3.4</b>	Existing grade line at storm sewer/ditch centerline.	<input type="checkbox"/>		
<b>3.5</b>	Finished grade line of centerline at storm sewer/ditch centerline.	<input type="checkbox"/>		
<b>3.6</b>	Stations on profiles in agreement with stations of storm sewer/ditch on plan view. Note, stationing for storm sewer/ditch typically different than stationing for road centerline.	<input type="checkbox"/>		
<b>3.7</b>	Invert elevations (In and Out), type of structure, and rim elevations for storm sewer structures.	<input type="checkbox"/>		
<b>3.8</b>	Clearly indicate "From" structure for each Invert In and "To" structure for each Invert Out at each storm structure.	<input type="checkbox"/>		
<b>3.9</b>	Pipe material, diameter, length, and slope for storm sewer/culverts.	<input type="checkbox"/>		
<b>3.10</b>	Show sanitary sewer, waterline, and any known utility crossings to scale and at correct invert elevation at the centerline of storm sewer/ditch.	<input type="checkbox"/>		
<b>3.11</b>	Show HGL of the governing design storm at each storm structure.	<input type="checkbox"/>		
<b>3.12</b>	Show grade/grade break of ditch centerline for each section of grade change.	<input type="checkbox"/>		
<b>3.13</b>	Show station of each grade break on ditch centerline.	<input type="checkbox"/>		

3.14	Show clearance between storm sewer/ditch centerline for each crossing utility as applicable.	<input type="checkbox"/>		
3.15	Show minimum cover for each section of storm sewer as applicable.	<input type="checkbox"/>		
<b>4.0 HYDRAULIC CALCULATIONS</b>				
4.1	Calculations sealed and signed by professional engineer	<input type="checkbox"/>		
4.2	If calculations provided in booklet rather than on plans, each page to be: 1) Numbered 2) Include project name 3) Include date of calculation	<input type="checkbox"/>		
4.3	Provide summary table indicating "C-value/RCN-value", area, time of concentration, design storm intensity, peak 2-year, 10-year, 25-year, 100-year runoff, hydraulic grade line elevation for appropriate storm for each inlet and/or analysis point subarea.	<input type="checkbox"/>		
4.4	Clearly indicate appropriate design storm	<input type="checkbox"/>		
4.5	Provide available capacity of each section of storm sewer/culvert and/or ditch as applicable	<input type="checkbox"/>		
4.6	Provide water velocity in each section of storm sewer/culvert and/or ditch based on design storm	<input type="checkbox"/>		
4.7	Provide material and roughness coefficient for each section of storm sewer/culvert and/or ditch as applicable	<input type="checkbox"/>		
4.8	Provide final grade of each section of storm sewer/culvert and/or ditch as applicable	<input type="checkbox"/>		
4.9	Provide diameter of each section of storm sewer/culvert	<input type="checkbox"/>		
4.10	Provide upstream and downstream invert elevation of each section of storm sewer as applicable	<input type="checkbox"/>		
4.11	Provide structure from and structure to for each section of storm sewer as applicable	<input type="checkbox"/>		
4.12	Provide dimensions and number of barrels for each box culvert as applicable	<input type="checkbox"/>		
4.13	Provide side slopes, base width, lining, and depth of each section of ditch as applicable	<input type="checkbox"/>		
4.14	Provide structure type	<input type="checkbox"/>		
4.15	Identify whether inlet is on grade or in sag	<input type="checkbox"/>		
4.16	Provide inlet length	<input type="checkbox"/>		
4.17	Provide curb type	<input type="checkbox"/>		
4.18	Provide spread width based on design storm	<input type="checkbox"/>		
4.19	Provide water depth in curb or ditch at inlet/analysis point as applicable	<input type="checkbox"/>		
4.20	Provide hydraulic grade line elevation at each inlet based on design storm	<input type="checkbox"/>		
4.21	Provide tailwater elevation based on design storm or 0.8 times the diameter if actual elevation is unknown.	<input type="checkbox"/>		
4.22	LD-204 – "Stormwater Inlet Computation" (or equivalent) as applicable.	<input type="checkbox"/>		
4.23	LD-229 - "Storm Sewer Design Computations" (or equivalent) as applicable.	<input type="checkbox"/>		
4.24	LD-347 – "Hydraulic Grade Line" (or equivalent) as applicable.	<input type="checkbox"/>		