ARTICLE 8

DESIGN STANDARDS

SECTION

30-08-01: CONFORMITY WITH THE COMPREHENSIVE PLAN AND ZONING ORDINANCE: A proposed subdivision shall conform to the Comprehensive Plan, to related policies adopted by the City, and to the Hanover Zoning Ordinance, as may be amended.

30-08-02: LAND REQUIREMENTS:

A. Land shall be suited to the purpose for which it is to be subdivided. No plan shall be approved if the site is not suitable for the purposes proposed by reason of potential flooding, topography, adverse soil conditions, rock formations, or wetlands.

B. Proposed subdivisions shall be coordinated with surrounding properties and/or neighborhoods, so that the City as a whole may develop efficiently and harmoniously.

C. General design, street pattern, street widths, proposed private and public areas, facilities and uses, and proposed density of population shall conform to applicable plans, ordinances and regulations, including the Comprehensive Plan, Zoning Ordinance, Building Code, and other applicable regulations.

D. Valuable topographic and scenic features and ground cover shall be preserved and retained to the maximum extent possible. Drainage shall be provided for in the subdivision by adequate storm drains or by maintenance of natural drainage channels.

E. Minimum Design Features. The design features set forth in this Chapter are minimum requirements. The City may impose additional or more stringent requirements concerning lot size, streets, and overall design as deemed appropriate considering the property being subdivided.

30-08-03: BLOCKS:

A. Length. The length, width, and acreage of blocks shall be sufficient to accommodate the size of lots required for the area by the Zoning Ordinance and to provide for convenient access, circulation, control and safety of street design. The maximum length of blocks shall be one thousand five hundred (1,500) feet and the minimum length four hundred (400) feet. Blocks over nine hundred (900) feet long may require pedestrian ways at least thirty (30) feet wide at their approximate center. The use of additional pedestrian ways to schools, parks, and other destinations may be required.

B. Pedestrian pathways, not less than thirty (30) feet wide, shall be required where deemed essential to provide circulation, or access to schools, playgrounds, shopping centers, transportation and other community facilities.

C. Arrangement. A block shall be so designed as to provide two (2) tiers of lots unless it adjoins a major collector, arterial street, railroad, thoroughfare, watercourse or park or where topographic or other conditions render the block arrangement unreasonable.

30-08-04: LOTS:

A. Area. The minimum lot area, width and depth shall not be less than that established by the Hanover Zoning Ordinance in effect at the time of adoption of the preliminary plat. Minimum lot area for shall consist of buildable land exclusive of utility transmission easements and pipeline easements that encumber lot development.

B. All lots shall abut by their full frontage (lot width required by the Hanover Zoning Ordinance) on a publicly dedicated street or a street that has received legal status.

C. Butt Lots. Butt lots shall be platted at least twenty (20) percent wider than the average width of interior lots in the block.

D. Corner Lots. Corner lots shall be platted twenty percent (20) percent larger than the minimum dimension required to secure the minimum lot area specified in the Zoning Ordinance and have additional width or depth to permit appropriate building setbacks from both streets and a buffer yard where a lot abuts a collector, arterial street, railroad, pipeline or utility transmission easement, as required by the Hanover Zoning Ordinance.

E. Side Lot Lines. Side lines of lots shall be approximately at right angles to street lines or radial to curved street lines.

F. Width. Every lot must have the minimum width measured at the minimum front yard setback.

G. Lot Frontage. All lots shall have frontage on a public street that provides the required lot width at the minimum front yard setback. Flag lots are prohibited.

H. Single and Two Family Lot Access. All new single and two family lots shall be designed to receive access from a local street. Direct lot access from an arterial or major collector street for these lots shall be prohibited.

I. New commercial, industrial, and multiple family lots fronting on an arterial or major collector street shall be designed to minimize the number of direct access points through the following methods listed in preferential order. If the highest preference is not possible, the next preference shall be utilized until an access method is possible.

1. Access from a local street.

2. Frontage road serving multiple properties.

3. Frontage driveway or connected parking lots with cross easements serving multiple properties.

4. Shared driveways.

5. One driveway access, no closer than two hundred (200) feet to another driveway and that meets the City's minimum spacing standards from a street intersection. All driveways shall be reviewed for consistency with the access management guidelines of the Hanover Transportation Plan.

J. Setback Lines. Setback lines shall be shown on all lots and shall not be less than the setback required by the Hanover Zoning Ordinance.

K. Water Courses. Watercourses may be contained within abutting lots. Watercourses shall be protected by easement that will include at a minimum a

thirty (30) foot buffer extending outward from the delineated wetland boundary or the watercourse ordinary high water level. Lots with easements protecting watercourses shall have sufficient dimensions and area outside the ordinary high water mark to meet or exceed the minimum lot area and width specified in the underlying Zoning District in which the lots are located.

L. Grading for drainage. Lots shall be graded so as to provide drainage away from building locations and shall conform to the approved final grading plan. Storm water drainage from an improved lot shall not be directed at an adjoining property at a rate above a predevelopment condition except where drainage is directed to a designed drainage easement.

M. Natural Features. In the subdividing of any land, due regard shall be shown for all natural features, such as tree growth, water courses, historic places or similar conditions which, if preserved, will add attractiveness and stability to the proposed development.

N. Frontage on Two Streets. Double frontage, or lots with frontage on two (2) parallel streets shall not be permitted except where lots back on major collector or arterial streets, or where topographic or other conditions render subdividing otherwise unreasonable. Additional lot depth and a minimum twenty (20) foot wide landscaped buffer yard shall be provided where a lot backs onto a major collector or arterial street.

O. Irregular Shaped Lots. On lots determined to be irregular in shape (e.g., triangular), the developer shall demonstrate to the City an ability to properly place principal buildings and accessory structures upon the site which are compatible in size and character to the surrounding area.

P. Building Expansion. All single-family residential lots shall be designed in consideration of potentials for buildings accommodating garages, porches and decks, etc. without need for setback variance. Said buildings and structures are to be compatible in size and character with the surrounding area.

Q. Lot Remnants/Outlots. All remnants of lots below minimum lot size left over after subdividing a larger tract must be added to adjacent lots rather than allowed to remain as unusable parcels. Outlots may be platted within a subdivision to delineate future development phases, commonly owned open spaces or land to be dedicated to the public for park, drainage and utility or other public purpose. The outlot shall be sized in a manner to accommodate its intended use. An outlot shall be platted into a lot and block prior to issuance of a building permit. No building permits shall be issued for an outlot except for City structures allowed as a recreational or utility component in an open space area.

30-08-05: CONSERVATION SUBDIVISION DESIGN:

A. Purpose. The intention of conservation subdivision design is to compatibly integrate development with the natural features of the site to accomplish the following objectives:

1. The perpetual preservation of natural habitat areas and land forms unique to Hanover.

2. The creation of open spaces for passive and active recreational uses.

3. The creation of well designed residential neighborhoods that feature common open space.

4. The establishment of a unified landscape amenity for the enjoyment of the City residents.

5. To implement greenway corridor objectives of the Comprehensive Plan.

B. Open Space Classification Designations. Each open space area shall be classified in one of the following categories: natural habitat, neighborhood recreation, or pedestrian corridor open space, and shall conform to the type of use, location criteria, and deed restrictions of that classification.

1. Natural Habitat. The development shall preserve the maximum quantity of natural habitat open spaces in a contiguous, connected configuration. Natural habitat open spaces may include, but are not limited to, fields, wetlands, slopes, bluffs, dense woods, watercourses, lakes, ponds, streams, Shorelands, and other environmentally sensitive areas or desirable view sheds. Natural habitat open spaces may be preserved as conservation easements or outlots with shared ownership among the property owners or dedicated to a public agency.

2. Neighborhood Recreation. The development shall locate neighborhood recreation open spaces such that they are an integral part of the neighborhood of surrounding home sites, at an elevation appropriate to their intended recreational use, defined by coherent boundaries, and accessible to all neighborhood residents. Neighborhood recreation open spaces may include, but are not limited to, greenways, commons, playgrounds, ball fields, gardens, etc.

3. Trail Corridors. Trail corridor open spaces may include, but are not limited to, established regional trails, local pathways, or paved walkways. Public trail corridor parkland dedications shall be a minimum of thirty (30) feet in width. Private trail corridors may be established by easement or outlot under the ownership of a homeowners association. Trail corridor open

space shall be used for pedestrian and/or bicycle travel. Motorized vehicles shall be prohibited.

4. Habitable structures shall not be permitted in any of the designated open spaces. Open and recreational structures may be permitted within open spaces.

C. Ownership and Management. All designated open space shall be owned and managed according to the following means, subject to City approval.

1. Open space may be owned in common by the property owners created through subdivision of the original tract. Management shall be the responsibility of that subdivision's homeowner association. In the case where at least one (1) open space is held in common ownership, a homeowner association shall be established for that subdivision. Membership in the association by all property owners in the subdivision shall be mandatory. The homeowners association documents or the declaration of covenants, conditions and restrictions shall be submitted as part of the preliminary plat application and shall contain the following information:

a. The legal description of the common lands or facilities.

b. The restrictions placed upon the use and enjoyment of the lands or facilities including the persons or entities entitled to enforce the restrictions.

c. A mechanism for resolving disputes among the owners or association members.

d. A mechanism to assess and enforce the common expenses for the land or facilities including upkeep and maintenance expenses, real estate taxes, and insurance premiums.

e. The conditions and timing of the transfer of ownership and control of land or facilities to the association or to common ownership.

2. Natural Habitat. Open space may be deeded to an established land trust or non-profit organization. Management shall be the responsibility of the land trust or non-profit organization. Maintenance may be performed by the neighborhood homeowner association, through written agreement between the association and the land trust or non-profit organization.

a. Open space may be protected by establishing conservation easements in perpetuity in favor of an established land trust or non-profit organization as provided in Minnesota Statutes 84.64 through

84.65 as may be amended. Unless the document establishing the restrictions specifically provides to the contrary, the City shall have no responsibility for the maintenance or management of the area subject to the restrictions. The form and content of the deed or other instrument establishing the restrictions must be approved by the City prior to the execution and delivery thereof. Notwithstanding any provision of this Chapter to the contrary, the City may, in cases where conservation restrictions are utilized to meet open space dedication requirements of this Chapter, waive the requirement that the area subject to the restrictions be platted as a separate outlot.

b. Stormwater drainage systems located within open spaces or the residential lots shall be covered by utility and drainage easements dedicated on the final plat to the City.

3. Neighborhood Recreational and Greenway Corridor Trails. Recreational open space or greenway corridor trails intended as public parks or public trails shall be dedicated to the City. Management and maintenance of the public recreational areas shall be the responsibility of the City.

D. Residential Lot Siting.

1. Residential lots shall be sited in a manner that preserves existing significant tree cover on the site.

2. View Shed. The lots of a neighborhood may be arranged such that a majority of the principle structures will take visual advantage of an identifiable feature, building, structure, greenway, wetland, woods, lake, stream, or other open space that could be described as a view shed.

3. Streetscape. The lots may be arranged such that the principle structures face a local street enhanced with landscaping, street trees, boulevards, medians, or other landscaping techniques appropriate to the City's street design standards.

30-08-06: STREETS AND ALLEYS: The arrangement, character, extension, width, grade, and location of all streets shall conform to the Hanover Construction Standards Manual, Comprehensive Plan and to this Chapter shall be considered in their relation to existing and planned streets, to reasonable circulation of traffic, to topographical conditions, to run-off of storm water, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by the streets.

A. Streets. Where such is not shown in the Comprehensive Plan, the arrangement of streets in a subdivision shall:

1. Streets, Continuous. Except for cul-de-sacs, streets shall connect with streets already dedicated in adjoining or adjacent subdivisions, or provide for future connections to adjoining un-subdivided tracts, or shall be a reasonable projection of streets in the nearest subdivided tracts. The arrangement of arterials and collector streets shall be considered in their relation to the reasonable circulation of traffic, to topographic conditions, to runoff of storm water, to public convenience and safety, and in their appropriate relation to the proposed uses of the area to be served.

2. The arrangement of streets in a new subdivision shall make provisions for the proper projection of streets into adjoining areas by carrying the new streets to the boundaries of the new subdivision at appropriate locations approved by the City Engineer.

3. Temporary Cul-de-Sac. In those instances where a street is terminated pending future extension in conjunction with future subdivision and more than two hundred (200) feet between the dead-end and the nearest intersection, a temporary turn around facility shall be provided at the closed end, in conformance with cul-de-sac requirements. This temporary cul-de-sac must be placed inside a temporary roadway easement if it is located outside street right-of-way. At such time as such a street is extended, the acreage covered by the turn-around outside the boundaries of the extended street shall revert in ownership to the property owner fronting on the temporary turn-around. Financial security will be required for removal or restoration as determined by the City Engineer. Said temporary cul-de-sacs shall be posted with signage indicating that the road is a proposed through road to alert the public that the road is planned to continue into the next development upon future subdivision.

4. Provisions for Re-subdivision of Large Lots and Parcels. When a tract is subdivided into larger than normal building lots or parcels, such lots or parcels shall be so arranged as to permit the logical location and openings of future streets and appropriate re-subdivision, with provision for adequate utility connections for such re-subdivision.

5. Service Streets. Where a subdivision abuts or contains an existing or planned major thoroughfare, the City Council may require a street approximately parallel to and on each side of the right-of-way for adequate protection of residential properties and to afford separation of through and local traffic. The service streets shall be located at a distance from the major thoroughfare or railroad right-of-way suitable for the appropriate use of the intervening land, as for park purposes in residential districts, or for commercial or industrial purposes in appropriate districts. The distances shall also be determined with due regard for the requirements of approach grades and future grade separations.

6. Marginal Access Streets. Marginal access streets shall be so aligned that their use by through traffic shall be discouraged.

7. Widths. Right of way widths and pavement width (face to face) of curb shall be as shown in the Comprehensive Plan Transportation Plan, and where not shown in the Comprehensive Plan the minimum right-of-way width for streets, arterial highways or pedestrian ways included in any subdivision shall be not less than the minimum dimensions for each classification as follows:

Classification	**Right of Way**	**Pavement Width**
Principal Arterial	100 feet	52 feet
Minor Arterial	75 feet	48 feet
Collector	80 feet	44 feet
Minor / Local	66 feet	36 feet
Service/Marginal Access	50 feet	28 feet
Cul-de-sac Streets	66 feet	36 feet
Cul-de-sac Radius	60 feet	45 feet
Alley	24 feet	18 feet
Pedestrian Way	30 feet	10 feet

8. Street Intersections. Insofar as practical, streets shall intersect at right angles, and in no case shall the angle formed by the intersection of two streets be less than sixty (60) degrees. Intersections having more than four corners shall be prohibited. Adequate land for future intersections and interchange construction needs shall be dedicated

9. Street Alignment. The horizontal and vertical alignment standards on all streets shall be as follows:

   a. Horizontal: radii of centerline:

Classification	**Desirable**	**Minimum Acceptable**
Principal Arterial Highway	800 feet	500 feet
Minor Arterial Highway	800 feet	500 feet
Collector Street	500 feet	300 feet
Local Street	500 feet	100 feet

b. There shall be a tangent between all reverse curves as follows:

Classification	**Minimum Acceptable**
Principal Arterial Highway	100 feet
Minor Arterial Highway	100 feet
Collector Street	50 feet
Local Street curves of a minimum length as	50 feet

c. Vertical: All changes in street grades shall be connected by vertical parabolic curves of such lengths as follows:

(1) Principal or Minor Arterial Highways. Thirty (30) times the algebraic difference in the percent of grade of the two adjacent slopes.

(2) Collector or Local Streets. Twenty (20) times the algebraic difference in the percent of grade of the two adjacent slopes.

10. Deflections. When connecting street lines deflect from each other, or when a single street deflects at one point, by more than ten (10) degrees, they shall be connected by a curve with a radius adequate to ensure a sight distance of not less than five hundred (500) feet for arterials, three hundred (300) feet for collectors, and two hundred (200) feet for all other streets. The City Council may allow greater or lesser sight distances and of such radii as the City Engineer shall determine for special cases.

11. Street Intersection Offsets. Street intersection jogs shall have a centerline off-set of one hundred fifty (150) feet or more when applied to minor streets and service streets. In all other cases they shall be avoided.

12. Cul-de-Sacs. The maximum length of a street terminating in a cul-de-sac shall be five hundred (500) feet measured from the centerline of the street of origin to the end of the right-of-way.

13. Centerline Gradients. All centerline gradients shall be at least four-tenths (0.4) percent and shall not exceed the following: Arterials and collector streets: five (5) percent, minor and service streets: eight (8) ~~six (6)~~ percent.

14. Half Streets. Half streets shall be prohibited, except where essential to the reasonable development of the subdivision in conformity with the other requirements of this Chapter; and except where the City Council finds it shall be practicable to require the dedication of the other half when adjoining property is subdivided. Wherever there is a half street adjacent

to a tract to be subdivided, the other half of the street shall be platted within the tract prior to the granting of access.

15. Private Streets. Private streets shall not be approved nor shall public improvements be approved for any private streets.

16. Reserve Strips. Reserve strips controlling access to streets shall be prohibited except under conditions approved by the City Council.

17. Access Management Requirements. In the case where a proposed plat is adjacent to a limited access highway, there shall be no direct vehicular or pedestrian access from individual lots to such highways. As a general requirement, access to such limited access highways shall be at intervals of not less than one-half (1/2) mile and through existing and established crossroads where possible. Any such proposed access shall be subject to state or County approval as may be applicable as well as City Approval.

18. Platting of Small Tracts: In the platting of small tracts of land fronting on a limited access highway where there is no convenient access to existing entrances and where access from such plat would be closer than one-half (1/2) mile from an existing access point, a temporary entrance permit may be granted. Provision shall be made in such plats for the connection of roads to neighboring land. As the neighboring land is platted and developed, and access becomes possible at a preferred location, such temporary entrance permits shall become void at the discretion of the City.

19. Access of local streets onto arterial shall be discouraged at intervals of less than thirteen hundred twenty (1,320) feet and collector streets shall be discouraged at intervals of less than five hundred (500) feet.

20. Where a subdivision abuts or contains an existing street of inadequate width, sufficient additional width shall be provided within the subdivision to meet the standards of this Chapter.

21. Additional right-of-way and roadway widths may be required by the Council to promote public safety and convenience when special conditions require it.

22. Dedication. All proposed streets shown on the plat shall be in conformity to City, County and State plans and standards and be offered for dedication as public streets unless otherwise determined by the City Council.

23. Hardship to Owners of Adjoining Property Avoided. The street arrangements shall not be such as to cause hardship to owners of

adjoining property in platting their own land and providing convenient access to it.

24. Grading. The full width of the right-of-way of all streets and alleys dedicated in the plat shall be graded to the lines and cross sections as shown on the grading plan submitted to and approved by the City Engineer. Exceptions to the width of grading may be granted where topography or tree cover warrant.

25. Soil Investigation. To determine sub grade soils classification and bearing capacity of the soils in the proposed development, a soil investigation report shall be prepared under the supervision of a soils engineer associated with a qualified soils testing service and be provided to the City Engineer. The report shall contain the design recommendation for street section based on nine (9)-ton design. In proposed streets, soils investigation shall be performed at intervals not to exceed three hundred (300) lineal feet. The soil borings completed during the investigation shall be at least ten (10) feet in depth below the proposed finished grade. Ground water levels shall be reported at each boring. Elevations shall be in mean sea level datum. Locations of borings shall measure in the field and accurately shown on the plans.

26. Base and Surfacing. All streets shall be improved with a concrete or bituminous surface. Streets to be paved shall be surfaced for a nine (9) ton axle weight capacity using current Minnesota Highway Department design standards and in accordance with City standard design detail plates. No building permit shall be issued for any lot or parcel in a subdivision prior to the installation of the first lift (wear course) of bituminous surfacing or concrete surfacing on the streets thereof. Exceptions to this provision may be granted by the City Council at their discretion as part of a development contract.

27. Concrete Curb and Gutter. All curb shall be concrete with integral gutter. The standard curb shall be vertical face (Type B618) in accordance with City standard design templates. In new residential developments where access location to lots are not known, a surmountable concrete curb in accordance with City standard design templates may be used subject to the approval of the City Council if the radius of curvature of the street is two hundred (200) feet or larger and except at intersections and catch basin inlets. Street intersections and intersections of cul-de-sac streets and the turn-around portions thereof shall be rounded with not less than fifteen (15) foot radii.

28. Boulevards. All boulevards shall have four (4) inches of topsoil (black dirt) placed on them and then shall be sodded or seeded.

29. Sidewalks. Concrete sidewalks, four inches thick except at driveways where greater thickness shall be required, five (5) feet wide in residential areas and of such width as directed in other areas, are required on one (1) side of residential streets and may be required on both sides of the streets with the outside edge located on the property line, and on pedestrian ways as directed by the City Council.

30. Driveways. Concrete or asphalt driveways shall be constructed from the curb to the property line. In cases where driveways are constructed after curbing and sidewalks are in place, the sidewalk for the width of the driveway shall be reconstructed to driveway specifications. Where driveways shall be permitted to access onto thoroughfare or collector streets, provisions shall be made for an on-site turn around area that would provide access to the thoroughfare or collector street in a forward direction.

    a. For residential subdivisions, driveways shall be graded to final grades, with the minimum acceptable driving surface to include four (4) inches of aggregate base.

    b. The subdivision grading plan shall indicate the location and slope, for all driveways within the proposed subdivision, and according to the requirements of the Zoning Ordinance and design specifications of the City Engineer.

    c. Driveways shall be constructed in accordance with the Hanover Construction Standards Manual.

31. Lighting. Streetlights conforming to City specifications shall be installed at the locations approved by the City Engineer. Easements may be required along property lines from utility easements on rear lot lines to rights-of-way so as to provide for a street light interval not to exceed five hundred (500) feet.

32. Signs. Four way metal street signs shall be installed at each street intersection. Letters shall be at least six (6) inches high, green on a white background.

33. Street Trees. ***(Amended 05.16.06; Resolution 33-05-06; Ordinance 2006-06)*** In all new subdivisions, street trees shall be planted approximately every forty (40) feet and in consideration of driveway curb cuts. Trees shall be placed between the street edge and sidewalk. If no sidewalk is required, trees shall be planted five (5) feet from the street edge. No trees shall be planted within thirty (30) feet of the intersection of curb lines on corner lots. A list of prohibited Street trees is included in Article 20-32-03.

34. Streets in Flood Hazard Area. No street shall be approved if its final surface is at a lower elevation than one (1) foot below the regulatory flood protection elevation. The City Council may require profiles and elevations of finished streets for areas subject to flooding. Fill may be used for streets, provided such fill does not unduly increase flood heights and provided any such fill would not result in a stage increase violating the Requirements of Minnesota Statutes Chapters 104 and 105, as such chapters may be amended, supplemented, or replaced from time to time, and any applicable requirements imposed by the Federal Emergency Management Agency pursuant to its rules and regulations. Drainage openings shall not restrict the flow of water so as to unduly increase flood heights and provided any such drainage opening would not violate the requirements of Minnesota Statutes Chapters 104 and 105, as such chapters may be amended, supplemented, or replaced from time to time, and any applicable requirements imposed by the Federal Emergency Management Agency pursuant to its rules and regulations.

35. Names of streets shall conform to the Hennepin or Wright County grid system. Names of streets that are extensions of existing streets shall be the same. No street names shall be used which will duplicate or be confused with the names of separate existing streets. Street names shall be subject to the approval of the City Council.

B. Alleys.

1. Alleys may be required at the rears of lots to be used for multiple dwellings, commercial, industrial and institutional purposes, lots fronting trunk highways, and major thoroughfares and lots needing a secondary means of access.

2. Alleys shall be not less than twenty-four (24) feet in width.

3. Alley intersections and sharp changes in alignment shall be avoided, but, where necessary, corners shall be cut off sufficiently to permit safe vehicular movement.

4. Dead-end alleys shall be avoided where possible, but if unavoidable, shall be provided with adequate turn-around facilities at the dead-end, as determined by the City Council.

30-08-07: EASEMENTS:

A. Lot Lines. Drainage and utility easements at least twelve (12) feet wide shall be provided on all lot lines. These easements may be centered on common rear and side lot lines. At a minimum, these easements shall be ten (10) feet wide

along all lot lines adjacent to streets and along all boundaries with un-platted land. The easements shall provide continuity of alignment from block to block. At deflection points, an easement for a pole line anchor shall be provided. Where possible, lot lines shall be arranged to bisect the exterior angle so that pole guys will fall along side lot lines.

B. Drainage Channels. Easements shall be provided along each side of the centerline of any waterway or drainage channel. The easements shall be of a sufficient width to provide for proper maintenance and protection of the waterway or channel, stormwater runoff, and the installation and maintenance of drainage systems. Such easements for drainage purposes shall not be less than thirty (30) feet in width.

C. Utilities. Easements shall be provided for all sanitary sewer, water main, and stormwater facilities. The easements shall be of a sufficient width to provide for access, proper maintenance, protection of the facilities and future replacement.

30-08-08: STORM WATER MANAGEMENT:

A. Storm Water Drainage Facilities. Storm water drainage facilities, where required, shall be designed to convey the flow of surface waters without damage to persons or property. The system shall insure drainage at all points along streets, and provide positive drainage away from building and on-site waste disposal to accommodate frequent floods. Drainage plans shall be consistent with local and regional drainage plans. The facilities shall be designed to protect against surface erosion and siltation of surface water and to prevent the discharge of excess runoff onto adjacent properties. The natural drainage shall be used as far as is feasible for the storage and flow of runoff. The following requirements shall also apply:

1. No existing ditch, stream, drain or drainage channel shall be deepened, widened, re-routed or filled without written permission from the City and other governmental agencies.

2. Where drainage channels must be constructed to augment the natural drainage system, such channels, as well as the natural drainage ways, may be planned as a part of a recreational trail system. When this is done, channels shall be designed to be aesthetically compatible for recreational trail use.

B. Storm Water Drainage Standards. All developments are responsible for control of surface or storm water to equal or improve pre-development conditions. Development drainage systems shall be provided that accept flow from upstream areas, that control, covey, and pond development runoff, that limit outflow to the natural pre-development rate, and that do not have detrimental impacts on

downstream properties. All pipe conveyance shall be of ten (10) year design return frequency. Flood protection shall be provided for one hundred (100) year-ten (10)-day and one hundred (100) year-twenty four (24) hour design return frequency. All ponding, detention or retention shall be designed for 100-year frequency storm condition with a positive outlet. Flood protection for public and personal property shall be one foot plus any encroachment above the floodplain. All storm runoff shall be calculated by the Soil Conservation Service Method TR55, TR20 or HydroCad.

C. The City Engineer shall approve all subdivision grading, drainage, and wetland mitigation plans.

30-08-09: EROSION AND SEDIMENT CONTROL:

A. The following guidelines shall be applied in the subdivision:

1. The development shall conform to the natural limitations presented by topography and soil so as to create the least potential for soil erosion.

2. Land shall be developed in increments of workable size such that adequate erosion and siltation controls can be provided as construction progresses. Appropriate control measures shall be installed prior to development when necessary to control erosion. The smallest practical area of land shall be exposed at any one period of time.

3. When soil is exposed, the exposure shall be for the shortest feasible period of time, as specified in the development agreements.

4. Where the topsoil is removed, sufficient arable soil shall be set aside for re-spreading over the areas to be planted. The soil shall be restored to a minimum depth of four (4) inches or a depth as may be established by the City Engineer and shall be of a quality at least equal to the soil quality prior to development.

5. Natural vegetation shall be protected wherever possible.

6. As determined by the City Engineer, runoff water shall be diverted to a sedimentation basin before allowed to enter the natural drainage system. Storm water runoff from the developed site shall not, at any time, exceed the rate existing prior to development except as may be approved by the City Council.

7. The City shall have the authority to remove the topsoil for its own purposes from all dedicated streets within its corporate boundaries. Said

topsoil shall be utilized in the development project from which it is taken unless otherwise specified as part of a development agreement.

30-08-10: PUBLIC UTILITIES:

A. Watermain. Watermain size shall be a minimum six (6) inch diameter. Watermain size up to eight (8) inch diameter may be utilized as a standard and minimum distribution size along with six (6) inch. Watermain shall be ductile iron pipe and shall meet all the requirements of the City Engineer's Association of Minnesota standard utility specification for watermain and service line installation (latest edition) and American Water Works Association standard.

1. Mains shall be valved at intervals not to exceed eight hundred (800) feet. Wedge gate valve shall be installed as main valves. Valve shall also be installed at street intersection and branches in the distribution system or in locations as determined by the City Engineer.

2. "Dead end" mains shall be looped if exceeding the allowed length of a cul-de-sac. The distribution system may require installing a larger main to benefit the entire water service in the City. The City Engineer shall determine the location and size of mains larger than six (6) or eight (8) inches in residential areas. In commercial/industrial areas, watermain up to twelve (12) inches may be required to meet normal distribution required in the development. The cost of normal distribution size and appurtenances shall be the responsibility of the developer. Size of pipe over and above the normal shall be installed and financed in accordance with City policy.

B. Water Supply. An individual well, if permitted by the City Council, shall be constructed in accordance with the Minnesota State Well Code. The applicant shall provide evidence that lots proposed for individual wells will have a good chance of securing an adequate supply of potable water.

C. Fire Hydrants. Installation shall be pursuant to plans approved by the City Engineer and local fire fighting authority and shall be located in accordance with Insurance Service Office (ISO) standards.

1. Hydrants shall be placed at the end of all "dead ends," cul-de-sacs and at intersections. All hydrants shall have wedge gate valves and shall be easily accessible to fire fighting personnel and equipment. The single hydrant style shall be throughout the distribution system and that type is shown on the City of Hanover standard plates.

D. Sanitary Sewer. Sanitary Sewer shall be a minimum of eight (8) inch pipe and shall be of a material approved for use in the City by the City Engineer. Sanitary

sewer grades and installation shall conform to the Recommended Standards for Sewage Works latest edition by the Great Lakes - Upper Mississippi River Board of State Sanitary Engineers and the City Engineer's Association of Minnesota standard utilities specification for sanitary sewer (latest edition). Main size will be determined by the sewage flow and grade in accordance with the City of Hanover Comprehensive Plan.

1. Size of pipe shall be determined by lateral service and/or trunk service. Trunk service shall be the responsibility of the property served and City Council shall establish cost distribution policy. Lateral service shall be the responsibility of the property serviced and cost shall be borne by the serviced property.

2. Sanitary sewer service shall be a minimum of four (4) inches and shall be installed in accordance with the City's standard detail templates. All sewer service lines shall be minimum four (4) inch diameter PVC pipe or approved equal.

3. Water Services. Each house service shall be run from the main to the property line, where a cap or plug shall be placed until the service is extended to the structure. A one (1) inch Type K copper water service, or approved equal; corporation cock, curb box and stop shall be the minimum requirements.

4. Reproducible "as-built" drawings showing all utilities, grading and improvements shall be furnished to the City by the applicant of all required improvements in developments where the applicant has been responsible for improvements. All "as-built" drawings shall show both horizontal and vertical locations for all utilities constructed. Such "as-built" drawings shall be certified to be true and accurate by the registered engineer responsible for the installation of the improvements.

E. Sanitation. Water and sewer lines shall be installed and connected to the public system to serve all lots within the proposed subdivision under the provisions of applicable statutes and ordinances. The City Council shall require the installation of water and sewer mains, at the applicant's expense or under the provisions of applicable statutes and ordinances, unless said applicant can prove to the City Council that extension of the existing water system is not feasible in the development of the subdivision and that adequate water facilities will be otherwise provided, in which case the City Council may permit the installation of individual wells.

F. Telephone, electric, cable, gas service lines and/or other public utilities are to be placed underground in accordance with City standards.

1. Developers shall apply for City permits to install underground utilities in public rights-of-way.

2. The City shall approve all utilities prior to installation.

3. Public utilities shall be installed in a joint trench in accordance with City standards.

4. Conduit shall be installed for all road crossings.

5. Public utility installation shall not occur until one (1) week after all curb has been backfilled.

30-08-11: CONDITIONS IN FLOOD HAZARD AREAS:

A. All developments in flood hazard areas shall include:

1. Construction and modification of sewage, water supply and drainage facilities to meet the standards of this Chapter and Zoning Ordinance, Article 20-57-00 (Floodplain Management Overlay District), and to promote the health, safety and general welfare.

2. Construction of channel modifications, dikes, levees and other protective measures to include filling in.

3. Establishment of flood warning systems.

4. Imposition of operational controls, sureties and deed restrictions enforceable by the City to restrict the type and design of uses. Such restrictions shall include flood proofing of intended uses mandated by the Minnesota State Building Code. Structurally dry flood proofing standards for construction shall be in accordance with the Minnesota State Building Code. (See Zoning Ordinance, Minimum Flood proofing standards for Basement Construction).

30-08-12: FLOOD WARNING SIGNS IN FLOOD-PRONE AREAS: The limits of the areas which have been or would be inundated by the 100-year flood shall be delineated as reasonably practical at three hundred (300) foot intervals by means of firmly placed markers of sufficient size to be easily read from a distance of twenty (20) feet. The markers shall record the maximum known depth of flooding or height to the flood protection level, whichever is greater. All flood warning signs in flood prone areas shall be in accordance with the above requirements or any additional requirements as provided by the use of the 100-year flood profile and other supporting technical date in

the Flood Insurance Study and the Flood Insurance Rate Map. The subdivision markers shall meet the following specifications:

A. The markers shall be on substantial permanent metal posts.

B. The marker(s) shall have notification painted white and shall be stenciled or otherwise lettered with the inscription "100-year flood elevation." This lettering is to be of a permanent nature.

C. The marker be firmly placed in the ground and be at least two (2) feet above the ground.

D. The cost of preparing and installing such markers shall be borne by the applicant and the markers shall be installed prior to the sale of lots and construction of any buildings or structures.

30-08-13: PROPERTY DEDICATION:

A. A portion of any subdivision shall dedicate to the City a reasonable portion of the proposed subdivision for public streets, roads, utility easements, water facilities, storm water drainage and holding areas or ponds and other similar utilities and improvements.

B. As a prerequisite to any subdivision approval, and at the sole determination by the City, developers shall dedicate land for parks, playgrounds, public open spaces or trails and/or shall make a cash contribution to the City's park dedication fund roughly related to the anticipated effect of the subdivision on the park and trail system. The amounts listed in this Section are the City's best estimate of the dedication or cash contribution needed to offset the effect of the subdivision on the park and trail system. The requirement may also be met with a combination of land and/or cash if approved by the City Council.

    1. No park dedication shall be required in the case of an Administrative subdivision where land is being added to an existing parcel for the creation of a larger lot. In the case where an existing lot for which no park dedication fee has been paid, such dedication shall be paid prior to issuance of a building permit on such lot.

    2. The owner or developer may, at the option of the City, pay a cash payment to the City for use in acquisition and development of parks. The payment shall be based upon a formula established by Ordinance of the City Council. The dedication or cash payment shall also be subject to the following:

a. Dedication credit shall not be granted for the construction of recreation facilities unless the facilities and land area are dedicated to and accepted by the City;

b. If a new subdivision is designed to be platted in several additions, all public recreation space, school sites or other public use lands in the total subdivision area, except streets or easements other than those leading directly to the sites, shall be dedicated at the time of platting of the first addition unless otherwise approved by the City Council. Areas to be dedicated shall be brought to a suitable condition by the developer prior to acceptance by the City. All dead trees, trash, debris, junk, unwanted structures or similar undesirable elements shall be removed by the developer at his or her expense.

C. Land shall be reasonably suitable for its intended use and shall be at a location convenient to the people to be served. Factors used in evaluating the adequacy of proposed park and recreation areas shall include size, shape, topography, geology, hydrology, tree cover, access and location, and future park needs pursuant to the Comprehensive Plan. Wetlands, ponding areas, and drainage ways shall not be eligible for park dedication credit. Parkland to be dedicated shall be above the ordinary high water level. Grades exceeding twelve (12) percent or areas unsuitable for park development shall not be considered for dedication. Land with trash, junk, pollutants and/or unwanted structures is not acceptable.

D. The applicant shall confer with City Staff and the Park and Recreation Committee at the time of concept plan and/or prior to the preliminary plat public hearing, to secure a recommendation as to the location of any property that should be dedicated to the public, such as parks, trails, playgrounds or other public property. The preliminary plat shall show the location and dimensions of all areas to be dedicated in this manner. Such contribution requirement recommendation(s) will be sent to the Planning Commission for review and comment and subsequently to the City Council for their consideration.

E. When a proposed park, playground, recreation area, school site, greenway or other public ground has been indicated in the Comprehensive Plan and is located in whole or in part within a proposed plat, it shall be dedicated to the appropriate governmental unit. If the developer elects not to dedicate an area in excess of the land required hereunder for such proposed public site, the City may consider acquiring the excess land through purchase or other means.

F. Where private open space for park and recreation purposes is provided in a proposed subdivision, such areas may be used for credit, at the discretion of the City Council, against the land or cash dedication requirement for park and

recreation purposes, provided the City Council finds it is in the public interest to do so.

G. The City, upon consideration of the particular type of development, may require that a lesser parcel of land should be dedicated due to particular features of the development. In such cases, a cash contribution shall be required above the land dedication to ensure that compensation is received for the full amount of the impact on the City's park and trail system.

H. In all new residential subdivisions, ten (10) percent of the area subdivided shall be dedicated for public recreation space. This ten (10) percent shall be calculated on the net area, which is the gross area of the subdivided property minus the area of wetlands, lakes and rivers below the ordinary high water mark. The land dedicated for public recreation shall be in addition to property dedicated for streets, easements, or other public ways. No areas may be dedicated for public use until such areas have been approved by the City Council as suitable and necessary for the health, safety, convenience and general welfare of the City.

I. When a subdivision is proposed, the developer shall make a dedication of land for public park and trail use, as provided for in Item H, of this Article, or shall pay a fee in lieu of such land dedication as indicated in the following table. Said amount is the City's best estimate of the effect of the subdivision on the City's park system.

(fees amended Oct 21 2003, Ord. 2003-07)

Residential Units	$2610.00 per unit
Commercial / Industrial	$ .00 per acre

J. All land proposed for trail dedication shall be subject to the recommendations of the Park and Recreation Committee and approval of the City Council.

K. The City may elect at its sole discretion to receive a combination of cash, land, and development of the land for park and/or trail use. Combined park land and cash dedications shall be calculated based upon the following:

1. At the time of preliminary plat, a yield plan will be prepared demonstrating the total number of units/lots possible within the development without a park. This figure is then multiplied by the residential per unit park dedication charge (established by City Council Ordinance). The result of this calculation is equal to the total cash value of the park dedication for the residential project. The formula is outlined as follows:

   a. Buildable Acres (less wetlands, right-of-way, water bodies etc.,) x Average Density = Number of Units/Lots.

   b. Number of Units/Lots x Residential Unit Cash Charge = Total Cash Contribution for the Subdivision.

2. Land Value Determination. The value of the land dedication is determined based upon the following formula:

    a. Total Land Dedication Acres x Land Value = Total Land Value

3. To determine the combined land and cash dedication requirement, the following formula should be used:

    a. Total Cash Contribution for Subdivision – Land Value for Park Land = Balance of Cash Contribution.

L. Planned Unit Developments shall make cash and/or land contributions in accordance with this Article based upon the percentage of land devoted to the various uses. Land area dedicated to the City to satisfy park dedication requirements shall be in addition and not in lieu of open space requirements for Planned Unit Developments.

M. Park cash contributions are to be calculated and established based on land value at the time of final plat. Cash dedications shall be included in the development agreement and paid prior to the City's signature of and release of the final plat. For subdivisions that do not require a development agreement, the cash dedication shall be paid before the City releases the signed approval of the final plat for recording.

1. "Fair Market Value" shall be determined as of the time of filing the final plat in accordance with the following:

    a. The City and the developer may agree as to the fair market value, or

    b. The fair market value may be based upon a current appraisal submitted to the City by the developer at the developer's expense. The appraisal shall be made by appraisers who are approved members of the SREA or MAI, or equivalent real estate appraisal societies.

    c. If the City disputes such appraisal the City may, at the developer expense, obtain an appraisal of the property by a qualified real estate appraiser, which appraisal shall be conclusive evidence of the fair market value of the land.

N. Cash contributions for parks and trails shall be deposited in the City's Park Dedication Fund or multi-purpose trail fund and shall only be used for park acquisition or development, and trail acquisition or development as determined by the City.

O. Property being re-platted with the same number of lots and same number of dwelling units shall be exempt from all parkland dedication requirements. If the number of lots or the number of dwelling units is increased, or if land outside of the previously recorded plat is added, then the park land dedication and/or park cash contributions shall be based on the additional units/lots and on the additional land being added to the plat.

P. If the applicant or developer does not believe that the estimates contained in this Article fairly and accurately represent the effect of the subdivision has on the park or trail system of the City, the applicant or developer may request that the City prepare an in-depth study of the effect of the subdivision on the park and trail system and an estimate of that effect in money and/or land. All costs of such study shall be paid by the developer or applicant. If the developer requests the preparation of such a study, no application for the development shall be deemed complete until the study has been completed and a determination is made as to the appropriate amount of land or money necessary to offset the effects of the subdivision.

30-08-14: TREE PRESERVATION AND REPLACEMENT

A. Tree Preservation. The following process for preserving significant trees shall be required for all new development. Developers and landowners are encouraged to preserve all healthy trees of significant value even if the trees are less than six (6) inches in diameter.

1. Required Actions. Applicants shall:

a. Incorporate the preservation of trees into the overall design of the plat.

b. Prepare a tree preservation plan superimposed on the grading plan, as described below.

c. Ensure the tree preservation plan is followed during the plan development (mass grading).

d. Provide a financial guarantee as part of the development agreement to guarantee the preparation and implementation of the preservation plan and the replacement of all significant trees that were to be saved but were actually destroyed or damaged. The financial security in an amount determined by the City Council and adopted by ordinance shall be provided for:

(1) Each mass graded lot with at least one (1) significant tree to be saved, and

(2) Each custom graded lot with at least one (1) significant tree on the lot, and

(3) Each outlot with at least one (1) significant tree.

e. Install snow fencing or polyethylene laminar safety netting at the drip line or critical root zones of trees to be saved.

f. Install signage at all tree protection areas that instructs workers to stay out.

g. Install erosion control measures.

h. Keep tree protection measures in place and in good condition until all grading and construction activity is terminated.

i. Prevent change in soil chemistry due to concrete wash out and leakage or spillage of toxic materials such as fuels or paints.

2. Prohibited Actions.

a. No soil disturbance shall occur within the subdivision until the tree preservation plan is approved, financial securities have been submitted and development agreement approved, and tree protection measures are in place on site.

b. Construction staging areas and areas for the storage of equipment and stockpiling of materials shall not be within tree protection areas.

c. Fill shall not be placed against tree trunks, under the drip line, or in critical root zones of trees to be saved.

d. Pruning of oak trees shall not take place from April 1st through July 15th. If wounding of oak trees occurs, a non-toxic tree wound dressing must be applied immediately. Excavators shall have a non-toxic tree wound dressing with them on the development site.

3. During preliminary plat review, the tree preservation plan will be reviewed according to the best available layout to preserve significant trees and the efforts of the developer to mitigate damage to significant trees. If two (2) or more trees are preserved on each lot (preferably the front yard), the

landscape plan requirements of two (2) two and one half (2 ½) inch caliper trees is waived.

4. A tree preservation plan shall be submitted and shall consist of the following items:

   a. Tree inventory, prepared by a licensed land surveyor and a forester or landscape architect, that includes the size, species, tag numbers, and locations of all significant trees, specimen trees, and significant tree stands on the entire property included in the preliminary plat.

   b. Mass graded areas and proposed grades. Changes in grades should be well planned with the objective of preserving significant trees.

   c. Custom graded lots.

   d. All significant trees proposed to be saved and significant trees proposed to be removed in soil disturbance areas

   e. The plan shall designate tree save zones for:

      (1) areas not in soil disturbance areas, and

      (2) all specimen trees to be saved, and

      (3) all significant tree stands to be saved.

   f. Measures proposed to protect significant trees including, but not limited to:

      (1) Tree removal procedures including directional felling away from existing trees to be saved and trenching to separate root systems prior to bulldozing trees or stumps.

      (2) Installation of signage at all tree protection areas that instructs workers to stay out.

      (3) Installation of snow fencing or polyethylene laminar safety netting at the drip line or critical root zones of trees to be saved.

      (4) Installation of erosion control measures.

(5) Designation of a construction staging area along with a designated area for the storage of equipment and stockpiling of materials that is not within tree save zones.

(6) Construction access locations.

(7) Overlay of the subdivision utility plan on the tree preservation plan to strategically lay out utility locations and trenches in a manner that protects trees to be saved. Individual utility stubs to home sites shall be reviewed for compliance with tree preservation plans.

5. After mass grading has been completed and streets and utilities installed, the developer's forester or landscape architect shall:

   a. Certify in writing to the City the status of all trees indicated as trees to be saved in the approved plan.

   b. Certify in writing to the City whether tree protection measures were installed.

   c. Certify the status of any remove-designated trees that were saved.

6. If a significant tree indicated to be saved on the tree preservation plan is destroyed or damaged, it shall be replaced in accordance with the tree replacement requirements of Section B (Tree Replacement).

7. The financial security will be released upon:

   a. Certification in writing by the forester or landscape architect indicating that the tree protection measures were installed on mass graded lots and tree replacement is completed, if necessary. These must be confirmed by the City.

   b. The homebuilders having posted a security for the custom graded lots.

8. Tree preservation measures shall require written approval from the City Engineer prior to removal and shall not be removed from the site until the City Engineer has approved the grading as-built plans for a mass graded site nor prior to the release of financial securities held by the City.

9. Home Builders:

   a. The City will require an individual lot tree preservation plan prepared and incorporated on the required site survey for each

custom graded lot with at least one (1) significant tree. The plan shall be consistent with the original tree preservation plan for the plat. The homeowner, builder and the forest or landscape architect shall meet prior to the development of the individual lot tree preservation plan to determine the placement of the home where the fewest significant trees would be destroyed or damaged. The builder will be responsible for ensuring the tree preservation plan is followed during building construction. On mass graded lots with at least one (1) significant tree to be saved, builders are required to follow the tree preservation plan for the plat.

b. The individual lot tree preservation plan must be certified by a forester or landscape architect and signed by the homeowner. The forester or landscape architect will indicate on the plan the following:

(1) Size, species, and location of all significant trees proposed to be saved and significant trees proposed to be removed.

(2) Identification of all significant trees proposed to be saved and significant trees proposed to be removed.

(3) Measures proposed to protect significant trees shall include but are not limited to:

(a) Installation of snow fencing or polyethylene laminar safety netting placed at the drip line.

(b) Placing fill against the trunk of the tree, on the root crown, and under the drip line for the tree shall be prohibited.

(c) Installation of erosion control methods.

(d) Prevention of changes in soil chemistry due to concrete wash out and leakage or spillage of toxic materials such as fuels or paints.

(e) Pruning of oak trees must not take place from April 15 through July 1. If wounding of oak trees occurs, a non-toxic tree wound dressing must be applied immediately. Excavators must have a non-toxic tree wound dressing with them on the development site.

c. Home builders will be required to furnish the following items for tree preservation at the time the building permit application is submitted for all lots with at least one (1) significant tree.

(1) Security of one thousand ($1,000.00) dollars per lot per tree protection requirements.

(2) Certification from a forester or landscape architect indicating tree protection measures are installed.

(3) Builders are liable for subcontractors that destroy or damage significant trees that were indicated to be saved on the individual lot tree preservation plan.

(4) Building inspectors will monitor the tree protection measures at the time of routine inspections.

(5) Prior to the issuance of a certificate of occupancy and release of tree preservation security, the forester or landscape architect shall certify to the City in writing that all the tree protection measures identified on the tree preservation plan were installed from the start of construction to the end of construction and tree replacement is completed, as necessary.

B. Tree Replacement.

1. Developers and/or home builders shall be required to replace significant trees which were indicated on the tree preservation plan to be saved but ultimately were destroyed or damaged. Each significant tree destroyed or damaged shall be replaced with two (2) replacement trees.

2. Replacement trees shall consist of nursery stock and be no less than the following sizes:

a. Deciduous Trees: No less than two (2) inches in caliper.

b. Coniferous Trees: No less than six (6) feet tall.

3. Replacement trees shall be species similar to the trees which were destroyed or damaged and can include those species specified in Zoning Ordinance Article 20-32-00 (Landscape, Screening and Tree Preservation). A minimum of twenty-five (25) percent of the replacement trees must be conifers. Within all residential and commercial zoning districts, a minimum of ten (10) percent of replacement trees shall be three (3) caliper inches or larger to provide a more natural mix of sizes.

4. Unacceptable Trees: The following trees are unacceptable because of structural instability, susceptibility to disease, or because they are invasive species.

   a.

Deciduous:	**Coniferous:**
Norway Maple	Colorado spruce
Silver Maple	
Amur Maple	
Siberian Elm	
Cottonwood	

5. Replacement trees shall not be placed on easements or street rights-of-way. Prior to planting replacement trees, the developer or homebuilder shall submit for City review and approval the locations of the replacement trees. If the sufficient area for replacement plantings does not exist on-site, the replacement plantings may occur on public lands, or an equivalent cash payment for off-site plantings as approved by the City Council.

30-08-15: SLOPE PRESERVATION:

A. Slopes in excess of twelve (12) percent shall not be developed except as approved by the City Council and only when plans demonstrate that special erosion control, vegetation, restoration and appropriate building design will assure satisfactory results.

30-08-16: ENERGY CONSERVATION:

A. Street and lot orientation and proposed grading shall provide for solar access as appropriate and reasonable as determined by the Council.

B. Grading of lots shall not preclude earth-sheltered structures where feasible.