

15-08-03 Sensitive Area Overlay Zone District

E. Development Standards within the Sensitive Area Overlay Zone.

4. Drainage and Erosion. The area of the watershed shall be used to determine the amount of storm water runoff generated before and after construction.

e. The "Rational Method" or other method as approved by the City Engineer shall be used in computing runoff. The basic formula for the "Rational Method" is:

Q = CIA in which:

Q = Runoff in cubic feet per second (c.f.s.)

C = Coefficient of runoff or the portion of storm water runs off a given area.

The following ranges for C value are typical examples. The actual C value used shall be approved by the City Engineer.

Type of Development	Runoff Coefficient
Industrial & Commercial	.80 - .90
Residential	.30 - .40
Parks	.15 - .24
Agricultural	.10 - .20

I = Average rainfall intensity during time of concentration for 25 year return period in inches per hour. The time of concentration shall be defined as the time required for water to flow from the most remote point of the section under consideration.

A = Drainage area in acres.

f. Lots shall be arranged so as to ensure adequate setbacks from drainage channels. The 100 year storm shall be that basis for calculating setbacks. No structures shall be allowed in the 100 year flood plain.

g. Facilities for the collection of storm water runoff shall be required to be constructed on development sites and according to the following requirements.

1. Such facilities shall be the first improvement or facilities constructed on the development site, with the exception of sewer and water lines.

2. Such facilities shall be designed so as to detain safely and adequately the maximum expected storm water runoff for a twenty-five year storm, not to exceed .2 cubic feet per second per acre or at a low rate or at a rate not higher than the flow rate before construction, whichever is less, on the development site, for a sufficient length of time so as to prevent flooding and erosion during storm water runoff flow periods.

3. Such facilities shall be so designed as to divert surface water away from cut faces or sloping surfaces of a fill.

4. The existing natural drainage system will be utilized, as much as possible, in its unimproved state.

5. Where drainage channels are required, wide shallow swales lined with appropriate vegetation shall be used instead of cutting narrow, deep drainage ditches.
 6. Flow retarding devices, such as detention ponds and recharge berms, shall be used where practical to minimize increases in runoff volume and peak flow rate due to development. Areas which have shallow or perched groundwater or areas that are unstable must be given additional consideration.
- h. Construction on the development site shall be of a nature that will minimize the disturbance of vegetation cover, especially between December 1 and April 15 of the following year.
 - i. Erosion control measures on the development site shall be required to minimize the increased solids loading in runoff from such areas. The detailed design system to control storm water erosion during and after construction shall be contained in the Grading and Drainage Report described in this Title.