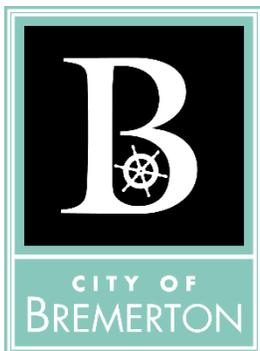


**DIVISION 2**  
**Earthwork**  
**&**  
**Temporary Erosion & Sediment**  
**Control**



Department of Public Works and Utilities  
Engineering Division

# Division 2.1 – Earthwork

The purpose of this chapter is to safeguard life, limb, property, the environment, and public welfare by regulating grading on private property. This chapter sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments; supports the administrative procedure for issuance of permits; and provides guidance for approval of plans and inspection of grading construction.

## Table of Contents

<i>Definitions</i> .....	3
<b>EXCAVATION AND GRADING</b> .....	5
<i>General threshold values and which permit is required:</i> .....	5
<i>Exemptions</i> .....	6
<i>Recognized Testing Standards</i> .....	6
<i>Hazards</i> .....	6
<i>Permit Requirements</i> .....	7
<i>Construction Stormwater General Permit</i> .....	8
<i>Grading Designation</i> .....	9
<i>Plans and Reports</i> .....	9
<i>Permit Issuance</i> .....	10
<i>Permit Terms, Expiration, and Extension</i> .....	11
<i>Permit Suspension or Revocation</i> .....	11
<i>Fees and Financial Guarantees</i> .....	11
<i>Cuts and Fills</i> .....	12
<i>Setbacks</i> .....	13
<i>Stormwater Best Management Practices (BMPs)</i> .....	14
<i>Grading Inspection</i> .....	14
<i>Completion of Work</i> .....	15
<i>Grading Plan Checklist</i> .....	16
<i>Additional items required for engineered grading permit:</i> .....	17

# Definitions

For the purposes of this Division, the definitions listed hereunder shall be construed as specified.

“Abandoned” – shall mean a permitted project that has not commenced work within one hundred eighty days from the date of issue or made substantial efforts to complete the permitted work and has not requested an extension.

“Approval” -- shall mean that the proposed work or completed work conforms to this chapter in the opinion of the Director.

“As-graded” -- is the extent of surface conditions on completion of grading.

“Bedrock” -- is in-place solid rock.

“Bench” -- is a relatively level step excavated into earth material on which fill is to be placed.

“Borrow” -- is earth material acquired from an off-site location for use in grading on a site.

“Building Official” -- is the City of Bremerton Building Official or the designated appointee.

“Civil Engineer” -- is a professional engineer registered in the state to practice in the field of civil works.

“Civil Engineering” -- is the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works.

“Compaction” -- is the densification of a fill by mechanical means.

“Earth Material” -- is any rock, natural soil or fill or any combination thereof.

“Director” – is the City of Bremerton Public Works & Utilities Director or designee.

“Engineering Geologist” -- is a geologist experienced and knowledgeable in engineering geology.

“Engineering Geology” -- is the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

“Erosion” -- is the wearing away of the ground surface as a result of the movement of wind, water or ice.

“Excavation” -- is the mechanical removal of earth material.

“Existing Grade” -- is the grade prior to grading.

“Fill” -- is a deposit of earth material placed by artificial means.

“Finish Grade” -- is the final grade of the site that conforms to the approved plan.

“Geotechnical Engineer” -- See “Soils Engineer”

“Grade” -- is the vertical location of the ground surface.

“Grading” -- is any excavating or filling or combination thereof.

“Key” -- is a designed compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope.

“Professional Inspection” -- is the inspection required by this code to be performed by the civil engineer, soils engineer or engineering geologist. Such inspections include that performed by persons supervised by such engineers or geologists and shall be sufficient to form an opinion relating to the conduct of the work.

“Rough Grade” -- is the stage at which the grade approximately conforms to the approved plan.

“Site” -- is any lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

“Slope” -- is an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

“Soil” -- is naturally occurring superficial deposits overlying bedrock.

“Soils Engineer” (“Geotechnical Engineer”) -- is an engineer experienced and knowledgeable in the practice of soils engineering (geotechnical) engineering.

“Soils Engineering” (“Geotechnical Engineering”) -- is the application of the principles of soils mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection or testing of the construction thereof.

“Terrace” -- is a relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes.

# EXCAVATION AND GRADING

The purpose of this chapter is to safeguard life, limb, property, the environment, and public welfare by regulating grading on private property. This chapter sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments; supports the administrative procedure for issuance of permits; and provides guidance for approval of plans and inspection of grading construction.

The City of Bremerton has adopted the most current versions of the following, as the accepted guidance documents for earthwork, grading, and excavation:

- International Building Code (IBC), Appendix J Grading, (BMC 17.04.020 STATE BUILDING CODE – ADOPTION). The assignment of “Building Official”, in Appendix J, is uniformly replaced with the “Director of Public Works & Utilities” by ordinance, although certain components of the code are verified and enforced by the Building Official.
- Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction (M 41-10) Division 2- Earthwork.
- Stormwater Management Manual for Western Washington (SWMMWW), Department of Ecology (most current revision)

Other regulations may apply. It is the responsibility of the project owner to ensure all local, state, tribal, and federal requirements for the specific project are followed.

The summary below is a general review of the adopted manuals and covers most of the requirements for grading and excavation. For complete guidance, see the adopted manuals.

Grading permits are issued by the Department of Community Development (DCD), at the Permit Center, with Public Works input and review. A grading permit, from the Director, is required for all excavation, grading, and earthwork construction, including fills and embankments, on public and private land except as exempted herein. Grading permits are required to be obtained before any excavation, grading, or filling takes place. A separate permit shall be obtained for each site, and may cover both excavations and fills.

## **General threshold values and which permit is required:**

- Greater than 50 cubic yards of excavation and/or fill material - Grading permit.
- Greater than 100 cubic yards of excavation and/or fill material - Site Development Permit.
- Greater than 1,000 cubic yards of excavation and/or fill material – Site Development Permit and State Environmental Policy Act (SEPA) review.

These numbers are provided as general guidance and not a guaranteed value to determine if an associated permit will be required. Many contributing factors may change the permit/s needed to complete a project for earthwork. Ask a Permit Center professional to verify what your project needs for permits and environmental review. For instance, an archeological and historical

cultural resources review may be required which is not addressed in this standard but is referenced in the WSDOT M 41-10 Division 1 standards.

Each application for a grading permit shall be accompanied by a plan and all applicable reports. See the Grading Plan Checklist at the end of this chapter for Grading Plan requirements.

## **Exemptions**

A grading permit is not required for the following:

- An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit.

EXCEPTION: This shall not exempt any fill made with the material from such excavation or exempt any excavation having an unsupported height greater than 5 feet after the completion of such structure.

- An excavation that (A) is less than 2 feet in depth or (B) does not create a cut slope greater than 5 feet in height and steeper than 1 unit vertical in 1 1/2 units horizontal (66.7% slope).
- A fill less than 1 foot in depth and placed on natural terrain with a slope flatter than 1 unit vertical in 5 units horizontal (20% slope), or less than 3 feet in depth, not intended to support structures, that does not exceed 50 cubic yards on any one lot and does not obstruct a drainage course.

NOTE: Exemption from the permit requirements of this chapter shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this chapter or any other laws or ordinances of this jurisdiction.

## **Recognized Testing Standards**

ASTM D 1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.

ASTM D 1556, Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method.

ASTM D 2167-15, Standard Test Method for in Place Density of Soils by the Rubber-Balloon Method.

ASTM D 2937, Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method.

ASTM D 6938, Standard Test Method for In-Place Density and Water Content of Soil and Soil Aggregate by Nuclear Methods (Shallow Depth).

## **Hazards**

Whenever the Director determines that any existing excavation or embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the Director, shall within the period

specified therein repair or eliminate such excavation or embankment to eliminate the hazard and to be in conformance with the requirements of this code.

## **Permit Requirements**

To obtain a permit, the applicant shall first file an application in writing on a form furnished by the Permit Center, a “Site Development Permit Application”. Requirements may be different for simple clearing and grading operations, so check with the Permit Center Professional to verify what is required before you start. The application shall include:

1. Project name.
2. Applicant contact information.
3. Contact person (if different than the applicant)
4. Property title holder.
5. Project engineer.
6. Specific property location (address or general vicinity).
7. Assesor tax account number(s).
8. Project description:
  - a. Existing site conditions,
  - b. Proposed land use activity,
  - c. Total parcel area,
  - d. Total disturbed site area,
  - e. Resulting new impervious surface area,
  - f. Number of residential lots,
  - g. Total Excavation + fill quantity (bank volume),
  - h. Drainage area and receiving water,
  - i. Water quality control features,
  - j. Identified critical drainage area,
  - k. Identify and describe the work to be covered by the permit for which application is made,
  - l. Be accompanied by plans, diagrams, computations and specifications and other data as required.
  - m. Be signed by the applicant, or the applicant's authorized agent.
  - n. Give such other data and information as may be required by the Director.
9. Critical Areas Checklist
10. Attachments (as required)

- a. State Environmental Act (SEPA) Checklist,
- b. Vicinity map,
- c. Verification of ownership,
- d. Construction plans (six copies) with supporting reports (3 copies):
  - Stormwater pollution prevention plan (SWPPP)
  - Erosion and sedimentation control plan (see Division 2.2 for BMP selection and requirements),
  - Engineered grading plan,
  - Engineered drainage plan,
  - Technical deviation,
  - Variance request,
  - Drainage report,
  - Downstream analysis,
  - SEPA Environmental Checklist,
  - Geotechnical Analysis or soils report.

### **Construction Stormwater General Permit**

A Construction Stormwater General Permit (CSWGP), issued by the Washington State Department of Ecology (DOE), may be required if the project meets the following thresholds:

#### **A. Permit Area**

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal operators and Indian Country as specified in Special Condition S1.E.3.

- Operators Required to Seek Coverage Under this General Permit:
  1. Operators of the following construction activities are required to seek coverage under this CSWGP:
    - a. Clearing, grading and/or excavation that results in the disturbance of one or more acres (including off-site disturbance acreage authorized in CSWGP S1.C.2) and discharges stormwater to surface waters of the State; and clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.
      - This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the

State (that is, forest practices that prepare a site for construction activities);  
and

- b. Any size construction activity discharging stormwater to waters of the State that the Washington State Department of Ecology (Ecology):
  - Determines to be a significant contributor of pollutants to waters of the State of Washington.
  - Reasonably expects to cause a violation of any water quality standard.
2. Operators of the following activities are not required to seek coverage under this CSWGP (unless specifically required under Special Condition S1.B.1.b. above):
  - a. Construction activities that discharge all stormwater and non-stormwater to ground water, sanitary sewer, or combined sewer, and have no point source discharge to either surface water or a storm sewer system that drains to surface waters of the State.
  - b. Construction activities covered under an Erosivity Waiver (Special Condition S2.C).
  - c. Routine maintenance that is performed to maintain the original line and grade, capacity, or original purpose of a facility.

## **Grading Designation**

Grading in excess of 5,000 cubic yards shall be performed in accordance with the approved grading plan prepared by a civil engineer (licensed in the State of Washington), and shall be designated as "engineered grading."

Grading involving less than 5,000 cubic yards shall be designated "regular grading" unless the permittee chooses to have the grading performed as engineered grading, or the Director determines that special conditions or unusual hazards exist, in which case grading shall conform to the requirements for engineered grading.

Engineered Grading Requirements. Application for a grading permit shall be accompanied by four sets of plans and specifications, and supporting data consisting of a soils engineering report and engineering geology report.

## **Plans and Reports**

When required, the plans and specifications shall be prepared and signed by an engineer (licensed in the State of Washington) when such plans or specifications are required by the Director.

Specifications shall contain information covering construction and material requirements.

Plans shall be drawn to scale upon substantial paper or cloth and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that they will

conform to the provisions of this code and all relevant laws, ordinances, rules and regulations. The first sheet of each set of plans shall give location of the work, the name and address of the owner, and the person by whom they were prepared.

The plans and reports shall include all applicable information listed in the Grading Plan Checklist at the end of this chapter.

Recommendations included in the soils engineering report and the engineering geology report shall be incorporated in the grading plans or specifications. When approved by the Director, specific recommendations contained in the soils engineering report and the engineering geology reports, which are applicable to grading, may be included by reference.

A licensed professional shall conduct Geotechnical investigations and the report submitted with the grading permit or any construction permit, including a site development permit. The Director shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent areas is available that demonstrates an investigation is not necessary. Soil classification shall be based on observation and any necessary tests of the materials disclosed by borings, test pits or other subsurface exploration made in appropriate locations. Additional studies shall be made as necessary to evaluate slope stability, soil strength, position, and adequacy of load-bearing soils, the effect of moisture variation on soil-bearing capacity, compressibility, liquefaction, and expansiveness.

## **Permit Issuance**

When the Director issues the permit where plans are required, such approved plans and specifications shall not be changed, modified or altered without authorizations from the Director, and all work regulated by this code shall be done in accordance with the approved plans. The permit, approved plans and modifications, and inspection documents shall be on-site at all times.

The Director may, but is under no obligation to issue a permit for the construction of part of the work before the entire plans and specifications have been submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of a partial permit shall proceed without assurance that the permit for the entire building or structure will be granted.

The Director may require that grading operations and project designs be modified if delays occur which incur weather-generated problems not considered at the time the permit was issued.

The Director may require professional inspection and testing by the soils engineer. When geologic factors are identified, grading will be required to conform to engineered grading.

One set of approved plans, specifications and computations shall be retained by the Director for a period of not less than 90 days from date of completion of the work covered therein; and one set of approved plans and specifications shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

The issuance or granting of a permit or approval of plans, specifications and computations shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this chapter or of any other ordinance of the City. Permits presuming to give authority to violate or cancel the provisions of this chapter or other ordinances of the City shall not be valid.

The issuance of a permit based on plans, specifications, and other data shall not prevent the Director from thereafter requiring the correction of errors in said plans, specifications and other data, or from preventing building operations being carried on thereunder when in violation of this code or of any other ordinances of the City.

### **Permit Terms, Expiration, and Extension**

Every permit issued under the provisions of this code shall expire and become null and void if the work authorized by such permit is not commenced within one hundred eighty days from the date of issue. If authorized work, under issued permit, is suspended or abandoned at any time after the work has commenced for a period of one hundred eighty days, it shall be null and void.

Before such work can be recommenced, the original permit may be reactivated, free of charge, by written request, provided no changes have been made or will be made in the original plans and specifications for such work and, provided further, that such suspension or abandonment has not exceeded one year.

Any permittee holding an unexpired permit may apply for an extension of time within which he may commence work under that permit, when unable to commence work within the time required by this chapter for good and satisfactory reasons, to the Director. The Director may extend the time for action by the permittee for a period not exceeding one hundred eighty days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken.

Permits expired for a period of one year or greater, the permittee shall obtain a new permit, pay a new full permit fee, and meet current codes and development regulations.

All permits expire after eighteen months and must be renewed if the work is not yet completed or substantial progress towards completion has been made.

### **Permit Suspension or Revocation**

The Director may, in writing, suspend or revoke a permit issued under the provisions of this code whenever the permit is issued in error or on the basis of incorrect information supplied, or in violation of any ordinance or regulation or any of the provisions of this chapter.

### **Fees and Financial Guarantees**

Fees shall be assessed in accordance with the fee Resolution adopted by the City of Bremerton City Council. These are updated annually and can be found on the City's website

at <http://www.bremertonwa.gov>, under Our Government, Codes & Ordinances – Rates & Fees.

When a plan or other data are required to be submitted, a plan review fee shall be paid at the time of submitting plans and specifications for review. Said plan review fee shall be as set forth in the fee resolution adopted by City Council on the Rates & Fees schedule. For excavation and fill on the same site, the fee shall be based on the volume of excavation or fill, whichever is greater.

A fee for each grading permit shall be paid to the “City of Bremerton Treasurer” as set forth in Rates & Fees schedule adopted by City Council. Separate permits and fees shall apply to retaining walls or major drainage structures as required by the building code or the Department of Public Works permit requirements.

The City may require financial guarantees in such form and amount as may be deemed necessary to ensure that the work will be completed to eliminate hazardous conditions.

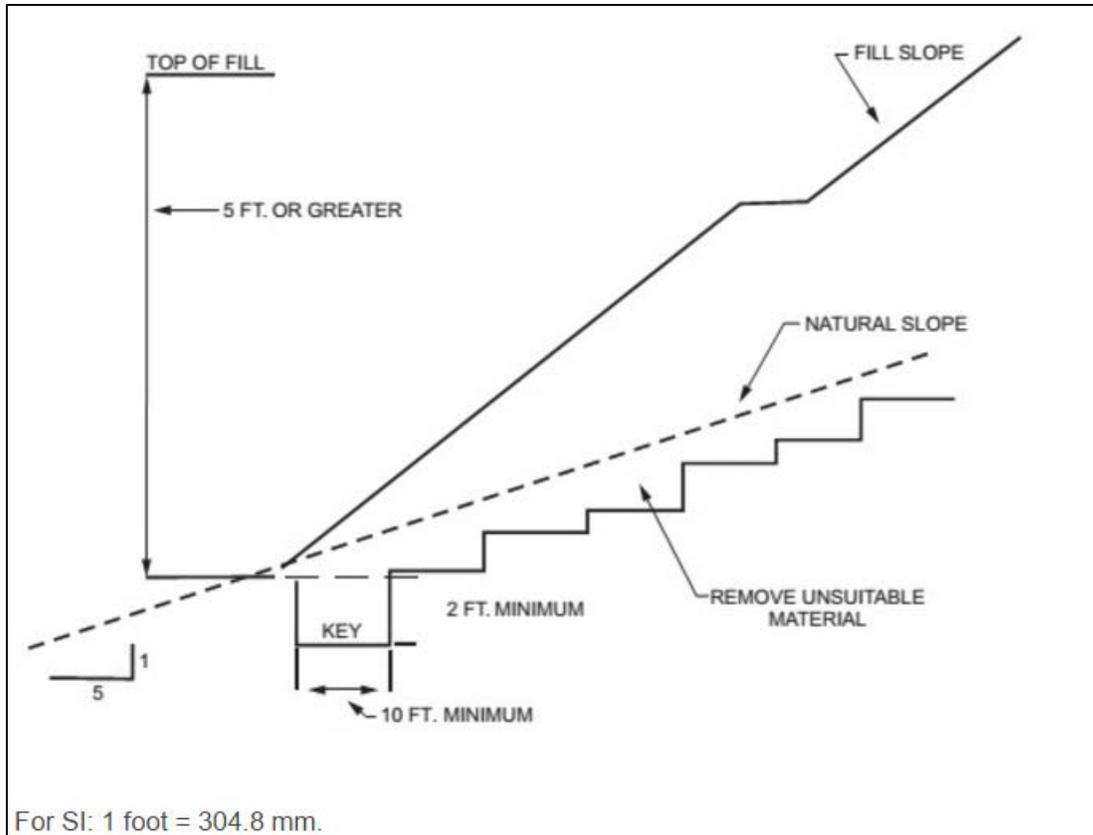
In lieu of a performance bond, the applicant may file a cash deposit or assignment of funds with the “City of Bremerton Treasurer” in an amount equal to 150% of the estimated cost to complete the permitted work.

## **Cuts and Fills**

Detrimental amounts of organic material shall not be permitted in fills. Except as permitted by the Director, no rock or similar irreducible material with a maximum dimension greater than 12 inches shall be buried or placed in fills. The City may permit placement of larger rock when the soils engineer properly devises a method of placement, and continuously inspects its placement and approves the fill stability. The following conditions shall also apply:

Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.

- Rock sizes greater than 12 inches in maximum dimension shall be 10 feet or more below grade, measured vertically.
- Rocks shall be placed so as to assure filling of all voids with well graded soil.
- All fills shall be compacted to a minimum of 90 percent of maximum density.
- The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes shall be no steeper than 1 unit vertical in 2 units horizontal (50% slope).



**Figure 1 - Benching**

## Setbacks

Cut and fill slopes shall be set back from site boundaries in accordance with this chapter. Setback dimensions shall be horizontal distances measured perpendicular to the site boundary. Setback dimensions shall be as shown in the diagram below.

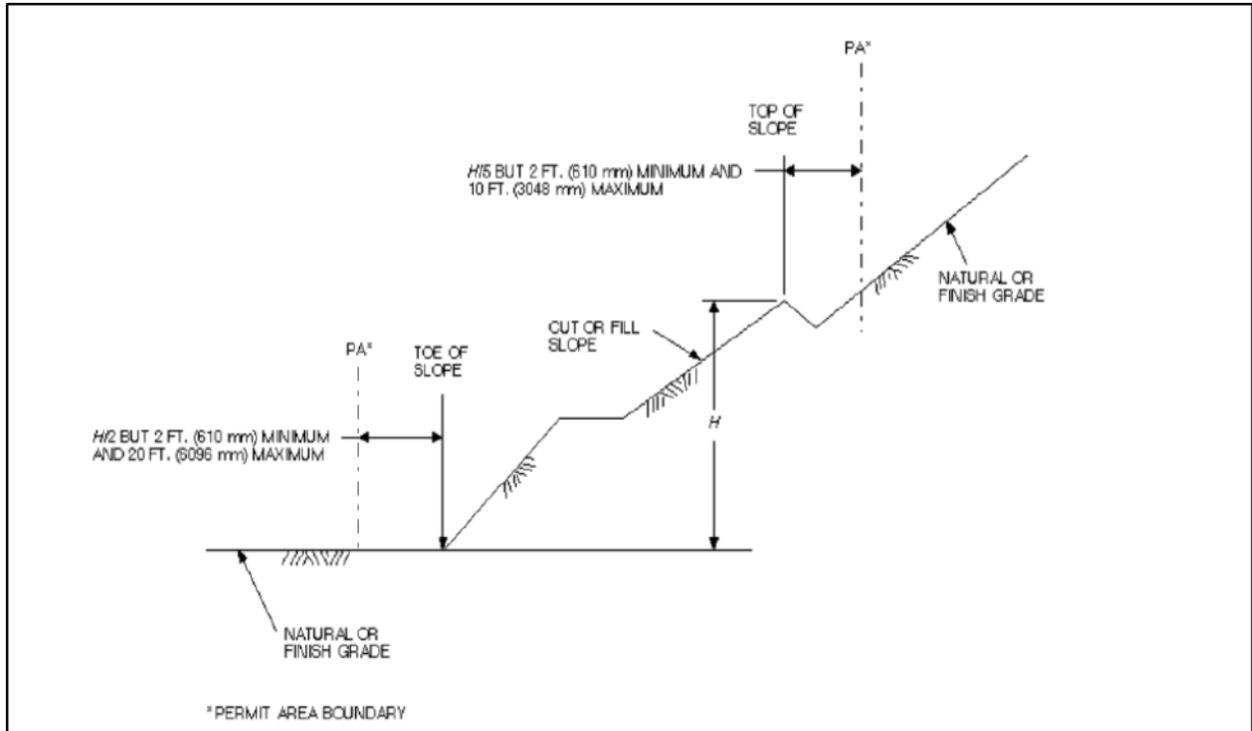
The top of cut slopes shall not be made nearer to a site boundary line than one fifth of the vertical height of cut with a minimum of 2 feet and a maximum of 10 feet. The setback may need to be increased for any required interceptor drains.

The toe of fill slope shall be made not nearer to the site boundary line than one half the height of the slope with a minimum of 2 feet and a maximum of 20 feet. Where a fill slope is to be located near the site boundary and the adjacent off-site property is developed, special precautions shall be incorporated in the work as the Director deems necessary to protect the adjoining property from damage as a result of such grading. These precautions may include but are not limited to:

- A. Additional setbacks.
- B. Provision for retaining or slough walls.
- C. Mechanical or chemical treatment of the fill slope surface to minimize erosion.

#### D. Provisions for the control of surface waters.

The Building Official may approve alternate setbacks. The Building Official may require an investigation and recommendation by a qualified engineer or engineering geologist to demonstrate that the intent of this chapter has been satisfied.



**Figure 2 - Drainage Dimensions**

### Stormwater Best Management Practices (BMPs)

All erosion control shall comply with Division 2, Section 2.2 - Temporary Erosion and Sediment Control. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.

Where necessary, check dams, or other devices or methods shall be employed to control erosion and provide safety.

### Grading Inspection

Grading operations for which a permit is required shall be subject to inspection by the City.

Grading operations inspections shall be provided by the civil engineer, soils engineer, or the engineering geologist retained to provide such services in accordance with this chapter for engineered grading and as required by the City for regular grading.

The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this code, and the permittee shall engage consultants, if required, to provide professional inspections on a

timely basis. The permittee shall act as a coordinator between the consultants, the contractor and the City. In the event of changed conditions, the permittee shall be responsible for informing the City of such change and shall provide revised plans for approval.

The City shall inspect the project at the various stages of work requiring approval to determine that adequate control is being exercised by the professional consultants.

If, in the course of fulfilling their respective duties under this chapter, the civil engineer, the soils engineer or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the City.

If the civil engineer, the soils engineer, or the engineering geologist of record is changed during grading, the work shall be stopped until the replacement has agreed in writing to accept their responsibility within the area of technical competence for approval upon completion of the work. It shall be the duty of the permittee to notify the City in writing of such change prior to the recommencement of such grading.

### **Completion of Work**

The permittee shall notify the City when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion-control measures have been completed in accordance with the final approved grading plan, and the required reports have been submitted.

## Grading Plan Checklist

### General requirements for all grading permits:

- Project title
- Vicinity map of the proposed site
- Parcel boundaries (property lines) certified by a land surveyor
- Legend
- North arrow
- Datum - Bench mark designation, elevation, and location (on all sheets where elevations are referenced)
- Datum - Horizontal, City of Bremerton ground scale (show ties to control)
- Scale bar
- Section, Township and Range
- Lot and subdivision and/or parcel number
- Utilities, both existing and proposed (above and below ground including buried tanks)
- Contour lines of existing ground at a maximum of 2 foot intervals
- Contour lines of existing ground at least 50 feet beyond site boundaries sufficient to depict area drainage
- Contour lines of proposed finished grade
- Existing structures on the subject parcel and within 100 feet of the project boundary
- Proposed structures on project site
- Wells (active, inactive and proposed)
- Easements, both existing and proposed
- Erosion Control Plan per Division 2, Section 2.2 - Temporary Erosion and Sediment Control for the Public Work's Plan Checklist containing the Erosion Control Plan checklist components.
- Soil type
- Construction entrance per Division 2, Section 2.2 - Temporary Erosion and Sediment Control
- Engineered grading required if >5,000 cuft, of material is used for fill or excavated and/or removed, special conditions required
- Quantities of material involved

## **Additional items required for engineered grading permit:**

### **( ) Soils Engineering Report:**

- ( ) Date of report
- ( ) Name, address, and phone number of firm and/or individual who prepared report
- ( ) Nature, distribution and strength of existing soils
- ( ) Conclusions and recommendations for grading procedures
- ( ) Design criteria for corrective measures, including buttress fills when necessary, and opinion on adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes

### **( ) Engineering Geology Report:**

- ( ) Date of report
- ( ) Name, address, and phone number of firm and/or individual who prepared report
- ( ) Description of the geology of the site
- ( ) Conclusions and recommendations regarding the effect of geologic conditions on the proposed development
- ( ) Opinion on the adequacy for the intended use of site to be developed by the proposed grading as affected by geologic factors

### **( ) Liquefaction Study:**

May be required to determine the potential for seismically induced soil liquefaction and soil instability when, during the course of an investigation, all of the following conditions are discovered:

- Ground water at 50 feet or less
  - Unconsolidated sandy alluvium
- ( ) Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work, Together with a map showing the drainage area and the estimated runoff of the area served by any drains.
  - ( ) Recommendations included in the soils engineering report and the engineering geology report shall be incorporated in the grading plans or specifications.

# **Division 2.2 - Temporary Erosion & Sediment Control**



Department of Public Works and Utilities

Engineering Division

## **Standards and specification for temporary erosion and sediment control (TESC) plan, stormwater pollution prevention plan (SWPPP) best management practices.**

Best Management Practices (BMPs) are defined as schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices, that when used singly or in combination, prevent or reduce the release of pollutants to waters of Washington State.

The City of Bremerton has adopted the most recent version of the Washington State Department of Ecology's (Ecology) Stormwater Management Manual Western Washington (SWMMWW) as the defining guidance document for temporary erosion and sediment control requirements (BMC 15.04.020 ADOPTION OF MANUALS). The SWMMWW can be found on Ecology's website at this link as of July 2017: <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>. This manual shall be used to develop the TESC plan that includes BMP drawings, and supporting materials that define the requirements for the individual project. BMP Drawings and technical guidance is available at the Washington State Department of Ecology's website address: <http://www.ecy.wa.gov/programs/wq/stormwater/manual/2014SWMMWWinteractive/2014%20SWMMWW.htm>. Drawings and figures are currently provided in PDF and AutoCAD format.

## **Spill Prevention Control and Countermeasures (SPCC)**

Contractors, who are required to prepare a project specific Spill Prevention Control and Countermeasure (SPCC) Plan, should prepare this plan prior to any construction activity.

Projects need to follow the SPCC requirements of Section #1-07.15(1) of the current WSDOT Standard Specification book, M41-10. Contract requirements are available at the WSDOT Construction web page. Staff are encouraged to contact a Haz Mat Specialist for questions, recommendations, or a project SPCC assessment. The current WSDOT can be found at: <http://www.wsdot.wa.gov/Publications/Manuals/M41-10.htm>.

### **Note:**

For permanent stormwater quantity and quality control facilities and BMPs, see City of Bremerton Division 4 – Stormwater standards, or the SWMMWW, and the adopted Low Impact Development Technical Guidance Manual for Puget Sound, December 2012, or the most current revision.