

Sketch Plan Infrastructure Checklist

Subdivision Name: _____

Subdivision No.: _____ Project No.: _____

SKETCH PROCESS PLANS (Article 17, Subtitle 2, section 201.c) These requirements apply to private and public infrastructure except where noted otherwise. In addition to the items listed in the Code and referenced in the Sketch Plan Checklist, the following items will be shown on the utility plans:

Plans – General

- _____ (1) Engineer's seal, signature and date
- _____ (2) North arrow and datum
- _____ (3) Centerline stationing
- _____ (4) All floodplain limits shown (floodplains are not approximate).
- _____ (5) Road names provided, and are consistent with road plans.
- _____ (6) Locate and dimension proposed easements.
- _____ (7) Show significant existing and proposed features, i.e. swales, streams, stormwater management facilities, wetlands, woods, etc.
- _____ (8) For Commercial Development, evaluate service to surrounding properties in determining whether onsite utilities will be public or private.
- _____ (9) For Commercial and Residential Development, evaluate need or requirement to extend water and/or sewer to neighboring properties. Consider:
 - _____ (9a) Water and sewer service areas per Water and Sewer Master Plan
 - _____ (9b) Topography relative to meeting minimum depth of cover and ability to provide gravity or pressure sewer.
 - _____ (9c) Evaluate looping of water mains

Water and Sewer Plans

- _____ (1) Existing and proposed sewer lines and water lines, valves, and appurtenances are located and labeled. Call out pipe diameter and material.
- _____ (2) Label proposed utilities as public or private. Show limits if both public and private utilities are proposed.
- _____ (3) Existing and proposed manholes are located and labeled. Provide proposed inverts, pipe material, sewer lateral locations.
- _____ (4) Existing and proposed fire hydrants and coverages are located and labeled.
- _____ (5) County record drawings referenced at points of connection to existing utilities.
- _____ (6) Arc radii of curvatures along property lines if water main is cramped.
- _____ (7) Proposed utilities accented in heavy, bold line.
- _____ (8) Proposed sewer services to be 10 feet minimum distance from existing or proposed water connections.
- _____ (9) Proposed sewer will be four feet from existing edge of pavement in existing condition without curbs.
- _____ (10) House sewer connections shown for all lots with typical house connection detail. Show size and material of pipe.
- _____ (11) Water and sewer mains, as appropriate, extended through frontage in accordance with Anne Arundel County Water and Sewer Master Plan.
- _____ (12) Identify locations for grinder pumps and mayo tanks (submit Sewer Study per Sewer Study Policy). Show easement and location of service valve assembly. Provide preliminary grinder pump data: invert and depth. Label public or private.
- _____ (13) Provide first floor elevations.

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Road and Storm Drain Plans

- _____ (1) Proposed road improvements
- _____ (2) Show existing and proposed ROW. Label ROW width; label public or private
- _____ (3) Existing surface features including poles, fences, buildings, driveways, hydrants, etc.
- _____ (4) Show existing grades at least 100' beyond ROW lines and 200' beyond ends of traffic ways or limit of disturbance
- _____ (5) Show existing pavement
- _____ (6) Horizontal curves for proposed roads
- _____ (5a) Radius
- _____ (5b) Arc length
- _____ (5c) Chord bearing
- _____ (5d) Chord length
- _____ (5e) PC and PT for all curb returns
- _____ (5f) Horizontal curves meet design speed requirements
- _____ (7) Cul de sacs
- _____ (7a) Length
- _____ (7b) Type
- _____ (7c) Slope within cul-de-sac by flow arrows and labeled
- _____ (8) Storm Drains
- _____ (8a) Label proposed location of storm pipes, inlets
- _____ (8b) Label pipe diameter, slope, invert and material.

SKETCH PROCESS VERTICAL INFORMATION

- _____ (1) Profiles provided for all offsite work – water, sewer, storm drain extensions and tie-ins of proposed utilities to existing utilities; road improvements.
Storm drain – if average slope across site is greater than or equal to 2% then profile is required. No flow tab required. Design professionals and review engineers to focus on
- _____ (2) the total flow to the point(s) of management and the determination of acceptable outfall, which is covered with the SWM criteria. SWM sizing calculations to support the gross sizing of proposed BMPs.
- _____ (3) Roads – public and private roads must meet the requirements of the Design Manual.
- _____ (3a) Where a public road cannot meet the Design Manual criteria – a modification must be requested from DPW via OPZ.
- _____ (3b) Where a private road cannot meet the Design Manual criteria – a modification must be requested from OPZ.
- _____ (4) Profiles may be necessary for OPZ and DPW to adequately review a modification request.
OPZ urges the design professional to determine at Sketch Plan phase whether or not a
- _____ (5) modification will be necessary so that this may be addressed with Sketch as opposed to Final Plan phase.
- _____ (6) Water – No vertical information to be provided. The assumption will be that at least a minimum 4-foot depth of cover over the water pipe will be maintained.
- _____ (7) Sewer – if average slope across site is greater than or equal to 2%, then profile will not be required. The responsibility for determining the need for gravity or pressure sewer will lie with the design professional.
- _____ (8) The Office of Planning and Zoning reserves the right to request additional design information, including calculations and profiles, to determine the feasibility of a design.

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PRELIMINARY STORMWATER MANAGEMENT REQUIREMENTS In addition to current County Policies and Procedures Manual, Chapter 3

- _____ (1) Address all five sizing criteria with computations to support preliminary sizing
- _____ (2) Provide preliminary TR-55 (pre and post development) and TR-20 for pond sizing
- _____ (3) Drainage area map for both pre and post development drainage areas
- _____ (4) Preliminary outfall analysis including photographic walking tour and cross sections
Geotechnical report – to support the basis of design per State Manual requirements for
- _____ (5) specific device (i.e. if proposing infiltration, then consultant needs to provide
geotechnical data showing that infiltration is feasible.).
- _____ (6) Floodplain determination – need to establish floodplain limit using HEC-2 or HEC-
RAS. Preliminary floodplain boundaries will not be accepted.
Provide an Environmental Conservation Plan with features as listed in County’s
- _____ (7) Stormwater Policies and Procedures Manual. Steep slopes are included as a primary
feature, since a modification is required for steep slope disturbance.
SWM Ponds – provide cross section through entire pond including embankments;
- _____ (8) provide cross section of pond, spillway and riser structure with orifice dimension
labeled. Show access ramp location, width.

ADDITIONAL ITEMS

- _____ (1) SWAMP analysis and EDU worksheet
- _____ (2) If necessary, sewer study (9 copies) per OPZ sewer study policy for grinder pumps
- _____ (3) Traffic Impact Study per Article 17 Title 5 Subtitle 4.

Owner/Agent

Date