City of Hesperia
BUILDING AND SAFETY DIVISION

Grading Plan Requirements for Residential Single Family In-fill Lots

A. *General Requirements*

- At the time of plan submittal the job site must be posted with a sign bearing the site address. Property corners are to be clearly marked. Failure to post the site may result in delays obtaining plan approval.
- Grading requires approved plans and a permit **prior** to starting the work. Provide the following:
  - Grading Plan (see section B)
  - W.Q.M.P. Report (see section C)
  - Erosion Control Plan (see section D)
  - E.C.S.P. Report (see section C)

- Complete sets of plans shall be submitted for review and approved prior to permit issuance. Plans shall be clear, legible, and of sufficient size (suggested size, 24 in x 36 in.; suggested scale, 1in. = 20 ft.).
- Plans are to be professionally prepared and drawn in ink and signed by the person who prepared them. Except single family infill lots may not require professionally prepared plans provided that all the requirements are followed per the City of Hesperia's Municipal Code and the California Residential Code. Any portion that will be designed must be stamped by a California registered professional (Civil or Structural Engineer).
- Projects with Natural Drainage Courses (NDC), Drainage Easements (DE) or clearly have drainage issues will require a separate Engineering review and fee. A separate Declaration of Engineer of Record form will also need to be completed and submitted.

B. *Grading Plans*

1. Grading Plan Required items:

☐	Applicant's Name	☐	Jobsite Assessor's Parcel Number
☐	Vicinity Map	☐	Jobsite Address
☐	North Arrow	☐	Drawing Scale
☐	Street Names	☐	Distance to center line(s)
☐	Lot Dimensions	☐	Building Setbacks
☐	Show any and all Easements and Drainage Courses	☐	Building Pad and Finish Floor Elevations
☐	Show original contours in 1 foot intervals. Where possible, contours are to continue 15 feet beyond property limits.	☐	Show amounts in cubic yards, estimated for cut and Fills
☐	Show Finish contours in 1 foot intervals	☐	Show general grading notes
☐	Location of all proposed buildings, existing buildings, septic systems (including proposed size), paving, any structures, and wells on the property, and where possible, on adjacent property within 15 feet of property.	☐	Type and location of protected native plants. (Joshua trees, yucca, nolinas, century plants, cactus including cholla and creosote rings larger than 10 ft. in diameter.

☐	Show details of terrain	☐	Show retention areas. Size areas per the WQMP.
☐	Show elevations for each side of the driveway at the street☐, The street flow line ☐ and the property line	☐	Indicate location of cut/fill contact (daylight) line(s) across building pad, if any. Note pad as (All Fill) if applicable
☐	Locations of all berms and swales	☐	Show slope setbacks from property lines
☐	Show standard swale detail on plan and provide specific swale detail(s) when necessary	☐	Benching details where fill is being placed on native slopes steeper than five to one (5:1)

2. Grading General Information:

a. All grading shall conform to chapter 15.06 of the City of Hesperia's Municipal Code
b. Building pads should be made to drain to the street at a minimum of 1% fall, and shall not drain across adjacent property lines.
c. The high point of the drainage swales is to be 0.3 foot, minimum, below pad elevation.
d. Provide compacted berms along flow line to protect any property on the down-hill side. Berms are to be one (1) foot minimum above the drainage flow line.
e. See typical swale cross section detail at the end of this handout.
f. All building setbacks from slopes shall be in accordance with Hesperia's Municipal Code.
g. Any walls required on the grading plan to support surcharges or slopes require a separate permit.
h. Where benching is required for placement of fills (fills placed on slopes steeper than 5:1), or the grading is required to be engineered grading (exceeds 5000 cubic of earthwork), or unusual conditions apply, a soils report by a licensed soils engineer is required.
i. Where building pads and other areas that are to be covered with impervious surfaces (roofs, driveways, etc.) they shall follow the City of Hesperia's Residential WQMP requirements and shall be incorporated in the design. See section 3 below.

3. Onsite Retention & Drainage:

a. Retention Formulas:
   I. When draining to the side or rear yards, use the standard city formula of 13.5 cubic feet capacity per 100 square feet of impervious surfaces added.
   II. When draining to the street, use the standard city formula of 25 cubic feet capacity per 1,000 square feet of impervious surfaces added.
b. If a readily identifiable drainage course crosses through the property and the proposed additional flows will not detrimentally affect downstream property, the drainage courses may, upon prior approval, be used for site drainage without the onsite retention requirement.

☐	Drainage swales are to be 1 foot in depth, minimum. See swale detail below for example and requirements.	☐	High point of drainage swales(s) to be one foot minimum below any habitable finish floor. Highpoint of swales running in front of garage are to be 0.5 below finish floor of garage.

☐	Retention spillways to rear or side yards shall be designed to sheet flow. The spillways are to be hard surfaced with concrete, pavement etc., to prevent erosion. The minimum level width of this hard surface is to be 15 feet. Each end of the spillway must rise 0.2 feet, minimum, and no other portion of the ponds rim can be lower than the spillway's elevated ends. See end of this handout for detail.	☐	Retention spillways to the street yards shall be designed to sheet flow. The spillways are to have 0.33' thick by 3' wide coarse gravel to prevent erosion. The minimum level width of this surface is to be 15 feet. Each end of the spillway must rise 0.2 feet, minimum, and no other portion of the ponds rim can be lower than the spillway's elevated ends. See end of this handout for detail.

C. *Single Family Residence WQMP and ESCP*

The City of Hesperia (City) is subject to requirements of the Municipal Separate Storm Sewer System Permit, General permit NPDES No.CAS000004 (MS4 Permit) issued by the State Water Recourses Control Board. The MS4 Permit requires the City to impose requirements on New Development and Redevelopment Projects to implement post-construction best management practices (BMPs) to mitigate potential adverse impacts to water quality and downstream channels.

To comply with MS4 Permit provisions for post-construction BMPs. The City must require Single Family Residential (SFR) development projects to prepare a Water Quality Management Plan (WQMP). The WQMP describes the required post-construction BMPs that will be implemented to minimize the discharge of pollutants and excess storm water runoff. The MS4 Permit also requires all construction projects to prepare and submit an Erosion and Sediment Control Plan (ESCP) before issuing grading or building permits. The City has prepared a SFR WQMP Template, and an ESCP Template to ensure that these projects comply with the MS4 Permit before City permits are issued.

- **All detached SFR projects that create and/or replace 2,500 square feet or more of impervious surface must submit a SFR WQMP and an ESCP as part of their permit application materials.**
- **All detached SFR projects must use the City's SFR WQMP template and ESCP Template for the required submittals.**

The SFR WQMP Template and the ESCP Template are available on the City website at:
http://www.cityofhesperia.us/122/Storm-Water-Management-Program

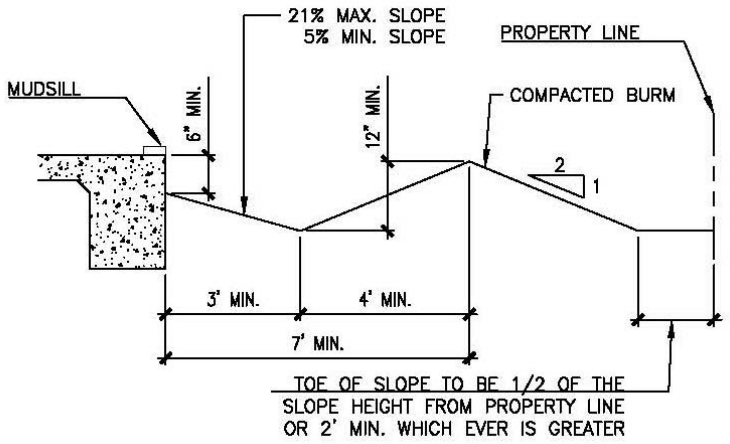
D. *Erosion Control Plans*

1. Erosion Control and Sediment Required items:

☐	Applicant's Name	☐	Jobsite Assessor's Parcel Number
☐	Vicinity Map	☐	Jobsite Address
☐	North Arrow	☐	Drawing Scale
☐	Street Names	☐	Distance to center line(s)
☐	Lot Dimensions	☐	Building Setbacks
☐	Show any and all Easements and	☐	Building Pad and Finish Floor

	Drainage Courses		Elevations
☐	Show general erosion control notes	☐	Show slope setbacks from property lines
☐	Show retention areas. Size areas per the WQMP.	☐	Show general erosion control notes
☐	Location of all proposed buildings, existing buildings, septic systems (including proposed size), paving, any structures, and wells on the property, and where possible, on adjacent property within 15 feet of property.	☐	Show location of the residential construction entrance per the City of Hesperia's requirements. Provide detail on plan. Construction entrances are not required when then project is on a dirt road.
☐	Show location(s) for the onsite erosion control items ☐ Fiber Rolls ☐ Silt Fencing ☐ Other Provide detail for all items on plans	☐	Show location on plan for the concrete wash out area. Provide detail on plan.
☐	Show locations for the waste collection area	☐	Show location for the portable restroom area

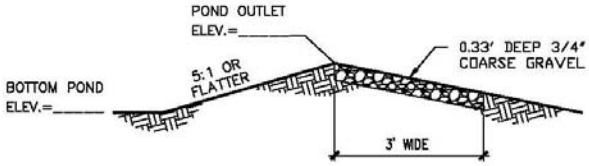
TYPICAL SWALE DETAIL



Notes on Swales:

1. Berm and slopes are to be compacted.
2. Top of berm to be 1 foot, minimum, above the flowline throughout.
3. Berm slope angles are not to exceed 2 units horizontal to 1 unit vertical.
4. Swales to be cut in to drain away at 1% at rough grading and prior to building construction.
5. Swales steeper than 8.3% to 20% (12"1 to 5:1) are to be lined with minimum ¾ to 2 inch rock. 20% to 33% (5:1 to 3:1) are to be lined with 2 to 6 inch rock, steeper than 33% must be concrete lined pavement.

SPILLWAY DETAIL TO STREET

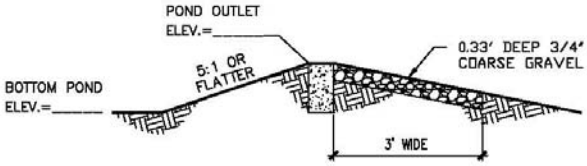


RETENTION POND SPILLWAYS ARE TO BE :

1. LEVEL AND 15' MINIMUM IN LENGTH
2. TO HAVE THE ENDS RISE AT LEAST 0.2' FEET (ABOUT 2-3/8")
3. NO POINT OF THE POND PERIMETER MAP DROP BELOW THE ELEVATED ENDS OF THE SPILLWAY
4. DIRT FORMING POND PERIMETER IS TO BE COMPACTED.
5. DEPTH FROM POND BOTTOM TO POND OUTLET IS NOT TO EXCEED 0.5' MAXIMUM

THE PURPOSE OF THE SPILLWAY IS TO HELP ENSURE SHEET FLOW FOR STORMWATER OVERFLOWS.

SPILLWAY DETAIL



RETENTION POND SPILLWAYS ARE TO BE :

1. MADE OF CONCRETE, CONCRETE BLOCK OR OTHER APPROVED MATERIAL
2. LEVEL AND 15' MINIMUM IN LENGTH
3. TO HAVE THE ENDS RISE AT LEAST 0.2' FEET (ABOUT 2-3/8")
4. NO POINT OF THE POND PERIMETER MAP DROP BELOW THE ELEVATED ENDS OF THE SPILLWAY
5. DIRT FORMING POND PERIMETER IS TO BE COMPACTED.
6. DEPTH FROM POND BOTTOM TO POND OUTLET IS NOT TO EXCEED 0.5' MAXIMUM

THE PURPOSE OF THE SPILLWAY IS TO HELP ENSURE SHEET FLOW FOR STORMWATER OVERFLOWS.