CHAPTER 1 PLANS AND REPORTS

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CHAPTER 1 PLANS AND REPORTS

1.0 INTRODUCTION

This chapter describes the requirements for meeting Minimum Requirement #1, KCC 12.18.010 in accordance with KCC 21.04.045 – Submittal Requirements. This chapter details the drainage-related submittal requirements to be provided with a permit application to the Kitsap County Department of Community Development.

Most projects require some degree of drainage plans and/or analysis to be submitted with the initial permit application. Site plans provide information on the proposal, including, but not limited to, location of critical areas, road alignments and right-of-way, site topography, building locations, land use information, and lot dimensions. They are used to determine the appropriate drainage conditions and requirements to be applied to the proposal during the drainage review process.

The intent of these requirements is to present consistent formats for design plans and the technical support data required to develop the plans. These conventions are necessary to enable timely and consistent review of designs for compliance with Kitsap County ordinances and regulations, and to ensure the intent of the plan is easily understood and implemented in the field. Properly drafted design plans and supporting information also facilitate the construction, operation, and maintenance of the proposed system long after its review and approval. When plans comply with the formats and specifications contained herein, they facilitate review and approval with a minimum of time-consuming corrections and re-submittals.

Note that this chapter primarily describes how to submit drainage plans and reports for review — what must be submitted (i.e., the contents) and in what formats. The basic drainage requirements that these plans must address are contained in KCC Title 12. The specific design methods and criteria to be used are contained in Chapters 2 through 11.

1.1 APPLICATION SUBMITTAL REQUIREMENTS

1.1.1 Preliminary Plan Application Requirements

Preliminary plan review is required for projects that require separate land use applications, including but not limited to Subdivisions, Short Subdivisions, Large Lot Subdivisions, Performance Based Developments, and Conditional Use Permits. When a land use application is required for a project, preliminary plans shall be submitted as part of the land use application.

A. Major developments, and minor developments that require engineering, shall submit engineered preliminary plans as part of the land use application submittal. Preliminary submittal documents shall include the following:

1. 5 copies of preliminary plans prepared in accordance with the requirements in Section 1.2.4.

- 2. 5 copies of a preliminary drainage report prepared in accordance with the requirements in Section 1.4.
- 3. 5 copies of other technical reports and documents as applicable.
- **B.** Minor developments that do not require engineering shall submit abbreviated plans as part of the land use application submittal. Abbreviated plan submittal documents shall include the following:
 - 1. 5 copies of an abbreviated plan prepared in accordance with Section 1.2.
 - 2. 5 copies of other technical reports and documents as applicable.

1.1.2 Site Development Activity Plan Application Requirements

In general, the number of copies required for review is as listed in this section. A few permit application types may be accepted with fewer copies than listed here. Initial submittal requirements for various project types can be obtained by contacting the department or consulting the county website at <u>www.kitsapgov.com/dcd</u>.

A. Minor developments that do not require engineering shall submit:

- 1. 5 copies of a completed Site Development Activity Permit Application. (Original plus 4 copies)
- 2. 5 copies of abbreviated plans prepared in accordance with the requirements in Section 1.2.
- 3. 3 copies of other technical reports and documents as applicable.
- 4. Submittal fees per Kitsap County Code 21.06.100 Kitsap County Development Permit Fee Schedule or as amended.

B. Minor developments that require engineering shall submit:

- 1. 7 copies of a completed Site Development Activity Permit Application. (Original plus 6 copies)
- 2. 7 copies of abbreviated engineered plans prepared in accordance with the requirements in Section 1.2.
- 3. 3 copies of a Final drainage report prepared in accordance with the requirements in Section 1.4.
- 4. 3 copies of other technical reports and documents as applicable.
- 5. Submittal fees per Kitsap County Code 21.06.100 Kitsap County Development Permit Fee Schedule or as amended.

C. Major Developments shall submit:

- 1. 11 copies of a completed Site Development Activity Permit Application. (Original plus 10 copies)
- 2. 11 copies of Engineered plans prepared in accordance with the requirements in Section 1.2.
- 3. 3 copies of a Final drainage report prepared in accordance with the requirements in Section1.1.4.
- 4. 3 copies of other technical reports and documents as applicable.

5. Submittal fees per Kitsap County Code 21.06.100 Kitsap County Development Permit Fee Schedule or as amended.

1.1.3 Other Permits

Projects subject to minimum requirements 1 through 5 per KCC 12.18 must submit plans and reports in accordance with this chapter, but may not be required to obtain a Site Development Activity Permit. (An example of such a project is a Single-family residence creating at least 2,000 square feet of impervious surface that does not meet the definition of a major development and is not otherwise subject to engineered drainage requirements.)

Initial submittal requirements for various project types can be obtained by contacting Development Engineering or consulting the county website at <u>www.kitsapgov.com/dcd</u>.

1.1.4 Permit Modifications

Approved or Issued Site Development Activity Permits may be modified in accordance with KCC 12.10.100. Modifications to engineered plans shall be signed and sealed by the project engineer.

A. Substantial proposed modifications shall submit:

- 1. 5 copies of modified complete plan sets or affected plan sheets with director approval.
- 2. 3 copies of a modified Final drainage report, where applicable, or a narrative explaining the rationale for the proposed changes.
- 3. 3 copies of other technical reports and documents as applicable.
- 4. Re-submittal fees per Kitsap County Code 21.06.100 Kitsap County Development Permit Fee Schedule or as amended.

B. Minor proposed modifications shall submit:

- 1. 4 copies of modified plan sheet or plan and detail of affected area, as applicable.
- 2. A narrative explaining the rationale for the proposed changes.

1.1.5 Permit Extensions and Renewals

Site Development Activity Permits may be renewed or extended in accordance with KCC12.10.055.

A. To request an **extension of an approved, unissued permit**, the owner or authorized representative shall provide a written request to Kitsap County DCD for permit extension <u>prior to the expiration date</u>. The request shall reference the permit number, original approval date, and the reason for the request.

B. To request a **renewal of an expired permit**, the owner or authorized representative shall provide:

1. For an approved, unissued permit:

- A written request to Kitsap County DCD for **permit renewal**. The request shall reference the permit number, original approval date and the reason for the request.
- A renewal fee per Kitsap County Code 21.06.100 or as amended.

2. For an issued permit:

- A written request to Kitsap County DCD for **permit renewal**. The request shall reference the permit number, original approval date and the reason for the request.
- A renewal fee per Kitsap County Code 21.06.100 or as amended.

C. Disposition of Expired Permits

Expired permits will be permanently closed if not renewed within **sixty** days of expiration. Once a permit is permanently closed it will not be renewed or extended. New permit applications and fees per Kitsap County Code 21.06.100 are required prior to any project activity.

1.2 PLANS FOR PERMITS AND DRAINAGE REVIEW

Kitsap County is responsible for the review of all engineering aspects of development proposals. Drainage review is a primary concern of engineering design. This section describes the types of plans required for engineering review at various permit review stages.

The **Stormwater Site Plan** encompasses the entire submittal to Kitsap County. It includes the following documents:

•Application Forms

•Site Improvement Plans

- Preliminary Review

- Abbreviated Review
- Abbreviated Engineered Review
- Engineered Review
- •Construction Stormwater Pollution Prevention Plan (CSWPPP)
- •Drainage Report

•Geotechnical Analysis, Soils Report, when required by Kitsap County Code or by the director.

•Other technical reports and documents as applicable, including but not limited to SEPA checklist, Wetlands Report, Traffic Impact Analysis, etc.

1.2.1 Site Improvement Plans

Site improvement plans shall portray design concepts in a clear and concise manner. The plans must present all the information necessary for persons trained in engineering to review the plans, as well as those persons skilled in construction work to build the project according to the design engineer's intent. Supporting documentation for the site improvement plans must also be presented in an orderly and concise format that can be systematically reviewed and understood by others.

The site improvement plans consist of all the plans, profiles, details, notes, and specifications necessary to construct road, drainage, grading, site infrastructure and development, utilities, off-street parking improvements and offsite traffic, stormwater or other offsite mitigation. Site improvement plans include the following:

- Base map
- Basic Site Plan Requirements
- Site plans and profiles

1.2.2 Base Map

A site improvement plan base map provides a common base and reference in the development and design of any project. A base map helps ensure that the engineering plans, grading plans, and ESC plans are all developed from the same background information. All Site plans with multiple sheets must provide the following items on every plan sheet:

- North Arrow
- Graphic scale
- Title Block
- Revision Block
- Property Boundaries
- All easements to remain
- Existing utilities to remain, and all associated easements
- Existing structures (buildings, parking lots and driveways, etc.) to remain
- Existing natural features such as wetlands, streams, slopes and their associated buffers and applicable construction setbacks

1.2.3 Basic Site Plan Requirements

The basic site plan set shall be formatted as noted below, and shall include the items listed under Base Map plus the following:

- 1. Plan Sheets: Preferred sheet size is 22" x 34". Minimum sheet size is 18" x 24" and maximum sheet size is 36" x 48".
- 2. Scale: Preferred horizontal scales are 1"= 20', 1" =30', 1"= 40' or 1"=50'. Minimum scale is 1"=100'. (Scale should be as large as plan sheet size can comfortably accommodate). Profiles shall use 1"=5' or 1"=10' vertical.
- 3. Name, address, and telephone of the owner, applicant and agent.
- 4. Name, address, and telephone of the person preparing the plan. (Engineer, if an engineered plan).
- 5. Assessor's Tax Parcel number.
- 6. Vicinity map of sufficient clarity to locate the property.
- 7. Symbol legend
- 8. Show the location and limits of all existing and proposed:
 - a. Property boundaries with dimensions.
 - b. Structures and other impervious surfaces such as parking lots, driveways, patios, buildings, etc.
 - c. Roads and right-of-way including roadway and right-of-way widths, surfacing and road names.
 - d. Sanitary sewers and water utilities.
 - e. Common open space.
 - f. Public dedications.
 - g. Other manmade features affecting existing topography or proposed improvements.
 - h. Easements and tracts.
- 9. The location of on-site and adjacent off-site waste treatment systems, such as septic tanks and distribution systems, and on-site and adjacent off-site wells and underground storage tanks, all in accordance with Kitsap County Health Department regulations.
- 10. Existing topography for the project site. At a minimum, topography shall be included for the limits of all land-disturbed area, flow-contributing area and the downstream flow path. Additional topography may be required to address relevant topographic features. Contour lines must be shown as described in the plan type being prepared.
- 11. Proposed limits of land-disturbing activity.
- 12. Surface water discharge

Provide ground surface elevations for a reasonable "fan" around points of discharge extending at least 50 feet downstream of all point discharge outlets.

13. Flows

Provide arrows that indicate the direction of surface flow on all public and private property and for all existing conveyance systems.

14. Hydrologic Features

Provide spot elevations in addition to contour lines to aid in delineating the boundaries and depth of all existing floodplains, wetlands, channels, swales,

streams, storm drainage systems, roads (low spots), bogs, depressions, springs, seeps, swales, ditches, pipes, groundwater, and seasonal standing water.

15. Revised plan sheets shall clearly identify on each sheet, by clouding or other visible notation, all revisions made.

1.2.4 Plans Required for Preliminary Review

This section describes the submittal requirements for drainage review for land use permits and approval. The preliminary submittal documents are generally less detailed than the final design plans. The objectives of a preliminary submittal are to demonstrate that the project is feasible and can meet the applicable standards. Final design generally follows preliminary approval.

All land boundary surveys and legal descriptions used for preliminary engineering plans must be stamped by a land surveyor licensed in the State of Washington. Topographic survey data and mapping prepared specifically for a proposed project may be performed by the professional engineer stamping the engineering plans as allowed by the Washington State Board of Registration for Professional Engineers and Land Surveyors.

The preliminary drainage plan shall follow the requirements of Site Improvement Plans and shall contain the base map, the basic site plan requirements, plus the following:

- 1. Professional Engineer's seal, signed and dated.
- 2. Professional Land Surveyor's seal, signed and dated, where applicable.
- 3. Contour lines, at maximum 5-foot intervals, with source of datum identified.
- 4. If connecting to Kitsap County Sanitary Sewer, see Kitsap County Public Works Standards for Sanitary Sewer Extensions for additional site plan requirements.
- 5. Show an approximate plan for the collection and conveyance of stormwater through the project site. As a minimum, show by flow arrows the directions of proposed stormwater flow and indicate the method for conveyance (pipe, ditch, bioretention filter, overland flow, etc.).
- 6. Proposed locations and sizes of stormwater quantity and quality control facilities, including typical cross-sections for ponds, trenches, vaults, tanks and swales.
- 7. For any proposal that includes public or private roadway construction or improvement, including but not limited to subdivisions, short subdivisions, large lot subdivisions and Performance-based Developments, provide road plan and profiles in accordance with Kitsap County Road Standards, KCC Title 11, showing existing grade and approximate finish grade. (Private roads may not have to be built to the same standard as public roads, but the plans must contain all the same elements).

1.2.5 Plans Required for Abbreviated Site Plan

Abbreviated plans are a simplified form of site improvement and erosion control plans that may be prepared by a non-engineer from a set of pre-engineered, or prescriptive, design details. Abbreviated plans are only allowed for projects that meet the definition of minor development and that are not otherwise required to be prepared by an engineer. Abbreviated drainage plans are often required for individual lots created by a subdivision project to show how required flow control BMPs and erosion control measures will be applied to future lot construction.

For single family residential permits, the level and scope of drainage plan requirements are generally determined upon building permit application. Some projects subject to prescriptive drainage review may also require engineered drainage.

The abbreviated plan shall follow the requirements of Site Improvement Plans and shall contain the base map and basic site plan requirements, plus the following:

- 1. Contour lines from the best available source, spot elevations, or indications of direction and steepness of slopes, with the source clearly identified.
- 2. Areas to be graded, filled, excavated, or otherwise disturbed. The location of graded slopes shall be indicated, together with the proposed steepness and height. The location of any stockpiles, haul roads and disposal sites shall also be indicated.
- 3. Grading cross-sections, to scale (minimum of one section each direction).
- 4. The location of on-site stormwater management facilities such as downspout infiltration, dispersion systems, bioretention filters, amended soils, and pervious pavement.
- 5. The location and type of erosion and sedimentation control measures proposed.

1.2.6 Plans Required for Abbreviated Engineered Review

Small projects with specific drainage concerns that are subject to Abbreviated Engineered Review require engineering plans that include many of the same elements as an Engineered Review. The site improvement plans and CSWPP plans may be of limited scope, but must meet all applicable specifications. For specific application requirements, see Section 1.1.

The abbreviated engineered plan shall follow the requirements of Site Improvement Plans and shall contain the base map, basic site plan requirements, plus the following:

- 1. Finished grades.
 - a. Show the extent of cuts and fills by existing and proposed contours, profiles, and/or other explicit designations.
 - b. Notation of quantities, in cubic feet, of excavation and/or embankment throughout the project site.
- 2. Contour lines at 2-foot intervals from the best available source, with the source clearly identified. 5-foot contour intervals may be used in areas of steep slopes. Contours may be limited to the affected portion of the site as described in Item 1, above.
- 3. Project datum.
- 4. Proposed drainage structures, including but not limited to pipes, open channels, culverts, ponds, vaults, bioretention filters, infiltration facilities, outfalls, rip rap treatment, energy dissipaters, etc. and details for construction as needed.

- 5. Plan views of drainage conveyance facilities shall include the following:
 - a. Exact locations of pipes, channels and structures (e.g. station and offset, or dimensioning).
 - b. Pipe sizes, types and materials, lengths of runs and gradients.
 - c. Structure identifier (catch basin or manhole number).
 - d. Type of structure (e.g. Type 2 CB).
 - e. Top elevation and invert elevations in/out of structures.
 - f. Notes shall be included referencing details, cross-sections, profiles, etc.
 - g. In order to minimize duplication of information where plan and profile views appear on the same sheet, drainage facility information provided in the plan view can be limited to the following: structure identifier, type of structure, pipe types and materials, and lengths of runs.
- 6. Cross sections shall be provided for at least the following:
 - a. Roadways, including access roads.
 - b. Proposed ditches and swales.
- 7. Standard plan notes per Appendix 1A.

If the project will connect to a drainage system in the right-of-way, include in addition:

- 8. Profile views shall be provided for drainage and roadways, including:
 - a. Existing and finish grades.
 - b. Proposed drainage pipes, channels and structures.
 - c. Existing underground utilities where such utilities cross proposed drainage facilities.
 - d. Pipe sizes, types and materials, lengths of runs, gradients and locations of pipes or channels, structure type and identifying number (if multiple structures), invert elevations in/out of structures, and top elevations of structures.
- 9. Details of the connection to the drainage system and the energy dissipation structure
- 10. Pavement trench restoration detail.
- 11. Existing drainage system with elevations and inverts for a minimum of 100 feet upstream and downstream of proposed connection.
- 12. Proposed means of access to drainage structures.
- 13. Conveyance calculations and energy dissipation calculations within the drainage report.

If the project is associated with **an application to use or improve a county right-of-way** per KCC11.36, include in addition:

- 14. Plan submittal shall comply with requirements of KCC11.36.
- 15. Exact lines, grades, and gradients of proposed roadways shall be shown.
- 16. Profile views shall be provided for drainage and roadways, including:
 - a. Existing and finish grades.
 - b. Proposed drainage pipes, channels and structures.

- c. Existing underground utilities where such utilities cross proposed drainage facilities.
- d. pipe sizes, types and materials, lengths of runs, gradients and locations of pipes or channels, structure type and identifying number (if multiple structures), invert elevations in/out of structures, and top elevations of structures.

If the project is associated with **a critical area**, include in addition:

- 17. Show on the plans the critical area being impacted (wetland, slope, stream, etc) and the proposed mitigation, including details for construction.
- 18. The engineer shall review and state that the proposed mitigation design is in compliance with any drainage or treatment recommendations of the wetland biologist, geotechnical consultant and/or other professional as appropriate.
- 19. Provide documentation of concurrence from wetland biologist, geotechnical consultant and/or other professional as appropriate, that the engineered design meets the recommendation of the professional.
- 20. Provide a profile of the drainage system per item 8, above, if the project is associated with a steep or otherwise geologically hazardous slope, or waterfront slope.
- 21. Delineate, label and indicate the elevation of the Line of Ordinary High Water, if a waterfront parcel.

1.2.7 Plans Required for Engineered Review

All Engineered Drainage Plans shall be prepared by and bear the stamp of a professional engineer, licensed in the State of Washington.

The Engineered Plans shall follow the requirements of Site Improvement Plans and shall contain the base map and basic site plan information, plus the following:

- 1. At least one sheet must contain a plan view of the entire project site. In the event the project site is sufficiently large that detailed drainage plans on any given sheet do not encompass the entire project site, then the sheet containing the plan view of the entire site must serve as an index to subsequent detailed plan sheets.
- 2. Project datum.
- 3. Locations and elevations of at least two project benchmarks.
- 4. Existing topography, including existing structures, for the site and extending 50' beyond project boundaries. Existing topography for adjacent rights-of-way must be included for the full width of right-of-way. Slopes 30% or steeper shall be clearly identified.
- 5. Contours extending 50' beyond project boundaries and including the full width of adjacent rights-of-way. Contours shall be at 2-foot vertical elevation intervals, except 5-foot intervals may be used in areas of steep slopes.
- 6. Notation of quantities, in cubic feet, of excavation and/or embankment throughout the project site.
- 7. Existing and proposed access locations for the project site.

- 8. Project boundaries shall include bearings and dimensions.
- 9. Right-of-way description shall include centerline and centerline bearings.
- 10. Existing utilities shall include franchised utilities located above or below ground.
- 11. Locations of existing drainage facilities that transport surface water onto, across, or from the project site. Existing drainage pipes, culverts, and channels shall include invert or flowline elevations.
- 12. Location of existing wells and septic components shall be provided on or within 100 feet of project boundaries.
- 13. Proposed drainage structures, including but not limited to pipes, open channels, culverts, ponds, vaults, bioretention filters, infiltration facilities, outfalls, rip rap treatment, energy dissipaters, etc. and details for construction as needed.
- 14. Locations of all gutter or ditch flowlines, including flow arrows indicating direction of flow. If a cul-de-sac or hammerhead is proposed as part of roadway system, show spot flowline elevations at 25' intervals along the perimeter of the cul-de-sac or hammerhead. Spot elevations at flowlines may also be necessary at intersections.
- 15. Plan and profile views of drainage conveyance facilities shall include the following:
 - a. Exact locations of pipes, channels and structures (e.g. station and offset, or dimensioning).
 - b. Pipe sizes, types and materials, lengths of runs and gradients.
 - c. Structure identifier (catch basin or manhole number).
 - d. Type of structure (e.g. Type 2 CB).
 - e. Top elevation and invert elevations in/out of structures.
 - f. Notes shall be included referencing details, cross-sections, profiles, etc.
- 16. In order to minimize duplication of information where plan and profile views appear *on the same sheet*, drainage conveyance facility information provided in the plan view can be limited to the following: structure identifier, type of structure, pipe types and materials, and lengths of runs.
- 17. Proposed drainage conveyance facilities in existing and proposed public and private roads shall be shown in profile view. In addition to items 15. a through f, profile views shall include:
 - a. Existing and finish grades.
 - b. Existing underground utilities where such utilities cross proposed drainage facilities.
- 18. Indicate any proposed phasing of construction.
- 19. Standard plan notes per Appendix 1A.
- 20. Details shall be provided for all proposed drainage structures for which there is insufficient information in the plan view. Details are not required for structures included in the APWA/WSDOT Standard Plans, provided that the specific APWA/WSDOT Standard Plans are referenced in the construction notes.
- 21. Cross sections shall be provided for at least the following:

- a. Roadways, including access roads.
- b. Surveyed cross-sections for new roadways, frontage improvements and/or roadway widening.
- c. Detention/retention ponds, tanks and vaults (including parking lot ponds and other multi-use facilities), wet ponds, and sediment ponds.
- d. Proposed ditches and swales, including bioretention filters.

1.3 CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

All Construction Stormwater Pollution Prevention Plans (SWPPP) for major developments shall be prepared by and bear the stamp of a professional engineer, licensed in the State of Washington. The SWPPP shall address the twelve required elements per KCC 12.18.020.

Construction Stormwater Pollution Prevention Plans (SWPPP) for minor developments do not have to be prepared by an engineer unless the minor development requires engineering. The SWPPP shall address the twelve required elements per KCC 12.18.020.

Plans submitted for review shall include the following information, including, but not limited to:

1.3.1 Narrative

- 1. Describe how the Construction SWPPP addresses each of the 12 required elements. (See Chapter 2). Include the type and location of BMPs used to satisfy the required element. If an element is not applicable to a project, provide a written justification for why it is not necessary.
- 2. Project description Describe the nature and purpose of the construction project. Include the total size of the area, any increase in existing impervious area; the total area expected to be disturbed by clearing, grading, excavation or other construction activities, including off-site borrow and fill areas; and the volumes of grading cut and fill that are proposed.
- 3. Existing site conditions Describe the existing topography, vegetation, and drainage. Include a description of any structures or development on the parcel including the area of existing impervious surfaces.
- 4. Adjacent areas Describe adjacent areas, including streams, lakes, wetlands, residential areas, and roads that might be affected by the construction project. Provide a description of the downstream drainage leading from the site to the receiving body of water.
- 5. Critical areas Describe areas on or adjacent to the site that are classified as critical areas per KCC Title 19. Critical areas that receive runoff from the site shall be described up to ¼ mile downstream, or for the distance required by the downstream analysis, whichever is greater. Describe special requirements for working near or within these areas.
- 6. Soil Describe the soil on the site, giving such information as soil names, mapping unit, and erodibility, settleability, permeability, depth, texture, and soil structure.

- 7. Potential erosion problem areas Describe areas on the site that have potential erosion problems. Include completed **Construction Site Sediment Transport Potential** Worksheet (Appendix 2C).
- 8. Construction phasing Describe the intended sequence and timing of construction activities and any proposed construction phasing.
- 9. Construction schedule Describe the construction schedule. If the schedule extends into the wet season, describe what activities will continue during the wet season and how the transport of sediment from the construction site to receiving waters will be prevented.
- 10. Financial/ownership responsibilities Describe ownership and obligations for the project. Include bond forms and other evidence of financial responsibility for environmental liabilities associated with construction.
- Engineering calculations Attach any calculations made for the design of such items as sediment ponds, diversions, and waterways, as well as calculations for runoff and stormwater detention design (if applicable). Engineering calculations must bear the signature and stamp of an engineer licensed in the state of Washington.
- 12. A responsible, certified erosion and sediment control lead shall be identified in accordance with Chapter 2.
- 13. Telephone and/or pager numbers shall be included.

1.3.2 Plans

The Stormwater Pollution Prevention Plan shall follow the format requirements of Site Improvement Plans (see Section 1.2.2) and shall contain the following information:

- 1. All information required per the Base Map and the basic site plan requirements.
- 2. Existing topography, as per the requirements for Engineered Plan.
- 3. Finished grade.
- 4. If the site will be cleared in phases, each phase must meet all requirements of this chapter. The phasing of any erosion and sedimentation control work clearly indicated on the Plan.
- 5. The name, address, and contact information of the designated erosion control lead as required in Chapter 2.
- 6. A detailed listing of the construction sequence.
- 7. The boundaries of and label the different soil types.
- 8. Areas of potential erosion problems.
- 9. Locations where stormwater discharges to surface waters during and upon completion of construction.
- 10. Conveyance systems Show on the site map the following temporary and permanent conveyance features:
 - a. Locations for swales, interceptor trenches, or ditches.
 - b. Drainage pipes, ditches, or cut-off trenches associated with erosion and sediment control and stormwater management.
 - c. Temporary and permanent pipe inverts and minimum slopes and cover.

- d. Grades, dimensions, and direction of flow in all ditches and swales, culverts, and pipes.
- e. Details for bypassing off-site runoff around disturbed areas.
- f. Locations and outlets of any dewatering systems.
- 11. Location of Flow Control BMPs Show on the site plans the locations of any Flow Control BMPs.
- 12. Erosion and Sediment Control (ESC) BMPs Show on the site plans all major structural and nonstructural ESC BMPs including:
 - a. The location of sediment pond(s), pipes and structures.
 - b. Dimension pond berm widths and inside and outside pond slopes.
 - c. The trap/pond storage required and the depth, length, and width dimensions.
 - d. Typical section views through pond and outlet structure.
 - e. Typical details of gravel cone and standpipe, and/or other filtering devices.
 - f. Stabilization technique details for inlets and outlets.
 - g. Control/restrictor device location and details.
 - h. Stabilization practices for berms, slopes, and disturbed areas.
 - i. Rock specifications, spacing, sections and detail for rock check dam, if used.
 - j. The location, detail, and specification for silt fence.
 - k. The construction entrance location and a detail.
- 13. Other pollutant BMPs Indicate on the site map the location of BMPs to be used for the control of pollutants other than sediment.
- 14. Standard plan notes per Appendix 1A.

1.4 DRAINAGE REPORTS

The Drainage Report shall be on 8-1/2" x 11" paper and maps shall be folded to 8-1/2" x 11" size unless another format is approved prior to submittal.

All Drainage Reports shall be prepared by and bear the stamp and dated signature of a professional engineer licensed in the State of Washington and shall contain the following information:

1.4.1 Preliminary Drainage Report

- 1. Cover Sheet, including the project name, proponent's name, address and telephone number, Project Engineer, and date of submittal.
- 2. Table of Contents, showing the page numbers for each section of the report, including appendices.
- 3. Description of project location.
- 4. Description of pre-development site conditions.
- 5. Downstream drainage analysis Level 1 Analysis (see Chapter 4).
- 6. Description of proposed development, including description of proposed developed site.
- 7. Description of proposed stormwater improvements, including conveyance, stormwater quantity control facilities, and stormwater quality control facilities.

- 8. Describe design method utilized, names of any computer software routines utilized in design process, and reference any design standards utilized.
- 9. Preliminary hydrological analysis, including pre-development and postdevelopment runoff hydrographs for the project site.
- 10. Preliminary sizing of facilities proposed for stormwater quantity and/or quality control.
- 11. All computer program outputs showing how the project complies with all applicable flow control and water quality standards.
- 12. Completed Construction Site Sediment Transport Potential Worksheet (Appendix 2C), and general proposal for mitigation of potential erosion and sedimentation impacts.
- 13. Vicinity map, noting Section, Township, and Range.
- 14. Pre-development and post-development basin maps, showing boundaries of project, any off-site contributing drainage basins, on-site drainage basins, approximate locations of all major drainage structures within the basins, and the course of stormwater originating from the subject property and extending all the way to Puget Sound or to the nearest receiving body of water (lakes, creeks, etc.). All basin maps must be legible and at a specified scale.
- 15. Pre-developed and post-developed time of concentration routes must be shown when using the Santa Barbara Unit Hydrograph (SBUH) method.
- 16. Other resource material such as soils maps, isopluvial maps, nomographs, charts, figures, tables, etc.
- 17. Surface/subsurface soil test results and test locations (when retention/infiltration is proposed).

1.4.2 Final Drainage Report

- 1. <u>Cover Sheet</u>, including the project name, proponent's name, address and telephone number, Project Engineer, and date of submittal.
- 2. <u>Table of Contents</u>, showing the page numbers for each section of the report, including appendices.
- 3. <u>Project Description</u>:
 - a. Describe the size and location of the project site.
 - b. Provide address and tax parcel number of the property.
 - c. Describe the project, including proposed land use, proposed site improvements, proposed construction of impervious surfaces, proposed landscaping, etc.
- 4. <u>Existing Conditions</u>: Describe existing site conditions and relevant hydrological conditions including but not limited to:
 - a. project site topography, land cover and land use; abutting property land cover and land use; offsite drainage to the property;
 - b. creeks, lakes, ponds, wetlands, ravines, gullies, steep slopes, springs and other environmentally sensitive areas on or adjacent to the project site;
 - c. general soils conditions present within the project site;
 - d. whether or not the project site is located in a groundwater sensitive area (reference reports and include well locations if applicable);

- e. Existing natural and manmade drainage facilities within and immediately adjacent to the project site; points of discharge for existing drainage from the project site.
- f. Include references to relevant reports such as basin plans, flood studies, groundwater studies, wetland designation, critical area designation, environmental impact statements, lake restoration plans, water quality reports, etc. Where such reports impose additional conditions on the project, those conditions shall be included in the report.
- 5. <u>Developed Site Drainage Conditions</u>:
 - a. Describe the size and types of land cover resulting from the proposed project;
 - b. Describe the potential stormwater quantity and quality impacts resulting from the proposed project;
 - c. Describe the proposal for the collection and conveyance of site runoff from the project site, for the control of any increase in stormwater quantity resulting from the project, and for the control of stormwater quality.
- 6. <u>Description of upstream basins</u>, identifying any sources of runoff to the project site. Any existing drainage or erosion problems upstream, which may have an impact on the proposed development should be noted.
- 7. <u>Drainage Basin Description</u>: Describe the drainage basin(s) to which the project site contributes runoff, and identify the receiving waters for each of these drainage basins.
- 8. <u>Downstream Analysis</u>: The initial drainage report submittal shall include a Level 1 downstream drainage analysis prepared in accordance with the requirements in Chapter 4. This Level 1 analysis, as well as the location of the project in a drainage basin, will be reviewed by the County to determine whether a Level 2 and/or Level 3 downstream analysis will be required. Any further analysis of downstream conditions required beyond the Level 1 analysis shall become a part of the Drainage Report and must be submitted as part of the Drainage Report.
- 9. <u>Basin Map(s)</u>, showing boundaries of project, any offsite contributing drainage basins, onsite drainage basins, approximate locations of all major drainage structures within the basins, and depict the course of stormwater originating from the subject property and extending all the way to Puget Sound or to the closest receiving body of water (lakes, creeks, etc.). Reference the source of the topographic base map (e.g. USGS), the scale of the map, and include a north arrow.
 - a. Existing conditions onsite basin map showing locations of all drainage features within the site, and depicting and noting the acreage of each type of land cover (pervious, impervious, buildings, driveways, etc.)
 - b. Developed conditions onsite basin map showing locations of all drainage features within the site and depicting and noting the acreage of each type of land cover (pervious, impervious, buildings, driveways, etc)
- 10. Soils Report(s), where applicable, prepared by a qualified professional engineer.
- 11. Geotechnical Report(s), where applicable

- 12. <u>Hydrological Analysis</u> All computer program outputs showing how the project complies with all applicable flow control and water quality standards.
- 13. <u>Hydraulic Design Computations</u>, supporting the design of ALL proposed stormwater conveyance, quantity and quality control facilities, and verifying the capacity of existing and proposed drainage facilities. These computations may include capacity and backwater analysis required either as part of the proposed drainage design or as a part of the downstream drainage investigation, and flood routing computations required for the design of detention/retention storage facilities, for wetland impact analysis, or for flood plain analysis. Screen shots of the facility design from the stormwater modeling software should also be included.
- 15. <u>Appendices</u>: Include the following: Copies of any additional relevant reports, prepared by others, which support or corroborate the findings, conclusions, or assumptions contained in the drainage report.

1.5 PERMIT ISSUANCE

Once all requirements have been addressed, the Site Development Activity Permit will be issued, subject to the preconstruction meeting and submittal of the following:

- 1. Payment of all permit fees.
- 2. Evidence of issuance of any permits required by other agencies.
- 3. Performance surety or Performance Covenant for Site Stabilization in accordance with KCC12.12.
- 4. Evidence of liability insurance in accordance with KCC12.12.050.
- 5. Recording of any required off-site construction-related easements.
- 6. Submittal of a completed Construction Site Sediment Transport Potential Worksheet (see Appendix 2C). Development sites that have a high potential for sediment transport require a pre-inspection by county staff prior to permit issuance.

1.5.1 Preconstruction Meeting

All SDAPs require a preconstruction meeting prior to issuance of the Site Development Activity Permit. Other minor developments may also require a preconstruction meeting. For projects that require a preconstruction meeting, no work shall take place on a project site prior to the preconstruction meeting.

In the event that work takes place on the project site prior to the preconstruction meeting, the owner and/or contractor shall be in violation of Kitsap County Code Title 12.10.030 and shall be subject to a monetary penalty as described in the Kitsap County Code. In addition, the issuance of the Site Development Activity Permit or other permit may be delayed and restoration work may be required for those areas of the site disturbed prematurely.

The preconstruction meeting shall be attended by:

- The owner or an authorized representative of the owner.
- The designated CESCL, or emergency contact person, if a CESCL is not required.
- The project engineer.
- A representative of the general contractor.
- A representative of Kitsap County.
- Representatives from all affected utilities.

The agenda for the preconstruction meeting shall include at least the following:

- 1. Verification that all required permits have been issued, which may include but is not limited to land use permits, building permits, Hydraulic Project Approvals, Construction Stormwater General Permits, etc.
- 2. Issuance of the Site Development Activity Permit placard, to be posted on the project site.
- 3. Verification that the contractor is in possession of current final approved plans.
- 4. Discussion of the duties of the designated CESCL or emergency contact person.
- 5. Discussion of coordination of work by affected utilities.
- 6. Discussion of Kitsap County requirements concerning erosion control and construction sequence, inspection requirements, plan changes, and protection of critical drainage areas.

1.5.2 Final Project Approval

Kitsap County will not recommend final project approval of final plats or the granting of certificates of occupancy, and will not release financial securities until the following applicable items have been completed:

1.5.2.1 Abbreviated (non-engineered) Plans

For permits requiring an Abbreviated Plan, the Conditions of the Abbreviated Plan approval must be met, except that final landscape planting may be delayed to the appropriate season for said planting.

1.5.2.2 Engineered Plans

For permits requiring Engineered or Abbreviated Engineered Plans, (except that final approval requirements for Abbreviated Engineered Drainage Plans may be modified on a case by case basis by Kitsap County):

- 1. Completion, to the satisfaction of the Director, of all work indicated on the plans.
- 2. Certification, by the Project Engineer, of the as-built live and dead storage pond volumes.

- 3. Certification, by the Project Engineer, that all pond side slopes are 2H: 1V or flatter for fenced ponds, and 3H: 1V or flatter for unfenced ponds.
- 4. Infiltration verification for infiltration facilities designed to meet minimum criteria #7 as required per chapter 7.
- 5. Record Drawings

a. Submittal of one set of reproducible mylar as-built plans or an electronic version of same in portable document format (PDF) along with two sets of full-sized copies. All sheets containing road and drainage plans, profiles and associated details shall be included in the as-built set. It is not necessary to include grading and erosion control plans and details.

b. Verification of the as-built condition of key elements of the roadway and stormwater system including, but not limited to, rim and invert elevations and positive surface and piped flow shall be provided as part of the Record Drawings.

c. The as-built plan set shall be stamped "RECORD DRAWING" and shall be signed and sealed by a professional engineer or land surveyor, and shall contain the following statement:

"I hereby certify that, based on field verification, the constructed stormwater facilities represented by this Record Drawing will perform as intended, subject to proper operation and maintenance."

- 6. Submittal of a recorded (with the Kitsap County Auditor) Maintenance Covenant for maintenance of private storm drainage facilities which gives Kitsap County the right to inspect the facilities and guarantees the County that the facilities will be properly maintained. A standard Maintenance Covenant form is available from the Department of Community Development.
- 7. Review and approval by the Director of the final plat map and associated documentation, if applicable.
- 8. Submittal of Recorded (with the Kitsap County Auditor) Covenants, Conditions and Restrictions, maintenance easements, agreements with adjacent property owners, conservation easements, and similar documents as required in the approved plans, SEPA Conditions, or Conditions of Preliminary Approval.
- 9. Fulfillment of all conditions of approval.
- 10. Permanent stabilization and restoration of the project site. Final replanting may be delayed to the appropriate season, provided that temporary soil stabilization measures are in place and financial security is provided to assure the completion of work.
- 11. Submittal, by the Project Engineer, of the Operation and Maintenance Manual for privately maintained and/or non-standard stormwater facilities. (see Chapter 9 for requirements).
- 12. Payment of any outstanding fees.
- 13. Submittal of any required maintenance bonds.

1.5.3 Performance Bond for uncompleted Subdivision improvements

For final plats that will be recorded prior to construction completion, performance sureties may be accepted in accordance with KCC12.12.040 in lieu of the Final Project Approval items listed above. However, in no event shall a performance surety be accepted for safety items including but not limited to guardrails or pond fencing.

1.5.4 Transfer of Engineering Responsibilities

If the engineer of record is changed during the course of the work, the work shall be stopped until the replacement engineer has agreed to accept the responsibilities of the Project Engineer.

1.5.5 Project Phasing

The phasing of construction is permitted when in accordance with current land use codes, policies, conditions of Preliminary Approval, and SEPA conditions.

The Site Improvement Plans for the initial phase of a project shall incorporate all detention/retention facilities, water quality facilities, and erosion control facilities necessary to serve the initial phase as if no further construction were to take place (a "stand alone" project).

It is of particular importance that runoff control facilities be designed so that stormwater release rates for each phase do not exceed allowable release rates for a given stage of "build-out". It will sometimes be necessary that the control structure be modified with each additional construction phase. With the addition of each phase of development, the project must maintain its ability to "stand alone" without dependence on future phases of development.

In the event that the scope of the Site Improvement Plans includes the entire project with all of its phases, the plans must clearly indicate phasing limits for land clearing, erosion control, grading, construction of drainage facilities, and construction of impervious surfaces.

Appendix 1-A Standard Plan Notes

Construction Sequence

- 1. Apply for and pick up any right of way permits from Kitsap County Department of Public Works.
- 2. Construct stabilized construction entrance(s).
- 3. Construct filter fence barriers.
- 4. Construct sedimentation basins.
- 5. Construct runoff interception and diversion ditches.
- 6. Clear and grade the minimum site area required for construction of the various phases of work.
- 7. Provide temporary hydroseeding or other source control stabilization measures on all disturbed soils.
- 8. Maintain all erosion and sedimentation control facilities to provide the required protection of downstream water quality.
- 9. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment laden water into the downstream system.
- 10. Provide permanent site stabilization.
- 11. Erosion and sedimentation control facilities shall not be removed until construction is complete and accepted by Kitsap County.

Drainage Notes

- 1. The contractor shall ensure that the drainage is installed and operational prior to commencement of paving work.
- 2. All steel pipe and parts shall be galvanized. All submerged steel pipes and parts shall be galvanized and have asphalt treatment #1 or better.
- 3. Drainage stubouts on individual lots shall be located with a five foot high 2" x 4" stake marked "STORM". The stubout shall extend above surface level and be secured to the stake.

Temporary Erosion and Sedimentation Control Maintenance Requirements

- 1. Erosion and sedimentation control facilities shall be inspected after each storm event and daily during prolonged rainfall.
- 2. Necessary repairs or replacement of facilities shall be accomplished promptly.
- 3. Sediment deposits shall be removed after each storm event or when the level of deposition reaches approximately one-half the maximum potential depth.
- 4. Sediment deposits remaining in place after the ESC facilities are no longer required shall be dressed to conform to the existing grade, prepared and seeded.
- 5. Temporary Erosion and Sedimentation Control facilities shall be maintained by:

Grading Notes

The contractor shall notify the engineer in the event or discovery of poor soils, groundwater or discrepancies in the existing conditions as noted on the plans.

- 1. Maximum slope steepness shall be 2:1 (Horizontal to Vertical) for cut and fill slopes.
- 2. Unless otherwise specified, all embankments in the Plan Set shall be constructed in accordance with Section 2-03.3(14)B of the WSDOT Standard Specifications. Embankment

compactions shall conform to Section 2-03.3(14)C, Method B of said Standard Specifications.

- 3. Embankments designed to impound water shall be compacted to 95% maximum density per section 2-03.3(14)C, Method C of WSDOT Standard Specifications.
- 4. All areas receiving fill material shall be prepared by removing vegetation, non-complying fill, topsoil and other unsuitable material, by scarifying the surface to provide a bond with the new fill, and where slopes are steeper than 3 horizontal to 1 vertical and the height is greater than 5 ft., by benching into sound competent material as determined by a soils engineer.

General Notes

- 1. All workmanship and materials shall conform to the MOST CURRENT Standard Specifications for Road, Bridge and Municipal Construction prepared by WSDOT and APWA as adopted by the Kitsap County Department of Public Works (KCPW).
- 2. Any revisions to the accepted construction plans shall be reviewed and approved by the County prior to implementation in the field.
- 3. The contractor shall maintain a set of the accepted construction drawings on-site at all times while construction is in progress.
- 4. It shall be the responsibility of the contractor to obtain all necessary permits from the KCPW prior to commencing any work within County right-of-way.
- 5. The contractor shall be responsible for providing adequate traffic control at all times during construction alongside or within all public roadways. Traffic flow on existing public roadways shall be maintained at all times, unless permission is obtained from the KCPW for road closure and/or detours.
- 6. The location of existing utilities on this plan is approximate only. The contractor shall contract the "Underground Locate" center at 811, and non-subscribing individual utility companies 48 hours in advance of the commencement of any construction activity. The contractor shall provide for protection of existing utilities from damage caused by the contractor's operations.
- 7. Rockeries or other retaining facilities exceeding 4 ft. in height require a separate permit
- 8. A "Forestry Practices" permit may be required prior to clearing of the site.

Inspection Schedule

The Contractor shall notify Community Development to arrange for inspection of the various phases of work checked below. All inspections shall be completed prior to proceeding with the next phase of work.

- 1. Clearing limits.
- 2. Implementation of the various phases of the Erosion and Sedimentation Control Plan.
- 3. Placement of drainage structures prior to back filling, including pond embankments.
- 4. Prior to placement of the detention outlet control structure (orifice size verified).
- 5. Inspection of prepared sub-grade.
- 6. Inspection of gravel base placement.
- 7. Inspection of fine grading prior to paving.
- 8. Inspection of paving operations.
- 9. Final inspection.

The Contractor shall be responsible for all work performed and shall ensure that construction is acceptable to Kitsap County.

If inspection is not called for prior to completion of any item of work so designated, special destructive and/or non-destructive testing procedures may be required to ensure the acceptability of the work. If such procedures are required, the Contractor shall be responsible for all costs associated with the testing and/or restoration of the work.

General Erosion and Sedimentation Control Notes

- 1. The following erosion and sedimentation control notes apply to all construction site activities at all times, unless otherwise specified on these plans:
- 2. Approval of this erosion and sedimentation control plan does not constitute an acceptance of the permanent road or drainage design.
- 3. The owner and his/her contractor shall be responsible at all times for preventing silt-laden runoff from discharging from the project site. Failure by the owner and/or contractor can result in a fine. The designated temporary contact person noted on this plan must be available for contact by telephone on a 24 hour basis throughout construction and until the project has been completed and accepted by the county.
- 4. The implementation of these ESC plans and the construction, maintenance, replacement and upgrading of these facilities is the responsibility of the owner and/or contractor from the beginning of construction until all construction is completed and accepted by the county and the site is stabilized.
- 5. Prior to beginning any work on the project site, a preconstruction conference must be held, and shall be attended by the general contractor, the project engineer, representatives from affected utilities, and a representative of Kitsap County.
- 6. The erosion and sedimentation control facilities shown on this plan are to be considered adequate basic requirements for the anticipated site conditions. During construction, deviations from this plan may be necessary in order to maintain water quality. Minor departures from this plan are permitted subject to the approval of the county inspector. However, except for emergency situations, all other deviations from this plan must be designed by the project engineer and approved by Kitsap County prior to installation.
- 7. All erosion and sedimentation control measures shall be inspected by the owner and/or contractor on a frequent basis and immediately after each rainfall, and maintained as necessary to insure their continued functioning. All sediment must be removed from silt fences, straw bales, sediment ponds, etc. prior to the sediment reaching 1/3 its maximum potential depth.
- 8. At no time shall concrete, concrete by-products, vehicle fluids, paint, chemicals, or other polluting matter be permitted to discharge to the temporary or permanent drainage system, or to discharge from the project site.
- 9. Permanent detention/retention ponds, pipes, tanks or vaults may only be used for sediment containment when specifically indicated on these plans.

Minimum Erosion and Sedimentation Control Requirements

1. <u>Stabilization and sediment trapping.</u> All exposed and unworked soils, including soil stockpiles, shall be stabilized by suitable application of BMPs that protect soil from the erosive forces of raindrop impact and flowing water. Applicable practices include, but are not limited to vegetative establishment, mulching, plastic covering, and the early application of

gravel base on areas to be paved. From October 1 to April 30, no soils shall remain unstabilized for more than 2 days. From May 1 to September 30, no soils shall remain unstabilized for more than 7 days.

- 2. At all times of the year, the contractor shall have sufficient materials, equipment and labor on-site to stabilize and prevent erosion from all denuded areas within 12-hours as site and weather conditions dictate.
- 3. From October 1st to April 30th, the Project Engineer shall visit the development site a minimum of once per week for the purpose of inspecting the erosion and sedimentation control facilities, reviewing the progress of construction, and verifying the effectiveness of the erosion control measures being undertaken. The Project Engineer shall immediately inform the County of any problems or potential problems observed during said site visits, as well as of any recommended changes in the erosion control measures to be undertaken. When requested by the County, the Project Engineer shall provide the County with written records of said weekly site visits, including dates of visits and noted site observations.
- 4. In the event that ground on a project site is left bare after September 30th, the County may issue a Stop Work Order for the entire project until satisfactory controls are provided. In addition, the Owner will be subject to the penalties provided in Section 12.32 of the Kitsap County Code.
- 5. In the event that ground on a project site is left bare after September 30th, and the County is unsuccessful in contacting the Owner or his/her designated emergency contact person, the County may enter the project site and install temporary ground cover measures and bill the Owner for all expenses incurred by the County. These costs will be in addition to any monetary penalties levied against the Owner.
- 6. Delineation of clearing and easement limits. Clearing limits, setbacks, buffers, and sensitive or critical areas such as steep slopes, wetlands and riparian corridors shall be clearly marked in the field and inspected by Kitsap County Department of Community Development prior to commencement of land clearing activities. During the construction period, no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the applicant/contractor for the duration of construction.
- 7. <u>Protection of adjacent properties.</u> Adjacent properties shall be protected from sediment deposition by appropriate use of vegetative buffer strips, sediment barriers or filters, dikes or mulching, or by a combination of these measures and other appropriate BMPs.
- 8. <u>Timing and stabilization of sediment trapping measures.</u> Sediment ponds and traps, perimeter dikes, sediment barriers and other BMPs intended to trap sediment on-site shall be constructed as a first step in grading. These BMPs shall be functional before land disturbing activities take place. Earthen structures such as dams, dikes, and diversions shall be stabilized according to the timing indicated in item (1) above.
- 9. <u>Slope Stabilization</u>. Cut and fill slopes shall be constructed in a manner that will minimize erosion. Roughened soil surfaces are preferred to smooth surfaces. Interceptors should be constructed at the top of long, steep slopes which have significant areas above that contribute runoff. Concentrated runoff should not be allowed to flow down the face of a cut or fill slope unless contained within an adequate channel or pipe slope drain. Wherever a slope face crosses a water seepage plane, adequate drainage or other protection should be provided. In addition, slopes should be stabilized in accordance with item (1) above.

- 10. <u>Controlling off-site erosion</u>. Properties and waterways downstream from development sites shall be protected from erosion due to increases in the volume, velocity, and peak flow rate of stormwater runoff from the development site by the implementation of appropriate BMPs to minimize adverse downstream impacts.
- 11. <u>Stabilization of temporary conveyance channels and outlets.</u> All temporary on-site conveyance channels shall be designed, constructed and stabilized to prevent erosion from the expected flow velocity from a 2-year frequency, 24-hour duration storm for the post-development condition. Stabilization adequate to prevent erosion of outlets, adjacent streambanks, slopes and downstream reaches shall be provided at the outlets of all conveyance systems.
- 12. <u>Storm drain inlet protection</u>. All storm drain inlets made operable during construction shall be protected so that stormwater runoff shall not enter the conveyance system without first being filtered or otherwise treated to remove sediment. After proper written application, the requirement for inlet protection may be waived by the County on a site-specific basis when the conveyance system downstream of the inlet discharges to an appropriate sediment containment BMP and the conveyance system can be adequately cleaned following site stabilization.
- 13. <u>Underground utility construction</u>. The construction of underground utility lines shall be limited, where feasible, to no more than 500 feet of open trench at any one time. Where consistent with safety and space considerations, excavated material shall be placed on the uphill side of the trench. Dewatering devices shall discharge to an appropriate sediment trap or pond, preceded by adequate energy dissipation, prior to runoff leaving the site.
- 14. <u>Constructed access routes.</u> Wherever construction vehicle access routes intersect paved roads, provisions must be made to minimize the transport of sediment (mud) onto the paved road by use of appropriate BMPs such as a Stabilized Construction Entrance. If sediment is transported onto a road surface, the roads shall be cleaned thoroughly, as a minimum, at the end of each day. Sediment shall be removed from roads by shoveling or sweeping and be transported to a controlled sediment disposal area. Street washing shall be allowed only after sediment is removed in this manner.
- 15. <u>Removal of temporary BMPs.</u> All temporary erosion and sediment control BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on-site. Disturbed soil areas resulting from removal of temporary BMPs shall be permanently stabilized. The removal of temporary erosion and sediment control BMPs may not be required for those projects, such as single family plats, that will be followed by additional construction under a different permit. In these circumstances, the need for removing or retaining the measures will be evaluated on a site-specific basis.
- 16. <u>Dewatering construction sites.</u> Dewatering devices shall discharge into an appropriate sediment trap or pond, designed to accept such a discharge, preceded by adequate energy dissipation, prior to runoff leaving the site.
- 17. <u>Control of pollutants other than sediment on construction sites.</u> All pollutants other than sediment that occur on-site during construction shall be handled and legally disposed of in a manner that does not cause contamination of storm or surface waters. Pollutants of concern include, but are not limited to, fuels, lubricants, solvents, concrete bi-products and construction materials

- 18. <u>Maintenance.</u> All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair shall be conducted in accordance with the Manual. The Applicant shall be responsible for assuring that any such facilities damaged during floods, storms or other adverse weather conditions are immediately returned to normal operating condition.
- 19. <u>Financial liability</u>. A performance covenant or performance surety, shall be required for all projects to ensure compliance with the approved erosion and sediment control plan, as outlined in Section 12.12 of the Kitsap County Code.