



RANCHO PALOS VERDES
Community Development Department

DRAINAGE GUIDELINES

1. **Who may prepare?** – Drainage plans may be prepared by an architect or other design professional if a grading plan is not required for the site. Otherwise, the drainage plan must be prepared, signed, and stamped by a registered Civil Engineer. Grading plans are required if there is more than 50 cubic yards of cut and cut fill on a site, or if there is any filling of earth over one foot in depth.
2. **What type of calculations?** – Hydrology and hydraulic calculations are required for all pipes, major channels, outlets, catch basins, and other inlets. The City Engineer may require additional calculations as needed.

Hydrology may be calculated using any accepted method, although the Los Angeles County Rational Method and Table 11-2 of the California Plumbing Code are preferred. For the Los Angeles County Method, a 25-year storm shall be used for non-sump conditions, and a 50-year storm for sump conditions. For the California Plumbing Code Method, a 4-inch per hour storm shall be used.

3. **What type/size of pipe?** – Drainage on private property and within the public right of way must be at least 6 inches in diameter and either PVC, HDPE, DIP, or CIP. If PVC or HDPE, the strength of the pipe must be at least SDR 35 or Schedule 40. Drainage through curbs may be accomplished using a culvert, 3-inch, or 4-Inch diameter pipe(s). 4-inch diameter pipe may be allowed for drainage solely from downspouts.
4. **Do I need a permit for pipe in the public right of way?** – Yes, drainage pipe(s) installed within the public right of way requires an over-the counter encroachment permit from the City Public Works Dept.
5. **Are sump pumps allowed?** – Sump pumps are only allowed when the City Engineer determines there is a severe hardship that cannot be remedied using gravity drainage. All sump pumps must be designed so the top of the grate is at least one foot below any finished floor of livable area that could be flooded due to a failure of the pump.

6. **Can cross-lot drainage be maintained or increased?** – The Building Code allows existing drainage patterns across lots to be maintained, so long as the flow rate and/or volume of water does not increase. Also, the water may not be concentrated, such as in a pipe, so that erosion of the downstream property will occur.
7. **What are the rules regarding rip rap/outlet structures?** – All outlet structures must be sized by a Registered Civil Engineer. All outlets shall be located to minimize erosion and downstream flooding. Whenever possible, they shall be located at the bottom of slopes rather than at the top. They shall be located on private property when being used to discharge water to the street in an area where a standard curb will not exist by the end of construction.

All guidelines provided here may be modified at the direction of the City Engineer to address site-specific issues.