

Chapter 17.31: Sensitive Lands (SL) Combining District

§17.31.010. Purpose.

The purpose of the SL Combining District is to identify lands within the City of Logan on which development may be constrained due to natural conditions that create natural hazards, and to protect the public health, safety, and welfare of the citizens of Logan, it is necessary to enact zoning regulations for management of development on sensitive lands.

§17.31.020. General Provisions.

To insure that proposed hillside developments shall reflect the best interests of Logan City, all grading or other improvement of any land, including, but not limited to, land in approved subdivisions or other development plans, shall conform to the development standards, guidelines, and criteria of this chapter, the provisions of which are intended to minimize floods, erosion, and other environmental hazards; to protect the natural scenic character of foothill areas not suitable for development, and to insure the efficient expenditure of public funds. The policies to be achieved by this chapter shall include, but not be limited to, the following:

- A. Encourage only minimal grading which relates to the natural contour of the land and which will round off, in a natural manner, sharp angles at the top and ends of cut and fill slopes, and which does not result in a “staircase” or “padding” effect.
- B. Require retention of trees and other vegetation which stabilize steep hillsides, retain moisture, prevent erosion, enhance the natural scenic view, and where necessary, require additional landscaping to enhance the scenic and safety qualities of the hillside.
- C. Require immediate planting wherever appropriate to maintain necessary cut and fill slopes, to stabilize them with plant roots, to conceal the raw soil from view and to minimize erosion.
- D. Preserve natural drainage channels.
- E. Encourage retention of natural landmarks and prominent natural features, wildlife habitat, and open space.
- F. Preserve and enhance the visual and environmental quality through the use of natural vegetation and prohibition of excessive excavation and terracing.
- G. Protect the public from natural hazards of storm water run-off and erosion by requiring drainage facilities.
- H. Minimize the threat of fire damage by establishing fire protection measures.
- I. Establish land use management that will encourage protection of natural elements while allowing a harmonious and satisfying residential environment.
- J. Encourage a regard for the view of the foothills as well as view from the foothills.

§17.31.030. Actions Prohibited.

Notwithstanding any other provision of these Ordinances it shall be unlawful to grade, fill, or excavate any land in any manner which presents an unreasonable risk of erosion, flooding, landslide, or any other unsafe condition, and it shall be unlawful to erect any structure which will not be reasonably safe for use as a human habitation because of:

- A. a high water table (water close to the surface);
- B. surface water;
- C. expansive soils;
- D. collapsible soils;
- E. proximity to a potential landslide area;
- F. proximity to a secondary fault;
- G. proximity to an alluvial fan;

- H. proximity to an active landslide;
- I. proximity to a primary Wasatch Fault zone;
- J. steep slopes; or
- K. any other unsafe condition.

§17.31.040. Procedure to Develop Real Property

- A. Letter Report or Geologic Report Required Prior to Building Permit
Prior to any action to develop, grade, fill, excavate any land, or to erect any structure without obtaining acknowledgment from the City Engineer that any report or geologic report required by this chapter has been received and meets the requirements of §17.31.090 or 17.31.100.
- B. Compliance With Approved Report
Except as provided in §17.31.100, all grading, filling, excavating land, or erecting a structure shall be undertaken in conformance with the procedures and plans as described in the letter report or geologic report which has been acknowledged by the City Engineer.
- C. Compliance With Applicable Logan Municipal Code Provisions Required
In addition to the provisions of this chapter, all grading, filling, excavation of land, or erection of any structure shall comply with all other applicable provisions of the Logan Municipal Code.
- D. City Engineer Approval Required for Public Facilities and Infrastructure
Those parts of any proposal to construct improvements such as roads, sewer lines, or water lines, or other improvements which are intended to be placed in public ownership shall be subject to the approval of the City Engineer.

§17.31.050. Preliminary Determination by City Engineer

All proposals to grade, fill, or excavate land or erect a structure on lands within the SL combining zone shall be referred to the City Engineer. The City Engineer shall make a preliminary finding as to whether any of the hazards subject to this chapter exist on the subject property. If such a finding is made by the City Engineer, a report prepared by an appropriate professional licensed to practice in the State of Utah shall be required.

§17.31.060. Requirement to Submit Letter Report or Geologic Report

Except as otherwise provided in Subsection (3), if the City Engineer determines in the manner described in §17.31.050 that no unsafe physical condition described in §17.31.020 appears to exist in relation to the subject property, the proposal with respect to which the subject property is associated may proceed, as proposed, subject to the other requirements of the Logan Municipal Code.

§17.31.070. City Engineering Determination

If the City Engineer determines in the manner described in §17.31.050, that an unsafe physical condition described in §17.31.020 appears to exist in relation to the subject property, the applicant shall submit a geologic report and otherwise comply with the remainder of the chapter.

§17.31.080. Letter Report Required to Resolve Issues

With respect to any proposal not requiring a geologic report, the City Engineer may require the applicant to submit a letter report to resolve issues with respect to the condition of the subject property. A letter report may be required even if the maps and materials maintained in the office of the City Engineer do not show any of the unsafe conditions described in §17.31.020. The City Engineer may withhold the determination described in §17.31.050

until he has received the letter report, and based on information in the letter report, the City Engineer may, for good cause, require the submission of a geologic report.

§17.31.090. Letter Report – Contents

A. “Letter Report” Defined

“Letter Report” means a simplified geologic report used in relation to areas of relatively stable soil and rock.

B. Minimum Contents of a Letter Report

The required letter report shall contain not less than the following:

1. An analytical geologic description of the subject property in relation to the development which is proposed thereon, and in relation to adjoining property;
2. A description of any requirements or restrictions which should be imposed on the proposal to avoid violation of the provisions of §17.31.020;
3. A geologic sketch map and/or a geologic structure section diagram, if relationships are complex and difficult to describe in writing;
4. The original signature and the registration number of the responsible engineering Geologist or Geotechnical Engineer, and a statement of the methods of study and approximate amount of field time spent by said geologist or engineer in the preparation of the subject letter report; and
5. The letter report shall include such other information as the City Engineer shall reasonably require.

§17.31.100. Geologic Report – Contents

A. Maps Required

A geologic report shall include maps and a report containing not less than the following information:

1. The maps shall include:
 - a. The site location and regional setting of the subject property.
 - b. A geologic map which illustrates actual or potential landslides, fault zones, shallow water tables, expansive or collapsible soils, debris flows, flood areas, and any other pertinent natural or artificial features that might influence the stability of the subject property or adjacent property.
 - c. Actual or probable surface and subsurface relations shall be shown with those relations that are conjectural being clearly labeled as such.
 - d. The proposed grading, filling, excavation, or structure to be erected shall be shown in relation to the geologic features described above.
 - e. Any corrective or remedial action necessary to avoid a violation of §17.31.020 shall be shown and shall be clearly identified as such.
2. The map shall use a scale of one (1) inch equaling one hundred (100) feet, with contour lines at five (5) foot intervals. Existing contours shall be shown by dashed lines and proposed contours shall be shown by solid lines. Boring logs, cross-sections, test trench logs, soil sample descriptions, and test results shall be included.
3. The City Engineer may require additional maps or additional detail on existing maps as reasonably necessary to evaluate actual or potential geologic hazards.

B. Report Contents:

1. A description of the proposed grading, filling, excavation, or structure;
2. An analysis of the effects of the proposed grading, filling, excavation, or erection of a structure in relation to the geologic conditions shown in the geologic maps;
3. With regard to a structure, an analysis of the manner in which the same, as constructed, will be made reasonably safe for human habitation;

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4. Any corrective or remedial action necessary to avoid a violation of §17.31.020 shall be described and analyzed in detail;
 5. A list, including title, author and date, of all prior studies or reports which are relied upon to make this report; and
 6. The City Engineer may require additional information or analysis, which are reasonably necessary to evaluate actual or potential geologic hazards.
- C. Geologic Reports for Steeply Sloping Lands (Greater Than 25% Slope)
If the geologic reports (maps and report) relates to land having an average slope that exceeds twenty-five (25) percent, the development proposal described in the geologic report shall conform to the provisions of §17.31.150.
- D. Situations for Waiver of Geologic Report
In the case of a proposal to grade, fill, or excavate, which is not directly or indirectly related to a proposal to erect a structure for human habitation, the City Engineer may waive compliance with any requirement of this section not relevant to the proposed grading, filling, or excavating.

§17.31.110. Engineer/Geologist Qualifications and Certificate

- A. Qualified Professional Required to Prepare Letter Report or Report
A letter report (described in §17.31.090) or a geologic report (described in §17.31.100) shall be approved and signed by one of the following:
1. A Geotechnical Engineer who shall be a registered professional engineer in the State of Utah, qualified by training and experience in the application of the principles of soil mechanics to foundation investigation, slope stability, and site development; or
 2. An engineering geologist who shall be a graduate in geology or engineering geology from an accredited university with at least five (5) years of professional geologic experience of which at least three (3) full years shall be in the field of engineering geology.
- B. Certificate
A letter report or a geologic report shall contain the following certificate:

CERTIFICATE

I hereby certify that I am a Geotechnical Engineer or an engineering geologist, as those terms are defined in §17.31.110 of the Ordinances of Logan City. I have examined the letter report/geologic report to which this certificate is attached and the information and conclusions contained therein is, without any reasonable reservation not stated therein, accurate and complete. All procedures and tests used, said letter report/geologic report meet minimum applicable professional standards.

Signature

License Number and Date Signed

§17.31.120. Post Construction Inspection and Certification

For any real property with respect to which development has proceeded on the basis of a letter report or a geologic report which has been acknowledged by the City Engineer, no final inspection shall be completed or certificate of occupancy issued or performance bond released until the engineer or geologist who signed and approved the letter report or geologic report shall further certify that the completed improvements and structures conform to the descriptions and requirements contained in said letter or report. Provided, however, that improvements and structures may, with the consent of the City Engineer, deviate from the descriptions and requirements contained in the letter report or geologic

report because of conditions which are discovered after acknowledgment by the City Engineer of the letter report or geologic report.

§17.31.130. Restrictive Covenant Required

A. Contents of Restrictive Covenant

If a letter report or a geologic report has been submitted to the City Engineer, no subdivision or other development plat or plan shall be approved and no building permit shall be issued for construction of a structure until the owner(s) of the subject real property has signed and delivered to Logan City a restrictive covenant in a form suitable for recording containing not less than the following:

1. A complete description of the geologic condition of the subject real property, including references to relevant reports and studies;
2. Description of the grading, filling, or excavation or erection of a structure for human habitation approved in the letter report or geologic report which has been acknowledged by the City Engineer, together with the requirements and restrictions imposed thereon; and
3. A covenant and agreement enforceable by Logan City, adjoining landowners, and any subsequent owner of the subject real property that only the grading, filling, or excavation or erection of a structure in the acknowledged letter report or geologic report will be constructed or maintained without further compliance with this chapter, as it may be amended from time to time.

B. Covenant to be Recorded Prior to Development Commencing Onsite

No development shall occur until the covenant has been recorded and a copy of the recorded instrument is submitted with the building permit application. If no building permit is required, a copy of the recorded instrument shall be submitted to the Chief Building Official prior to the commencement of any site activities.

§17.31.140. Civil and Criminal Fraud

It shall be unlawful for any person, including the seller or his representative, directly or indirectly in connection with the sale or offering for sale of real property located in Logan City, to make any untrue statement of a material fact related to the geologic condition of the subject property. This section shall be construed to create private and public civil causes of action in addition to creating criminal liability.

§17.31.150. Hillside Development Standards

A. Grading

1. No grading, filling, or excavation of any kind shall be accomplished without first having obtained a grading permit from the City Engineer based on the provision of this subsection.
2. Land having an average slope of greater than twenty-five (25) percent shall be deemed to be land having a “steep slope” within the meaning of §17.31.030. Any person proposing to grade, excavate, fill, or to erect any structure on such land shall submit a Geologic Report as though the same were required by the City Engineer pursuant to §17.31.060. This subsection shall not apply if a Geologic Report (as required by §17.31.040) relating to the subject property has, at an earlier date, been acknowledged by the City Engineer.
3. No grading, filling, or excavation of land or the erection of a structure shall be permitted on land having an average slope in excess of twenty-five (25) percent except in compliance with the provisions of §17.31.150.
4. A rough street and site grading shall be completed prior to the installation of utilities.

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5. Fills shall be compacted to at least ninety-five (95) percent of AASHTO (American Association of State Highway Transportation Officials) TI 80 density for those areas intended as structural foundations, including roadways.
 6. Borrowing for fill shall be prohibited unless the material is obtained from a cut permitted under an approved grading plan obtained for some purpose other than to produce fill material or imported from outside the hillside area of Logan City.
 7. Cut slopes shall be constructed to eliminate sharp angles of intersection with the existing terrain and shall be rounded and contoured as necessary to blend with existing topography to the maximum extent possible. The City will not accept the dedication and maintenance of cut and fill slopes except those within the required street right-of-way. Where a cut or fill slope occurs between two (2) lots, the slope shall normally be made a part of the downhill lot.
 8. Sections 7009, 7010, 7011, 7012, and 7013 of the Building Code shall be complied with, except that decisions described therein to be made by the “Building Official” may also be made by the City Engineer. (The Building Code is adopted in Section 15.04.)
- B. Drainage
1. Required storm water run-off collection facilities shall be designed so as to retain storm water run-off on development sites for a sufficient length of time so as to prevent flooding and erosion during storm water run-off flow periods.
 2. Required storm water run-off collection facilities shall be so designed as to divert surface water away from cut faces or sloping surfaces of a fill. French drains are not acceptable.
 3. Curb, gutter, and pavement designs shall be such that water on roadways is prevented from flowing of the roadways.
 4. Natural drainage shall be repaired or otherwise stabilized to the satisfaction of the City Engineer below drainage and culvert discharge points for a distance sufficient to convey the discharge without channel erosion.
 5. Waste material from construction, including soil and other solid materials, shall not be deposited within a natural or manmade drainage course nor within irrigation channels. Sediment catchment ponds shall be constructed downstream from each development, unless sediment retention facilities are otherwise provided.
- C. Vegetation and Revegetation
1. Every effort shall be made to conserve topsoil, which is removed during construction for later use on areas requiring vegetation or landscaping, e.g., cut and fill slopes.
 2. Areas not contained within lot boundaries shall be protected with adapted, fire-resistant species of perennial vegetal cover after all construction is completed. A list of acceptable species is available from the Planning Commission.
 3. New planting shall be protected with organic cover.
 4. All disturbed soil surfaces shall be stabilized before final acceptance of the subdivision by the City.
 5. In all areas under the ownership and control of the subdivider, he shall be fully responsible for any destruction of native vegetation, which is required to be retained. He shall carry the responsibility for such areas both for his own employees and for all subcontractors from the first day of construction until final acceptance of the subdivision by the City. The subdivider shall be responsible for replacing such destroyed vegetation.
 6. At the termination of the warranty period, any dead plant materials required to be installed by the subdivider shall be replaced and a new bond issued to assure establishment of the replaced materials.

D. Fire Protection

1. Lot size and potential placement of buildings thereon shall be such that adequate clearance of hazardous, flammable vegetative cover may be accomplished.
2. All easements for firebreaks for safety of built-up areas shall encompass access for fire-fighting personnel and equipment and such easements shall be dedicated for this specific purpose by being recorded.
3. The inability to provide fire line water pressure consistent with the standards set by the Insurance Service Organization shall be justification for denial of a subdivision request.

E. Streets

1. Street alignments, where possible, should be parallel to contours, in valleys or on ridges. If a location between a valley and a ridge is unavoidable, directional pavements should be split, with the principle of grading being half-cut and half-fill versus all fill or all cut. Split streets may be provided by the subdivider according to the following schedule:
 - a. One lane in each direction – the split section width of the pavement shall be sixteen (16) feet.
 - b. Two lanes in each direction – the split section width of the pavement width of the pavement shall be twenty-two (22) feet. The median between split streets shall not exceed the slope of two feet horizontal for each one foot vertical; and such median shall be planted by the subdivider and maintained for two years, to the satisfaction of the City Engineer. Where deemed appropriate by the City Engineer, lots may be located between the split pavement and such lots may front on both lanes.
2. Collective driveways shall only be permitted where such utilization will result in better building sites than would be possible if a public street was required. Said collective driveway shall not be used as required street frontage for the lots, which they serve.
 - a. Collective driveways serving two (2) or less dwellings shall be paved to a width not less than ten (10) feet, and shall not exceed one-hundred fifty (150) feet in length.
 - b. Collective driveways serving more than two (2) dwellings shall be paved to a width of not less than eighteen (18) feet and shall not exceed three hundred fifty (350) feet in length.
 - c. Turnarounds must be provided at the end of collective driveways.
 - d. Signs indicating the driveway as private shall be erected in compliance with City standards.
 - e. Collective driveways shall not be maintained in any way by the City. Slopes of collective driveways shall not exceed fifteen (15) percent.
3. Cul-de-sacs may serve no more than ten (10) dwelling units and shall be a maximum of four hundred (400) feet long. A suitable turnaround shall be provided at the end of stub streets.
4. Streets in hillside areas may intersect at a minimum angle of sixty (60) degrees, provided they meet all other legal requirements relating to the construction of streets.
5. Grades of collector and minor streets shall be permitted to exceed twelve (12) percent to a maximum of fifteen (15) percent for a distance not greater than three hundred (300) feet in any two thousand (2,000) feet of street distance.
6. The following minimum dimensions are to be utilized in the design of hillside streets:

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- a. All streets shall have suitable pavement edging such as curbs and gutters. Concrete gutters must be provided where street drainage is accommodated.
- b. Sidewalks of not less than five (5) feet in width may be required on one side of minor streets and on both sides of a collector street.
- c. Parking lanes eight (8) feet in width, shall be required on both sides of all public streets except where existing topography renders development adjacent to the street impractical; or where the street serves solely as an access road; or where an adequate number of off-street parking spaces are provided on each lot adjacent to the street. Streets without parking lanes shall be provided with emergency parking stalls adequate to contain at least two (2) vehicles per lot.
- d. The following travel lane widths shall be required in all hillside areas;
 1. The side of a travel lane not adjacent to another travel lane shall be increased by two (2) feet.
 2. Minor streets: Minor hillside streets shall have minimum travel lane of ten (10) feet.
 3. Collector streets: Collector hillside streets shall have a minimum travel lane of twelve (12) feet.

§17.31.160. High Water Table Area Development Standards

- A. Development in High Water Table Areas Shall Be Subject to the Following Standards:
 1. Prior to the acceptance by the City of a petition for rezoning of property in the designated area, or before the submission of an application for preliminary subdivision in the designated area, it must be demonstrated to the satisfaction of the Planning Commission that the conditions and requirements contained herein can be met. Such petition, submission, or application shall be made through the Planning Commission.
 2. Prior to acceptance by the City of an application for final subdivision plat or for a mobile home plan in the specified area, it must be demonstrated to the satisfaction of the Planning Commission that all of the conditions specified in the policy have been fully met and accomplished.
 3. Drainage water from the proposed new development will not be placed upon or pass through other properties, except:
 - a. Where a pre-existing drainage system of adequate capacity is already in use; or
 - b. Where a permanent drainage easement of a size sufficient to carry projected flows has been obtained and a statement from the owners of both the host and guest properties recorded on proper deeds in the Office of the Country Recorder specifying the following:
 1. That the City will be held harmless from all damages or injury resulting from water pollution and flooding from drainage crossing said property.
 2. That the property owner will allow the owner of the easement to enter onto said property to maintain the drainage facility on said easement.
 3. That the drainage channel can be placed in a pipe or culvert at such time as deemed appropriate by the owner of the easement.
 4. Drainage from the proposed new development will not be placed in an irrigation ditch or irrigation canal, originally constructed for irrigation purposes, except where permission, in written and recorded instruments running with the land, has been granted by the irrigation company and all water users below the proposed development on the specific ditch or canal specifying the following:
 - a. That the City will be held harmless from all damage or injury resulting from flooding, water pollution, or high ground water from drainage in the ditch or canal.

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- b. That the owner(s) of property which is the subject of a development plan will provide, and record with the County Recorder, a statement holding the City harmless from all damage when the project resulting from flooding or high water table.
 - c. That a disclosure statement be placed upon all subdivision plats in the subject area, stating that the subdivision lot is in an area potentially subject to flooding from high water table.
 - d. That drainage easements be granted to the City within the proposed development, as determined by the City Engineer, and drainage facilities be installed as part of the development at developer's expense.
5. No buildings shall be allowed to be constructed in a high water table area of the City where the building proposed to be built includes a basement, except according to the following standards:
- a. Prior to the issuance of the building permit, the owner(s) shall produce a statement which has been recorded on proper deeds in the Office of the County Recorder stating that the City will be held harmless from all damages or injury resulting from flooding in a high water table area.
 - b. Prior to the issuance of any building permit with a basement, the applicant therefore shall submit to the Chief Building Official a certificate from a registered professional engineer indicating the method or design to flood proof the basement.
6. A comprehensive drainage and grading plan is to be submitted by the developer of any property within a high water table area and shall be approved by the City Engineer before final residential subdivision approval or approval for any commercial or industrial development or building on a single lot or lots. In the case of building development on a single lot or lots, the plan shall be submitted by the Chief Building Official. Such plan shall be subject to the following requirements:
- a. Approval of, and signatures by, all irrigation and canal companies if their ditches or canals cross the development areas, or if surface or subsurface drainage is to outfall into the ditch or canal.
 - b. Quantities of run-off will need to be determined for the complete development area by the rational or other standard engineering method of run-off. Procedures for the rational method of computation are outlined in ASCE Manual Engineering Practice No. 37 "Design and Construction of Sanitary and Storm Sewers."
 - c. At all outfall points from the development, quantities of run-off for a "ten year" storm shall be determined and indicated on the plan in cubic feet per second.
 - d. The capacity of any irrigation ditch, storm drain, or other channel shall be determined from the inlet point to the outfall point of said channel if it is to be used for run-off. If there is an insufficient capacity to handle added flows, it will not be used.
 - e. A topographic map shall be prepared indicating sufficient slopes in all areas to take surface drainage water into the designated street or storm drain. Water will not be allowed to pond any place other than a designated retention basin.
 - f. A plan of all proposed curbs, gutters, and cross-gutters will need to be submitted. Such plan shall indicate on each curb the proposed grade, directions of flow, and quantities of flow. If the gutter capacity is less than that required for a "ten-year" storm, storm drains will be required.
 - g. French drains or sumps will be allowed in the developments as part of the drainage plans.

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- h. No building permit shall be issued in any development in the described area until the required subsurface and storm drainage system has been constructed and is in operable condition.
- i. That accompanying the drainage and grading plan will be soil test provided by a licensed soil engineer for all areas in which underground private and public utilities will be installed. The engineer's statement must indicate what remedial action is anticipated to be taken to stabilize utility lines to assure that they will not shift, buckle, or lose alignment.
- j. The said engineering plan shall include a cross-section of all proposed utility trenches showing configuration and type of materials to be used in backfill and as a "bed" for utility lines the same to be approved by the City Engineer.