

SECTION 2

GRADING PLANS

GENERAL

This division establishes the minimum acceptable standard for design and preparation of grading plans for approval by the City of Palmdale.

All grading must conform to the Palmdale Municipal Code, Chapter 70, Excavation and Grading Provisions as adopted and modified by the City of Palmdale and hereafter referred to as the City Grading Ordinance.

Submittals are also necessary to ensure that on-site drainage is adequately handled, that offsite drainage at ultimate development in accordance with the current general plan, is conveyed through the project, and that the proposed development grading plans are compatible with adjacent property topography.

This section of the manual specifies the requirements of grading plans for private developments. It includes items pertinent for the City's review and reflects established professional engineering practice for preparation of grading plans.

Prior to submittal, a Registered Civil Engineer must stamp each sheet of plans, calculations/reports and indicate license number and expiration date. **Unsealed plans will not be accepted for plan checking.** Final (ready for approval) plans and reports will need to be signed by the Engineer prior to City Approval.

SUBMITTAL REQUIREMENTS

1. All prints submitted shall be folded to a size no larger than 9" x 12".
2. The initial submittal of a Grading Plan for review shall include the following:

Grading plan	5 copies
Soils report	2 copies
Hydrology/Hydraulic report	2 copies
Percolation report	2 copies
Drywell calcs	2 copies
All Approved Conditions of Approval	1 copy
Approved Tentative Tract map/ Tentative Parcel map or Site plan	1 copy
Stamped approved by the Case Planner (SPR, CUP)	1 copy (as applicable)
Earthwork calculations	1 copy
Retaining wall calculations (if applicable)	2 copies

Itemized construction estimate Fees	2 copies
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3. Subsequent submittals to the City shall include:

The previous marked up check prints	1 redlined copy
Revised plans	2 copies
Previously checked Hydrology/Hydraulic Report	1 redlined copy
Revised Hydrology/Hydraulic Report	2 copies
Any additional material requested by the plan checker including fees	2 copies
Any subsequent submittals to the City's Geologist/consultant shall be as required by the City plan checker	1 copy

4. Prior to approval of grading plan:

4.1. Right of entry for any grading on adjacent properties. Permission to be in letterform and signed by adjacent property owner and notarized. A form is available at the City Engineer's Office. This is required even if the owner of the impacted property is the developer of the subject project.

4.2. Drainage acceptance letter or easement from the owners of all affected properties. This is required even if the owner of the impacted property is the developer of the subject project.

4.3. Clearance from the City's Geologist or City Engineer.

4.4. Approval for compliance by the Planning Department

PLAN PREPARATION

1. The plan size shall be 24" x 36", ink on 3 mil mylar and minimum scale 1" = 40'. Margins shall be 1.5" on the left edge and 1" on the other three sides. Deviations from sizing criteria must be approved by the Engineering Division.

2. The first sheet shall be a title sheet and includes:

2.1. Location map showing project location, major cross streets, city limit lines if near the project, north arrow, and scale.

2.2. Index map showing street configuration within the project, lot configuration and numbers (include entire tentative tract or development), project boundaries, street names, index of sheets, city limit lines if contiguous to project, north arrow, Scale: 1" = 200', drainage facilities including drywell locations, and direction of flow in each street.

- 2.3. Title block containing the Tract number and Tentative Tract number if applicable; phase number if applicable purpose of grading (rough, precise, etc.) and site address.
 - 2.4. Benchmark - Los Angeles County number, description, location, date (year of adjustment), and elevation to three decimal places.
 - 2.5. Engineering firm's name, address, telephone number, date of plan preparation, stamp and signature of Registered Civil Engineer responsible for design.
 - 2.6. Name, address and telephone number of owner, developer, soils engineer and engineering geologist.
 - 2.7. Signature and stamp of soils engineer and engineering geologist (as required). (Approval by City's geologist is required prior to approval by City Engineer.)
 - 2.8. Checked By block for Plan Checker, Recommended By block and Approval block for City Engineer's signatures with dates, and for other agencies as appropriate. Also include on the face sheet the Planning Department Compliance with case No. Signature block.
 - 2.9. Revision block with revision number, date, initials of design engineer, description of plan change, and spaces for City approval and date. All revisions within the plan shall be referenced on the title sheet.
 - 2.10. Applicable General Notes
 - 2.11. Complete list of construction notes with quantities for all items to be constructed per the grading plan and requiring inspection.
 - 2.12. Earthwork Breakdown shall include: Cubic yardage of cut, fill, over-excavation and recompact, scarification, shrink/swell, export and import.
 - 2.13. Legend and symbols.
 - 2.14. Detail of typical lot drainage.
 - 2.15. Reference to any Geotechnical Engineering Report and/or Engineering Geologist Report.
3. The sheets following shall clearly delineate the grading of the project and shall include the following:
 - 3.1. Precise location of all existing buildings, structures, trees, cesspools, septic tanks, and wells on the property. The location of any building or structure or other significant feature within 15' of the project.
 - 3.2. All existing and proposed easements for drainage devices, roadways and utilities easement should be official record book and page.
 - 3.3. Accurate contours or spot elevations indicating the topography of the existing ground. Contours or spot elevations must be shown beyond the property line of the site being graded to properly indicate existing drainage patterns.

- 3.4. Finish grades by contours and/or spot elevations indicating proposed drainage patterns and grading. Show finish grade elevations at corners of all structures, BCR, ECR, B.C., E.C., BVC, EVC and grade breaks. Precise grading plans shall show pad and finished floor elevations.
- 3.5. Daylight lines of all cut and fill. Make them continuous and obvious.
- 3.6. Where excess dirt is to be placed. A Temporary Use Permit may be required by the Planning Department for a stockpile.
- 3.7. Building or structure setbacks per approved site plan.
- 3.8. All drainage structures and reference to street or storm drain plans for construction details.
- 3.9. Location and complete details of any detention, retention or retarding basins and drywells.
- 3.10. Top and toe of all cut and fill slopes and setback from permit boundary.
- 3.11. Location and complete details of sub drainage systems according to approved soils report.
- 3.12. Signature blocks; Recommended By and Checked By on all sheets. The City Engineer Approval block shall be only on the Title Sheet/Face Sheet.
- 3.13. Show locations and structural details of all walls, both retaining walls and freestanding walls. All wall details are to be shown on the grading plan only.
- 3.14. North arrow and scale, 1"=40' minimum, include bar scale.
4. If construction occurs during October 1 to April 15, then the last sheet(s) of the Grading Plan set shall be an erosion control plan. See Temporary Erosion Design Criteria, page 16 for more details.
5. The following note along with the design engineer's seal and signature shall be on each sheet of every grading plan:

I have agreed to comply with the criteria and specifications of Ordinance # 1362 - Water Efficient Landscape, and I have applied them accordingly for the efficient use of water in the grading design plan.

GRADING GENERAL NOTES

- 1) All work shall be done in accordance with the excavation and building code of the City of Palmdale and any special requirements of the permit. Any violation will result in the stoppage of all work until the violation is corrected.

- 2) The developer's engineer shall exercise sufficient supervisory control during grading and construction to insure compliance with the approved plans and in accordance with section 7020.4, Engineered Grading Requirements, of the City Building Code.
- 3) No work shall be started without first scheduling a Preconstruction meeting with the Public Works Inspector. To set up a meeting call (661) 267-5255 at least 48 hours before work is commenced.
- 4) Slopes shall be no steeper than 2 horizontal to 1 vertical and 3 horizontal to 1 vertical within LMD defined areas, or as recommended by the Soils Engineer and approved by the City Engineer.
- 5) Fills shall be compacted throughout to at least 90% of the maximum dry density as determined by A.S.T.M. Soil Compaction Test D1557-78.
- 6) The developer's Soils Engineer shall certify that the required inspections and tests have been performed and that such tests comply with the City Building Code.
- 7) Fill areas shall be cleared of all vegetation and debris, scarified, have subdrains installed (if any) and approved by the Grading Inspector and Soils Engineer prior to the placing of fill.
- 8) Approved protective measures and temporary drainage provisions must be used to protect all impacted properties during the Grading operations.
- 9) Dust shall be controlled by watering to the satisfaction of the Public Works Inspector/City Engineer.
- 10) After all work, including the installation of drainage structures and protective devices, has been completed and required reports and certifications have been submitted and accepted by the City, the permittee shall request a Rough Grading Inspection from the City of Palmdale Engineering Division.
- 11) All public streets shall be maintained free of dust and mud caused by grading operations.
- 12) All cesspools, septic tanks, etc., to be abandoned shall be filled or removed in accordance with the Plumbing Code. Contact the Building & Safety Department.
- 13) Any existing wells to be abandoned shall be capped in accordance with Los Angeles County Health Department regulations.
- 14) The Developer's Surveyor or Civil Engineer of record shall set grade stakes for all drainage devices and the contractor must obtain inspection before placing concrete.
- 15) Not less than one Field Density Test will be made for each 2 feet vertical of fill, nor less than one such test for each 1,000 cubic yards of material placed. Location of test shall be at the discretion of the project's soil engineer and acceptable to the City's Public Works Inspector.

- 16) Finish Grading will be completed and approved, and Slope Planting and Irrigation Systems installed per approved plans before Final Occupancy is released by the Engineering Division.
 - 17) Estimated Cut = _____ Cubic Yards.
 - 18) Estimated Fill = _____ Cubic Yards.
 - 19) These quantities are raw numbers only. See Earthwork Breakdown on this sheet for estimated losses due to grubbing, processing and compaction.
 - 20) For Import/Export greater than 50 cubic yards the Developer/grading contractor shall either provide a hauling route diagram to the Public Works Inspector for approval or obtain a stockpile permit from the City Planning Department prior to the start of grading operation.
 - 21) Field density will be determined by the Sand-Cone method A.S.T.M. D1556-82. In fine-grained cohesive soils, field density may be determined by the Nuclear Density method A.S.T.M. D2922 & D3017 provided not less than 10% of the required Density Tests uniformly distributed are by the Sand-Cone method. The method of determining Field Density and location and approximate elevation shall be shown in the Compaction Report. Other methods may be used if recommended by the Soils Engineer and approved in advance by the City Engineer.
 - 22) No rock or similar material greater than 6" in diameter will be placed in the fill unless recommendations for such placement have been submitted by the Soils Engineer in advance and approved by the City Engineer.
 - 23) Density Tests will be made at points approximately 1 foot below the fill slope surface on the basis of one test for each 1,000 square feet of slope surface but not less than one test for each 10 feet vertical of slope height.
 - 24) All storm drain work is to be done under the supervisory control of the Engineer of Record. Weekly Status Reports shall be submitted by the Contractor to the Public Works Inspector.
 - 25) Contours shown on plan represent original ground elevations prior to grading operations. Contour intervals shown shall be appropriate for plans; however, no interval shall be greater than 2 feet. Provide a Legend for finished grades.
 - 26) Expected date for start of grading _____
 - 27) Expected date for completion of grading _____
 - 28) The undersigned Civil Engineer certifies this grading work will be supervised in accordance with Section 7020.4 entitle "Engineered Grading Requirements", of the City Building Code.
 - 29) _____
- | Name | RCE # | Expiration Date |
|------|-------|-----------------|
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- 30) The Soils Engineer must approve all grading including the stability of any slopes created, existing or remaining.
- 31) Comply with all requirements of the Geotechnical Engineering Report dated _____ Prepared by _____ (Report No.)
- 32) The Engineer of Record signing these plans is responsible for assuring the accuracy and acceptability of the work hereon. In the event of discrepancies arising during construction, the Engineer of Record shall be responsible for determining an acceptable solution and revising the plans for review and approval by the City.
- 33) This Grading Plan has been reviewed, and conforms to recommendations by:

Name of Soils Engineer	Signature of Soils	Exp. Date & Stamp
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- 34) All pads are graded flat at rough grading with drainage swales at a minimum slope of 1% towards the street or an approved designed drainage outlet.
- 35) The front drive approach for residential lots shall not exceed a slope of 14%.
- 36) All drywells shown on this project shall be maintained by the owners where their locations are on private property or through the creation of a Landscape Maintenance District (LMD) when approved by the City. Drywells will be replaced by the owners when they cease to drain standing surface water in a 24 hour period or are deemed to be obsolete by the City Engineer. Regular Maintenance of the drywell settling chamber is required to achieve proper operation of the drywell and shall be performed annually or more often depending upon its location, and shall be performed by the owner or district as applicable.
- 37) All drywells shall be constructed per City of Palmdale Standards."
- 38) Temporary Erosion Control Plans shall be submitted prior to October 1. The control devices shown on said plans shall be installed prior to November 1 and maintained in operable condition until April 15.
- 39) The applicant shall submit to the Engineering Division a copy of the permit application and receipt made to the State Water Resources Control Board (SWRCB) as proof that a SWPPP has been approved.
- 40) Approved Erosion Control Plans are valid for the year of the Rainy Season in which they are approved. A renewal plan shall be required for review and approval by the City Engineer for each year thereafter until completion of the project.
- 41) In the event the Developer's Civil Engineer, Soils Engineer or Engineering Geologist of Record is changed during grading the work shall be stopped until a replacement has been obtained. It shall be the Developer's responsibility to notify the City Engineer in writing of such change prior to the recommencement of grading operations. The replaced Engineer shall provide written acceptance of all work performed to date to the City Engineer.

- 42) Standard hours of Operation within the City are 6:30 AM to 8:30 PM, Monday through Saturday. Work performed outside standard business hours is prohibited without the expressed written permission of the City Engineer.
- 43) Overtime inspection request are granted based on staff availability. Request must be received 48 hours in advance and additional inspection fees paid prior to work commencing.
- 44) All utilities shown as private are for information only. Review, Approval and Permitting for construction of private utilities falls under the authority of the Building Official and or the Utility Purveyors.

TEMPORARY EROSION CONTROL:

- 1) The surface of all slopes more than three (3) feet in vertical height and steeper than 5:1 shall be covered with City of Palmdale approved erosion control blankets. Installation shall conform to manufacturer's specifications. Deviations from this requirement shall be submitted in writing with an alternative plan for temporary erosion control. This plan shall be approved by the City Engineer.
- 2) Installation of the erosion blankets shall be installed to the satisfaction of the City's Public Works Inspector prior to acceptance of rough grading and shall be per the manufacturer's specifications.

PERMANENT EROSION CONTROL:

- 1) The surface of all slopes more than three (3) feet in vertical height shall be covered with North American Green S-150 or approved erosion control blankets. Installation shall conform to manufacturer's specifications.
- 2) The surface of all slopes more than three (3) feet in vertical height shall be protected against damage by erosion by planting with ground cover plants. Slopes exceeding fifteen (15) feet in vertical height shall also be planted with trees spaced at not more than 20 feet on center.
- 3) Slopes required to be planted shall be provided with an approved system of irrigation.
- 4) All required landscaping and irrigation shall conform to the City of Palmdale's Slope Erosion Control Landscaping Standards.
- 5) All planting and irrigation shall be installed to the satisfaction of the City Inspector prior to the acceptance of final grading. Contact City Engineering Division at (661) 267-5255 for inspection within a minimum of twenty-four (24) hours notice. For LMD call for landscape inspection at (661) 267-5346.

PRIVATE ENGINEER'S NOTICE TO CONTRACTOR

The existence and location of any underground utility pipes, conduits or structures shown on these plans was obtained by a search of the available records. To the best of our knowledge, there are no existing utilities except as shown on these plans. The contractor is required to take due precautionary measures to protect the utility lines shown on these drawings. The contractor further assumes all liability and responsibility for the utility pipes, conduits or structures shown or not shown on these drawings. The contractor shall pothole all existing utilities to verify the location and any discrepancy between the plans shall be brought to the attention of the Design Engineer.

Contractor agrees that he shall assume sole and complete responsibility for the job site condition during the course of construction of this project, including safety of all persons and property and that this requirement shall apply continuously and not be limited to normal working hours. The contractor also agrees to defend, indemnify and hold the owner and the engineer harmless from any and all liability, real or alleged in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

ENGINEER'S SIGNATURE (Print Name under signature line)	R.C.E.	DATE
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GRADING DESIGN CRITERIA

Grading shall conform to Chapter 70 of the City of Palmdale Building Code and the following criteria. In case of a discrepancy, the following criteria shall govern.

1. Drainage

1.1. Minimum Gradients for residential sites:

1.1.1. Dirt, grass, etc. 1.0%

1.1.2. Fine graded residential lot - dirt 2.0% sheet flow away from building pad for minimum of 3', pad shall be at least 0.3' above high point of swale.

1.2. Minimum gradients for flat land industrial sites:

Earth at rough grade stage	0.5%
Earth fine grade	1.0%
Asphalt Pavement (sheet flow)	1.0%
Concrete Pavement (sheet flow)	1.0%
Concrete drain in earth area	0.5%
Concrete gutter in paved area	0.4%
Maximum gradient for sheet flow	20.0%

- 1.3. Design for water to flow to nearest practical street, storm drain or natural watercourse. Cross lot drainage is to be avoided.
- 1.4. Show design and location of all drainage devices.
- 1.5. Drainage shall not sheet flow over the top of any slopes steeper than 5:1.
- 1.6. For residential lots, swales shall be 3 feet minimum from building pad.
- 1.7. Common side yard swales are not acceptable.

2. Slopes

- 2.1. Slopes shall be designed with full consideration of landscaping requirements. Cut and fill slopes shall be no steeper than 2 horizontal to 1 vertical.
- 2.2. Drainage shall be directed away from the faces of cut and fill slopes or into approved drainage structures. The faces of cut and fill slopes shall also be manufactured to control erosion. This control may consist of stepping or other surface protection, as approved by the City Engineer. The protection for the slopes shall be installed within 15 days after completion of the rough grading.
- 2.3. Slopes required to be planted shall be provided with an approved system of irrigation. See Landscape Standard for details.
- 2.4. Recommendations in the soils report shall be incorporated into the design of any slope.

TEMPORARY EROSION CONTROL DESIGN CRITERIA

Temporary Erosion Control Plans shall be submitted prior to October 1. The control devices shown on said plans shall be installed prior to November 1 and maintained in operable condition until April 15.

Temporary Erosion Control Plans shall provide for the following:

1. Temporary soils stabilization measures shall be installed on slopes graded at 10:1 or steeper, and/or 10 feet or more in height. Contact the City's Landscape Division for the approved methods of soil stabilization and planting mixes.
2. Desilting facilities at all drainage inlets for the graded site shall be designed for 25-year storm intensity. They must be detailed on the plan. Design and specific recommendations shall be submitted for the following:
 - 2.1. Desilting basin volume based on gradient, inflow, and nature of soils.
 - 2.2. Distribution extent of all graded areas and identification of any temporary soil stabilization measures.
 - 2.3. Size of desilting basin outlet pipe and nonerosive overflow.
 - 2.4. Dike requirements; dimensions, percent compaction, etc.
3. Show Erosion Control Notes on the plan initial sheet.

EROSION CONTROL NOTES

- 1) In case of emergency call _____
- 2) A standby crew for emergency work shall be available at all times. Necessary materials shall be available on-site and stockpiled at convenient locations to facilitate rapid construction of temporary devices or to repair any damaged erosion control measures.
- 3) Erosion control devices shall not be moved or modified without the approval of the City Engineer.
- 4) All removable protective devices shown shall be in place at the end of each working day in the period from October 1 through April 15, and at any other period when the weather forecast indicates a greater than 50% probability of rain.
- 5) After a rainstorm, all silt and debris shall be removed from check berms and desilting basins. Any graded slope surface protection measures damaged during the rainstorm shall also be repaired immediately.
- 6) Fill slopes at the project perimeter must drain away from the top of the slope at the conclusion of each working day.
- 7) A six-foot high perimeter fence or a 24-hour guard shall be posted on the site whenever the depth of water in any device exceeds 18 inches.
- 8) The engineer of record is responsible for assuring the accuracy and acceptability of the work. In the event of discrepancies arising during construction, the engineer of record shall be responsible for determining an acceptable solution and revising the plans for approval by the City.
- 9) Temporary erosion devices shown on the grading plan which interfere with the work shall be relocated or modified when the Public Works Inspector so directs the work progress.
- 10) All loose soil and debris shall be removed from the street areas upon starting operations and periodically thereafter as directed by the Public Works Inspector.
- 11) When the Public Works Inspector so directs, a 12-inch berm shall be maintained along the top of the slope of those fills on which grading is not in progress.
- 12) Velocity check dams shall be provided across the outlets of all lots draining into the street.
- 13) All fills shall be graded to promote drainage away from the edge of the fill.
- 14) Stand-by crews shall be alerted by the permittee or contractor for emergency work during rainstorms.
- 15) All utility trenches shall be blocked at the prescribed intervals from bottom to top with a double row of sandbags prior to backfill. Sewer trenches shall be blocked at

the prescribed intervals with a double row of sandbags extending downward, two sandbags from the graded surface of the street. Sandbags are to be placed with alternate header and stretcher courses. The intervals prescribed between sandbag blocking shall depend on the slope of the ground surface, but not exceed the following:

GRADE OF THE STREET	INTERVALS
Less than 2%	as required
2% to 4%	100 feet
4% to 10%	50 feet
over 10%	25 feet

16) Velocity check dams shall be provided in all unpaved street areas at the intervals indicated above. Velocity check dams may be constructed of sandbags, timber, or other erosion-resistant materials approved by the Public Works Inspector, and shall extend completely across the street or channel at right angles to the centerline. Earth dikes may not be used as velocity check dams. Plastic bags shall not be used for sandbags.

17) Velocity check dams shall be provided in all unpaved graded channels at the intervals indicated below:

GRADE OF CHANNEL	INTERVALS BETWEEN CHECK DAMS
Less than 3%	100 feet
3% to 6%	50 feet
over 6%	25 feet

18) After sewer and utility trenches are backfilled and compacted, the surfaces over such trenches shall be mounded slightly to prevent channeling of water in the trench area. Care should be exercised to provide for cross flows at frequent intervals where trenches are not on the centerline of a crown street.

19) Except when the Public Works Inspector directs otherwise, all devices shown shall be in place at the end of each working day when rain is forecast and shall be maintained during the rainy season (October 1 thru April 15).

20) All basins and check dams shall have the debris and silt removed after each storm to restore their capacity.

21) Sandbag shall be stockpiled in parkway at intervals shown plans, ready to be placed in position when rain is forecast, or when the Public Works Inspector so directs.

22) Brush and ground cover may not be removed more than 10-feet above fills between October 1 and April 15.

- 23) Placement of devices to reduce erosion damage within the project must be shown on the plan. Stockpile locations for materials shall also be indicated on the drawing.
- 24) Outlet conditions from the desilting basin shall not exceed downstream limitations. The overflow shall be designed to safely pass 1.5 times the 25-year peak discharge.
- 25) A construction entrance shall be installed prior to commencement of grading. Location of the entrance may be adjusted by the contractor to facilitate grading operations. All construction traffic entering the paved road must cross the construction entrance. The construction entrance shall consist of a bed of 3/4" gravel of the following minimum dimensions: 15' wide, 30' long and 12" deep. The construction entrance shall be removed prior to placing base for paving.
- 26) All sandbags shall be American Builders supply size 18" x 30" made of propylene material or equal, with 10x12 Weave, 950 Denier, 1200-Hour U.V. Rating, of Milk white Color, and should have 1000 per Bale.
- 27) Sediments and other pollutants must be retained on site and may not be transported from the site via sheet flow, swales, area drains, natural drainage courses or wind.
- 28) Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
- 29) Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
- 30) Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site.
- 31) Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
- 32) Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- 33) Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
- 34) Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.

GRADING PLAN CHECK LIST

TITLE SHEET (asterisk means requires special attention by plan checker).

- 24" x 36" SHEET SIZE (See example face sheet format)
- BENCHMARK - County of Los Angeles, Palmdale Quad, elevation, location, benchmark number, description, date of adjustment. Temporary B.M. shall be set at 1000' grids to be utilized during grade checking.
- TITLE BLOCKS - tract number and Palmdale number (bottom right and right margin), sheet number, phase, rough or final, City Engineer "approved by" "checked by", "recommended by", "Planning Department compliance" signature blocks ; name, address and phone for owner, developer, design engineer, soils engineer, geologist, revision blocks, list of items on sheet.
- KEY MAP - scale 1" = 200', north arrow up, flow arrows, street names, street widths, dry well locations, lot lines and numbers, retention/detention basin location, key to sheet numbers, adjoining tract numbers, City Limits.
- VICINITY MAP - Highway names, City Limits, north arrow up.
- Engineers seal, expiration date, signature, date signed.
- Legend and Symbols.
- Job Address (where applicable).
- * Offsite grading for drainage and slopes - need Drainage Acceptance Letter and/or Cut/Fill Acceptance Letter or easement recorded. (see examples at end of this section)
- General Notes.
- Private Engineer's Notice to Contractor.
- Private Engineer's Responsibility Statement.
- Earthwork volumes - cut, fill, over-excavation, backfill, export and import. Backup calculations and cross sections should be provided.
- Details - sideyard swales, paved swales, rear yard swales, rough grade section, berm section, wall section, typical lot grading.
- Has a Storm Water Pollution Prevention Plan (SWPPP) been prepared? Prior to issuance of a Grading Permit, the applicant shall file a Notice of Intent with the Lahontan Region of the California Regional Water Quality Control Board to comply with the applicable National Pollution Discharge Elimination System (NPDES) requirements.

GRADING PLAN

- TITLE BLOCK (same as cover, except NO City Engineer or Planning compliance signature blocks)

- [] Contours of existing ground with elevations noted.
- [] North arrow and scale.
- [] Existing features within 25' of boundary.
- [] Finish grades - by contours or spot elevations indicating proposed drainage patterns and grading. Show finished grade elevations at corners of all structures and lots; top of curb elevation for BCR, ECR, B.C., E.C., BVC, EVC and top and toe of all cut and fill slopes at lot corners.
- [] Daylight lines - Show "C" and "F". (cut and fill).
- [] Front yard set back line.
- [] Lot numbers and dimensions (including curves) at property lines.
- [] * Storm drainage system (shown in phantom).
- [] * All existing utilities (sewer, water, gas, telephone, electrical, etc.).
- [] All existing trees.
- [] Right-of-way width.
- [] Flow arrows with slope in percent (0.4% Minimum and 10.0% maximum). New cul-de-sac bulb design shall have 1% minimum grade at gutter flowline when not impacted by existing development.
- [] Street names.
- [] Adjoining tract numbers or if vacant, the APN number.
- [] Street centerline dimensions.
- [] Matchline with sheet reference.
- [] * Retaining and freestanding walls - (location and reference).
- [] Slopes with label (slope ratio 2:1, 3: 1, etc.)
- [] Engineer has signed and sealed each sheet

DRAINAGE BASIN PLAN VIEW

- [] Boundary (lot lines).
- [] Slopes with label. (Slope ratio)
- [] Elevations at toe and crest.
- [] Dimensions.
- [] * Access Ramp road (paved with cut-off wall at bottom) with reference to detail (max slope 15%, min width 15').
- [] * Entry gate with reference to detail.

- [] * Walls/fences with reference to detail.
- [] Scale (min 1" = 20').
- [] Basin cross-section shown to center line of adjoining streets (minimum of 1 each way).
- [] * Rip-rap or other energy dissipater.
- [] Adjoining lots and numbers.
- [] Title Blocks.
- [] * Finished surface elevations, water surface elev. Q25.
- [] * Structures, pipes, headwalls, rip-rap, spillways, etc. shown with reference to street plans.

RECORDING REQUESTED BY:

CITY OF PALMDALE

WHEN RECORDED MAIL TO:

CITY OF PALMDALE
OFFICE OF THE CITY CLERK
38300 SIERRA HIGHWAY, SUITE C
PALMDALE, CA 93550

EXAMPLE

Space above this line is for Recorder's Use

ACCEPTANCE OF GRADING AND DRAINAGE

WE, I, FILL-IN OWNER'S NAME(S) HERE, are/am the owner(s) of the following described property:

FILL-IN THE PROPERTY ADDRESS

As owner(s), we/I have examined all plans for the development of (GIVE LEGAL DESCRIPTION OF THE SITE TO BE DEVELOPED) known as (GIVE PROPOSED ADDRESS - IF AVAILABLE) give permission to (DRAIN WATER, CONSTRUCT CUT/FILL SLOPES, WHICHEVER IS APPLICABLE).

The undersigned states that the City of Palmdale will be free and clear of any and all liability for damages due to this work.

The cost and maintenance of the (DRAINS, SLOPES, ETC.) shall be the responsibility of (NAME(S) OF WHOEVER IS ACCEPTING RESPONSIBILITY).

Dated: _____, 20__

By: (OWNER'S SIGNATURE)
Print or Type owner's name here

By: (OWNER'S SIGNATURE)
Print or Type owner's name here

PROJECT: _____

APN: _____

Note: All signatures must be notarized. Attach acknowledgement form(s).

RECORDING REQUESTED BY:

CITY OF PALMDALE

WHEN RECORDED MAIL TO:

CITY OF PALMDALE
OFFICE OF THE CITY CLERK
38300 SIERRA HIGHWAY, SUITE C
PALMDALE, CA 93550

Space above this line is for Recorder's Use

ACCEPTANCE OF GRADING AND DRAINAGE

WE, I, _____, are/am the owner(s) of the following described property:

As owner(s), we/I have examined all plans for the development of _____ known as _____ give permission to _____.

The undersigned states that the City of Palmdale will be free and clear of any and all liability for damages due to this work.

The cost and maintenance of the _____ shall be the responsibility of _____.

Dated: _____, 20__

By: _____

By: _____

PROJECT: _____

APN: _____

Note: All signatures must be notarized. Attach acknowledgement form(s).