Chapter 01. Grading

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Article 01. Definitions

Agricultural Development: (1) Land for the purpose of Agricultural Operations. (2) Agricultural Grading for the purpose of increasing the amount of land used in commercial agricultural operations.

Agricultural Grading: Non-Development grading associated with commercial agricultural operations (crop production or grazing) within land use zones AE or OS.

Agricultural Operation: The activities related to: (1) the growing or harvesting of crops, or (2) the raising of fish, fowls, and animals for commercial purposes.

Average Natural Slope: The Average Natural Slope is the ratio of the vertical distance to the horizontal distance, or the elevation change in feet divided by the distance in feet. The percent slope of a agricultural area (i.e., the entire contiguous area that will be disturbed by the grading is the natural slope of the existing terrain and not the finished or proposed percent slope resulting from the project. The Average Natural Slope, in percent, for a given area is the product of the selected contour interval and the sum of the length of each selected contour interval divided by the area in square feet and is shown in formula:

$$S = (I \times L \times 100) \div (A \times 43{,}560)$$

where:

S = Average existing land slope, in percent.
I = Interval, in feet, of the topographic map contour lines.
L = The sum, in feet, of the length of the contour lines, at the selected contour interval “I”.
A = The total area, in acres, of the agriculture.

The cross section of the selected contour shall be representative of the property and drawn perpendicular to the contours of the proposed disturbed area using a site plan with a contour interval not to exceed ten feet at a scale of 1 inch = 100 feet or better.

Benching: A grading process that constructs a relatively level step excavated into earth material on which fill is to be placed.

Best Management Practices (BMP): Also known as stormwater Best Management Practices, a program, technology, process, siting criteria, operational method, or engineered system, which when implemented prevents, controls, removes, or reduces soil erosion, sediment transport and pollution. Best Management Practices approved for use under this ordinance shall come from one or more of the following sources:

1. CASQA (California Stormwater Quality Association) Stormwater Best Management Practice Handbook, latest edition;

2. Caltrans Stormwater Quality Handbook, latest edition;

3. NRCS (Natural Resource Conservation Service) Conservation Practice Standards, latest edition.

4. Other sources approved in writing by the Public Works Agency including but not limited to measures designed and stamped by a Civil Engineer.

5. The permitting authority's Best Management Practices guide.

Channel: The deepest or central part of a linear depression where a body of surface water flows or may flow.

Civil Engineer: An individual registered by the State of California to practice civil engineering and use the title, Civil Engineer.

Contour: A line on a map that connects points of equal value such as the elevation of the land surface above or below some reference value.

Crop: A plant or plant product grown for the purpose of harvesting, grazing or landscaping for profit or subsistence.

Cut: See excavation.

Cut Slope: A slope that is constructed by excavation.

Dam: Any human made barrier that may impound or divert water.

Debris Basin: An area that intercepts earth materials and other debris in a drainage course to prevent the debris from traveling downstream.

Detention Basin: An area where excess stormwater is stored or held temporarily and then slowly released when the water levels of the receiving channel recede.

Development Grading: All grading that is associated with a project that requires a building permit.

Disturbed Area: An area where Grading has occurred and the ground surface is susceptible to errosion.

Ditch: A human made channel constructed to collect and carry water runoff.

Drainage Course: A natural or human made channel or flow path produced wholly or in part by a definite flow of water that is either continuous or intermittent.

Earth Materials: Any rock, natural soil or unconsolidated material above bedrock or mixture thereof.

Embankment: Any fill placed above natural grade to impound water.

Engineer: The Engineering Geologist or Civil Engineer who prepared and approved the Geotechnical Report or Grading Plan or their authorized representative.

Engineering Geologist: A professional geologist certified by the State of California as an Engineering Geologist.

Erosion: The wearing away and removal of the land surface from the property by water, or other climatic and geologic agents.

Excavation: The removal of earth material by artificial means, also referred to as a cut.

FEMA: The Federal Emergency Management Agency

Fill: Deposition of earth materials by artificial means.

Fill Slope: A slope that is constructed with fill.

Geotechnical Engineer: A Civil Engineer authorized by the State of California to use the title “Geotechnical Engineer”.

Geotechnical Report: A report, plan or design prepared and stamped by a Geotechnical Engineer that documents the existing surface and subsurface site conditions and makes design and/or construction recommendations that are consistent with standard engineering practices to ensure compliance with the objectives of this ordinance.. When not provided as part of a Grading Permit, the Geotechnical Report shall be provided upon request by the Public Works Agency.

Grading: The movement, removal or deposit of earth materials by artificial means.

Grading Plan: A report, plan or design Grading that is consistent with standard engineering practices to ensure compliance with the objectives of this ordinance, that is prepared and stamped by a Geotechnical or Civil Engineer and is implemented by a property owner. When not provided as part of a Grading Permit, the Grading Plan shall be provided upon request by the Public Works Agency.

Grazing: The consumption of plants or plant materials by livestock or wildlife.

Grazing Lands: Rangeland, pastureland, forestland, native and naturalized pasture, used primarily for production of vegetation that is maintained or managed primarily by Grazing.

Grindings: Small fragments (less than 2-inch, nominal, in size) of asphalt, concrete or rock typically used for road surfacing and erosion control.

Gullies: Narrow channels that are larger and deeper than rills that usually carry water only during and immediately after heavy rains.

Hillside: Property that has an Average Natural Slope steeper than 10:1 (10 percent gradient).

Hillside Agricultural Development: Land for the purpose of crop production or grazing that has an average natural slope greater than 10:1 (10 percent) gradient.

Irrigated Lands: An Agricultural Development area that has water applied by artificial means.

Irrigated Lands Waiver: A conditional waiver of waste discharge issued by the California Regional Water Quality Control Board to agricultural land owners.

Land Clearing: Process of removing trees, stumps, brush, stones, non-cultivated vegetation and other obstacles from the ground surface. Land Clearing may involve some ancillary disturbance of the ground surface. Land clearing does not include controlled burn processes under supervision of the Fire Protection Agency, mastication processes, or Range Management.

Land Disturbance: An activity involving grading prior to planting that causes land to be exposed to erosion

Landslide: A mass-movement landform in which the displaced material moves over a relatively confined zone or surface of shear.

Nested Rocks: Rocks or concrete inert debris placed or dumped in a manner such that the sides are in direct contact with each other.

Non-Development Grading: All grading that does not meet the definition of Development Grading including but not limited to Agricultural Grading and Oil Field Grading.

Oil Field Grading: Non-Development grading associated with lands that are used for commercial oil field operations.

Pad: See Storage Area.

Parcel: A land area described by map or deed that is on record with the County of Ventura Recorder's Office.

Property: One or more contiguous parcels managed by the same operator who owns, leases, or manages the parcels.

Rainy season: The period of time beginning on October 1st and continuing up to and including April 15th each year or as specified in the Ventura County MS4 permit as approved by the California Regional Water Quality Control Board, Los Angeles Region.

Range Management: Historical practices to control woody plant species which include, but are not limited to, prescribed burning, mechanical clearing methods along natural contours, mastication, prescribed grazing, herbicide applications, bio-control methods, cultivation of annual and perennial grasses for the purpose of maintaining grazing lands.

Red Line Channel: Natural and human made channels or streams within the County of Ventura Watershed Protection District's jurisdiction that carry a minimum of 500 cubic feet per second in a 100-year storm event and that are regulated by Ventura County Ordinance FC-18.

Reservoir: . A human-made containment for water either stored above or below the natural grade.

Retention Basin: An area that stores stormwater on a permanent basis and may be used to recharge groundwater.

Rock Disposal Area: An area designated for the placement of nested rocks with a nominal size greater than 12 inches and volume greater than 5 cubic yards.

Scarp: The undisturbed ground around the uphill periphery of a landslide caused by the movement of material away from the undisturbed ground.

Slope: An inclined stretch of ground that is expressed as a ratio of horizontal distance to vertical distance.

Slope Height: The overall height of a slope measured vertically from the bottom to the top. The overall height does not include portions supported by retaining walls or portions separated by a level distance greater than 12 feet.

Stable: Resist movement and erosion.

Stock Pond: A small body of water with shallow depth, not exceeding six feet in depth or two acre feet in storage, which is contained by the surrounding land where the pond is deep enough to support aquatic plants and provides a water source for livestock and wildlife. Stock ponds tend to be seasonal and naturally fed by a water source.

Stormwater Best Management Practices: See Best Management Practices.

Soils Engineer. See Geotechnical Engineer.

Stockpile: The temporary placement of earth materials or grindings above grade on a property.

Storage areas: A relatively level area that is only used to store equipment and for staging of activities.

Swale: See ditch.

Topsoil: The natural medium for the growth of land plants.

Wetland: An area delineated by a biological consultant properly trained and qualified to make such delineations. The official definition of a "wetland" differs among regulatory agencies but all variations involve these three elements:

1. **Wetland Hydrology**: The presence of water at or above the soil surface for a sufficient period of the year to significantly influence the plant types and soil chemistry

2. **Hydric Soil**: Soil that is wet long enough during the growing season to develop low-oxygen conditions.

3. **Hydrophytic Plants**: Plants adapted to saturated soil conditions.

Article 02. Development Standards

Being Developed

Article 03. Non-Development Standards.

Section 03.01. Purpose.

This article provides ministerial standards for the proper conduct of grading, drainage improvement, and site development for Non-Development grading projects. All grading, drainage improvement, and site development shall be conducted in a manner consistent with the requirements of this article, regardless of whether or not a permit is required by this Article.

Section 03.02. Land Clearing.

Land clearing shall be designed and conducted in compliance with the following requirements.

A. All clearing must be performed within the boundaries of the property being cleared.

B. The limits of clearing shall be defined and marked when land clearing is within 50 feet of a separately owned adjacent property.

Section 03.03. Cuts and Fills.

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, Cuts and Fills shall be designed, constructed and maintained during construction in compliance with this Section.

A. General.

1. **Site Drainage**. Site drainage for cuts and fills shall be in accordance with this Section and Section 03.08.

2. **Erosion Control**. Stormwater Best Management Practices shall be implemented in accordance with Section 03.09.

3. **Areas of cuts and fills.** Cuts and fills shall be limited to the amount necessary for the intended use.

4. **Final contours.** Contours, elevations, and shapes of finished surfaces shall be blended with adjacent natural terrain to achieve a consistent grade and natural appearance as follows:

a. The top of cut slopes shall be rounded off to blend with the natural terrain.

b. Borders of cut slopes and fills shall be rounded off to a minimum radius of 5 feet to blend with the natural terrain.

B. Cuts.

1. This standard does not apply to cuts that are 3 feet or less in height on an average natural slope equal to or less than 10:1 (10 percent).

2. This standard does not apply to temporary excavations for the placement of pipes for drainage, utility and water lines.

3. **Slope.** The slope of cut surfaces shall be no steeper than 2 units horizontal to 1 unit vertical (50 percent) for slope heights greater than 5 feet vertical.

C. Fills.

1. This standard does not apply to Fills that are 1 foot or less in thickness on an average natural slope equal to or less than 10:1 (10 percent).

2. **Surface preparation**. Ground surfaces shall be prepared to receive fill by removing vegetation, topsoil, and other unsuitable materials, and scarifying the ground to provide a bond with the fill material. Fill shall not be placed upon a frozen surface or a surface containing snow, ice or other frozen material.

3. **Benching**. Benching into unweathered bedrock or firm material shall be required where the existing Average Natural Slope is steeper than 4 units horizontal to 1 unit vertical (25 percent) and the depth of the fill exceeds 5 feet. Benching shall be performed in accordance with Figure 01.1, and the following requirements:

a. A key at least 10 feet in width and 2 feet in depth shall be installed.

b. The key shall be installed at least 1 foot into bedrock or firm earth material.

c. The surface area below the toe of the fill shall be sloped for runoff in a non-erosive manner.

d. Cuts for benching and keys shall be level and a suitable foundation for fill prior to the placement of the fill material.

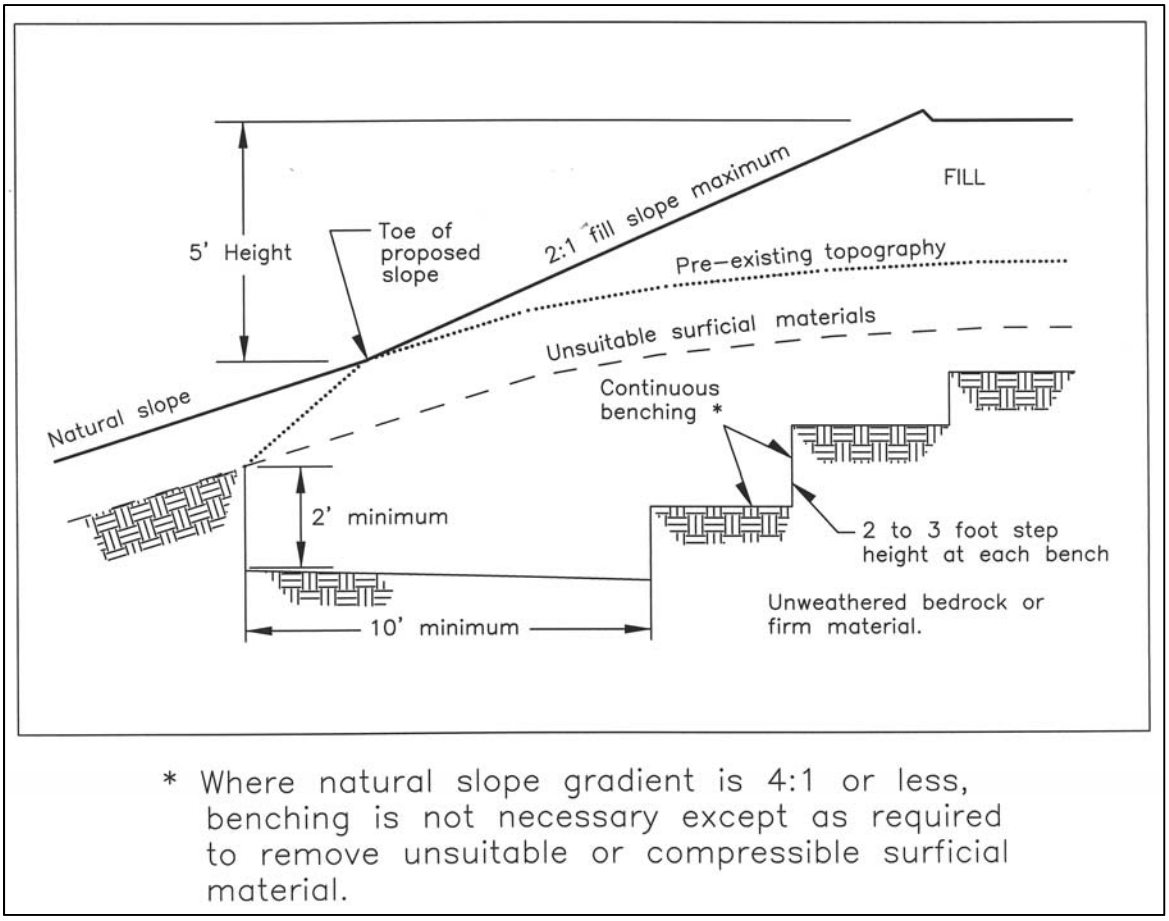

Figure 01.1 - Benching Details

4. **Fill material**. Fill material shall not include organic, frozen, or other deleterious materials and shall comply with the following requirements:

   a. **Nesting**. Fills containing three cubic-yards or more of nested rocks or similar irreducible material greater than 12" in any dimension shall be placed according to a Grading Plan and shall meet the following requirements:

      1) Material shall be placed so as to assure filling of all voids with well–graded soil.

      2) Material sizes greater than 3 feet in maximum dimension shall be placed a minimum of three below grade, measured vertically.

      3) Rock Disposal Areas shall be delineated on the Grading Plan. The Grading Plan shall be modified by the Engineer to show the as-built location of the Rock Disposal Areas at the completion of grading.

4) The placement of nested material shall be continuously inspected for compliance with the Grading Plan by the Engineer who prepared the plan. The Engineer shall provide the property owner with a statement of compliance with the Grading Plan upon completion of the grading.

5) See Article 04 for permitting requirements.

b. **Construction Demolition or Inert Material**. Prior to placing any fill containing construction, demolition or inert debris as defined and regulated by the County of Ventura Environmental Health Department (EHD), an evaluation from EHD for their permitting requirements shall be provided to the Public Works Agency.

5. **Fill Placement**. Fills shall be constructed in lifts not exceeding 12 inches in thickness. The distribution and gradation of earth fill material shall have no lenses, pockets, streaks or layers that substantially differ in material type, gradation or texture from the adjacent materials. Completed fills shall be stable, well-integrated, and bonded to adjacent materials and the materials on which they rest. Fills shall be competent to support anticipated loads and be stable at the design slopes.

a. **FEMA Designated Special Hazard Areas**: Prior to placing any fill in a FEMA designated special flood hazard area that raises the existing ground elevation, an evaluation shall be performed by the Public Works Agency to determine all flood plain permitting requirements.

b. **County of Ventura Watershed Protection District Red Line Channel**: Prior to placing any fill within a Red line Channel as defined and regulated by the County of Ventura Watershed Protection District (WPD), an evaluation from WPD on their permitting requirements shall be provided to the Public Works Agency.

6. **Fill Compaction**.

a. Fills shall be compacted to the density necessary for the intended use and to limit erosion.

b. Fills shall contain uniform moisture content for optimizing compaction at the time of placement and compaction.

c. Compaction by one or more of the following methods will be considered as complying with this section:

1) Sheepsfoot Roller: The roller shall have staggered uniform spaced tamping feet and be equipped with suitable cleaners.

The weight of the roller shall not be less than 2,500 pounds per foot of width. The maximum speed shall be less than 3 miles per hour and the entire surface shall receive at least 4 passes with this equipment.

2) Pneumatically Tired Equipment (Scraper): A loaded scraper or a type of pneumatic roller shall pass over 90 percent of the entire surface area prior to placing an additional fill layer and the surface of each new fill layer shall receive at least 6 passes prior to placing additional fill.

3) Track Equipment (Bulldozer): The tracks of the equipment shall pass over 90 percent of the entire fill surface prior to placing an additional fill layer and the surface of each new fill layer shall receive at least 8 passes prior to placing additional fill.

4) Mechanical Hand Tampers: Small work areas or areas that do not permit equipment to pass over the surface shall be compacted with mechanical tampers that pass over the entire area a minimum of three times prior to placing the next soil lift. The thickness of the fill layer shall not be more than 6 inches prior to compaction.

5) Jetted Backfill: Backfill of trenches to be densified by water shall be jetted. Jetting shall be accomplished by the use of a jet pipe to which a hose is attached, carrying a continuous supply of water under pressure. Suitable material for jetting shall have a sand equivalent of 15 or greater.

6) Engineer Testing: Any compaction method that is confirmed through testing by an Engineer that meets the requirements of a Geotechnical Report or Grading Plan.

d. Compaction equipment shall not be operated within 3 feet of any structure or above any vertical excavation within a distance equal to 2 times the height of the excavation.

7. **Slope**. The slope of fill surfaces shall be no steeper than 2 units horizontal to 1 unit vertical (50 percent).

D. Drainage of cut and fill slopes.

1. Drainage of cut and fill slopes shall be designed and constructed to preserve the integrity of the slope and shall meet the requirements of Section 03.09.

2. Cuts and fills with finished surface slopes steeper than 3 units horizontal to 1 unit vertical (33 percent) shall meet the following additional requirements.

   a. **Drainage Swale Intervals**. Drainage swales shall be established on cut and fill slopes to control surface drainage and debris. Suitable access shall be provided to permit proper cleaning and maintenance.

      1) For cut and fill slopes up to 30 feet in vertical height, drainage swales are not required.

      2) For cut and fill slopes greater than 30 feet in vertical height shall be designed by a Civil Engineer.

   b. **Subsurface drainage**. Cut and fill slopes shall be provided with subsurface drainage as necessary for stability or in areas where keyways or benches encounter water or evidence of water. Subdrains shall be constructed in accordance with Figure 01.2 of this Section.

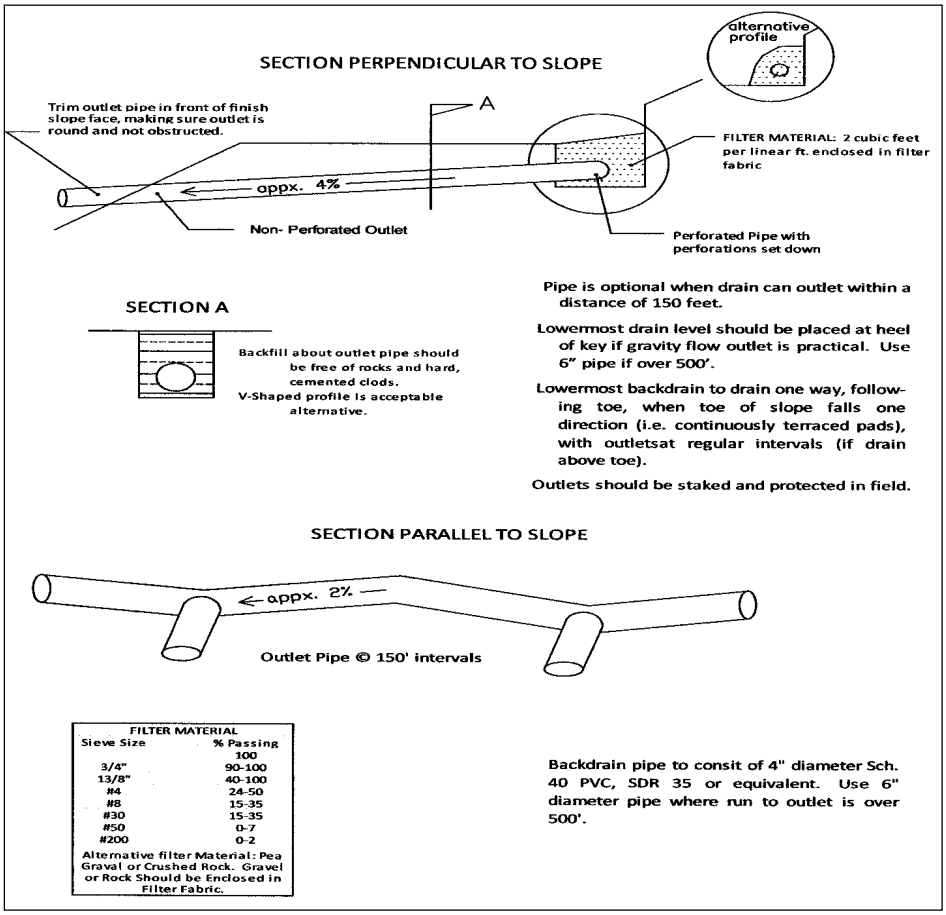

Figure 01.2 - Subsurface Drainage Requirements

E. Property Line Setbacks. Cut and fill slopes shall be set back from property lines with the minimum dimensions shown in Figure 01.3. Setback dimensions shall be measured perpendicular to the property line.

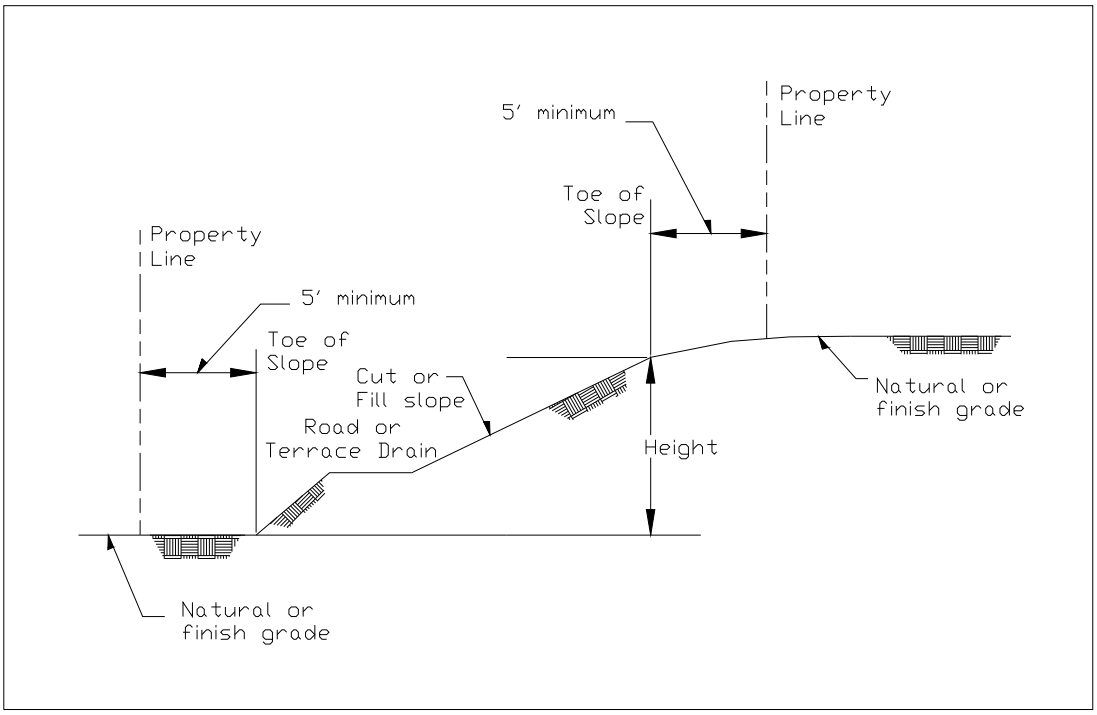

Figure 01.3 - Property Line Setbacks

F. Protection of footings, structures, and adjacent property. In order to protect footings, structures and adjacent property from grading activities the following requirements shall be followed:

1. Footings that may be affected by any excavation shall be underpinned or otherwise protected against settlement and lateral movement.

2. Fills or other surcharge loads shall not be placed adjacent to any building or structure unless the building or structure is capable of withstanding the additional loads caused by the fill or surcharge.

3. Adjacent properties shall be protected from damage that may occur from grading operations.

Section 03.04. Stockpiles.

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, all stockpiles shall be designed, constructed and maintained in compliance with this Section.

A. All stockpiles shall comply with the following requirements:

1. **Erosion Control**. Stormwater Best Management Practices shall be implemented in accordance with Section 03.09.

2. **Surface Gradient**. Stockpiles may only be placed on a surface gradient less than or equal to 5:1 (horizontal to vertical).

3. **Side Slopes**. Once the stockpile is placed on the property, the side slopes of the stockpile shall be trimmed to an average slope of 3:1 (horizontal to vertical) with no vertical cut that exceeds 4 feet in height.

4. **Accumulation of Water**. Stockpiles shall not be placed or constructed in a manner that allows the accumulation of water on the stockpile or around its perimeter.

5. **Setbacks**. Stockpiles shall be setback from buildings, public roads, property lines or buried utilities a minimum of twice the height of the stockpile but no less than 10 feet.

6. **FEMA Designated Special Hazard Areas**: Prior to placing any Stockpiles in a FEMA designated special flood hazard area that raises the existing ground elevation, an evaluation shall be performed by the Public Works Agency to determine any flood plain permitting requirements.

7. **County of Ventura Watershed Protection District Red Line Channel**: Prior to placing any Stockpiles within a Red line Channel as defined and regulated by the County of Ventura Watershed Protection District (WPD), an evaluation from WPD on their permitting requirements shall be provided to the Public Works Agency.

B. Stockpiles containing rock, concrete or asphalt where 25% or more of the stockpile has a nominal particle size greater than 12 inches shall comply with the following requirements:

1. **Location**: Stockpiles shall not be located: 1) on a landslide; 2) within 50 feet of a down slope property line; or 3) within 50 feet of an embankment or downhill slope greater than 5:1 (horizontal to vertical).

2. **Height**: Stockpiles shall not be greater than 10 feet in height.

Section 03.05. Level Storage Areas and Pads.

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, Level Storage Areas and Pads shall be designed, constructed and maintained in compliance with this Section.

A. **Erosion Control**. Stormwater Best Management Practices shall be implemented in accordance with Section 03.09.

B. All level storage areas and pads that are planned for or may in the future support a building or structure that will require a building permit shall meet the requirements of the Development Grading Standards before the structure may be built.

C. All Hillside Level Storage Areas and Pads (Hillside Pad) shall meet the following requirements:

1. Maintain a minimum drainage gradient of 2 percent toward drainage improvements.

2. Berms or other devices shall be provided at the edge of the Hillside Pad to prevent surface waters from overflowing onto descending slopes and damaging the face of a slope. Berms used for slope protection shall not be less than 12 inches above the level area created.

3. A Hillside Pads placed in a Drainage Course shall safely convey upstream water to the same drainage course downstream of the Hillside pad. The natural watershed drainage area above the pad shall not exceed 10 acres.

Section 03.06. Slope Repairs.

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, all Slope Repairs shall be designed, constructed and maintained in compliance with this Section.

A. **Erosion Control**. Stormwater Best Management Practices shall be implemented in accordance with Section 03.09.

B. **Grading Plan**. All Slope Repairs where the total slide area is greater than or equal to 5,000 square-feet shall be performed in accordance with Grading Plan. See Article 04 for permitting requirements.

1. The Grading Plan shall, at a minimum, addresses the following:

   a. An evaluation of the landslide area, determination of the cause(s) and prescribed repair methodology.

   b. Topographic site plan.

   c. Geologic map of the landslide area.

   d. Geologic data on the slip surface.

e. Soil properties and laboratory test results as deemed necessary by the Engineer.

f. Recommendations to stabilize the slide; increase subsurface and surface drainage; promote surface drainage around or through the slide area; and a schedule to monitor the construction or post construction phase of the repair.

g. Appropriate post-repair vegetative cover requirements and the location of subdrain and surface drain outlets.

h. An Operation and Maintenance Plan to include a schedule for periodic inspections for additional movement, vegetation growth, surface erosion, and drainage system functionality.

2. All repair work shall be monitored and controlled onsite by the Engineer who prepared the Grading Plan to ensure compliance with the Grading Plan.

Section 03.07. Dams and Reservoirs.

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, all Dams and Reservoirs shall be designed, constructed and maintained in compliance with this Section.

A. This Section does not apply to Stock Ponds.

B. **Erosion Control**. Stormwater Best Management Practices shall be implemented in accordance with Section 03.09.

C. **Dams and reservoirs subject to County jurisdiction**. Dams and Reservoirs subject to the County of Ventura's jurisdiction shall be constructed and maintained to meet the following requirements.

1. **Freeboard**. The residual freeboard (vertical distance from the maximum water surface to the minimum top of the retaining structure) shall be a minimum of1.5 feet.

2. **Outlet Flows**. All surface flow coming out of a Dam or Reservoir shall be conveyed safely and in a non-erosive manner.

3. **Interior Slopes**. Interior slopes shall be a equal to or less than 3:1 (horizontal to vertical).

4. **Safety**. Appropriate safety measures shall be provided to prevent injury from unauthorized access to the Dam, Reservoir, inlets and outlets.

5. **Engineered Design**. All Dams and Reservoirs that involve the storage of water above grade or a total storage volume greater than two acre-feet shall be constructed in accordance with a plan designed and stamped by a Civil Engineer. See Article 04 for permitting requirements.

    a. A copy of the Engineer's design shall be provided to the Public Works Agency upon request.

Dams and reservoirs subject to state jurisdiction. Dams and Reservoirs within the state's jurisdiction shall be designed and constructed in compliance with the requirements of the California Division of Safety of Dams. The construction of water impoundment devices such as a wall or embankment may constitute the construction of a dam and may be subject to the permit requirements of the Division of Safety of Dams with the California Department of Water Resources. In accordance with the California Water Code, Division 3, Dams and Reservoirs, Part 1, Supervision of Dams and Reservoirs, Chapter 1, Definitions, 6003: "Any such barrier which is or will not be in excess of six feet in height, regardless of reservoir storage capacity, or which has or will have a storage capacity not in excess of 15 acre-feet, regardless of height, shall not be considered a dam."

6. A copy of all permits obtained the California Division of Safety of Dams shall be provided to the Public Works Agency.

Section 03.08. Site Drainage.

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, all Site Drainage shall be designed, constructed and maintained in compliance with this Section.

A. Erosion Control. Drainage improvements shall prevent or minimize soil loss through the use of Best Management Practices as specified in Section 03.09, storm drain culverts (pipes), storm drain inlets and outlets, storm drain outfalls, energy dissipaters, flow dispersion, check dams, debris basins, detention basins, retention basins and vegetated swales.

B. Natural drainage patterns and stormwater levels. Grading shall be designed to maintain historic drainage patterns, and limit post-graded stormwater runoff levels to the same as pre-graded storm runoff levels. Drainage patterns shall be maintained so as not to cause a greater erosive condition than the pre-existing pattern.

C. Disposal of stormwater. Drainage improvements shall carry stormwater to the historical disposal location and shall dissipate the energy or diffuse the flow. Desilting basins, filter barriers or other methods shall be utilized to minimize sediments from surface waters from entering streets, storm drains, and natural watercourses.

D. **Overland Flow.** Outlets flowing water over land and not into a channel or other Drainage Course shall have a flow rate less than 3 cubic-feet per minute.

E. **Engineered Design**. All Site Drainage of an area greater than 10 acres or greater than 5 acres and on a Hillside shall be constructed in accordance with a plan designed and stamped by a Civil Engineer. See Article 04 for permitting requirements.

1. The Engineer's design shall be based on hydrology report covering the area to be drained.

2. A copy of the Engineer's design shall be provided to the Public Works Agency upon request.

Section 03.09. Soil and Other Pollutant Discharges.

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, all grading projects shall be designed, constructed and maintained in compliance with this Section.

A. An owner who is in compliance with a State of California issued Irrigated Lands Waiver permit is deemed to be compliant with this Section.

B. Soil and other pollutant discharges shall be controlled and minimized from leaving the Property upon which the project is located or from entering Drainage Courses or water bodies by using storm water Best Management Practices.

C. Best Management Practices shall be employed to minimize earth materials from falling onto private or public roads from vehicles which have been on the project site.

D. Property owners shall inspect all disturbed project areas after rain events for evidence of erosion. Best Management Practices shall be reestablished and/or modified as needed to meet the requirements of this Section.

E. All Hillside disturbed surfaces shall be revegetated as provided by Section 03.10, unless covered with impervious or other improved surfaces authorized by a Grading Plan, and permanent erosion and sediment source control methods are installed.

F. Storm water Best Management Practices shall be implemented and functional on the project site at all times during the Rainy Season.

Section 03.10. **Revegetation.**

Unless otherwise recommended or approved in a Geotechnical Report or Grading Plan, non-development grading and drainage improvement projects shall revegetate disturbed Hillside surfaces in compliance with the following requirements.

A. **Preparation for Revegetation**. Topsoil removed from the surface in preparation for new grading and drainage improvements shall be stored on or near the work area and protected from soil loss erosion while the work is underway, provided that such storage shall not cause damage to root systems of trees intended to be preserved or block drainage.

B. **Methods of Revegetation**. Mulching, seeding, planting of groundcover, shrubs or trees, or other suitable stabilization measures shall be used to protect exposed soil to minimize soil loss, and to maximize slope stability.

C. **Timing of Revegetation Measures**. Temporary or permanent re-vegetation shall be installed as soon as practical after vegetation removal to ensure compliance with Section 03.09.

Section 03.11. Protection of Human Remains and Archaeological Resources.

In the event that human remains or archaeological resources are discovered during grading, drainage improvement, and vineyard and orchard site development, all work shall be halted in the vicinity of the find, the permit authority shall be notified, and the following shall occur before work may be resumed:

A. **Human remains**. If human remains or suspected human remains are discovered, the permittee or the property owner shall notify the county coroner and comply with all state law requirements, including Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, to ensure proper disposition of the human remains or suspected human remains, including those identified to be Native American remains.

B. **Archaeological resources.** If archaeological resources or suspected archaeological resources are discovered, the lessee or property owner shall retain a qualified archeologist to evaluate the find to ensure proper disposition of the archaeological resources or suspected archaeological resources. All costs associated with the evaluation and mitigation of the find shall be the responsibility of the lessee or property owner. The need for confidentiality of information concerning the archaeological resources or suspected archaeological resources shall be recognized by all parties. For the purposes of this section, archaeological resources include historic or prehistoric ruins, burial grounds, pottery, arrowheads, midden, or culturally modified soil deposits. Artifacts associated with prehistoric ruins include humanly modified stone, shell, bone, or other cultural materials such as charcoal, ash, and burned rock indicative of food procurement or processing activities. Prehistoric domestic features include hearths, fire pits, or floor depressions; mortuary features are typically represented by human skeletal remains.

Section 03.12. Protection of Natural Drainage Courses, Water Bodies and Wetlands.

All grading and drainage improvements within, adjacent to, or involving the alteration of natural Drainage Courses, water bodies or Wetlands shall comply with the permitting requirements described in the "Wetland Project Permitting Guide", latest edition, prepared by the Resource Management Agency, County of Ventura and the following requirements:

A. **Erosion Control**. Stormwater Best Management Practices shall be implemented in accordance with Section 03.09 to prevent the erosion of Disturbed Areas and Stockpiles into natural Drainage Courses, Wetlands or water bodies.

B. **Flood carrying capacity**. The flood carrying capacity of any altered or relocated portion of a natural drainage course shall be maintained.

C. **Obstruction of natural drainage courses**. Natural Drainage Courses shall not be obstructed unless alternate drainage improvements complying with Section 03.08Section 03.12 of this Article are installed.

D. **Wetlands**. New Agricultural Development within a wetland shall only be performed under the authorization of California Department of Fish and Game or County of Ventura discretionary permit.

Article 04. Permitting Thresholds

Section 04.01. Development Grading Project

Section 04.02. Non-Development Grading Projects

A. Discretionary Permitting. A Discretionary Permit prior to grading shall be required on a non-development grading project when one or more of the following conditions are met:

1. When the non-development grading standards cannot be complied with.

2. When the project is discretionary by some other law, ordinance, or County policy.

B. Ministerial Permitting. A Ministerial Permit prior to grading shall be required on a non-development grading project when one or more of the following conditions are met:

1. Agricultural Grading

    a. Cuts and Fills

        1) The final cut slope is steeper than 2:1 and greater than 5 feet in height.

        2) The height of the cut is greater than 8 feet.

        3) The final fill slope is steeper than 2:1.

        4) The thickness of the fill exceeds 8 feet.

        5) Fills containing five cubic-yards or more of nested rocks or similar irreducible material greater than 12” in any dimension.

        6) The placement of fill is located within a FEMA designated special hazard area.

        7) The placement of fill is located within or on a waterway or natural drainage course.

        8) When protections to buildings or structures are required as described in Section 03.03 and those buildings or structures are not owned by the property owner performing the grading.

        9) The distance to a property line is less than 5 feet.

10) An upslope road or structure is closer than twice the height of the cut.

b. Stockpiles

1) The height of stockpile exceeds 20 feet.

2) The stockpile is less than 20 feet to property line, public roads, buildings, or buried utilities.

3) The stockpile is placed on a slope greater than 5:1 in gradient.

4) Stockpiles containing rock, concrete or asphalt where 25% or more of the stockpile has a nominal particle size greater than 12 inches and a height greater than 10 feet.

c. Level Storage Areas and Pads

1) The level storage area or pad gradient is less than 2 percent and is located in a Hillside area.

2) The level storage area or pad size is greater than 20,000 square feet and is located on a Hillside area.

d. Slope Repairs

1) The slope failure area has an uphill Scarp that has a height that is equal to or greater than 8 feet and a horizontal length that is equal to or greater than 10 feet.

2) The slope failure involves two properties under separate ownership regardless of size.

e. Dams and Reservoirs

1) The reservoir is located within a Hillside area.

2) The total water surface area is greater than 1 acre.

3) Any portion of the reservoir is located closer than 15 feet to a property line.

f. Site Drainage

1) When the Site Drainage includes a Detention Basin greater than 20,000 square-feet.

g. Hillside Grading

1) The Disturbed Area is less than 25 acres on slopes steeper than 3:1 (33 percent).

2) The Disturbed Area is greater than or equal to 25 acres on slopes steeper than 5:1 (20 percent).

h. Whenever a Geotechnical Engineer's report is being relied upon to deviate from the grading standards contained in this Chapter.

2. Oil Field Grading

3. Other Grading