



GRADING PERMIT APPLICATION & SUBMITTAL REQUIREMENTS



City of Redding
777 Cypress Avenue
Redding CA 96001
Telephone:
(530) 225-4170
FAX: (530) 245-7024

The following documents are required by the Land Development Division for grading permit submittals. Incomplete submittals will be returned unchecked with a request for additional information. Please place a check mark by each box to indicate inclusion in submittal.

Yes	No	NA
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- Completed **Grading Application/Permit** form and application fee.
- Four (4) complete sets of plans (24" x 36"). Plans shall contain the following information:
- The scale of the grading plans shall not be more than one inch equaling fifty feet, nor less than one inch equaling twenty feet. The scale of details or sections shall not be less than one inch equaling one foot.
- A vicinity sketch or other data adequately indicating the site location and address.
- Property lines with dimensions and bearings of the property on which the work is to be performed
- Show: Amount (cubic yards) of cut and fill, top & toe of cut & fill slopes, direction of sheet and concentrated drainage
- Location of any existing buildings, structures, easements, utilities, and drainage channels on the property where the work is to be performed and the location of any building or structure on land of adjacent property owners within twenty-five feet of the property boundary
- Contours showing the topography of the existing ground. Contour intervals shall be consistent with the existing terrain and shall be accurate to accepted mapping standards for the map scale. Contours shall extend 25 feet past the boundary lines of any project and where unusual topography exists (i.e., permanent or seasonal natural watercourses, etc.) adjacent to a site and the contours shall be extended to include the same
- Elevations, dimensions, locations, extent, and the slopes of all proposed grading shown by contours and/or other means
- Detailed plans of all drainage devices, walls, cribbing, dams, or other protective devices to be constructed in connection with or as part of the proposed work.
- Contour maps submitted pursuant to this subsection shall bear the name of the person responsible therefor and the date they were made and datum used
- A description of the vegetation to be cleared, show all trees over 6 inches in diameter in the disturbed areas.
- Hydraulic calculations prepared by a civil engineer (if required), together with a map showing the drainage area and calculated runoff of the area served by the drains, subdrain location, and approximate length (see page 3).
- Soils Report (if required) Note: all recommendations included in the Soils Report shall be incorporated into the grading permit plans, notes and/or specifications.
- Incorporation of City of Redding standard notes on interim erosion control requirements.
- Final erosion control plan
- Cost estimate of installing/maintaining the interim erosion control measures and the storm drain system.
- Depending on site conditions and location, written clearance or permits may be required from, but not be limited to, the following agencies prior to commencement of grading: California Regional Water Quality Control Board, California Department of Fish and Game, U. S. Army Corps of Engineers

Submittal and approval of an Interim Erosion Control Plan and performance security is required before a grading permit will be issued. For soil disturbances greater than one acre, a Notice of Intent and Storm Water Pollution Prevention Plan (SWPPP) are required to be filed with the Regional Water Quality Control Board. A receipt and one copy of the SWPPP shall be submitted to the City of Redding.



Hydrology/Hydraulics Report Requirements



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The hydrology/hydraulics report requirements for the City of Redding are divided into three sections: peak flow mitigation, hydraulic capacity, and floodplain encroachment or definition. All sections have criteria specified in either the City of Redding Construction Standards, City of Redding Hydrology Manual, or City of Redding Municipal Code. All design analysis requires that the engineer have the experience necessary to practice in the field and all calculations and reports must be signed, checked, dated, and stamped by a registered Civil Engineer.

All reports must contain:

1. Table of Contents.
2. Engineer's statement with stamp and signature.
3. Site description/location with vicinity map.
4. Proposed project description.
5. Pre- and post-project drainage basin description and map.
Basin and sub-basin maps must be scaled drawings, including topography, at an interval adequate to determine drainage boundaries and direction. Extent of mapping includes all areas draining to or through the project, including offsite drainage.
6. Drainage schematic. For projects with multiple sub-basins, a drainage schematic is required corresponding to the analysis. Drainage schematics will show sub-basins, combination points, routing functions, and the location of any road crossings.
7. Site characteristics (pre/post development).
8. Design criteria. This section needs to reiterate the criteria and reference the source.
9. Methodology.
10. Conclusions.
11. Appendix with appropriate supporting information to draw conclusions.
 - a. Tables of model input assumptions.
 - b. Appropriate model output summaries.
 - c. Other information as required to support conclusions.

Information required specific to each type of analysis:

1. Peak flow mitigation.
 - a. Tables of peak flows at all available channel locations downstream of the project including difference column for each event frequency.
 - b. Inflow and outflow hydrographs for any proposed detention/retention facility.
 - c. Stage-storage-discharge relationship for any proposed detention/retention facility.
 - d. Drawings or plans consistent with the analysis of any proposed detention/retention facility.
 - e. Drainage system upstream of the facility capable of delivering the 100-year peak flows to the facility.
2. Hydraulic design.
 - a. Drainage basin figures showing drainage area to each inlet, clearly correlating each basin with each inlet with a unique identifier associated with corresponding calculations.

- b. Calculations for:
 - i. Spread of flow in street immediately upstream of each inlet.
 - ii. Capture/bypass calculations at each inlet
 - iii. Pipe sizing, including:
 - 1. Normal depth in pipe.
 - 2. Hydraulic grade line.
 - 3. d/D in pipe.
 - c. Overland release route identification.
 - i. Identify overload release route for all drainage facilities.
 - ii. Include calculations for release routes for 100 year recurrence event.
 - d. Mitigation facility design.
 - i. Access route.
 - ii. Inlet design.
 - iii. Outlet design.
 - iv. Spillway design.
 - v. Approval from Division of Safety of Dams for any facility large enough to require or any facility requested to pursue consultation by the City Engineer.
3. Floodplain analysis.
- a. Hydrology analysis and report as outlined above.
 - b. 24"x 36" drawing with pre-project topography of affected area, including:
 - i. Existing jurisdictional floodplain boundary.
 - ii. Identification of the source of the floodplain (FEMA, Montgomery Watson, LOMR, etc.).
 - iii. Location of existing cross sections (if any).
 - iv. Identification of pre-project floodplain elevations at cross-section locations.
 - c. 24"x 36" drawing with project topography of affected area, including:
 - i. Revised floodplain boundary.
 - ii. Location of cross sections.
 - iii. Identification of post-project floodplain elevations at cross-section locations.
 - d. Scaled stream profile drawing showing cross-section locations, pre- and post-project water-surface elevations and channel invert.
 - e. Complete CLOMR/LOMR application per directions provided by FEMA instructions package.
 - f. Pre-project and post-project cross-section figures.