Appendix A

Grading Standards

DEPARTMENT OF BUILDING AND SAFETY
COUNTY OF RIVERSIDE
GRADING NOTES (2010 CBC)

GENERAL

1. All grading shall conform to the 2010 California Building Code Chapters 17, 18 & Appendix Chapter- J as amended by Ord. 457.
2. All property corners shall be clearly delineated in the field prior to commencement of any construction/grading.
3. All work under this grading 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. Grading shall be done under the supervision of a soils engineer in conformance with recommendations of the preliminary soils investigation by _____ dated _____ .
5. Compacted fill to support any structures shall comply with section 1803.5. Projects without preliminary soils report shall have detailed specifications satisfying the requirements in section 1803.5 prepared by the EOR.
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.

CUT / FILL

8. Maximum cut and fill slope = 2:1.
9. No fill shall be placed on existing ground until the ground has been cleared of weeds, debris, topsoil and other deleterious material. Fills should be placed in thin lifts (8-inch max or as recommended in soils report), compacted and tested as grading process until final grades are attained. All fills on slopes steeper than 5 to 1 (H/V) 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 min.
10. The slope stability for cut and fill slopes over 30' in vertical height, or slopes steeper than 2:1 must be verified with a factor of safety of at least 1.5.
11. 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 and EROSION/ DUST CONTROL

12. Drainage across the property line 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.
13. Provide a slope interceptor drain along the top of cut slopes where the drainage path is greater than 40 feet towards the cut slope.
14. Provide 5 ' wide by 1' high berm along the top of all fill slopes steeper than 3:1.
15. The ground immediately adjacent to the building foundation shall be sloped away with 5% min for a min distance of 10 horizontal feet. Swales within 10 feet from building shall have 2% minimum slope.
16. No obstruction of natural water courses shall be permitted.
17. 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 damage to adjacent properties.
18. Dust shall be controlled by watering or other approved methods.
19. All existing drainage courses on the project site must continue to function. Protective measures and temporary drainage provisions must be used to protect adjoining properties during grading operations.
20. For slopes 3 to 1 (H/V) or steeper:
    All slopes equal to or greater than 3 ' in vertical height, are required to be planted with grass or rosea ice plant (or equal) ground cover at a maximum spacing of 12" 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 shrubs not to exceed 10 ', 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 U.P.C., Chapter 10. The slope planting and irrigation system shall be installed prior to precise grading final.

COMPLETION OF WORK

21. A registered Civil Engineer shall prepare final compaction report/ grading report and it shall be submitted for review and approval. The report shall also provide building foundation design parameters including allowable soil pressures, expansion index and remedial measures if EI > 20, water soluble sulfate content, corrosivity and remedial measures if necessary.

22. Except for non-tract single residential lot grading, the compaction report shall include the special inspection verifications listed in Table 1704.7 of 2010 CBC.
23. A registered Civil Engineer shall submit to the Building and Safety Department written certification of completion of grading in accordance with the approved grading plan prior to requesting inspection and issuance of the building permit. Certification shall include line grade, surface drainage, elevation, and location of permitted grading on the lot.

NPDES: When one acre or more is being disturbed:

1. Construction site Best Management Practices (BMPs) for the management of storm water and non-storm water discharges shall be documented on the grading plan which thereby becomes the site Storm Water Pollution Prevention Plan (SWPPP). Arrangements shall be made by the developer to retain the SWPPP on the jobsite throughout the time of construction. The implementation and maintenance of site BMPs is required to minimize jobsite erosion and sedimentation. Certain BMPs may be required to remain in place throughout the year to minimize 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 minimize the entrainment of soil in runoff from disturbed soil areas on construction sites.
3. Sediment control BMPs shall be implemented and maintained to minimize the transport of soil from the construction site.
4. Grading shall be phased to limit the amount of disturbed areas 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 the storm season, all slopes shall be stabilized prior to a predicted storm event. Construction sites shall be re-vegetated as early as feasible after soil disturbance.
7. Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site to 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 storm water (non-storm water 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 separated from potential storm water 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 the 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 contactors and subcontractor personnel are to be made aware of the required BMPs and good housekeeping measures for the project site and any associated construction staging areas.
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.

Grading Standards for La Entrada

Grading for La Entrada will utilize the standards contained in the County of Riverside Grading Ordinance, (Ordinance 457) as it may be amended. Standards shall be those in effect at the time of grading permit.