COUNTY OF RIVERSIDE
BUILDING AND SAFETY DEPARTMENT

GRADING NOTES

Sam Shahrouri
Deputy Director of TLMA
Building Official

GENERAL

1. All grading shall conform to the current California Building Code (CBC) Chapters 17, 18, & Appendix-J as amended by Ordinance 457.
2. All property corners, grading boundaries and all Conservation Areas/Least Sensitive Area (LSA) determined by the Environmental Programs Department (EPD) shall be clearly delineated and staked in the field prior to commencement of any construction/grading.
3. All work under this permit shall be limited to work within the property lines. All work within the road right-of-way will require separate plans and a separate review-approval (permit) from the Transportation Department.
4. All grading shall be done under the supervision of a soils engineer in conformance with the recommendations of the preliminary soils investigation prepared by _____ dated_____.
5. Compacted fill to support any structures shall comply with Section 1803.5.8. Projects without a preliminary soils report shall include detailed specifications in accordance with Sections 1803.2 and 1803.5 prepared by the engineer of record.
6. The contractor shall notify the Building and Safety Department at least 24 hours in advance to request finish lot grade and drainage inspection. This inspection must be approved prior to building permit final inspection for each lot.
7. The contractor shall notify Underground Service Alert, two days before digging at 1-800-422-4133.
8. Prior to grading, a meeting shall be scheduled with a Riverside County Environmental Compliance Inspector prior to commencement of grading operations.

CUT/FILL

9. Maximum cut and fill slope = 2:1 (horizontal to vertical).
10. No fill shall be placed on existing ground until the ground has been cleared of weeds, topsoil and other deleterious material. Fills should be placed in thin lifts (8-inch max or as recommenced in the soils report), compacted and tested throughout the grading process until final grades are attained. All fills on slopes steeper than 5 to 1 (horizontal to vertical) and a height greater than 5 feet shall be keyed and benched into firm natural soil for full support. The bench under the toe must be 10 feet wide minimum.
11. The slope stability for cut and fill slopes over 30 feet in vertical height, or cut slopes steeper than 2:1 have been verified with a factor of safety of at least 1.5.
12. No rock or similar irreducible material with a maximum dimension greater than 12 inches shall be buried or placed in fills closer than 10 feet to the finished grade.

DRAINAGE, EROSION / DUST CONTROL

13. Drainage across property lines shall not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices.
14. Provide a paved slope interceptor drain along the top of cut slopes where the drainage path is greater than 40 feet towards the cut slope.
15. Provide 5' wide by 1' high berm along the top of all fill slopes steeper than 3:1 (horizontal to vertical).

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16. The ground surface immediately adjacent to the building foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet measured perpendicular to the face of the foundation.
17. No obstruction of natural water courses shall be permitted.
18. During rough grading operations and prior to construction of permanent drainage structures, temporary drainage control (Best Management Practices, BMPs) shall be provided to prevent ponding water and drainage to adjacent properties.
19. Dust control shall be controlled by watering or other approved methods.
20. Fugitive Dust control: Construction sites subject to PM10 Fugitive Dust Mitigation shall comply with AQMD Rule 403.1.
21. All existing drainage courses and storm drain facilities shall continue to function. Protective measures and temporary drainage provisions must be used to protect adjoining properties during grading operations.
22. For all slopes steeper than 4 to 1 (H/V): All slopes equal to or greater than 3' in vertical height are required to be planted with an approved drought-tolerant ground cover at a minimum spacing of 12" on center or as approved by the Engineer of record or the Registered Landscape Architect and drought-tolerant shrubs spaced at no more than 10' on center. Slopes exceeding 15' in vertical height shall be planted with approved shrubs not to exceed 10' on center, or trees spaced not to exceed 20' on center, or a combination of shrubs and trees not to exceed 15' in addition to the grass or ground cover. Slopes that require planting shall be provided with an in-ground irrigation system equipped with an appropriate backflow device per C.P.C. Chapter 6. The slope planting and irrigation system shall be installed as soon as possible upon completion of rough grading. All permanent slope planting shall be established and in good condition prior to scheduling precise grade inspection.

COMPLETION OF WORK

ROUGH GRADE

23. A registered Civil Engineer shall prepare final compaction report/grading report and it shall be submitted to the Department of Building and Safety for review and approval. The report shall include building foundation design parameters (allowable soil pressures, etc.), expansion index (and design alternatives if EI > 20), water soluble sulfate content, corrosivity and remedial measures if necessary.
24. Except for non-tract single residential lot grading, the compaction report shall include the special inspection verifications listed on table 1705.6 of 2016 CBC.
25. The County of Riverside requires a licensed Professional Engineer to submit a wet signed and stamped rough grading certification which includes pad elevations prior to requesting inspection and issuance of the building permit.
26. **Rough Grade Only Permits:** In addition to obtaining all required inspections and approval of all final reports, all sites permitted for rough grade only shall provide vegetative coverage (100 percent) or other means of site stabilization approved by Environmental Compliance Division, prior to receiving a rough grade permit final.

PRECISE GRADE

27. A registered Civil Engineer shall submit to the Building and Safety Department written final certification of completion of grading in accordance with the approved grading plan prior to the request of precise grading inspection.

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NPDES: When one acre or more is being disturbed:

1. Construction site Best Management Practices (BMPs) for the management of storm water and non-stormwater discharges shall be documented on the grading plan. Arrangements shall be made by the developer to retain the SWPPP on the jobsite throughout the time of construction. The implementation and maintenance of the site BMPs is required to minimize jobsite erosion and sedimentation. Arrangements shall be made by the developer to maintain those BMPs throughout the time of construction.
2. Erosion control BMPs shall be implemented and maintained to prevent and/or minimize the entrainment of soil in runoff from disturbed soil areas on construction sites.
3. Sediment control BMPs shall be implemented and maintained to prevent and/or minimize the transport of soil from the construction site.
4. Grading shall be phased to limit the amount of disturbed area exposed to the extent feasible.
5. Areas that are cleared and graded shall be limited to only the portion of the site that is necessary for construction. The construction site shall be managed to minimize the exposure time of disturbed soil areas through phasing and scheduling of grading and the use of temporary and permanent soil stabilization.
6. Once disturbed, slopes (temporary or permanent) shall be stabilized if they will not be worked within 21 days. During storm season, all slopes shall be stabilized prior to predicted storm event. Construction sites shall be revegetated as early as feasible after soil disturbance.
7. Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site or streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
8. Construction sites shall be maintained in such a condition that a storm does not carry wastes or pollutants off the site. Discharges other than stormwater (non-stormwater discharges) are prohibited, except as authorized by an individual NPDES permit, the statewide General Permit-Construction Activity. Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, solvents, detergents, glues, lime, pesticides, herbicides, fertilizers, wood preservatives, and asbestos fibers, paint flakes or stucco fragments, fuels, oils, lubricants, and hydraulic, radiator or battery fluids, concrete and related cutting or curing residues; floatable wastes; wastes from engine/equipment steam cleaning or chemical degreasing; wastes from street cleaning; and super-chlorinated potable water from line flushing and testing. During construction, disposal of such materials should occur in a specified and controlled temporary area on-site physically separate from potential stormwater runoff, with ultimate disposal in accordance with local, state and federal requirements.
9. Runoff from equipment and vehicle washing shall be contained at construction site and must not be discharged to receiving waters or local storm drain system.
10. Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented to eliminate or reduce transport from the site to streets, drainage facilities, or adjoining properties by wind or runoff.
11. All construction contractors and subcontractor personnel are to be trained in the implementation and use of the required BMPs and good housekeeping measures for the project site and any associated construction staging areas and all training documentation shall be maintained in the SWPPP.
12. Discharging contaminated groundwater produced by dewatering groundwater that has infiltrated into the construction site is prohibited. Discharging of contaminated soils via surface erosion is also prohibited. Discharging non-contaminated groundwater produced by dewatering activities may require a National Pollutant Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board.
13. BMPs shall be maintained at all times. In addition, BMPs shall be inspected prior to predicted storm events and following storm events.
14. At the end of each day of construction activity, all construction debris and waste materials shall be collected and properly disposed of in trash or recycle bins.

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