City of Aberdeen
Engineering Department
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Condensed Drainage Submittal - Requirements Guide

Overview of Condensed Drainage Submittal:

The Condensed Drainage Submittal is created to address Minimum Technical Requirements #1 through #5 found in Volume I-3.4 of the 2019 Stormwater Management Manual for Western Washington (SWMMWW). A link to the online, interactive SWMMWW is provided here:

https://fortress.wa.gov/ecy/ezshare/wq/Permits/Flare/2019SWMMWW/2019SWMMWW.htm

This guide explains the elements of the submittal and provides a checklist of all required components.

A Condensed Drainage Submittal is required when the proposed project produces between 2,000 and 4,999 square feet of new plus replaced hard surface area, ***or***, involves more than 7,000 square feet of land disturbing activity. Please refer to the Glossary in the SWMMWW for definitions and terminology explanation. The City has adopted the most current version of the SWMMWW as its stormwater design standards and guidance document. All proposed projects shall adhere to the SWMMWW in the design and construction of stormwater improvements.

Condensed Drainage Submittal – Submittal Items:

The following submittal items are required as part of the Condensed Drainage Plan:

1) **Site Development Plan(s)**
   Site development drawings generally contain all the applicable information essential for construction of a project. This may include applicable drainage, grading, erosion and sediment control, and topographic survey information, as well as any applicable notes or details. The minimum drawing requirements checklist is provided with this guide to verify that all submitted drawings contain the necessary information for the City's stormwater review.

2) **Project Narrative and Design Calculations**
   The Condensed Drainage Plan shall include a comprehensive narrative of the proposed project, explaining how the project complies with applicable stormwater requirements. A complete narrative should address the minimum technical requirements #1 through #5.

- Minimum Requirement #1 – Preparation of Stormwater Site Plans
- Minimum Requirement #2 – Construction Stormwater Pollution Prevention Plan
- Minimum Requirement #3 – Source Control of Pollution
- Minimum Requirement #4 – Preservation of Natural Drainage Systems and Outfalls
- Minimum Requirement #5 – On-Site Stormwater Management

The narrative shall provide written justification for the proposed Best Management Practices (BMPs) selected to meet Minimum Requirement #5 - On-Site Stormwater Management. If it is determined that the preferred BMPs are "infeasible" for the project site, a detailed explanation is required stating why it was determined infeasible. The written narrative shall also provide calculations related to sizing stormwater BMPs or conveyance systems, analyses of site conditions, documentation of infeasibility issues, etc.

If the applicant uses the Low Impact Development (LID) performance standard option of Minimum Requirement #5 – On-Site Stormwater Management, they shall provide design details of all BMPs that are used to help achieve the standard, and a complete computer model report including input files and output files. Projects choosing to meet Minimum Requirement #5 by using the LID prescriptive list option must provide design details for all BMPs, discussion of BMP feasibility and a calculation sheet for sizing chosen BMPs.

3) Construction Stormwater Pollution Prevention Plan

All land disturbing activities and projects creating hard surfaces are required to address stormwater runoff from construction areas. Sediment from soil erosion, concrete waste, spills, and other construction materials that may enter stormwater are considered pollutants and must be contained on-site. A Construction Stormwater Pollution Prevention Plan (CSWPPP) outlines the essential procedures for correctly managing stormwater during construction. Applicants preparing a Condensed Drainage Submittal must complete the Standard City of Aberdeen Construction Stormwater Pollution Prevention Plan form and include all erosion and sediment control BMP locations on the submitted Site Plan to satisfy Minimum Requirement #2.

Additional items may be required at the discretion of the Engineering, Building, and Community Development Departments. Additional submittals may include landscape plan, ROW development plan, critical areas report, environmental assessments, frontage improvement plans, or utility plan.

4) Soils Report (if applicable)

If the project includes stormwater management LID BMPs that are reliant on infiltration of stormwater, a soils report prepared by a qualified professional will be required. The report shall include soil surveys, test pits or borings, or soil grain size analysis to sufficiently characterize the soils onsite and suitability for infiltration facilities.

Low Impact Development (LID)

All projects that exceed 2,000 square feet of new plus replaced hard surface are required to manage runoff from those hard surfaces using low impact development techniques and principles. Stormwater runoff from hard surfaces must be managed with rain gardens/bioretention cells, permeable pavements, downspout infiltration, or stormwater dispersion to native vegetation. In addition to mitigating runoff from hard surfaces, all disturbed pervious, landscaped areas on a project must meet the Ecology's requirement for post-construction soil quality and depth.

When a Professional Engineer is Required

State law requires that engineering work be performed by or under the direction of a professional engineer licensed to practice in Washington State. Designs and plans involving construction of water quality treatment facilities, flow control facilities (detention ponds or infiltration basins, vaults, or galleries), structural pollution source control facilities, LID facilities (using performance standard design), or drainage conveyance systems (such as inlets, pipes, swales, and ditches) shall be prepared by or under the direction of a licensed engineer. The "practice of engineering" is further defined in RCW 18.43.020(5)(a).

All onsite soils evaluations and reports must be prepared by a professional soil scientist certified by the Soil Science Society of America (or equivalent national program), locally licensed on-site sewage designer, or a professional engineer, geologist, hydrogeologist, or engineering geologist registered in the State of Washington.

Condensed Drainage Submittals that require engineering calculations to size pipes, swales, inlets, infiltration facilities, rain gardens or bioretention cells, downspout infiltration or dispersion, permeable pavements, green roofs, or construction stormwater best management practices shall also be prepared by a licensed engineer. Construction Stormwater Pollution Prevention Plans (SWPPPs) that involve engineering calculations must also be prepared by or under the direction of a licensed engineer.

Condensed Drainage Submittals for single-family residences and small projects similar in size may use prescriptive methods for sizing onsite stormwater management facilities to comply with Core Requirement #5. If these prescriptive methods for facility sizing are used, an engineered plan is not required but all calculations, plans, and supporting documents must be provided with the submittal.

Submittal Checklists

Please use the attached checklists to confirm all necessary components of the Condensed Drainage Submittal are included. Missing or incomplete items may result in the denial of your application.

SITE DEVELOPMENT PLAN MINIMUM DRAWING REQUIREMENTS CHECKLIST *(applies to all stormwater plan sheets)*		
Applicant check box	***Drawing Item Description***	***Staff check box***
☐	Name, address, telephone number, and email address of the applicant	☐
☐	Name, address, telephone number, and email address of the person and/or company preparing the plan	☐
☐	Name, address, telephone number, and email address of the contractor (if known)	☐
☐	Parcel number(s) associated with the project	☐
☐	Engineer's scale and north arrow	☐
☐	Legend if symbols are used	☐
☐	Property boundaries, dimensions, and area	☐
☐	Contour lines sufficient to determine drainage areas and basins. Specify datum used (NAVD88, NGVD29, City Datum)	☐
☐	Names of all adjacent streets	☐
☐	Location and type of any on-site stormwater management/LID BMPs (e.g., infiltration trenches, dispersion, rain gardens, swale, etc.)	☐
☐	Location and type of construction stormwater pollution prevention CSWPPP BMPs used for erosion and sediment control	☐
☐	Location, type, size, and slope of stormwater conveyance systems and structures (e.g., catch basins, manholes, pipes, etc.)	☐
☐	Notes, specifications, and details related to selected BMPs	☐
☐	Existing and proposed structures, including other hard surfaces such as driveways, asphalt, patios, etc.	☐
☐	Location of onsite sewage disposal systems and reserve areas (if applicable)	☐
☐	Existing and proposed easements (if applicable)	☐
☐	Established buffers, significant trees, Soil and Vegetation Protection Areas, tree tracts, and natural vegetation easements (if applicable)	☐

☐	Natural drainage channels, wetlands, streams, ditches, gullies, water bodies, etc. (if applicable)	☐
☐	Project clearing limits	☐
☐	Areas to be graded, filled, excavated, or otherwise disturbed	☐
☐	Location of known wells, and underground storage tanks (if applicable)	☐
☐	Proposed location(s) determined for stockpiled materials, i.e., excavation wastes (if applicable)	☐
☐	Location and detail of construction entrance(s)	☐
☐	Location of stormwater dispersion areas, pipe outfalls, and dispersion BMPs (if applicable)	☐
☐	Building setbacks from property lines	☐

PROJECT NARRATIVE AND DESIGN CALCULATIONS CHECKLIST		
Applicant check box	***Item Description***	***Staff check box***
☐	Proposed project extent and improvements are described in the summary, including tabulation of new and replaced hard surface and land disturbing activity areas	☐
☐	Evaluation of existing site conditions, vegetation, topography, etc.	☐
☐	Identification of Minimum Requirements 1 through 5 and explanation of how the project complies with each requirement	☐
☐	Evaluation and discussion of construction stormwater (i.e. erosion and sediment control) methods and BMPs proposed for the site to comply with Minimum Requirement #2; Include anticipated construction schedule and other construction concerns should be included	☐
☐	Evaluation of existing onsite and offsite, downstream drainage courses (manmade and natural) to comply with Minimum Requirement #4	☐
☐	Existing drainage issues on the site and downstream of the site are identified	☐
☐	Receiving water for stormwater runoff from the site is identified	☐
☐	Identification of site conditions that make LID BMPs infeasible (if using the prescriptive list option of Minimum Requirement #5)	☐

☐	Justification for selection of chosen LID BMPs and whether the prescriptive list option or the LID performance standard option has been used to meet Minimum Requirement #5	☐
☐	Justification showing flow dispersion and infiltration BMPs meet ecology requirements	☐
☐	Calculations are provided for all proposed stormwater BMPs, and stamped by a licensed civil engineer (unless the prescriptive lists are used)	☐
☐	Stormwater facility modeling completed with an approved hydrologic model (i.e. WWHM or MGS-flood) (only required when using LID performance standard option for minimum requirement #5)	☐

SOILS REPORT CHECKLIST

Applicant check box	*Item Description*	*Staff check box*
☐	Confirmation of SCS/NRCS soil series mapping and Hydrologic Soil Group for the on-site soils	☐
☐	Soils testing completed by a qualified professional as described in this guide	☐
☐	Design infiltration rates determined by grain size analysis and correct equations and factors (i.e. K_{sat}, K_{equiv}, f_{design})	☐
☐	Depth to groundwater (i.e. any saturated soil stratum including perched groundwater conditions) identified on soil logs	☐
☐	Depth to confining soil layers identified on logs or in report or results of testing for a hydraulic restriction layer (groundwater , soil with less than 0.3 in/hr infiltration rate, bedrock, etc.)	☐
☐	If onsite stormwater flows may result in shallow subsurface lateral flow (interflow), the conveyance and possible locations where the interflow may resurface (e.g. groundwater seeps) assessed by a professional engineer, geologist, hydrogeologist, or engineering geologist registered in the State of Washington	☐
☐	Identification of any native soil and vegetation protection areas (SVPAs) on site	☐
☐	Identification of any steep slopes, contaminated soils, or other sensitive soil areas	☐
☐	Discussion of soil suitability for proposed LID, treatment, or flow control BMPs	☐