



Engineering Division
201 North Broadway, Escondido, CA 92025
(760) 839-4651, FAX (760) 839-4597

GRADING PLAN CHECKLIST

To: _____ Date: _____
_____ Project: _____
_____ Site Address: _____
_____ Plan No.: _____
_____ Check No: _____
Attn: _____ Via: _____

The attached plans have been reviewed by this office and are being returned for correction. Please complete all corrections noted both on this check sheet and the attached plans.

The re-submittal shall include all redlined plans, this form, any fees or other documents indicated on the review and **5 copies**, of the corrected plans, folded to 9" x 11" format.

If you have any questions on this review, please feel free to contact me. This review sheet and the attached check print(s) need to be resubmitted along with the corrected plans before they can be rechecked.

From: _____

GENERAL REQUIREMENTS

1. This plan shall be approved by the Fire Department for fire safety related issues prior to Engineering Department approval. Copies of this plan were sent to the Fire Department during the first plan check. Contact the Fire Department at (760) 839-5400 for any additional questions.
2. This plan shall be approved by the Planning Department for planning related issues prior to Engineering Department approval. Copies of this plan were sent to the Planning Department during the first plan check. Contact the Planning Department at (760) 839-4671 for any additional questions.
3. Two copies of revised complete hydrology and hydraulics study along with two well-defined drainage area maps shall be submitted for all drainage facilities shown or required on the plan. The study shall be signed and sealed by an R.C.E. (See City Design Standards - Drainage, for additional information)
4. A Construction General Permit and Storm Water Pollution Prevention Plan is required from the State Water Resources Control Board for all storm water discharges associated with a construction activity where clearing, grading and excavation results in a land disturbance of one acre or more. (Contact the Water Quality Control Board Web Site at www.swrcb.ca.gov for more information.)
5. Three copies of a Geotechnical Report prepared by a Geotechnical Engineer will be required prior to plan approval.
6. The Geotechnical Engineer shall sign and seal the grading plan indicating they have reviewed the grading design and that it conforms to the recommendations of his geotechnical report.
7. The grading plan shall include all private storm drains.
8. An erosion control plan and program shall be prepared for the site in accordance with the Grading Ordinance.
9. Two copies of Engineer's revised estimate of grading and drainage costs shall be submitted to determine bond and fee amounts (use current City of Escondido "Engineer's Estimate of Cost Form")
10. Two Copies of the earthworks calculations as back-up to show how quantities were determined by the Civil Engineer on a separate 8-1/2"x 11" sheet of paper, attached to the engineer's estimate. Earthwork calculation may be computer generated or hand written with corresponding cross sections.
11. A cash bond of \$_____ shall be posted for cleanup and/or damage due to construction prior to approval of this plan.

12. Fees:
 - a. Plan check and inspection fee balance \$_____.
 - b. Imaging Fee \$_____
13. A surety bond, letter of credit or cash bond for \$_____.

Note: "Record Drawings" shall be prepared by the Engineer and a mylar copy along with a digital drawing shall be provided to the City prior to release of any grading security.

14. Letter of Permission from adjacent owner for offsite grading (see City of Escondido's website, "Land Development" section) for the form.
15. A copy of the County Health Department approval is required for any site developing with a private septic system.
16. Submit original mylar for City Engineer signature approval.
17. Prior to issuance of a construction permit, the property owner shall provide the City of Escondido with a notarized Storm Water Control Facility Maintenance Agreement (SWCFMA) if conditioned.

GRADING PLAN REQUIREMENTS

1. All Grading Plans shall be prepared on 24" x 36" size sheets.
2. Include the legal description, site address and assessor's parcel number of the property on the plan.
3. Label all property lines on the plan or in the legend.
4. Show all property line distances and bearings.
5. Plot, label and dimension all existing and proposed easements on the plan. Also show any existing or proposed utilities located within these easements or near the site.
6. Include a vicinity map showing the site location.
7. Include the Bench Mark used as basis of elevations. A City Bench Mark is required. City Bench Marks are available at the Engineering Department.
8. Include a legend on the plan.
9. Show a north arrow on the plan which should point toward the top of the sheet whenever possible.
10. Show cut and fills, private drainage system, brow ditch, gutter, slope landscaping, retaining walls, erosion control BMP's, and other related quantities on the plan.
11. Show the scale of the plan. The scale shall be a graphic bar-type, 1/4" wide and 4" long to accommodate future plan reduction.

12. Include Grading Plan No. GP-_____ on the lower right hand corner of the plan and the Project No. ENG_____ in the same general location on the plans.
13. All grading and erosion control plans must be reviewed, signed and sealed by a Registered Civil Engineer.
14. Plans shall include the name, address and phone number of the owner, engineer, and geotechnical engineer.
15. Show sufficient existing contours and/or spot elevations, all existing structures and complete existing topography both on site and for a minimum distance of 25 feet beyond all property lines.
16. Show the building footprint(s) on plan. Include finished floor and pad elevations. Finished floor should be high enough to sewer site.
17. All grading must show drainage being directed to an approved drainage treatment facility before discharging into the street or to an approved drainage course.
18. As part of the design, the engineer should consider the impacts if the drainage system is clogged or a larger than design storm occurs.
19. If a downstream drainage problem exists, on-site detention should be used to limit the peak flow to pre-development levels.
20. Show sufficient finished elevations on plan to show drainage patterns. Indicate the percentage of slope.
21. Show all daylight lines on plan.
22. Revise all finished grades to provide 1% minimum slope. A minimum slope of 0.5% may be used on P.C.C. A slope of 2% is required from building pads to unpaved drainage swales adjacent to buildings. A maximum slope of 2% is permitted in handicapped parking spaces and the adjacent loading area. A maximum slope of 6% is allowed in other parking spaces. A maximum slope of 8.3% is permitted on handicapped ramps.
23. Access routes conforming to the American Disabilities Act shall be provided into the project from the public sidewalk, to the satisfaction of the City Engineer.
24. Show details and elevations of all private drainage facilities including inlets, connector pipes, cleanouts at all bends, riprap pads at outlets, etc. Minimum sizes for small projects are as follows: Inlets: 12"x12" flat grate or 6" diameter atrium grate inlets. Connector pipes: 4" minimum diameter and of rigid construction.
25. Riprap pads: minimum size of 5' wide by 10' long by 2' thick, with 12" minimum diameter rock for velocities under 12 fps. Higher velocities require ¼ ton or larger rock.
26. Gutters shall be Type "G", per Std. Dwg. No. G-2 or valley gutters - 3 feet wide, 5 1/2" thick with a 0.05' dip in the center.

27. Show a typical section where required for additional clarity of the plan.
28. Show all setbacks from buildings to slopes per Grading Ordinance (see Figure 33-1060).
29. All cut and fill slopes must be set back from the property line per the Grading Ordinance, or a letter of permission from adjacent owners shall be submitted to waive setbacks. Show all setbacks on plan (minimum of 1', see Figure 33-1060).
30. Any septic leach lines within 100 feet of the property lines should be shown. A setback of 5 times the cut slope height with a maximum of 100 feet shall be maintained from the top of cut slopes to the existing leach lines.
31. Show sufficient grades of existing or proposed street improvements and note all right-of-way dimensions.
32. All public right-of-way shall be indicated to be graded to the ultimate width both on the plan and on a typical section.
33. Show existing or proposed sewer lateral and note invert elevations at both the main and sewer cleanout. Show existing or proposed water service and meter box. Meter box shall be located behind or outside the sidewalk and within the right-of-way or easement area.
34. Indicate all retaining wall heights on plan (wall height is included in overall slope height).
35. Maximum permitted slope heights (including retaining wall height): Peripheral fill within 50' of property line - 5' or 10' with City Staff approval; fill adjacent to public or private street - 10'; interior fill or any cut - 20'. A Planning Commission approved Grading exemption is required for any slopes exceeding these heights.
36. Cut and fill slopes should be at an inclination of 2 to 1 and so noted on the plan. Cut slopes of 1.5 to 1 may be allowed by the City Engineer for heights of less than five feet upon recommendation of the Geotechnical Engineer and approval of the Planning Department.
37. A P.C.C. brow ditch shall be constructed at the top of all cut slopes per Standard Drawing No. D-75 when a width of more than 40 feet of tributary drainage flows toward the cut slope. A 4-foot wide minimum setback is required from property line for the brow ditch.
38. Potential areas as recommended by the Geotechnical Engineer for removal and recompaction, rock disposal and ground water control shall be shown on the plan. (Policy on rock disposal is available at the Engineering Department)
39. All driveway profiles shall conform to Figure 12 of the Escondido Design Standards. Longer driveways and those with slopes exceeding 15% and lying below the street shall include an on site turnaround. Minimum driveway apron width at the street is 16'. A 2-foot-wide shoulder shall be provided between the edge of driveway and top of fill slopes.

40. Note on the plan that all private driveways and parking areas shall be paved with a minimum of 3" AC over 6" of AB or 5 1/2" PCC. over 6" AB. All paved areas exceeding 15% or less than 1.0% slope shall be paved with PCC. *(This requirement may be reduced to 2" AC over 4" AB or 5 1/2" PCC over native for single family residential only)*
41. Profiles shall be included on the grading plan for all proposed retaining walls three (3) feet and higher (measured top of footing to top of wall). The retaining wall profile(s) shall include top of footing, top of wall, face of wall grade, and back of wall grade lines and any proposed or existing utility crossings.
42. Each section (height, backfill case, footing type, etc.) of the proposed retaining walls shall either have an applicable San Diego County Regional Standard Drawing called out, or equivalent structural details for each section shall be included on the plans and structural calculations for same shall be submitted to the Engineering Dept. for review and approval. Some retaining walls designs and calculations will require review by Consulting Structural Engineers for which additional plan check fees will be required.

Include the notes circled below on the plan:

GENERAL NOTES

1. All work to be done in accordance with the standard specifications for public works construction, 2015 edition, effective december 07, 2016 by resolution no. 2016-17 and the design standards and standard drawings of the city of escondido effective april 02, 2014 by resolution 2014-08, along with any amenments thereto.
2. All contractors working in the public right of way shall obtain a separate encroachment permit from the director of engineering services, inspection of all work is required. Contact the engineering field office at (760) 839-4664 to arrange for encraochment permits and insption. Twenty-four hour advance notice is required for inspection. No work shall be performed in the public right of way on saturdays, sundays or legalholidays without the express permission of the city engineer.
3. It shall be the responsibility of the contractor to locate all substructures, wheterh shown heron or not, and protect them from damage. The expense of repair or replacement of said substructures shall be borne by the contractor.
4. Location and elevation of all existing improvements within the area of work shall be confirmed by field measurement prior to cosntruction of new work. Contractor will make exploratory excavations and locate existing underground facilities sufficiently ahead of construction to permit revisions to plans if revisions are necessary because of actual location of existing facilities.

GRADING NOTES

1. Following the approval of the grading plan, but no later than 48 hours before starting grading, the contractor shall obtain a grading permit from the engineering field office at 201 North Broadway, (760) 839-4664.

2. Grade areas shown on these plans in accordance with article 55, excavation and grading, of the Escondido zoning code.
3. The soils report prepared by _____ dated _____ and all supplements thereof are incorporated and made a part of the plan.
4. All fills shall be compacted to 90% of the maximum density. A compaction report, accompanied by a pad certification report, shall be submitted to the field engineer prior to the rough grading inspection for all fills exceeding one-foot in depth, for each graded pad. The compaction report shall include a statement that the geotechnical engineering and engineering geologic aspects of the grading have been inspected and are in compliance with the applicable conditions of the grading permit, the geotechnical engineer's and engineering geologist's recommendations. The compaction report and pad certification letter shall be reviewed and approved by the field engineer prior to the rough grading.
5. All slopes shall be contour-graded so as to round corners and to blend manufactured slopes into adjacent natural slopes. See section 33-1066-c of the grading ordinance for specific requirements.
6. All slopes over three feet in height shall be landscaped. For slopes over five feet in height, the contractor shall provide permanent sprinkler systems installed on each lot.
7. Pad elevation certificates must be submitted for each pad a minimum of 3 days prior to requesting final rough grading inspection. The certificate must be an original signed and sealed by a california licensed land surveyor or registered civil engineer with an rce no. Of 33965 or less, and must contain an elevation to the nearest tenth of a foot. The statement "substantial conformance" will not be allowed.
8. No blasting shall be done until a blasting permit is obtained from the escondido fire department at 1163 North Centre City Parkway at 760.839-5400.

RETAINING WALL NOTES

1. All retaining walls shall comply with the latest edition of the california building codes which typically adopts the latest uniform building codes (ubc).
2. The project engineer shall provide the following inspection reports and/or certifications to the field engineering inspector during retaining wall constuction:

After retaining wall foundation excavation and prior to steel placement, the soils engineer shall certify in writing that the foundation excavations comply with the intent of the soils report.

All special inspection certifications as called for on these plans.
3. Two (2) copies of a retaining wall certification report signed and sealed by a california registered civil engineer shall be submitted to the field engineering inspector prior to rough grading sign-off. The report shall certify that all construction materials (size, spacing, strength, etc) are in accordance with these approved plans.

STORM WATER POLLUTION PREVENTION NOTES

1. Best management practices (BMPS) shall be implemented during all phases of construction in conformance with the City of Escondido's Municipal code. Additionally, sites over an acres shall abide by the construction general permit (CGP). All BMP's shall be installed in accordance with the most recent version of the CASQAS Handbook. At a minimum perimeter control and construction entrances should be in place prior to a grading permit being activated.
2. Inspection, modification and maintenance of the BMP's shall be implemented as necessary. In the event of failure or refusal to properly maintain the BMP's, the City may issue emergency maintenance work to be completed to protect adjacent private and public property. The cost (including an initial mobilization amount" and any fines assessed to the City shall be charged to the owner of the project.
3. Necessary materials to implement the required BMPs' shall be available on site to facilitate rapid deployment or to repair any BMP failures.
4. City Staff shall be alerted by the contractor, permittee or owner, as needed for emergency work during rainstorms.
5. Run-on flow onto the site shall be properly managed and planned for to prevent failure of BMP's and /or illegal discharges from the project site into the storm drain.
6. Storm drain inlet protection shall be installed at every onsite storm drain inlet to prevent sediment from entering the storm drain system. Where feasible desilting basins shall also be provided at drainage outlets from the graded site.
7. Erosion control measures shall be implemented on slopes and any exposed soil using the following BMP's, fiber blankets, bonded fiber matrix: or by installing or maintaining existing vegetation. The contractor shall immediately repair and stabilize any eroded areas. Inactive slopes shall be protected and stabilized. All Exposed soil including inactive an active slopes shall be protected prior to a rain event.
8. All unpaved graded channels shall implement erosion prevention measures such as lining and installing velocity check dams at regular intervals.
9. Street sweeping vehicles with vacuums and water tanks shall be used to keep paved streets free of loose soil and/or construction debris.
10. Contractors shall have water trucks and equipment on-site to minimize airborne dust created from grading and hauling operations or excessive wind conditions. Additional dust control measure shall be implemented as needed.
11. Stockpiles shall be covered at the end of each working day and prior to forecast rain. Asphalt shall additionally be placed on a layer of plastic sheet, or equivalent.
12. All portable toilets shall have secondary containment and not be located near a storm drain ie.(catch basin or street)

13. Vehicles shall have drip pans underneath them and any leaks or spills shall be properly repaired and removed.
14. All debris shall be placed in dumpsters with lids. The lids shall be closed at the end of each day and are not to be overfilled. Additional trash pick-ups shall be made as necessary.
15. Liquid materials shall be stored in closed containers in secondary containment and under cover. Solid materials shall be stored on pallets and be covered prior to forecast rain.
16. A materials washout shall be available onsite whenever liquid materials are used. The washout shall fully contain wash materials and the surrounding area shall be kept free of spills.
17. Discharge of potable water (such as from power washing or filling water trucks) shall be prevented or directed to landscape.
18. Perimeter control is required on all sites.
19. All active entrances shall prevent tracking by installing stabilized construction entrances.

ENGINEER'S CERTIFICATION OF STRUCTURAL BMP'S

The engineer of record shall verify that the structural BMP's have been constructed and operate in compliance with all of the design specifications, plans, permits, ordinances and the requirements of the MS4 permit.

The engineer of record shall provide the field office with a signed and stamped certification(s) that the project's site design and structural BMP's were installed in accordance with the approved plans and SWQMP. The certification shall include photographs taken during several phases of the treatment facilities during construction (including photographs of subsurface structures and materials) and final as-built conditions.

COMMENTS:

1. _____

2. _____



Engineering Department
GRADING & EROSION CONTROL PLAN
Transmittal ~ Re-Submittal Requirements

Date: _____ City Plan Checker: _____ Check #: _____

Project #: _____ Project Name: _____

THE FOLLOWING INDICATED ITEMS MUST BE INCLUDED IN EACH RE-SUBMITTAL:

- _____ Transmittal letter from the Engineer or Surveyor of Work listing all the items being submitted.
- _____ Copy of this City Transmittal.
- _____ Five (5) bond sets of the corrected grading and erosion control plans, folded to 9" x 12".
- _____ Digital copy of plans on CD.
- _____ Two (2) sets of bound (not notebook) corrected Drainage Report, sealed & signed by Eng. or Surveyor of Work.
- _____ Two (2) sets of bound (not notebook) corrected Soils Report, sealed & signed by Engineer or Surveyor of Work.
- _____ Two (2) sets of corrected Engineer's Cost Estimate, sealed & signed by Engineer or Surveyor of Work.
- _____ Two (2) sets of corrected Storm Water Quality Management Plan (SWQMP), signed by the Eng. of Work.
- _____ All previous checkprints of plans, correction list, reports, calculations and estimates.
- _____ Concurrent re-submittal: Tract/Parcel Map, Improvement Plans.
- _____ Additional Items/Information Required: _____
- _____ Comments: _____

THE FOLLOWING INDICATED ITEMS MUST BE INCLUDED BEFORE CITY APPROVAL:

- _____ Transmittal letter from the Engineer or Surveyor of Work listing all the items being submitted.
- _____ Copy of this City Transmittal.
- _____ Digital copy of plans on CD.
- _____ All previous checkprints of plans, correction list, reports, calculations and estimates.
- _____ Five (5) bond sets of the corrected grading and erosion control plan folded to 9"x12".
- _____ Original mylars of the plans with all required signatures.
Mylars must also be sealed & signed by the Engineer of Work.
- _____ Proof of approval of securities and agreements, and verification of payment of balance of fees.
- _____ Additional Items/Information Required: _____
- _____ Comments: _____