CHAPTER 1 LAND PRESERVATION AND WOODLAND PROTECTIONS.

Subd. 1. Purpose.

The purpose of this Chapter is to insure that the natural environment is protected and to minimize any adverse effects development might have on the environment.

Subd. 2. Soil Erosion and Sedimentation Control.

A. General Standards.

1. All development shall conform to the natural limitations presented by the topography and soil in order to create the best potential for preventing soil erosion.

2. Structures and accessory facilities, except stairways and landings, as identified in Chapter 22 (General Provisions), Subd. 17 (Stairways, Lifts and Landings) shall not be placed within a bluff impact zone.

3. Slopes over 18 percent in grade shall not be developed.

4. Development on slopes with a grade between 12 and 18 percent shall be carefully reviewed to insure that adequate measures have been taken to prevent erosion, sedimentation, and structural damage.

5. Erosion and siltation control measures shall be coordinated wit the different stages of development. Appropriate control measures shall be installed prior to development when necessary to control erosion.

6. Land shall be developed in increments of workable size such that adequate erosion and siltation controls can be provided as construction progresses. The smallest practical area of land shall be exposed at any one period of time and no exposure shall exceed 65 days unless extended by the Council.

7. Where the topsoil is removed, sufficient arable soil shall be set aside for re-spreading over the disturbed area or new topsoil shall be brought in. The topsoil shall be restored to a depth of four inches and shall be of a quality at least equal to the soil quality prior to development.

8. Public and private properties adjacent to the development site shall be protected from the effects of sedimentation. Any violations of this provision must be corrected by the owner to the satisfaction of the City within five (5) days of receiving notification of such. If the violation is not remedied within the time period specified, the City may correct the problem and assess the costs incurred to the property owner.

B. The following control measures shall be taken to control erosion during construction on exposed slopes:

1. No exposed slopes should be steeper in grade than five (5) feet horizontal to one (1) foot vertical.

2. Exposed slopes steeper in grade than ten (10) feet horizontal to one (1) foot vertical should be contour plowed to minimize direct runoff water.

3. At the foot of each exposed slope, a channel and berm should be constructed to control runoff. The channeled water should be diverted to a sedimentation basin (debris basin, silt basin, or silt trap) before being allowed to enter the natural drainage system.

4. Along the top of each exposed slope, a berm should be constructed to prevent runoff from flowing over the edge of the slope. Where runoff collecting behind said berm cannot be diverted elsewhere and must be directed down the slope, appropriate measures shall be taken to prevent erosion. Such measures should consist of either an asphalt paved flow apron and drop chute laid down the slope of a flexible slope drain. At the base of the slope drain or flow apron a gravel energy dissipater should be installed to prevent erosion at the discharge end.

5. Exposed slopes shall be protected to whatever means will effectively prevent erosion considering the degree of slope, soils material, and expected length of exposure. Slope protection shall consist of mulch, sheets of plastic, burlap or jute netting, sod blankets, fast growing grasses or temporary seedings of annual grasses. Mulch consists of hay, straw, wood chips, corn stalks, bark or other protective material. Mulch should be anchored to slopes with stakes and netting, or should be worked into the soil to provide additional slope stability.

6. Control measures, other than those specifically stated above, may be used in place of the above control measures if it can be demonstrated that they will as effectively protect exposed slopes.

Subd. 3. Woodland Preservation.

A. Structures and other amenities shall be located in such a manner that the optimum number of trees shall be preserved.

B. If there are no feasible or prudent alternatives to the cutting of trees on a development site and if trees are cut, trees should be re-planted to restore the density of trees to that which existed before development.

C. Forestation, reforestation, or landscaping should utilize a variety of tree species and should not utilize any species under disease epidemic. Species planted should be hardy under local conditions and compatible with the local landscape.

D. Development including grading and contouring shall take place in such a manner that the root zone aeration stability of existing trees will not be affected and should provide existing trees with a watering area equal to not less than one-half of the crown area.

Subd. 4. Wetland Protection.

The Federal Clean Water Act and the Minnesota Wetland Conservation Act are hereby incorporated in their entirety by reference.