

## **Hill County Subdivision Process**

1. Owner or applicant submits a Preliminary Plat and, if interior roadways and/or drainage improvements are associated with the development, engineering plans hereinafter *Submittal Package* along with all required fees, application forms, and associated information, to the County Commissioners Court for review at least 30 days prior to the next scheduled commissioners court session. Plats and plans will be prepared in conformance to the Hill County Subdivision Ordinance.
2. By special permission of the Commissioners Court, an Owner, whose lot or parcel has not been platted, may secure a development permit under the procedures stated in Section VI, Subsections 19 and 20.
3. The Development Support Team reviews and identifies any deficiencies, and makes recommendations to Commissioners Court for approval of the plat and plans, after all corrections are addressed and required information is submitted.
4. Upon Commissioners Court approval of the submitted documents, the applicant is authorized to begin construction of perimeter and interior improvements. Twelve months after approval of documents, the approval will expire if Owner or Applicant fails to proceed with platting or development process.
5. County and/or its designee shall make periodic construction visits to visually observe and verify that development is progressing in accordance to the submittal package. The Owner or Developer upon substantial completion shall notify County to request substantial completion verification. Preliminary acceptance of the improvements is issued after a satisfactory verification is complete. The Owner or Applicant maintenance period begins at the beginning of the following week.
6. Applicant submits a Final Plat to the Development Support Team for review after substantial completion verification and approval.
7. Development Support Team reviews the Final Plat, identifies any deficiencies and after all corrections are addressed, makes recommendations to the Commissioners Court for approval of the Final Plat.
8. Final Plat is submitted directly to the formal agenda for Commissioners Court action.
9. The Plat is recorded by the Owner or Applicant and copies are distributed after approved by Commissioner's Court.

10. Applicant begins lot sales, unless the Owner is approved to proceed under Section VI, Subsections 19 and 20 of these Rules and Regulations.
11. Prior to actual structure construction lot owner submits application with all information required under Regulations for Floodplain Management for a development permit for each structure to be built.
12. If the proposed structure complies with Hill County Regulations for Flood Plain Management, the applicant is issued a development permit.
13. After construction/establishment of the finished floor is completed, (if in a FEMA Flood Zone A) and prior to the construction of the finished structure and/or the construction of a private sewage facility applicant must submit a post-construction finished floor elevation certification. This Certification must be made by a Texas Registered Professional Surveyor, Engineer or Architect and must confirm that the finished floor of the actual construction is at or above elevation established in the Elevation Certificate.
14. Lot owner submits application for a permit to construct a private sewage facility with all the information required in the Rules and Regulations covering private sewage facilities. Applicants will also be required to submit a copy of the development permit application, the development permit, plat map, floodplain map, elevation certificate, and post-construction finished floor certification.
15. The permit, including specifications for construction will be issued to the lot owner.
16. Lot owner requests a County inspection of the sewage facilities after construction.
17. An inspection sheet and license to operate is issued to the owner after construction of the sewage facility is satisfactory to the county inspector.



# Hill County

## Development Process

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# SECTION I - INTRODUCTION

## 1. LEGAL AUTHORITY:

These regulations have been adopted to provide minimum standards by which land may be subdivided and developed for the benefit of the citizens of Hill County. Authority for these regulations is given in V.T.C.A. Local Government code Chapter 232. The subdivision process outlined in this document applies to those that meet the following requirements:

- a. The owner of a tract of land located outside the limits of a Municipality must have a plat of the subdivision prepared if the owner divides the tract into two or more parts to lay out: A division of a tract including a division regardless of whether it is made by using metes and bounds description in deed of conveyance or in a contract for a deed, by using a contract of sales or convey, or by using any other method. V.T.C.A. local government Code § 232.001.
  - 1) A subdivision of the tract, including an addition;
  - 2) lots;  
Or
  - 3) streets, alleys, squares, parks, or other parts of the tract intended to be dedicated to the public use or for the use of purchasers or owners of lots fronting on or adjacent to the streets, alleys, squares, parks, or other parts.

## 2. DEVELOPMENT SUPPORT TEAM:

In order to foster a greater understanding of the regulations set forth herein, a Development Support Team shall be established to schedule meetings with Owners, Applicants, Developers or other interested persons. The Team shall be composed of representatives as appointed by County Judge. The County Judge or his designee shall act as the presiding officer at all meetings of the Team. Any other County official or employee who may be requested to participate by the County Judge shall be an Ex-official member.

## SECTION II - DEFINITIONS

1. APPLICANT: A natural person or other legal entity who is authorized in writing to present matters to the County Commissioners Court, or Development Support Team regarding any plat, plan or study submitted pursuant to these Rules and Regulations.
2. ARCHITECT: A person duly registered, licensed and authorized under the provisions of the Texas Regulation of Practice of Architecture Act to practice the profession of architecture.
3. BENCH MARKS: A surveyor's mark made on a stationary object of a previous determined position and elevation.
4. BUSINESS DAY: A day other than Saturday, Sunday, or a holiday recognized by this state.
5. ENGINEERING DEPARTMENT: The designated County Consultant.
6. COMMISSIONERS COURT: Commissioners Court of Hill County, Texas.
7. COUNTY or HILL COUNTY: Hill County, Texas a political subdivision of the State of Texas.
8. COUNTY JUDGE: County Judge of Hill County, or in his/her absence, his/her authorized designee.
9. COUNTY ROAD (STREET): A public road or street which has been accepted by the County, through prescription, dedication or statutory means for maintenance purposes, or is a road or street that was constructed and maintained by the County. The term "road" and "street" are used interchangeably for the purpose of these regulations.
10. DEVELOPMENT SUPPORT TEAM: Team members as appointed by County Judge to schedule meetings with Owners, Applicants, Developers or other interested persons. Any other County official or employee who may be requested to participate by the County Judge shall be designated ex officio members.
11. EASEMENT: A grant by the property owner to the public, a corporation or persons, for the use of land for specific purposes.

12. ENGINEER: A person duly licensed and authorized under the provisions of the Texas Engineering Practice Act to practice the profession of engineering.
13. EXTRA TERRITORIAL JURISDICTION (ETJ): That area outside a City's limits so designated to fall in the City's "sphere of influence".
14. FINAL PLAT: A map of a land subdivision or re-subdivision prepared in a form suitable for filing or recording with the necessary affidavits, dedications and acceptances and with complete bearings and dimensions of all lines defining lots and blocks, streets, public areas and dimensions of all lines and other dimensions of land and subdivision requirements of Hill County, Texas.
15. FLOODWAY: The channel of a stream, plus any adjacent floodplain areas, within which no obstruction to flow would be allowed so that 100 year flood may pass without cumulatively increasing the 100 year flood elevation more than one (1) foot, provided that hazardous velocities are not produced. The floodway limits are to be defined based on standard engineering practices or as determined by the Development Support Team , the Federal Emergency Management Agency and the Federal Insurance Administration.
16. GEOMETRIC DESIGN STANDARDS: Minimum allowable engineering geometry standards adopted by Hill County affecting the functional traffic level operations, service and safety of highway, roads and streets in Hill County.
17. INFRASTRUCTURE DEVELOPMENT PLAN: A set of plans, drawings, sketches, or blueprints which describe, show, locate and define the improvements to be constructed which will provide for adequate drainage, culverts, any Special Flood Hazard Area (SFHA), public or community water supply, water supply lines, sanitary sewer lines facilities, roads, streets, alleys, parks and any other significant improvements.
18. LOT LINES: The property lines of any given tract or parcel of land which circumscribe the area divided by any plat of record in the plat records of Hill County, Texas or in the absence of such a plat, the lot lines shall mean those property lines circumscribing the lot independently isolated on the official plat on the file in the Hill County records.
19. MANUFACTURED HOME RENTAL COMMUNITY (MHRC): A plot or tract of land that is separated into two or more spaces or lots that are rented, leased, or offered for rent or lease. For a term of less than 60 months without a purchase option, for the installation of manufactured homes for use and occupancy as residences.
20. MINOR PLAT: A map of a land subdivision prepared in a form suitable for recording or filing with complete metes and bounds descriptions of all lines

defining the lot(s) and other dimensions of land and subdivision requirements of Hill County, Texas.

21. ORIGINAL TRACT: An area of land including all contiguous and adjacent tracts, title to which is held under common ownership.
22. OWNER: The person, corporation, partnership or other legal entity holding fee simple title to the tract of land or property subject to regulation under these Subdivision Rules & Regulations.
23. PRELIMINARY PLAT: A map of a proposed land tract showing the character and proposed layout of the tract in sufficient detail to indicate the suitability of the proposed subdivision of land.
24. PRESCRIPTIVE EASEMENT: Any area, parcel or strip of land which provides vehicular access to adjacent property or land whether designated as a street, highway, freeway, thoroughfare, avenue, lane, boulevard, road, place, drive or however otherwise designated which has been used by the general public over a ten year period. This area is typically defined as that portion lying between fence lines including all roadways, shoulders, and drainage ditches. In the absence of fences, this area will be that portion lying between five feet outside of ditches on each side.
25. PRIVATE SEWAGE FACILITY: All systems and methods used for the disposal of sewage, other than organized disposal systems operated under a valid permit issued by the Texas Commission On Environmental Quality and /or Texas Department of Health.
26. PUBLIC STREET/ROADWAY: Any area, parcel or strip of land which provides vehicular access to adjacent property or land whether designated as a street, highway, freeway, and which is either dedicated or granted for purpose or acquired for public use by prescription.
27. RESUBDIVISION / REPLAT: The alteration of an existing subdivision, including but not limited to any changes of lot size therein, or the relocation of any street lines or lots.
28. SPECIAL FLOOD HAZARD AREA (SFHA): The land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year according to the FEMA Flood Insurance Rate Map (FIRM).
29. SUBDIVIDER OR DEVELOPER: Any person, partnership, firm association corporation (combination thereof), or any officer, agent employee, servant or trustee thereof, who performs or participates in the performing of any act toward subdivision of the land within the intent, scope and purview of these regulations.



30. SUBDIVISION: The division of any tract or parcel of land into two or more parts for the purpose of laying a subdivision of the tract, including an addition, or for laying out suburban lots or building or lots and streets, alleys, squares, parks, or other portions intended for public use or the use of purchasers or owner of lots fronting thereon or adjacent thereto.
31. SUBSTANDARD COUNTY ROAD OR STREET: A County maintained road or street which was not constructed according to the specifications set forth in these Rules and Regulations or is determined to be substandard by the Development Support Team .
32. SURVEY: For the purposes of Section VII, plans, drawings, sketches, or blueprints which identify and /or locate the boundaries of the subdivision, location of lots or spaces, utilities easements, dedications of right of ways and any other significant features of the community.
33. SURVEYOR: A person duly licensed and authorized under the provisions of the Texas Surveyors Registration Act to practice the profession of surveying.
34. TCEQ: Texas Commission On Environmental Quality
35. TxDOT: Texas Department of Transportation

# SECTION III - SUBDIVISIONS EXCLUDED FROM PLATTING

1. **EXCLUDED SUBDIVISION**: Owners of a tract of land who subdivided the tract under the following circumstances, shall not be required to comply with these Rules and Regulations.
  - a. **Agriculture Exclusion**: The land is to be used primarily for agriculture use, as defined by, Art. VIII, Section 1d, Texas Constitution, or for farm, ranch, wildlife management, or timber production use within the meaning of Section 1-d-1, Art. VIII, Texas constitution; and the Owner does not lay out any part of the tract for the purposes set forth in § 232.001(a) (3), Local Government Code. If a tract of land ceases to be used primarily for agriculture use or farm, ranch, wildlife management, or timber production use, the Owner will be required to comply with these Rules and Regulations.
  - b. **Family Exclusion**: The land is to be divided into four or fewer lots or tracts; the Owner does not plat any part of the tract for the purposes set forth in § 232.001(a) (3); and each of the lots or tracts are sold, conveyed, gifted, or otherwise transferred to a person who is related to the Owner within the third degree of consanguinity or affinity.
  - c. **Large Lots Exclusion**: The land is subdivided into lots which are ten acres or more in size and the Owner does not plat any part for the purposes set forth in § 232.001 (a) (3).
  - d. **Sale to Veterans' Land Board Program**: All lots are sold to veterans through the Veterans' Land Board Program and the Owner does not plat any part of the tract for the purposes set forth in § 232.001 (a) (3).
  - e. **Government Exclusion**: The Owner of the land is the State of Texas, an agency, board or commission of the State of Texas or a permanent school fund or any other dedicated fund of the State and the Owner does not plat any part of the tract for the purposes set forth in § 232.001 (a) (3).
  - f. **Common Ownership Exclusion**: All parts of the tract are transferred to persons who own an undivided portion in the original tract; the requirements of these Rules and Regulations are met before any further

development of any part of the tract; and Owner does not plat any part of the tract for the purposes set forth in § 232.001 (a) (3).

- g. City/Floodplain Exclusion: The Owner is a political subdivision of the State of Texas; the land is situated in a floodplain; and the lots or tracts are sold to adjoining landowners.

2. **OWNER REQUIREMENTS**: An Owner who claims to be entitled to any exclusion to platting set forth in **EXCLUDED SUBDIVISION** of this Section must provide the following prior to the issuance of any development permits by the County:

- a. Agriculture Exclusion: The Development Support Team shall be provided an affidavit, in a form provided by the Development Support Team in which the Owner and any person to whom the Owner is to transfer an ownership interest, affirming the use of the tract of land as defined by section 1-d. Art. VIII., Texas Constitution or within the meaning of section 1-a-1, Art. VIII, Texas Constitution
- b. Family Exclusion: The Development Support Team shall be provided an affidavit in the form provided by the County or certified copies of birth certificates, marriage licenses or other governmental or family records which establish relationship between the Owner and the persons to whom an Ownership interest shall transfer.
- c. Large Lots Exclusion: The Development Support Team shall be provided a survey or deed describing the lot transferred.
- d. Sale to Veterans Through Veterans' Land Board Program: The Development Support Team shall be provided a statement from an official of the Texas Veterans' Land Board that the lots have been sold through a Veterans' Land Board Program and the persons to whom the lots were sold are veterans, an affidavit by the Owner to the effect or other reliable documentation which establishes the exclusion.
- e. Governmental Exclusion: The Development Support Team shall be provided certified copies of the deeds and certified copies of the minutes of the meeting at which the agency, board, commission or fund authorized the transfer of the lot.
- f. Common Ownership Exclusion: The Owner shall provide a certified copy to the deed by which the common Owner acquired their common ownership interests.

- g. City/Floodplain Exclusion: The Development Support Team shall be provided certified copies of the ordinance, resolution or minutes of the meeting establishing the approval of the transfer by the City.

## SECTION IV - PRELIMINARY PLAT

1. **PRELIMINARY PLATS AND PLANS REQUIRED**: Preliminary Plats shall be required for all subdivisions or re-subdivisions, except those submitted as Minor Plats, if the development involves interior roads and/or drainage improvements associated with the development. Engineering plans will be required for all improvements at time of Preliminary Plat submittal. See Section VIII, Engineering Plans and details. When the Development Support Team determines that no improvements are to be constructed and no engineering plans are required, the Owner or Applicant may proceed to submit a Final Plat. The developer shall prepare a Preliminary Plat and submit two (2) prints of a Preliminary Plat along with all forms of a proposed subdivision to the Development Support Team for presentation to the Team members. Any revisions or changes required by the Development Support Team of the Preliminary Plat may delay submittal to commissioner's court. The Preliminary Plat shall show or be accompanied by the following information:
2. **SUBDIVISION NAME**: The proposed name of the subdivision, which shall not conflict with the name of any other subdivision in the County, and the names of adjacent subdivisions.
3. **OWNER IDENTIFICATION**: The names, addresses and telephone numbers of the Owner and/or Owners of the proposed subdivision and the names, addresses and telephone numbers of the Engineer, Architect or Surveyor, responsible for the preparation of the plat or engineering plans. If the Owner is a corporation, partnership or joint venture, the name and address of the corporate officers, partners or joint ventures shall be provided.
4. **BOUNDARY LINES**: The location of boundary lines and their relation to a corner of the original survey, a corner of a platted subdivision, or other known and locally recognized reference point, together with a vicinity map. The Point of Beginning (POB) and all property boundary lines shall be shown in state plane coordinates (NAD 83).
5. **LOTS AND STREETS LAYOUT**: The location and width of existing and proposed streets, roads, lots (accurate dimensions and acreage) and alleys, building lines, easements, parks, school sites, and any other feature relating to the proposed subdivision shall be shown. The plat shall show the outline of adjacent properties for a distance of at least two hundred (200) feet and how the streets, alleys, or highways in the proposed subdivisions may connect with adjacent land or with adjacent subdivision which are of record. No streets or roads will be accepted by the County for maintenance that do not connect or intersect an existing county road or state highway.

- a. The acreage of the proposed subdivision shall be indicated on the plat. All lots shall be one acre minimum net, the combined width of all easements or rights of way for streets shall have a minimum width of sixty (60) feet. The road shall be centered within the 60 feet width defined above. Lot numbers and block designations shall be shown on the Preliminary Plat. Proposed street names shall be clearly printed on the Preliminary Plat. Such names shall not conflict with existing county roads or streets.
6. **DRAINAGE AND TOPOGRAPHY**: The Preliminary Plat must show the preliminary drainage plan, the physical features of the property including water courses, the 100 year floodplain boundaries, and structures, benchmarks, and other features of importance of lot and street layout, prepared by a Texas Licensed Professional Engineer or Surveyor. Topography of the tract shall be shown on the Preliminary Plat by means of contours of two (2) foot intervals tied to United States Geological Survey (USGS) datum.
- a. Where drainage within the subdivision forms a part of or is within a SFHA or where drainage must be conveyed on private and not within a dedicated public right-of-way, provisions shall be made for drainage easement(s) to allow for proper control of drainage and, if specifically approved by the Commissioners Court, for maintenance by the County within the easement area. See Section VI, Subsection 13. No drainage will be allowed to be conveyed to property downstream that increases or decreases flow quantities.
7. **DRAWING REQUIREMENTS**: The north arrows shall be shown with scale (in figures and with a bar) and date. The Preliminary Plat shall be drawn to a scale not exceeding one (1) inch equals two hundred (100) feet. Preliminary Plats shall be presented on standard size sheets of 24"x 36". If the proposed subdivision is too large to be accommodated by a single standard size sheet, two or more sheets may be used, with match lines clearly shown.
8. **UTILITY SERVICE**: The owner must submit copies of letters and/or plans, signed by each utility company, along with the Preliminary Plat, stating their plans for providing utility service within the proposed subdivision, i.e., electric, telephone, water and sewer service. The owner may, in the alternative, submit copies of the letters sent to the utility companies stating that copies of the Preliminary Plat were provided to the Utility Company requesting the utility company review and respond within thirty (30) days with any objections the company may have. The owner shall provide proof that the letter was delivered by Certified U.S. Mail return receipt requested. Failure of the utility company to timely respond shall be deemed acceptance of the easements and service plans set forth in the plat. A form of such utility letter is shown as an attachment to these Rules and Regulations.

Utility easements of not less than fifteen (15) feet shall be provided as needed. The intended use of the easement shall be clearly indicated, i.e., municipal sewer service, privately owned sewage disposal system, individual septic tanks, etc.

9. **DEVELOPMENT IN SFHA**: The Owner or Developer of a tract of land that contains SFHA shall comply with all applicable provisions of Hill County Flood Damage Prevention Ordinance.
10. **SUBDIVISION WITHIN EXTRATERRITORIAL JURISDICTION (ETJ)**: If the location of the subdivision is within the ETJ of any city or town within Hill County, Texas, review of the Preliminary Plat shall be conducted concurrently with said city or town. Approval by that governing body shall precede but not preclude the necessity of conforming to all rules and regulations of Hill County. The more stringent regulations of two governing bodies shall apply. If the city or town, in whose ETJ the subdivision lies, does not require the filing of a plat, a written certification to said fact executed by the authority responsible for approving plats in said city or town, shall be attached to the plat when submitted to the Development Support Team.
11. **APPROVAL BY HILL COUNTY COMMISSIONERS COURT**: After examination of the Preliminary Plat and engineering plans (if required), the Development Support Team shall make a recommendation to Court to approve or disapprove the Preliminary Plat and engineering plans. If the Preliminary Plat and engineering plans are disapproved they will be returned to the Owner with the reason(s) for the disapproval. If the plat and plans are approved by the Commissioners Court, the Owner shall be authorized to begin construction on the project following a Pre-construction meeting with the designated County official. .
12. The Preliminary Plat and engineering plans shall be approved by the Commissioners Court prior to submittal of the Final Plat and prior to any construction activities. Interior/perimeter roadway and damage improvements must be completed, inspected and approved by the County prior to submittal of the Final Plat. No lots shall be sold prior to Final Plat approval.
13. Any field modifications due to construction activities that modify the information provided with the drainage study or engineering plans shall be brought to the attention of the Development Support Team, in writing within a reasonable time after completion of the field modifications.
14. **EXPIRATION OF PRELIMINARY PLAT APPROVAL**: The approval of a Preliminary Plat shall continue for twelve (12) months following the date of approval by the Commissioners Court and will expire after that time if Owner or Applicants have taken no action to proceed with the platting and development

process. If Preliminary Plat approval expires, Owner or Applicant will be required to resubmit the Preliminary Plat and pay all applicable fees.

15. **PLAN/PLAT FEES:** Each applicant shall pay a fee according to the Fee Schedule which is attached to these Rules and Regulations and which may be amended, adjusted or changed by the Commissioners Court from time to time.



## SECTION V - MINOR PLAT

1. **MINOR PLATS ALLOWED**: No Preliminary or Final Plat shall be required where the provisions of this section apply. A Minor Plat will be allowed for any subdivision in which only one lot (1) is being platted (One Lot Minor Plat) or in which no road or drainage improvements are required and each lot contains ten (10) acres or more. The signature of the owner is required on all Minor Plats. An owner and the owner's successors in title shall not be allowed more than three (3) Minor Plats in any original tract. The total of all three (3) Minor Plats shall not exceed twenty-five percent (25%) of the total area of the original tract. Minor plats shall not be accepted for a subdivision in which any portion of the platted lots are located within a SFHA.

The provisions of this section shall not apply to any subdivision in which a portion of the original tract is to be dedicated to public streets or roads and the development involves the construction of public improvements, including roads and/or drainage improvements.

2. **MINOR PLAT REQUIREMENTS**: All of the requirements of Section VI Final Plat shall apply to all Minor Plats.
3. **OWNERSHIP IDENTIFICATION**: The names, addresses and telephone numbers of the Owner and /or Owners of the proposed subdivision and the name address and telephone number of the Engineer or Surveyor responsible for the preparation of the Minor Plat. If the owner is a corporation, partnership or joint venture, the name and address of the corporate officers, partners or joint ventures shall be provided.
4. **BOUNDARY LINES**: The location of boundary lines and their relation to a corner of the original survey, a corner of a platted subdivision, or other known and locally recognized reference points or monuments, described by metes and bounds, shall be included in the plat, together with a vicinity map. The Point of Beginning (POB) shall be shown in state plane coordinates (NAD 83).
5. **LOT STREETS LAYOUT**: The location and width of existing streets, roads, lots (accurate dimensions and acreage), the original tract (accurate dimensions and acreage), alleys, building lines, easements, and other features relating to the proposed subdivision shall be shown. The Minor Plat shall show the outline of adjacent of properties for a distance of at least two hundred (200) feet. A lot number shall be shown on the Minor Plat.

6. **PLAT FEES AND MISCELLANEOUS:** See Section IV; Subsection 14 of these Rules and Regulations.
  
7. **APPROVAL BY COMMISSIONERS COURT:** A Minor Plat shall be submitted by the Development Support Team to the Commissioners Court within fourteen (14) business days of its submission to the Team. If the Owner or Applicant has failed to provide additional information or make corrections requested in writing by the Development Support Team, submission to the Commissioners Court shall be held until the information or corrections are received and approved by the Development Support Team. Submission to the Commissioners Court shall be made within ten (10) business days after the review of a Minor Plat, and/or corrections are received by the Development Support Team. After review of a Minor Plat, the Commissioners Court shall approve or disapprove the Minor Plat. If the Minor Plat is approved, the Minor Plat is recorded; the owner may sell the lot. The Commissioners Court shall advise the owners in writing of the reasons for the disapproval of a Minor Plat. A space shall be provided in the lower right hand corner on a Minor Plat for the approval by the County Judge.
  
8. **RECORDATION:** After final approval and prior to any sale of the lots, a Minor Plat will be recorded by the owner pursuant to the provisions of Section VI, Final Plats, Subsection 15.
  
9. **ZONING REQUIREMENTS:** All subdivisions lying within the jurisdiction or ETJ of any City or Municipality, shall comply with the land use restrictions, setbacks and all other regulations set forth by the respective governing body. Final Plats shall contain a note that use of lots in the subdivision is regulated by said City and specific Ordinance.
  
10. **STATUS OF AD-VALOREM TAXES:** Each Owner or Applicant will provide a tax certificate for the subdivision as furnished through the Hill County Tax Assessor-Collector office demonstrating there are no delinquent taxes owed and that taxes imposed for the current year have been paid.

# SECTION VI - FINAL PLAT

1. **PLAT AND PLANS REQUIRED**: After the Preliminary Plat (and engineering plans if appropriate) has been approved by the Commissioners Court, and after preliminary acceptance of the construction of perimeter and interior improvements, or after a Final Plat has been approved and a re-subdivision is proposed, two copies of a Final Plat for review, without signatures, shall be prepared and submitted to the Development Support Team. Upon approval by the Development Support Team, a Final Plat for recording shall be submitted and shall consist of one (1) 24" x 36" blackline with original seals and signatures. The Final Plat shall show or be accompanied by the following information.
2. **DRAWING REQUIREMENTS**: The North arrow shall be shown with scale (in figures and with a bar) and date. The Final Plat shall be drawn on 24"x 36" sheets to a scale of 1"=100' but not exceeding one (1) inch equals two hundred (200) feet. The drawing shall contain a 2" x 3" block in the lower right hand corner for recording information.
3. **SUBDIVISION NAME**: The name of the subdivision, scale, date and North arrow; name of streets, and lot, block and section numbers within the subdivision shall be shown. Adjacent subdivisions shall also be shown and identified.
4. **OWNER IDENTIFICATION**: The names, addresses, and telephone numbers of the owner or owners of the proposed subdivision and the name, address and telephone number of the Surveyor responsible for the preparation of the Final Plat shall be shown. If the Owner is a corporation, partnership or joint venture, the name and address of the corporation officers, partners or joint ventures shall be provided.
5. **BOUNDARY LINES**: The perimeter boundary of the subdivision shall be shown with bearings and distances, references to a corner of the original survey, and shall be described by metes and bounds. The area of each lot and the total project area must be shown in each survey. A vicinity map must be shown. The Point of Beginning (POB) shall be shown in state plane coordinates (NAD 83).
6. **UTILITIES SERVICE**: See Section IV, Subsection 8.
7. **LOTS, STREETS, EASEMENTS, AND SET BACK LINE LAYOUT AND DRAINAGE**: Location of lots, streets, roads, public highways, utility easements, parks, benchmarks, 100-year floodplain boundaries and other pertinent features, shall be shown with accurate dimensions in feet and decimals of feet and bearing, with length, radii and central angle of all curves, and with all other

information necessary to duplicate the plat on the ground. The location of drainage easements, and other public right-of-way or future right-of-way shall be shown. The names and locations of all streets and roads, as approved in the Preliminary Plat, shall be clearly shown. All lots shall be 1 acre minimum net of all right-of-way and SFHA. Lot numbers and block designation shall be shown on the Final Plat. A minimum of thirty (30) foot setback line shall be provided for each lot which shall have a minimum sixty (60) foot frontage.

8. **CERTIFICATION AND DEDICATION BY OWNER**: Certification by the Owner of his dedication of all streets, highways, alleys, utility and drainage easements, parks, if any, any other land dedicated for public use forever, signed and acknowledged before a notary public by said Owner shall be placed on the face of the Final Plat.
9. **CERTIFICATION BY a REGISTERED PROFESSIONAL LAND SURVEYOR**: Certifications to the effect that the plat correctly represents a survey made by him, and that all the lot corner markers and boundary markers are correctly placed as shown thereon and all markers shall be shown on the face of the Final Plat. Markers shall be at least one half (1/2) inch iron rods at least eighteen (18) inches in length, with caps, firmly placed in the ground on the corners of each lot so as to be permanent. The dimensions, bearing, acreage and other technical information needed for platting each lot shall be shown on the subdivision plat. A Final Plat shall not be approved until all pins and benchmarks are placed and placement of same is certified by the Surveyor.
10. **CERTIFICATION AND APPROVAL BY CITY**: Certification of approval signed by the appropriate representatives of any city having extraterritorial jurisdiction over the area in which the subdivision is located shall be placed on the face of the Final Plat. All cities required information, i.e. plans and specifications, that was necessary for the city's approval, shall also be submitted to Hill County along with the Final Plat.
11. **RESTRICTIONS OF SUBDIVISION**: A copy of the restrictions, if any, within the subdivision shall accompany the Final Plat, shall be properly signed and notarized, and filed for record in the office of the County Clerk.
12. **ZONING REQUIREMENTS**: Not Applicable.
13. **DEVELOPMENT IN SFHA**: The owner or developer of a tract of land that contains SFHA must comply with all provisions of the Hill County Regulations for Floodplain Management and supply sufficient hydrological/hydraulic data suitable to determine floodplain and floodway limits and to determine base flood elevations. Lots that extend into the floodway must be adequately sized to insure that no encroachments will occur in the floodway.

14. **APPROVAL BY COMMISSIONERS COURT**: After examination of the Final Plat, the Planning Representative shall submit same to the Commissioners Court, directly to the Formal Agenda. The Commissioners Court shall approve or disapprove the Final Plat. If the plat is disapproved, it shall be returned to the Owner with reasons for the disapproval. Lots may not be sold prior to Final Plat approval and recording or the owners complying with Section VI, Subsections 19 and 20. Final Plat approval does not constitute acceptance of any maintenance obligations of any improvements by Hill County. A space shall be provided on the Final Plat, in the lower right hand corner, for approval by the County Judge of Hill County, Texas.
15. **RECORDATION**: Within ten (10) business days after Final Plat approval, the owner or applicant shall file the Final Plat and deed restrictions, if any, with the County Clerk and pay all fees therefore, Failure to comply with this section shall void the approval granted under Section VI, Subsection 14 as provided in Section XIII, Subsection 1 in addition to being punishable under Section XIII, Subsection 2.
16. **STATUS OF AD-VALOREM TAXES**: Each Owner or Applicant will provide a tax certificate for the subdivision as furnished through the Hill County Tax Assessor-Collector office demonstrating there are no delinquent taxes owed and that taxes imposed for the current year have been paid. An original certificate from each taxing unit with jurisdiction of the real property indicating that no delinquent ad valorem taxes are owed on the real property must be attached to and recorded with the Final Plat.
17. **IMPROVEMENTS STATEMENT**: Each plat shall have the following statements placed on the face.

“Water service to be provided by XXXX.”

All utility providers’ names, addresses and phone numbers.

“Sanitary sewer to be handled by facilities approved by the Hill County Onsite Sewage Facilities (OSSF) Agent.”

“The maintenance of paving, grading and drainage improvements and/or easements shown on this plat are the responsibility of the individual property owners and do not constitute acceptance of same for maintenance purposes by Hill County.”

“All surface drainage easements shall be kept clear of fences, buildings, foundations, plantings, and other obstructions to the operation and maintenance of the drainage facility.”

“Blocking the flow of water or constructing improvements in surface drainage easements, and filling or obstructing the floodway is prohibited.”

“Hill County will not be responsible for any damage, personal injury or loss of life or property occasioned by flooding or flooding conditions.”

“The existing creeks or drainage channels traversing along or across the addition will remain as open channels and will be maintained by the individual property owners of the lot or lots that are traversed by or adjacent to the drainage courses along or across the lots.”

“Construction not complete within two years of the Commissioners Court approval shall be subject to current County Subdivision Rules and Regulations.”

“The owner of each lot must obtain approval for a driveway culvert from the Hill County Road and Bridge Department, prior to the construction, installation or placement of any driveway access improvements within the dedicated right-of-way.”

“No construction, without written approval from Hill County shall be allowed within an identified “FIRM” floodplain area, and then only after a detailed floodplain development permit including engineering plans and studies show that no rise in the Base Flood Elevation (BFE) will result, that no flooding will result, that no obstruction to the natural flow of water will result; and subject to all owners of the property affected by such construction becoming a party to the request. Where construction is permitted, all finished floor elevations shall be a minimum of one foot above the 100-year flood elevation.”

When engineering plans are provided, the engineer shall execute on the face of the plat the following statement:

“I, \_\_\_\_\_, a Texas Licensed Engineer, do hereby affirm that to the best of my knowledge, information, and belief and based upon the information provided, the drainage improvements shown on this plat will have no adverse effect on any property adjacent to the property shown. I further declare that I will accept full responsibility for the drainage design and will defend and hold harmless Hill County from any claim or litigation arising out of any errors, omissions or other acts of negligence in the preparation of same.”

The following statement shall appear on any Plat containing private streets, drives, emergency access easements, recreation areas and open spaces.

“Hill County shall not be responsible for maintenance of private streets, drives, emergency access easements, recreation areas and open

spaces; and the owner(s) shall be responsible for the maintenance of private streets, drives, emergency access easements, recreation areas and open spaces, and said owners agree to indemnify and hold harmless Hill County, from all claims, damages and losses arising out of or resulting from the performance of the obligations of said owners set forth in this paragraph.”

18. **CITY EXTRA-TERRITORIAL JURISDICTION:** The owner will be required to submit an affidavit regarding the subdivision’s location within a municipality ETJ. A re-plat of a subdivision located within the ETJ of a municipality whose population exceeds fifty thousand and approved by said municipality has approved the re-plat under Local Government Code §212.016, shall not be required to submit said re-plat for review and approval under these Subdivision Rules and Regulations. Qualifying plats shall be approved on the face of the plat by the Development Support Committee.
  
19. **POSTING BOND:** A Corporate Surety Bond in the amount of not less than the estimated construction cost and as approval by the Commissioners Court of Hill County may be posted with the Commissioners Court in lieu of completing construction of all interior and perimeter improvements. The estimated construction costs shall include a contingency factor in the amount of twenty percent (20%). The bond shall be executed by a surety company authorized to conduct business in the State of Texas, preferably in Hill County, and shall be made payable to the County Judge, or his/her designee or successors in office, Hill County, Texas. The conditions of said bond shall be that the developer(s) of such proposed subdivision shall (1) provide to Hill County a certified copy of the contract for construction of the said improvements, (2) complete construction within the time as noted in a schedule provided by the developer’s contractor at the pre-construction meeting and (3) not be released until and unless all construction and drainage improvements have been accepted for maintenance by Hill County.
  
20. **DEVELOPMENT PERMIT:** The requirements, as recommended to the Commissioners Court by the Development Support Team, may include, but are not limited to, the following:
  - a. The posting of a performance bond, letter of credit or escrow agreement in an amount to cover the cost of the engineering/surveying process and 20% contingency.
  
  - b. A copy of the professional services agreement between the engineer/surveyor and developer/owner must be provided. The professional service agreement must contain at least the following terms:
    - 1) A date of completion, if a date of completion was not provided at the preconstruction meeting;

- 2) Total cost of construction and cost within the right of way;
- 3) A sufficient description of the services to be performed for the Development Support Team to determine that all improvements provided in the engineering plans will be constructed pursuant to said plans.

c. All platting fees payable to the Development Support Team must be paid with all necessary applications completed.

21. **FORFEITURE:** If the Owner, Applicant or Developer fails to complete construction of all interior and perimeter improvements within the time as noted in a schedule provided by the developer's contractor at the pre-construction meeting (The "Completion Date"), the County shall give written notice to the Owner, Applicant and/or Developer of the failure to timely complete the improvements. The Development Support Team shall send notice by Certified U.S. Mail; return Receipt Requested, to the address provided by the Owner, Applicant and/or Developer. Notice to the Owner, Applicant or Developer shall be deemed sufficient notice to all persons involved in said subdivision. The notice shall be sent no later than ten (10) business days prior to the Completion Date. The notice shall specify the improvements or any portion thereof which remain to be completed. The notice shall also state that if the improvements are not completed by the completion date or an extension thereof, with adequate assurances to the County, and approved by the Commissioners Court, the applicant will forfeit the bond, letter of credit, or escrow agreement, whichever is applicable, and the County will proceed to complete the improvements with the available funds.

22. **AMENDING PLATS:** The Development Support Committee may approve an amending plat which may be recorded and is controlling over the preceding plat without vacation of that plat, amending plat is signed by the applicants only and is solely for one or more of the following purposes:

- a. To correct an error in a course or distance shown on the preceding plat;
- b. To add a course or distance that was omitted on the preceding plat;
- c. To correct an error in a real property description shown on the preceding plat;
- d. To indicate monuments set after the death, disability, or retirement from practice of the engineer or surveyor responsible for setting monuments;



- e. To show the location or character of a monument that has been changed in location or character or that is shown incorrectly as to location or character on the preceding plat;
- f. To correct any other type of scrivener or clerical error or omission previously approved by the Commission Court, including lot numbers, acreage, street names, and identification of adjacent recording plats;
- g. To correct an error in courses and distance of lines between two adjacent lots if:
  - 1) Both lot owners join in the application for amending the plat;
  - 2) Neither lot is abolished;
  - 3) The amendment does not attempt to remove recorded covenants or restrictions; and
  - 4) The amendment does not have a material adverse effect on the property rights of the other owners in the plat.
- h. To relocate a lot, to eliminate encroachment of a building or other improvement on a lot line easement;
- i. To relocate one or more lot lines between one or more adjacent lots if:
  - 1) The owners of all those lots join in the application for amending the plat;
  - 2) The amendment does not attempt to remove recorded covenants or restrictions;
  - 3) The amendment does not increase the number of lots; and
  - 4) The amendment does not create or require the creation of a new street or make necessary the extension of utility easements.
- j. To re-plat one or more lots fronting on an existing street if:
  - 1) The owners of all those lots join in the application for amending the plat;
  - 2) The amendment does not attempt to remove recorded covenants or restrictions;
  - 3) The amendment does not increase the number of lots; and
  - 4) The amendment does not create or require the creation of a new street or make necessary the extension of utility easements.

Notice, a hearing, and the approval of other lot owners are not required for the approval and issuance of an amending plat.

# SECTION VII - MANUFACTURED HOME RENTAL COMMUNITY (MHRC)

1. **SURVEY AND INFRASTRUCTURE DEVELOPMENT PLANS REQUIRED:**  
The Owner of a tract of land intended to be used as a MHRC shall have prepared and submitted to the Development Support Team a survey and an Infrastructure Development Plan (IDP). The Owner shall submit four blue line prints and one reproducible print, all with original seals and signatures. The survey and an IDP shall show or be accompanied by the following information:
2. **DRAWING REQUIREMENTS:** The North arrow shall be shown along with scale (in figures and a bar) and date. The final survey shall be drawn on 24" X 36" sheets to a scale not exceeding one (1) inch equals two hundred (200) feet. The recording survey shall be on permanent type material i.e. Mylar. All figures and letters shown must be plain, distinct, and of sufficient size as to be easily read, and must be of sufficient density to make a lasting and permanent record.
3. **MANUFACTURED HOME COMMUNITY NAME:** The name of the community, scale, date and North arrow, name or numbers of streets, and lots or spaces numbers within the community shall be shown. Adjacent communities and platted subdivisions shall also be shown and identified.
4. **OWNER IDENTIFICATION:** The names, addresses and telephone numbers of the owner or owners of the proposed community and the name, address and telephone number of the Surveyor responsible for the preparation of the final survey shall be shown. If the Owner is a corporation, partnership or joint venture, the names and addresses of the corporate officers, partners or joint ventures shall be provided.
5. **BOUNDARY LINES:** The perimeter boundary of the community shall be shown with bearings and distances, referenced to a corner of the original survey, shall be described by metes and bounds. The area of each lot or space and the total project area must be shown in each survey. A vicinity map must also be shown. The Point of Beginning (POB) shall be shown in state plane coordinates (NAD 83).
6. **UTILITIES SERVICE:** All utilities service providers shall approve the survey and IDP in writing and provide the Development Support Team with a letter certifying its approval and its ability to provide service to the community.
7. **LOTS, STREETS, EASEMENTS, SET BACK LINE LAYOUT AND DRAINAGE:**  
Location of lots, spaces, streets, roads, public highways, utilities easements,

parks, benchmarks, 100 year floodplain boundaries and other pertinent features, shall be shown with accurate dimensions in feet and decimals of feet and bearing, with length, radii and central angle of all curves, and with all other information necessary to duplicate the survey on the ground. The location of drainage easements, and other public right-of-way or future right-of-way shall be shown. The names and locations of all streets and roads shall be clearly shown. All lots shall be one (1) acre minimum net of all right-of-way and SFHA. Lot numbers and block designation shall be shown on the final survey. A minimum of a thirty (30) foot setback line shall be provided for each lot which shall have a minimum sixty (60) foot frontage.

8. **CERTIFICATION AND DEDICATION BY OWNER**: Certification by the Owner of his dedication of all street, public highways, alleys, utility and drainage easements, parks, if any, any other land dedicated for public use forever, signed and acknowledged before a notary public by said Owner shall be placed on the face of the final survey.
9. **CERTIFICATION BY REGISTERED PROFESSIONAL LAND SURVEYOR**: Certification that the survey correctly represents a survey made by him, and that all the lot corner markers and boundary markers are correctly placed as shown thereon and all markers shall be shown on the face of the survey. Markers shall be at least one half (1/2) inch iron rods at least eighteen (18) inches in length, with caps, firmly placed in the ground on the corners of each lot so as to be permanent. The dimensions, acreage and other technical information needed for platting each lot shall be shown on the community survey. A Final Survey shall not be approved until all pins and benchmarks are placed and placement of same is certified by the Surveyor.
10. **CERTIFICATION AND APPROVAL BY CITY**: Certification of approval signed by the appropriate representatives of any city having extraterritorial jurisdiction over the area in which the community is located shall be placed on the face of the final survey. All city required information, i.e. plans and specifications, was necessitated for their approval, shall also be submitted to the Hill County Development Support Team along with a final survey.
11. **RESTRICTIONS OF COMMUNITY**: A copy of the restrictions, if any, within the community shall accompany the Final Survey, shall be notarized and filed for record in the office of the County Clerk.
12. **DEVELOPMENT IN SFHA**: The owner or developer of a tract of land that contains a SFHA must comply with all provisions of the Hill County Regulations for Floodplain Management and supply sufficient hydrological / hydraulic data suitable to determine floodplain and floodway limits and to determine base flood elevations. Lots that extend into the floodway must be adequately sized to insure that no encroachments will occur in the floodway.

13. **STATUS OF AD-VALOREM TAXES:** Each Owner or Applicant will provide a tax certificate for the community as furnished through the Hill County Tax Assessor-Collector office demonstrating there are no delinquent taxes owed and that taxes imposed for the current year have been paid.
14. **IMPROVEMENTS STATEMENT:** Each survey shall have the following statement placed on the face.

“Water service to be provided by XXXX.”

All utility providers” names, addresses and phone numbers.

“Sanitary sewer to be handled by facilities approved by the Hill County Onsite Sewage Facilities (OSSF) Agent.” All fees and permits will be the responsibility of the Developer.

“The maintenance of paving, grading and drainage improvements and/or easements shown on this survey are the responsibility of the individual property owners and do not constitute acceptance of same for maintenance purposes by Hill County.”

“All surface drainage easements shall be kept clear of fences, buildings, foundations, plantings, and other obstructions to the operation and maintenance of the drainage facility.”

“Blocking the flow of water or constructing improvements in surface drainage easements, and filling or obstructing the floodway is prohibited.”

“Hill County will not be responsible for any damage, personal injury or loss of life or property occasioned by flooding or flooding conditions.”

“The existing creeks or drainage channels traversing along or across the addition will remain as open channels and will be maintained by the individual property owners of the lot or lots that are traversed by or adjacent to the drainage courses along or across the lots.”

“Construction not complete within two years of the Commissioners Court approval shall be subject to current County Subdivision Rules and Regulations.”

“The owner of each lot must obtain approval for a driveway culvert from the Hill County Road and Bridge Department, prior to the construction, installation or placement of any driveway access improvements within the dedicated right-of-way.”

“No construction, without written approval from Hill County shall be allowed within an identified “FIRM” floodplain area, and then only after a detailed

floodplain development permit including engineering plans and studies show that no rise in the Base Flood Elevation (BFE) will result, that no flooding will result, that no obstruction to the natural flow of water will result; and subject to all owners of the property affected by such construction becoming a party to the request. Where construction is permitted, all finished floor elevations shall be a minimum of one foot above the 100-year flood elevation.”

When engineering plans are provided, the engineer shall execute on the face of the survey the following statement:

“I, \_\_\_\_\_, a Texas Licensed Engineer, do hereby affirm that to the best of my knowledge, information, and belief and based upon the information provided, the drainage improvements shown on this survey will have no adverse effect on any property adjacent to the property shown. I further declare that I will accept full responsibility for the drainage design and will defend and hold harmless Hill County from any claim or litigation arising out of any errors, omissions or other acts of negligence in the preparation of same.”

15. **APPROVAL OF SURVEY AND IDP**: After examination of the survey, the Development Support Committee shall make a recommendation to Commissioners Court to approve or reject the survey and IDP within sixty (60) days of being submitted. A rejection shall be in writing and shall be served when placed in the mail addressed to the owner. Failure to reject the plan within the time prescribed shall constitute the Commissioner Courts acceptance of the plan. Construction of the community is prohibited until the plan is approved.
16. **INSPECTIONS REQUIRED**: Prior to the commencement of construction, the Owner, Owner’s engineer, the Owner’s contractor, and representatives of the County shall meet in a pre-construction meeting to discuss and establish timing of inspections by the County during all phases of construction. The final inspection shall occur no later than two (2) business days after the owner delivers written confirmation that all improvements have been completed.
17. **CERTIFICATE OF COMPLETION**: If the inspector determines that the infrastructure complies with the IDP, the Commissioners Court shall issue a certificate of completion no later than five (5) business days after final completion.
18. **UTILITY SERVICES**: A utility may not provide services, including water, sewer, gas, and electric services, to a community subject to an IDP or a manufactured home in the community unless the owner provides the utility with a copy of the certificate of compliance issued under Subsection 18 above. This subsection applies to:
  - a. a municipality that provides utility services;

- b. a municipality owned or municipality operated utility that provide services;
- c. a public utility that provides services;
- d. a non-profit water supply or sewer service corporation organized and operating under Chapter 67, Texas Water Code, that provides utility services;
- e. a county that provides utility services, and
- f. a special district or authority created by state law that provides utility services.

# SECTION VIII - ENGINEERING PLANS

## 1. PLANS REQUIRED

Engineering Plans shall be submitted for all improvements required such as new roads, drainage ditches, open channels, detention ponds, erosion control devices or structures and all other required improvements. The engineering plans shall convey the existing and proposed conditions for the site being developed. Three (3) sets of engineering plans shall be submitted simultaneously with the Preliminary Plat. The total cost for such engineering plans shall be borne by the owner/developer. The developer is prohibited from disturbing any natural soils or constructing any improvements prior to acceptance and approval of the engineering plans by the Commissioner Courts. Any improvements constructed prior to this approval shall be removed at the owner / developer's expense. All plans shall be compiled in accordance with the following requirements:

The portions of the tract designated for use as roads, drainage facilities and structures in and adjacent to a proposed subdivision shall be platted, regardless of whether the owner intends to dedicate the same to Hill County for maintenance. All such dedications or designations are subject to acceptance and approval by the Commissioners Court, whether dedicated public right-of-way easements or designated as private easements. All said improvements shall be constructed to the standards required by these regulations and inspections by Hill County to insure compliance with these regulations.

- a. Hill County will not accept any drainage easement if any portion thereof lies within a SFHA.
- b. The Developer of a subdivision shall be responsible for the cost of the construction of all roads, drainage improvements, and all other required improvements in the development, whether or not the streets were already County roads.

## 2. GENERAL REQUIREMENTS

- a. All plan sheets containing plan and profiles shall be 1" = 40'" horizontal and 1" = 4' vertical. Site plans and guarding plans shall be 1"= 30' or less but may be 1" = 40' with the approval of Reviewing Engineer. The drainage plan/map shall be 1" = 1000' or less but in general 1" = 200' shall be the preferred scale.
- b. All sheets shall be 11x17 or 24x36 inches in size and shall be signed, and sealed by a Texas Licensed Professional Engineer.

- c. A North arrow indicating the direction of North.
- d. Benchmarks shall be required to be placed in at least two (2) locations within every subdivision and shown for reference in the plans. In all there shall be a minimum of one benchmark for each 20 acres in the development. The location of each benchmark in reference to permanent objects such as trees, fence corners, drainage structures or fixed, permanent objects, the actual elevation of each benchmark and the GPS coordinates in NAD 83 shall be included on the Preliminary and Final Plat.
- e. The Developer shall provide copies of all permits required by TxDOT, TCEQ, EPA, or any other governmental entity with jurisdiction of the real property or adjacent roads, streets or highways. TCEQ and EPA permits shall include, but are not limited to, a Stormwater Pollution Prevention Plan process permit. For Notice of Intent (NOI), a copy of the application shall be deemed in compliance with these regulations. Notice of Terminations (NOT) shall also be submitted at the end of the project.
- f. An erosion control plan for the site shall be submitted with the engineering plans. A note stating that " 75 % grass coverage of all disturbed areas shall be required before the construction activities will be accepted " is to be placed on the erosion control plan. If the contractor is unable to obtain this coverage with a standard TxDOT winter / summer (rye/Bermuda) mix or to sodding the affected areas, a bond, as set forth in Section VI, bond, as set forth in Section VI, Subsections 19, 20, & 21, may be posted to insure compliance and conditioned upon reaching compliance with this subsection within 6 months of approval of said bond by Commissioners Court. If the grass has not achieved the 75 % coverage over the affected areas the bond may be forfeited by the applicant and the Commissioners Court will complete the project with the remaining funds. The bond shall be in the amount of \$400 per disturbed acre.
- g. Construction plans shall show all proposed utilities in both plan and profile view for all utilities in County right-of-way or easements. Underground utility lines may be permitted to cross County right-of-way, but will not be permitted longitudinally in the right-of-way. All utilities crossing under existing roadways must be bored and encased in a casing pipe. Utilities crossing proposed roadways may not be open cut. Utility lines 4-inch and greater in diameter shall be encased in schedule 40 steel pipe. Utility lines less than 4 inch in diameter shall be encased in schedule 80 (PVC) pipe. All utility lines crossing existing or proposed roadways shall be encased. The ends of all casing pipes shall be sealed with end caps. Backfill may be native material from the trench excavations, or may be select granular material. Backfill shall be placed in maximum 8 inch loose lifts and compacted to a minimum 95 % standard proctor density at - 2% to + 4% optimum moisture. At least one density test shall be taken on each lift for each crossing. Test shall be ordered by County, but all cost associated with testing shall be borne by the developer. Trench backfill not placed and documented as



described will be replaced. Alternatively, a flowable backfill may be used to backfill trenches. Flowable backfill must be in accordance with TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, current edition or as approved by the designated County Engineer. No pavement subgrade preparation may proceed until trench backfill has been approved. No water jetting of trenches will be allowed. Utilities shall have a minimum forty-two inches (42") cover, measured from the lowest point of the adjacent roadside ditch. The minimum allowable width for all drainage is twenty feet (20') and utility easements shall be fifteen feet (15').

h. The Hill County Development Support Team will review the construction plans for their conformance to this ordinance, and return one (1) set of the construction plans to the developer stating:

- that the plans have been approved or
- Comments stating the changes that will need to be made before the plans will be approved. If any changes are required, the developer shall have the necessary changes made and submit two (2) copies of the corrected plans to the Development Support Team. If all necessary changes have been made, the Team will return one (1) set of the corrected plans to the developer stating that the plans have been approved.

### **3. PAVING PLANS**

#### **a. General**

- 1) All materials and construction methods shall conform to the latest edition of the TxDOT Standard Specifications for Construction of Highways, Street and Bridge, plus any other TxDOT specifications reference therein. Other standard specifications may be approved as determined acceptable by the Development Support Team.
- 2) The geometric design of roads shall conform to the latest edition of The American Association of State Highway and Transportation Officials (AASHTO) "Policy on Geometric Design of Highways and Streets."
- 3) The Owner shall pay for and utilize the services of a geotechnical engineer to sample and test right-of-way site soils. The Owner's engineer shall make recommendations for soil stabilization in report form and shall design the roadway section for a minimum thirty (30) year service life. The minimum acceptable wearing surface shall be Type 'D' HMA with a two inch (2) minimum thickness or 3,000 psi minimum Portland Cement Concrete with a minimum six inch (6") thickness. The Owner's engineer shall design the road sections based on projected traffic volume and type and soil conditions to comply with the performance criteria. The pavement design provided in the

geotechnical report shall specify a minimum allowable tolerance to be applied during construction to the "As-Built" pavement thickness and for each item shown in the pavement cross section. If no tolerance is allowed, then the constructed pavement thickness must be equal to or greater than that specified in the design and a statement to that effect must be provided in the report.

**b. Perimeter Improvements**

- 1) When a proposed subdivision of land abuts both sides of an existing road, street, highway, or drainage easement that is substandard according to the current Hill County Standard Specifications, the developer shall be required to improve the existing road and drainage to Hill County standards. The Developer shall also be required to dedicate the necessary right-of-way for the particular roadway, which shall be no less than sixty feet (60').
- 2) When the proposed addition or subdivision is located adjacent to a county road or street, the developer shall be required to upgrade the perimeter road to current standards.

**c. Layout Requirements**

- 1) For lots with on-site septic systems, minimum lot size shall be 1 acre net. Net acreage is defined as the total acreage minus any area included in drainage easements or floodplain easements.
- 2) Side lot lines should normally be at a ninety-degree angle to the street.
- 3) Any land which, in its natural state, is subject to a 100-year flood or which cannot be properly drained shall not be subdivided, re-subdivided or developed until receipt of evidence that the construction of specific improvements proposed by the Subdivider can be expected to yield a usable building site. Thereafter, Commissioners Court may approve plat; however, construction upon such land shall be prohibited until the specific improvements have been planned and construction guaranteed.
- 4) All roads designed to intersect shall intersect at a minimum centerline distance of three hundred feet (300') from the closest adjacent intersecting road.
- 5) The reservation of private ownership of strips of land intended solely or primarily for the purpose of avoiding abutment to a County maintained road shall be prohibited.
- 6) Provision must be made for the extension of existing dead-end streets within recorded adjacent subdivisions. Proposed streets must conform to existing

topography as nearly as possible in order that drainage may be provided. Streets should follow valleys or depressions so as to form a collection system for surface runoff. Streets extending further than one thousand (1,000) feet shall provide for an emergency vehicle turn-around at least every one thousand feet (1,000').

- 7) The system of streets designated for the subdivision must connect with streets already dedicated in any adjacent subdivision and, where no adjacent connection are platted, must be continued to the boundaries of the tracts subdivided, so that other subdivisions may connect therewith.
- 8) No dead-end streets without a cul-de-sac will be approved unless such dead-end streets are provided to connect with future streets on adjacent land.
- 9) Cul-de-sacs may be permitted where the form or contour of the land makes it difficult to plat with connecting streets. Such cul-de-sacs shall provide an outside right-of-way radius of at least fifty feet (50') and an outside edge of pavement radius of at least forty feet (40'). Cul-de-sacs shall be constructed one (1) cul-de-sac per every one thousand feet (1000') along the entire length of each dead-end street.
- 10) In subdivisions constructed in more than one (1) phase, temporary cul-de-sacs shall be required at the end of street or road which is intended to connect to future streets. The materials of which the temporary cul-de-sac shall be constructed shall conform to those required for the street itself in the Geotechnical report.
- 11) The need to provide access for emergency services or align road and street right-of ways to provide the safe flow of traffic may require an additional entrance to a subdivision from a Hill County Road or a State Highway or an altered alignment of the roads and streets within the subdivision.
- 12) Where an existing County road abuts the subdivision, the owner shall set back the subdivision line (road R.O.W. line) a minimum of one half the total R.O.W. width as established for that road.
- 13) All roads or streets shall have minimum grade of five-tenths percent (0.5%). Grades of more than ten percent (10%) shall only be allowed upon approval of the Hill County Development Team.
- 14) Roads or streets which are continuation of any existing road or street shall take the name of the existing road or street.
- 15) All roads or streets preferably shall intersect at a ninety-degree angle. Where this is not possible, the intersection, on the side of the acute angle,

shall be rounded with a curve or a cutback, but in no case, shall the curve have less than twenty-five foot (25') radius.

16) No decorative ornamental entrances or any other obstruction to traffic shall be constructed or preserved within the right-of-way of a road dedicated to the public without the written permission of Hill County. If landscaping and /or irrigation are proposed within the right of way, the owner shall create a body (municipal utility district, homeowners association, neighborhood association, etc.) that will be responsible for the maintenance and liability of the landscaping and/or irrigation system. This body shall have assessment authority to insure the proper funding for maintenance.

17) Private Roads

- Private roads cannot be included in a subdivision without prior approval of the Commissioners Court. When request for a private road is received it will be presented to Commissioners Court for their approval or disapproval.
- Private streets, roads, emergency access easements, etc. shall be termed as a vehicular access way under private ownership and maintenance.
- Private roads shall meet the same construction standards and specifications as public roads and streets.

18) If new roads are constructed over existing petroleum pipeline crossings, the pipelines must meet the following requirements:

- Encased pipe must be at least 42 inches below the deepest proposed ditch grade
- Non-cased pipe (of extra wall thickness meeting Federal Regulations) must be at least 4 feet below the deepest proposed ditch.

19) Drainage easements shall generally be located along the existing drainage way, and shall have 4:1 side slopes. All easements shall be so designed to allow maintenance equipment to enter the easement from public property, and be able to perform routine maintenance.

20) All streets signs, posts and mounting hardware shall be furnished by the Developer, Applicant or Owners (at his or her expense).

21) The following information shall be obtained from County and lettered on all street signs:

- the block range (written in lower right hand corner)
- street name (with the suffix)

22) All signs shall be constructed of material conforming to the requirements of the Texas Manual on Uniform Traffic Control Devices, latest edition, and installed by the developer or owner.

23) Street names will not be approved if said conflict or will cause confusion with existing street names. The information regarding street names and addressing of structures shall be reviewed by the Development Support Team in order to facilitate use of said information by Hill County's Emergency 911 System.

**d. Roadway Plan Requirements**

- 1) Centerline stationing beginning at an intersecting roadway centerline.
- 2) Station and elevation references shall be provided on plan and profile sheets at PT"s, PC"s, PI"s, centerline intersections, VPT"s, VPC"s, VPI"s, culvert crossing and other locations deemed necessary. Station and elevation shall be provided at the bottom of each profile at each one hundred foot (100') station mark.
- 3) Spot elevations.
- 4) A joint spacing plan (concrete paving only).
- 5) Typical cross-section of the roadway showing each type of material to be used.
- 6) All lot corners, angle points, points of curvature, and points of tangency shall be identified with iron rods at least eighteen inches (18") in length. All lots shall have frontage on a dedicated public right-of-way or a private road which intersects a public right-of-way.

**4. DRAINAGE DESIGN**

**a. Drainage Plan/Map**

- 1) A drainage plan/map shall be required for all subdivisions.
- 2) When calculating the runoff, the drainage plan shall show the boundary of the drainage area contributing runoff into the proposed system. The area shall be further divided into sub-areas to determine flow at concentration points.

- 3) The drainage plan should show all boundary lines, lot lines, drainage easements and labels, the location of all proposed or existing detention ponds, open channels, swales and riprap, streets, street names, any zoning, zoning boundaries, existing ground on five foot (5') contours and a hydraulic summary table. The hydraulic summary table shall show for each sub-area the following information:
  - a) concentration point numbers or designations
  - b) area and or sub-area number
  - c) total acres in each area or sub-area
  - d) runoff coefficient "C"
  - e) time of concentration "Tc"
  - f) design rainfall intensity "I"
  - g) design discharge "Q"
- 4) Direction of flow within streets, alleys, natural and man-made drainage-ways and at all systems intersections shall be clearly shown on the drainage area map. This includes sags, crests and corners.
- 5) The rainfall intensity "I" shall be shown for a 10, 50 and 100-year event when no detention pond is required and for a 2, 5, 10, 25, 50, & 100-year event when detention is required.

**b. Drainage Design Criteria**

- 1) Open Channel Design: Open channels are to be used whenever concentrated flows greater than 25 cfs occur. The use of existing channels in their condition is encouraged when possible. In such cases, an adequate drainage easement shall be dedicated to meet flow requirements. The design water surface in an open channel is shown in this section. All plan sheets for Open Channels shall show the one hundred (100) year hydraulic grade line (HGL) in the profile, centerline stationing, and elevation information at one hundred foot (100) station intervals.
- 2) Roadway Ditch Design: Barrow Ditches are to be used along all roadways to convey drainage in accordance with the following criteria:

- a) Ditches shall be designed to carry a one hundred (100) year storm and the backwater effects of the most restrictive culvert to be placed in the ditch.
  - b) Ditches shall at all times maintain a minimum thirty inch (30") depth.
  - c) The entire ditch should be contained within the ROW of the road. If the ditch cannot be contained additional ROW may be required. A second option would be to provide a minimum sixteen foot (16') drainage easement and the following note on the plat: Note Drainage easements adjacent to roadways may not be fenced and must be left so that access can be obtained for maintenance purposes.
  - d) The side-slopes of all ditches shall be a maximum slope of 4:1.
  - e) The minimum allowable bottom slope in any roadway ditch shall be 1.0%. Bottom slopes of less than 1% shall require rip-rap or other structural surface approved by Development Team.
- 3) Drainage Swale Design: When concentrated flows occur on the property developed that are less than 25 cfs a drainage swale may be used. The primary function of a drainage swale is to intercept water and convey it to a drainage channel or other drainage facility. Swales shall be designed in accordance with the following criteria:
- a) The minimum allowable bottom slope in a swale shall be 0.50%.
  - b) The side-slopes of all swales shall be 4:1 maximum.
  - c) The depth of all swales shall be eighteen inches (18") or (1.5 feet).
- 4) Culvert Design: There are two principal categories of culverts that are used in roadway design, driveway culverts and crossing culverts. The following design criteria shall be used for each:
- a) Sub-grade, bedding and backfill material for all culverts shall be compacted in accordance with Hill County specifications prior to final acceptance.
  - b) Drainage design for all culverts shall consider the backwater effects of inlet and outlet control. The size and depth shall be adjusted if necessary to accommodate and contain the downstream culvert backwater.
- 5) Driveway Culverts:

- a) All driveways and driveway culverts are the responsibility of the individual lot owner or developer. It is the developer's responsibility to insure that all lot owners are aware of this requirement. Driveway culverts shall be made of corrugated metal pipe (CMP), 14 gauge or better. They shall have a minimum bottom slope of 1.0% and be no less than twenty-four feet (24') in length and no greater than fifty feet (50'). The minimum allowable driveway culvert size shall be fifteen inches (15") in diameter.
  - b) Concrete-Safety-Treatments (ends) are required for all new culverts in accordance with TxDOT standard details.
  - c) A minimum of six inches (6") of cover shall be placed above all new culverts below the lowest bank of the ditch.
  - d) Where multiple culverts occur in ditches, the ditch bottom must be widened to have a bottom width that is six inches (6") greater on each side than the distance from the outside walls of the outer two culverts. Each culvert shall also be separated by six inches (6") of compacted fill material.
  - e) Driveway culverts shall be shown at the most restrictive section to be anticipated for each lot, in the roadway plan and profile. The Hydraulic Grade Line (HGL) shall reflect the effects of backwater in the profile. Proposed upstream and elevations for proposed culverts shall be shown in the plan and profile as well.
  - f) All driveway culverts must be installed prior to issuance of building permits or construction activities on the individual lot.
- 6) Crossing Culverts:
- a) Crossing culverts shall be placed to relieve drainage at all low-points and drainage crossings. They shall be constructed of Class-III or better, Reinforced Concrete Pipe (RCP).
  - b) The minimum bottom slope in all crossing culverts shall be 0.50%. The minimum allowable crossing culverts size shall be eighteen inches (18") in diameter or as approved by the Development Team.
  - c) Safety ends or headwalls shall be constructed at the ends of all Crossing Culverts to protect the embankment from erosion and culvert from displacement. The safety ends or headwalls shall be constructed in accordance with TxDOT standards as required by the physical conditions of the particular installation. Rock rip-rap or other suitable erosion control may be required at each location as supplemental protection.



7) Stormwater Runoff Management:

Hill County Stormwater Policy- it is the intent of Hill County to have zero impact on properties adjacent to and or downstream of new subdivisions or developments. This shall be required of all new developments regardless of size. There is one condition that will serve as an exception to this requirement and that is when a “point discharge” would result if a detention pond or other drainage structure were to be constructed. Therefore, in cases where the overland distance of flow across the entire portion of the property being platted is less than three hundred feet (300') and can be clearly shown to have only sheet flow that does not concentrate flow, a drainage plan clearly showing this condition will be all that is required to be submitted. If it is known that the final usage of such a property will result in a drainage runoff coefficient greater than 0.50 this exception will not apply and some form of stormwater management will be required. There are several accepted methods of providing protection and safety for these downstream properties that can be used. They are:

a) Stormwater Detention

Stormwater Detention involves collecting excess runoff before it enters the main drainage systems. It can be used effectively and economically to reduce peak flow rates and mitigate problems of flooding, pollution, soil erosion issues.

- b) Design Criteria: The Modified Rational Method shall be used for drainage areas of 10 acres or less. HEC-HMS latest version is allowed for basins less than 10 acres and is required for all drainage basins greater than 10 acres. The pond and its outlets shall be designed to accommodate the 2, 5, 10, 25, 50 and 100- year storm events.
- c) Pond Layout: Side slopes of berms and drop offs shall be 4:1 maximum and the bottom of all dry bottom ponds shall have a minimum 1.00% slope. A minimum six inch (6") freeboard above the one hundred (100) year event must be provided. Spot elevations for proposed and existing grades in the pond area and for at least one hundred and fifty feet (150') downstream of all outlet structures shall be shown on the plans.
- d) Outlet Structures: In all cases an earthen or concrete (if preferred) overflow structure must be provided above the one hundred (100) year flood event and have a minimum depth of twelve inches (12").
- e) Construction: All ponds shall be seeded or sodden with rye or Bermuda grass (or native grass as appropriate to the season) and attain a 75% gross coverage prior to final acceptance. All outlet elevations and pond

geometry shall be verified for elevation and dimensions by the owner's/developer's surveyor and approved by the County Engineer.

- f) Drainage Easements: It is to be clearly understood that all drainage easements must be minimum of twenty feet (20') in width and shall be on a single lot and not split by lot lines.

**c. Estimating Runoff**

**Introduction to Hydrologic Methods**

There are a number of empirical hydrologic methods available to estimate runoff characteristics for a site or drainage sub-basin; however, the following methods have been selected to support hydrologic site analysis for the design methods and procedures included in this Manual:

- Rational Method
- SCS Unit Hydrograph Method
- Snyder's Unit Hydrograph Method

Table 1 provides some limitations on the use of these methods.

<b>Table 1 Constraints on Using Recommended Hydrologic Methods</b>		
<u>Method</u>	<u>Size Limitations<sup>1</sup></u>	<u>Comments</u>
Rational	0-10 acres	Method can be used for estimating peak flows and the design of small site of subdivision storm sewer systems
Modified Rational	0-200 acres	Method can be used for estimating runoff volumes for storage design.
Unit Hydrograph <sup>2</sup>	> 100 acres	Method can be used for estimating peak flows and hydrographs for all design applications.

<sup>1</sup>Size limitation refers to the drainage basin for the stormwater management facility (e.g., culvert, inlet).

<sup>2</sup>This refers to the SCS and Snyder's routing methodology included in many readily available programs (such as HEC-HMS ) that utilize this methodology.

If other hydrologic methods are to be considered they must be approved in writing by the Hill County Engineer.

### **Rainfall Estimation**

The first step in any hydrologic analysis is an estimation of the rainfall that will fall on the site for a given time period. The amount of rainfall can be quantified with the following characteristics:

*Duration (hours) – Length of time over which rainfall (storm event) occurs*

*Depth (inches) – Total amount of rainfall occurring during the storm duration*

*Intensity (inches per hour) – Depth divided by the duration*

The Frequency of a rainfall event is the recurrence interval of storms having the same duration and volume (depth). This can be expressed either in terms of *exceedance probability or return period*.

Rainfall intensities for Hill County will be provided upon request and should be used for all hydrologic analysis.

## 1) Rational Method

### Equations

The Rational Formula estimates the peak rate of runoff at any location in a watershed as a function of the drainage area, runoff coefficient, and the mean rainfall intensity for duration equal to the time of concentration,  $t_c$  (the time required for water to flow from the most remote point of the basin to the location being analyzed).

The Rational Formula is expressed as follows:

$$Q = CIA \qquad \text{Equ. (1)}$$

where:

Q = maximum rate of runoff (cfs)

C = runoff coefficient representing a ratio of runoff to rainfall

I = average rainfall intensity for a duration equal to the  $t_c$  (in/hr)

A = drainage area contributing to the design location (acres)

### Time of Concentration

Use of the Rational Formula requires the time of concentration ( $t_c$ ) for each design point within the drainage basin. The duration of rainfall is then set equal to the time of concentration and is used to estimate the design average rainfall intensity (I). The time of concentration consists of an overland flow time to the point where the runoff is concentrated or enters a defined drainage feature (e.g., open channel) plus the time of flow in a closed conduit or open channel to the design point.

The USDA *Urban Hydrology for Small Watersheds TR-55* equations should be used to determine time of concentration for each drainage area or sub-basin. Basic methodology for TR-55 time of concentration calculations is described in Section VIII, Subsection 4.c.2) of this document.

For each drainage area, the distance is determined from the inlet to the most remote point in the tributary area. From a topographic map, the average slope is determined for the same distance. The runoff coefficient (C) is determined by the procedure described in a subsequent section of this chapter. In urban areas, the length of overland flow

distance should realistically be no more than 50 – 100 feet. In rural and undeveloped areas, 300 feet is a maximum overland flow distance.

The following table gives recommended minimum and maximum times of concentration for developed areas only based on land use categories. The minimum time of concentration should be used for the most upstream inlet (minimum inlet time). Computed downstream travel times will be added to determine times of concentration through the system. For anticipated future upstream development, the time of concentration should be no greater than the maximum.

<u>Land Use</u>	<u>Minimum (minutes)</u>	<u>Maximum (minutes)</u>
Residential Development	15	30
Commercial and Industrial	10	25
Central Business District	10	15

Two common errors should be avoided when calculating time of concentration. First, in some cases runoff from a portion of the drainage area which is highly impervious may result in a greater peak discharge than would occur if the entire area were considered. Second, when designing a drainage system, the overland flow path is not necessarily the same before and after development and grading operations have been completed. Selecting overland flow paths in excess of 50 feet for impervious areas should be done only after careful consideration.

### **Rainfall Intensity (I)**

The rainfall intensity (I) is the average rainfall rate in inches per hour for a duration equal to the time of concentration for a selected return period. Once a particular return period has been selected for design and a time of concentration calculated for the drainage area, the rainfall intensity can be determined from Rainfall-Intensity-Duration data associated with Hill County.

## Runoff Coefficient (C)

<b>Table 3 Runoff Coefficient Values</b>	
Description of Area	Runoff Coefficients (C)
<b>Lawns:</b>	
Sandy soil, flat, 2%	0.10
Sandy soil, average, 2 - 7%	0.15
Sandy soil, steep, > 7%	0.20
Clay soil, flat, 2%	0.17
Clay soil, average, 2 - 7%	0.22
Clay soil, steep, > 7%	0.35
<b>Agricultural</b>	0.30
<b>Forest</b>	0.15
<b>Streams, Lakes, Water Surfaces</b>	1.00
<b>Business:</b>	
Commercial areas	0.95
Neighborhood areas	0.70
<b>Residential:</b>	
Single Family (1/8 acre lots)	0.65
Single Family (1/4 acre lots)	0.60
Single Family (1/2 acre lots)	0.55
Single Family (1+ acre lots)	0.45
Multi-Family Units, (Light)	0.65
Multi-Family, (Heavy)	0.85
<b>Commercial/Industrial:</b>	
Light areas	0.70
Heavy areas	0.80
<b>Parks, cemeteries</b>	0.25
<b>Playgrounds</b>	0.35
<b>Railroad yard areas</b>	0.40
<b>Streets:</b>	
Asphalt and concrete	0.95
Brick	0.85
<b>Drives, walks, and roofs</b>	0.95
<b>Gravel areas</b>	0.50
<b>Graded or no plant cover:</b>	
Sandy soil, flat, 0 - 5%	0.30
Sandy soil, flat, 5- 10%	0.40
Clay soil, flat 0 - 5%	0.50
Clay soil, average 5 - 10%	0.60

## 2) SCS Hydrologic Method

### Application

The SCS method can be used for both the estimation of storm water runoff peak rates and the generation of hydrographs for the routing of storm water flows. The simplified method can be used for drainage areas up to 2,000 acres. Thus, the SCS method can be used for most design applications, including storage facilities and outlet structures, storm drain systems, culverts, small drainage ditches, open channels, and energy dissipators.

### Runoff Factor (CN)

The principal physical watershed characteristics affecting the relationship between rainfall and runoff are land use, land treatment, soil types, and land slope. The SCS method uses a combination of soil conditions and land uses (ground cover) to assign a runoff factor to an area. These runoff factors, called runoff curve numbers (CN), indicate the runoff potential of an area. The higher the CN, the higher the runoff potential. Soil properties influence the relationship between runoff and rainfall since soils have differing rates of infiltration. Based on infiltration rates, the SCS has divided soils into four hydrologic soil groups.

Group A - Soils having a low runoff potential due to high infiltration rates. These soils consist primarily of deep, well-drained sands and gravels.

Group B - Soils having a moderately low runoff potential due to moderate infiltration rates. These soils consist primarily of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures.

Group C - Soils having a moderately high runoff potential due to slow infiltration rates. These soils consist primarily of soils in which a layer exists near the surface that impedes the downward movement of water or soils with moderately fine to fine texture.

Group D - Soils having a high runoff potential due to very slow infiltration rates. These soils consist primarily of clays with high swelling potential, soils with permanently high water tables, soils with a clay pan or clay layer at or near the surface, and shallow soils over nearly impervious parent material.

A list of soils throughout the State of Texas and their hydrologic classification can be found in the publication *Urban Hydrology for Small Watersheds, 2nd*

*Edition, Technical Release Number 55, 1986.* Soil Survey maps can be obtained from local USDA Natural Resources Conservation

Service offices for use in estimating soil type. County specific data can be found on-line through NRCS at <http://soils.usda.gov/> and/or [www.nctcog.dst.tx.us/](http://www.nctcog.dst.tx.us/).

When a drainage area has more than one land use, a composite curve number can be calculated and used in the analysis. It should be noted that when composite curve numbers are used, the analysis does not take into account the location of the specific land uses but sees the drainage area as a uniform land use represented by the composite curve number.

Composite curve numbers for a drainage area can be calculated by using the weighted method.

<b>Table 4 Runoff Curve Numbers<sup>1</sup></b>					
Cover Description		Curve numbers for hydrologic soil groups			
Cover type and hydrologic condition	Average percent impervious area <sup>2</sup>	A	B	C	D
<b>Cultivated Land:</b> Without conservation treatment With conservation treatment		72 62	81 71	88 78	91 81
<b>Pasture or range land:</b> Poor condition Good condition		68 39	79 61	86 74	89 80
<b>Meadow:</b> Good condition		30	58	71	78
<b>Wood or forest land:</b> Thin stand, poor cover Good cover		45 25	66 55	77 70	83 77
<b>Open space (lawns, parks, golf course, cemeteries, etc.)<sup>3</sup></b> Poor condition (grass cover <50%) Fair condition (grass cover 50% to 75%)		68 49	79 69	86 79	89 84



Good condition (grass cover >75%)		39	61	74	80
<b>Impervious areas:</b>					
Paved; curbs and storm drains (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (Including right-of-way)		72	82	87	89
<b>Urban districts:</b>					
Commercial and Business Industrial	85%	89	92	94	95
	72%	81	88	91	93
<b>Residential districts by average lot size:</b>					
1/8 acre of less (townhouse)	65%	77	85	90	92
1/4 acre	38%	61	75	83	87
1/3 acre	30%	57	72	81	86
1/2 acre	25%	54	70	80	85
1 acre	20%	51	68	79	84
2 acres	12%	46	65	77	82
<b>Developing urban areas and newly graded areas (previous areas only, no vegetation)</b>		77	86	91	94

<sup>1</sup>Average runoff condition, and  $I_a = 0.2S$

<sup>2</sup>The average percent impervious area shown was used to develop the composite CNs. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. If the impervious area is not connected, the SCS method has an adjustment to reduce the effect.

<sup>3</sup>CNs shown are equivalent to those of pasture. Composite CNs may be computed for other combinations of open space cover type.

### Travel Time Estimation

Travel time ( $T_t$ ) is the time it takes water to travel from one location to another within a watershed, through the various components of the drainage system. Time of concentration ( $t_c$ ) is computed by summing all the travel times for consecutive components of the drainage conveyance system from the hydraulically most distant point of the watershed to the point of interest within the watershed.

## Roughness Coefficients

<b>Table 5</b> <b>Roughness Coefficients (Manning's n) for Sheet Flow<sup>1</sup></b>	
Surface Description	n
<b>Smooth surfaces</b> (concrete, asphalt, gravel or bare soil)	0.011
<b>Fallow</b> (no residue)	0.05
<b>Cultivated soils:</b> Residue cover <20%	0.06
Residue cover <20%	0.17
<b>Grass:</b> Short grass prairie	0.15
Dense grasses <sup>2</sup>	0.24
Bermuda grass	0.41
<b>Range</b> (natural)	0.13
<b>Woods<sup>3</sup></b> Light underbrush	0.40
Dense underbrush	0.80

<sup>1</sup> The n values are a composite of information by Engman (1986)

<sup>2</sup> Includes species such as bluestem grass, buffalo grass, gramma grass, and native grass mixtures.

<sup>3</sup> When selecting n, consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.

Source: SCS, TR-55, Second Edition, June 1986

## Shallow Concentrated Flow

After 50 to 100 feet, sheet flow usually becomes shallow concentrated flow.

Average velocities for estimating travel time for shallow concentrated flow can be computed from using the following equations. These equations can also be used for slopes less than 0.005 ft/ft.

$$\text{Unpaved } V = 16.13(S)^{0.5}$$

**Equ(2)**

$$\text{Paved } V = 20.33(S)^{0.5}$$

**Equ(3)**

where:

V = average velocity (ft/s)

S = slope of hydraulic grade line (watercourse slope, ft/ft)

After determining the average velocity, estimate travel time for the shallow concentrated flow segment.

## Open Channels

Velocity in channels should be calculated from the Manning equation. Open channels are assumed to begin where surveyed cross section information has been obtained, where channels are visible on aerial photographs, where channels have been identified by the county, or where stream designations appear on United States Geological Survey (USGS) quadrangle sheets. Manning's equation or water surface profile information can be used to estimate average flow velocity. Average flow velocity for travel time calculations is usually determined for bank-full elevation assuming low vegetation winter conditions.

Manning's equation is:

$$V = (1.49/n) (R)^{2/3} (S)^{1/2} \quad \text{Equ(4)}$$

where:

V = average velocity (ft/s)

R = hydraulic radius (ft) and is equal to  $A/P_w$

A = cross sectional flow area (ft<sup>2</sup>)

P<sub>w</sub> = wetted perimeter (ft)

S = slope of the hydraulic grade line (ft/ft)

n = Manning's roughness coefficient for open channel flow

After average velocity is computed, T<sub>t</sub> for the channel segment can be estimated.

- Equations in this section should not be used for sheet flow longer than 50 feet for impervious surfaces.
- In watersheds with storm sewers, carefully identify the appropriate hydraulic flow path to estimate  $t_c$ .
- In some cases, a culvert or bridge can act as detention structure if the culvert is significantly undersized. For culverts or bridges with capacity below a 5-year return event, detailed storage routing procedures should be used to determine the outflow through the culvert or bridge.

### 3) The Modified Rational Method

For drainage areas of *less than 200 acres*, a modification of the Rational Method can be used for the estimation of storage volumes for detention calculations.

The Modified Rational Method uses the peak flow calculating capability of the Rational Method paired with assumptions about the inflow and outflow hydrographs to compute an approximation of storage volumes for simple detention calculations. There are many variations on the approach. The rising

and falling limbs of the inflow hydrograph have a duration equal to the time of concentration ( $t_c$ ). An allowable target outflow is set ( $Q_a$ ) based on pre-development conditions. The storm duration is  $t_d$ , and is varied until the storage volume (shaded gray area) is maximized. It is normally an iterative process done by hand or on a spreadsheet. Downstream analysis is not possible with this method as only approximate graphical routing takes place.

#### **4) Downstream Hydrologic Assessment**

It is the responsibility of all new development to assess downstream conditions and determine the likelihood that an adverse impact will be created. Where downstream conditions warrant, it will be the developer's responsibility to mitigate for increased peak discharge and increased erosion potential for 2, 5, 10, 25 and 100 return event storms.

##### **Design Storm Requirements**

Listed below are the design storm requirements for various storm water drainage system components to be designed and constructed in accordance with these Hill County Standards. It is required that the full build-out conditions be used to calculate flows for the design storm frequencies below.

##### **Storm Drainage Systems**

All calculations shall assume full development watershed conditions.

- 2-year design storm for pipe design, 100-year design storm in right-of-way. A minimum of one 12-foot lane shall remain clear in a 100-year return-event storm for all roadway classifications.
- 10-year design storm for roadside ditches and driveway culverts.
- 5-year design storm on grade (for inlet design)
- 5-year design storm for sumped inlets, (unless overflow facilities are provided). In all cases, sumped inlets shall have a positive overflow route downstream.
- 100-yr design storm plus 1-foot freeboard (for bridges, culverts, and roadway crossing design)

#### **5) Conduit Systems (Storm Drains/Sewers)**

##### **Access Holes (Manholes)**

The primary function of an access hole is to provide access to the closed conduit system. An access hole can also serve as a flow junction and can provide ventilation and pressure relief. Typical access holes are shown in Tables 6 and 7 (HEC 22, 2001). The materials commonly used for access hole construction are precast concrete and cast-in-place concrete.

At a minimum, access holes should be located at the following points:

- Where two or more storm drains converge
- Where pipe sizes change
- Where a change in alignment occurs
- Where a change in grade occurs

Access holes may be needed at intermediate points along straight runs of closed conduits. Table 6 gives maximum spacing criteria.

<b>Table 6 Access Hole Spacing Criteria</b>	
<u>Pipe Size (inches)</u>	<u>Maximum Spacing (feet)</u>
12-24	300
27-36	400
42-54	500
60 and up	1000

**Table 7**  
**Manning's Coefficients for Storm Drain Conduits**  
**(HEC 22,2001)**

<u>Type of Culvert</u>	<u>Roughness of Corrugation</u>	<u>Manning's n</u>
Concrete Pipe	Smooth	0.010-0.011
Concrete Boxes	Smooth	0.012-0.015
Spiral Rib Metal Pipe	Smooth	0.012-0.013
Corrugated Metal Pipe, Pipe-Arch and Box (Annular or helical Corrugations Manning's n Varies with barrel size)	68 by 13 mm 2- <sup>2</sup> / <sub>3</sub> by 1/2 in	0.022-0.027
	Annular 68 by 13 MM 2- <sup>2</sup> / <sub>3</sub> by 1/2 in	0.011-0.023
	Helical 150 by 25 mm 6 by 1 in	0.022-0.025
	Helical 125 by 25mm 5 by 1 in	0.025-0.026
	75 by 25 mm 3 by 1 in	0.027-0.028
	150 by 50 mm 6 by 2 in	0.033-0.035
	Structural Plate 230 by 64 mm 9 by 2 1/2 in Structural Plate	0.033-0.037
Corrugated Polyethylene	Smooth	0.009-0.015
Corrugated Polyethylene	Corrugated	0.018-0.025
Polyvinyl chloride (PVC)	Smooth	0.009-0.011
<p>*Note: The Manning's n values indicated in this table were obtained in the laboratory and are supported by the provided reference. Actual field values for culverts may vary depending on the effect of abrasion, corrosion, deflection, and joint conditions.</p>		

### **Desirable Velocities**

Velocities in storm sewers are important mainly because of the possibilities of excessive erosion at the outfall location. Maximum outfall velocity is 6 ft/sec with no erosion control measures or a maximum of 12 ft/sec with permanent erosion control measures.

\*Exit velocities shall be evaluated for specific outfall conditions. Exit velocities must be low enough to prevent erosion unless specific erosion protection is designed at outfall location.

### **Storm Drain Outfalls**

All storm drains have an outlet where flow from the storm drainage system is discharged. The discharge point can be a natural river or stream, an existing storm drainage system, or a channel which is either existing or proposed for the purpose of conveying the storm water. The procedure for calculating the energy grade line through a storm drainage system begins at the outfall. Therefore, consideration of outfall conditions is an important part of storm drain design.

The flowline or invert elevation of the proposed outlet should be equal to or higher than the flowline of the outfall. If this is not the case, there may be a need to pump or otherwise lift the water to the elevation of the outfall. Written approval of the County Engineer is required prior to designing an outlet below grade.

#### REFERENCES:

Texas Department of Transportation, November 2002, Hydraulic Design Manual, Austin, Texas, page 5-17.

U.S. Department of Transportation, Federal Highway Administration, 1984. Drainage of Highway Pavements. Hydraulic Engineering Circular No. 12. U.S. Department of Transportation, Federal Highway Administration, 1985, Hydraulic Design of Highway Culverts, Hydraulic Design Series No. 5, FHW-IP-85-15, McLean, VA.

U.S. Department of Transportation, Federal Highway Administration, 2001, "Urban Drainage Design Manual," Hydraulic Engineering Circular No. 22, Second Edition, FHW-NHI-01-021, Washington, D.C.

#### **d. General Design Considerations**

- Storm water systems should be planned and designed so as to generally conform to natural drainage patterns and discharge to natural drainage pathways within a drainage basin. These natural drainage pathways should only be modified as a last resort to contain and safely convey the peak flows generated by the development.
- Runoff must be discharged in a manner that will not cause adverse impacts on downstream properties or storm water systems. In general, runoff from development sites within a drainage basin should be discharged at the existing natural drainage outlet or outlets. If the developer wishes to change discharge points he or she must demonstrate that the change will not have any adverse impacts on downstream properties.
- It is important to ensure that the combined on-site flood control system and major storm water system can handle blockages and flows in excess of the design capacity to minimize the likelihood of nuisance flooding or damage to private properties. If failure of minor stormwater systems and/or major stormwater structures occurs during these periods, the risk to life and property could be significantly increased.
- In establishing the layout of storm water systems, it is essential to ensure that flows are not diverted onto private property during flows up to the major storm water system design capacity.

Headwalls are required for all metal culverts and where buoyancy protection is necessary. If high headwater depths are to be encountered, or the approach velocity in the channel will cause scour, a short channel apron should be provided at the toe of the headwall. This apron should extend at least one pipe diameter upstream from the entrance, and the top of the apron should not protrude above the normal streambed elevation.

#### **Culvert Sizes**

The minimum allowable pipe diameter shall be 18 inches.



<b>Table 8 Manning's n Values</b>		
<u>Type of Conduit</u>	<u>Wall &amp; Joint Description</u>	<u>Manning's n</u>
Concrete Pipe	Good joints, smooth walls	0.012
	Good joints, rough walls	0.016
	Poor joints, rough walls	0.017
Concrete Box	Good joints, smooth finished walls	0.012
	Poor joints, rough, unfinished walls	0.018
Corrugated Metal Pipes and Boxes, Annular Corrugations	2 <sup>2</sup> / <sub>3</sub> -by <sup>1</sup> / <sub>2</sub> -inch corrugations	0.024
	6- by 1-inch corrugations	0.025
	5- by 1-inch corrugations	0.026
	3- by 1-inch corrugations	0.028
	6- by 2-inch structural plate	0.035
	9- by 2 <sup>1</sup> / <sub>2</sub> -inch structural plate	0.035
Corrugated Metal Pipes, Helical Corrugations, Full Circular Flow	2 <sup>2</sup> / <sub>3</sub> - by <sup>1</sup> / <sub>2</sub> -inch corrugated 24-inch plate width	0.012
Spiral Rib Metal Pipe	<sup>3</sup> / <sub>4</sub> - by <sup>3</sup> / <sub>4</sub> -in recesses at 12-inch spacing, good joints	0.013
High Density Polyethylene (HDPE)	Corrugated Smooth Liner	0.015
	Corrugated	0.02
Polyvinyl Chloride (PVC)		0.011

### **Open Channel Design**

Open channels include drainage ditches, grass channels, dry and wet enhanced swales, stone riprap channels and concrete-lined channels.

The purpose of this section is to provide an overview of open channel design criteria and methods.

### **Open Channel Types**

The three main classifications of open channel types according to channel linings are vegetated, flexible, and rigid. Vegetated linings include grass with mulch, sod and

lapped sod, and wetland channels. Stone riprap and some forms of flexible man-made linings or gabions are examples of flexible linings, while rigid linings are generally concrete or rigid block.

Vegetative Linings – Vegetation, where practical, is the most desirable lining for an artificial channel.

Conditions under which vegetation may not be acceptable include but are not limited to:

- High velocities (greater than 7 feet per second or as supported by geotechnical investigation).
- Standing or continuously flowing water
- Lack of regular maintenance necessary to prevent growth of taller or woody vegetation
- Lack of nutrients and inadequate topsoil
- Excessive shade

Proper seeding, mulching, and soil preparation are required during construction to assure establishment of healthy vegetation. Geotextile material will be required to protect constructed vegetated channel until stabilizing vegetation is established. Geotextile material must have UV protection and a design life of at least 24 months to protect exposed soils.

If low flows are prevalent, a hard lined pilot channel may be needed, and it should be wide enough to accommodate maintenance equipment. Whether to allow pilot channels should be included in the local criteria section.

Flexible Linings – Rock riprap, including rubble and gabion baskets, cable matting, and articulated blocks, are acceptable flexible lining for channels. They may require the use of a filter fabric depending on the underlying soils, and the growth of grass, weeds, and trees may present maintenance problems. Supporting geotechnical documentation will be required to support channel lining design selection.

Rigid Linings – Rigid linings are generally constructed of concrete and used where high flow capacity is required. Higher velocities, however, create the potential for scour at channel lining transitions.

### **Channel General Criteria**

The following criteria should be followed for open channel design:

- Channels with bottom widths greater than 10 feet shall be designed with a minimum bottom cross slope of 12 to 1, or with compound cross sections.
- Channel side slopes shall be stable throughout the entire length and the side slope shall depend on the channel material. A maximum of 4:1 should be used for earthen channel side slopes, unless otherwise justified by calculation and

approved in writing by the County Engineer. Roadside ditches should have a maximum side slope of 3:1.

- Trapezoidal or parabolic cross sections are preferred over triangular shapes.
- If relocation of a stream channel is unavoidable, the cross-sectional shape, meander, pattern, roughness, sediment transport, and slope should conform to the existing conditions insofar as practicable. Some means of energy dissipation may be necessary when existing conditions cannot be duplicated. Relocation of stream channel will not be permitted without written approval from the County Engineer. Jurisdiction determination and USACE 404 compliance will be required by written documentation submitted to the County Engineer.
- Streambank stabilization should be provided, when appropriate, as a result of any stream disturbance such as encroachment and should include both upstream and downstream banks as well as the local site.
- Open channel drainage systems shall be designed for the 100-year design storm with one foot of freeboard to the top of bank.
- HEC-RAS or other acceptable computerized water surface profile calculation program shall be used to confirm the water surface profiles in open channels, and shall be used to evaluate water surface profiles in roadside ditches as well.

### **Velocity Limitations**

The final design of artificial open channels should be consistent with the velocity limitations for the selected channel lining.

Maximum velocity is 15 ft/s in concrete lined channels. For gabions, maximum design velocities are 10 ft/s for 6-inch thick mattresses and 15 ft/s for 1-foot thick mattresses.

### **Manning's n Values**

Designers shall utilize natural channel n values as developed by Chow.

## **5. WATER AND SEPTIC SYSTEM REQUIREMENTS**

The owner(s) must submit a plan for providing utility service within the proposed subdivision. The proposed water supply should be clearly indicated, i.e. municipal water, rural water supply corporation, privately owned water system, individual well, etc., including location of fire hydrants, if any. The Owner(s) / Developers must provide an approval letter from the water supply company or municipality stating that water is available and the utility has agreed to provide the minimum domestic water needs as required by TCEQ.

The plan for sewage disposal should be clearly indicated, ie. municipal sewer service, privately owned/organized sewage disposal system, private sewage facilities, etc. If it is the Owner's intent that each lot purchaser shall provide private sewage facilities, those facilities must meet the requirements of the Hill County Onsite Sewage Facilities (OSSF) Agent..

Persons proposing residential subdivision, manufactured housing communities, multi-unit residential development, business parks, or other similar uses and utilizing Onsite Sewage Facilities (OSSF) for sewage disposal must submit planning materials for these developments to the permitting authority. The planning materials must include an overall site plan, detailing the types of OSSF's to be considered and their compatibility with area wide drainage and groundwater. A comprehensive drainage and 100-year floodplain impact plan must also be included in these planning materials. Planning materials shall also address potential replacement areas.

## **6. STORM WATER POLLUTION PREVENTION PLAN (SW3P)**

A site's Stormwater Pollution Plan shall govern the control measures necessary to prevent and control soil erosion, sedimentation, and water pollution which may degrade receiving waters including rivers. Streams, lakes, reservoirs, groundwater and wetlands. The control measures contained herein shall be installed and maintained throughout the construction contract, and coordinated with any permanent or temporary pollution control features specified elsewhere on the plans, and in the specification to assure effective and continuous water pollution control throughout the construction and post construction periods. These control measures shall not be used as a substitute for the permanent pollution controls may include silt fences, rock berms, diversion dikes, interceptor swales, sediment traps and basins, pipe slope drains, inlet protection, stabilized construction entrances, seeding, siding, mulching, soil retention blankets, or other structural or non-structural stormwater pollution controls. Additional information regarding these controls can be found in NCTCOG's guidance manual entitled Stormwater Quality

Best Management Practices for Construction Activities – North Central Texas. The Contractor is responsible for obtaining all permits required for Storm Water Pollution Prevention.

The construction plans must include a Stormwater Pollution Prevention Plan (SW3P). A copy of the plans, as approved by the Department of Public Works and any applicable permits must be available for review at the construction site.

Drainage ditches shall be seeded or sodden within 14 days of final grading.

All erosion control measures will be maintained in good working order. Disposal areas and stockpiles shall not be located in any wetland, waterbody, or streambed. The Contractor shall clean pave surfaces as necessary to remove sediment which has accumulated on the roadway.

Hill County reserves the right to inspect any construction site and request changes be made to a SW3P if the site is causing pollution to the environment.

# SECTION IX - CONSTRUCTION REQUIREMENTS

1. **Pre-Construction Meeting**: The Owner or Applicant and the Owner's engineer and constructor shall attend a pre-construction meeting which shall occur after approval of the Preliminary Plat and engineering plans by the Commissioners Court and before any construction of improvements begin. All matters on the Pre-Construction Checklist shall be discussed at said meeting.
2. **Beginning Construction**: Prior to beginning any construction within the subdivision, the owner shall contact in writing the Reviewing Engineer. No construction may commence prior to Preliminary Plat and plan approval and the completion of the Pre-Construction Meeting.
3. **Testing**: Testing is required to determine conformance to specifications and shall be performed by a qualified engineering laboratory. The following tests will be required:
  - a. **Subsurface Investigation**: A subsurface investigation to evaluate sub-grade characteristics, stabilization requirements, and pavement section thickness is required for a minimum 20 year life.
  - b. **Materials**: Pavement materials and mix designs shall be analyzed and evaluated for their suitability for pavement usage.
  - c. **Construction**: Materials, engineering testing and inspection services shall conform to Texas Council of Engineering Laboratories (TCEL) recommended scope of services.
    - 1) Soil stabilization (lime & cement), flex- pavement compaction, and concrete testing shall be required for all pavements.
    - 2) The cost of all testing shall be borne by the Owner/Developer of the subdivision.
4. **Project Completion**: Before the project improvements are accepted as complete, a final walk through and inspection shall be completed by the inspector. In all cases, regardless of size, 75% grass coverage of all disturbed areas shall be required before the construction activities will be accepted. If the contractor is unable to obtain this coverage with a standard TxDOT winter/summer (rye/Bermuda) mix or by sodding the affected areas, a bond as set forth in Section VI, Subsection 19, 20 and 21, may be posted to insure compliance and conditioned upon reaching compliance with this subsection within 6 months of approval of said bond by Commissioners Court. If the grass has not achieved the 75% coverage over the affected areas the bond may be forfeited by the applicant. The bond shall be in the amount of 120% of \$200 per disturbed acre.

**EXHIBIT  
PRE-CONSTRUCTION CONFERENCE AGENDA**

1. Owner/Developer will furnish the Reviewing Engineer with a minimum of three (3) sets of the approved construction plans for authorization and distribution to the respective parties at the preconstruction meeting.
2. Owner/Contractor will provide the Reviewing Engineer with a schedule of work to be done.
3. Owner will provide the Reviewing Engineer spec sheets showing test results for roadway materials.
4. Owner will furnish Reviewing Engineer with the name and telephone number of the project representative, contractor, job superintendent and a 24 hour emergency contact number. The Reviewing Engineer will provide the owner with name of the inspector assigned to the project. Before any testing is to be performed, this inspector must be personally notified 48 hours in advance.
5. Proper barricading, traffic control and erosion control will be the responsibility of the contractor in accordance with the plans and /or the minimum required of the Manual of Uniform Traffic Control Devices (MUTCD) For Streets and Highways as published by the U.S Department of Transportation and Federal Highway Administration. All items for each must be in place in accordance with the plans and specifications, prior to beginning any construction activities.
6. Upon completion of the final phase of construction, the Reviewing Engineer will perform a thorough walk through of the project and provide the owner / developer and contractor with a detailed final punch list of all deficiencies needed rectification prior to preliminary acceptance.
7. The contractor should be advised that 75% grass coverage of all disturbed areas shall be required before the construction activities will be accepted. If the contractor is unable to obtain this coverage with a standard TxDOT winter/ summer (rye/Bermuda) mix or by sodding the affected areas, a bond, as set forth in Section VI, Subsections 19, 20 and 21, may be posted to insure compliance and conditioned upon reaching compliance with this subsection within 6 months of approval of said bond by Commissioners Court. If the grass has not achieved the 75% coverage over the affected areas the bond may be forfeited by Commissioners Court. The bond shall be in the amount of \$400 per disturbed acre.
8. Upon satisfactory completion of all phases and rectification of deficiencies and re-inspection, the Reviewing Engineer will issue to the owner/developer a written statement of preliminary acceptance of the construction. The date which will be considered the date for the official completion of construction, will be the date Commissioners Court approves the Final Plat.
9. After completion of construction and receipt of preliminary acceptance, the owner may submit a Final Plat.

10. Once a date completion is established, the owner will be responsible for all maintenance until final acceptance of the public improvements. The process shall commence upon the earlier of the sale and built-out of 60% of the Subdivision's lots or two years from the date of completion.
11. Upon notification of any deficiencies and re-inspection, the Reviewing Engineer will provide a recommendation to the Commissioners Court regarding final acceptance of the improvements by Hill County.
12. Upon Commissioners Court approval, the improvements will be accepted by Hill County for maintenance. Until that time, Hill County will not perform any maintenance work of any kind on the subject improvements.

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Signature (Owner)

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Signature (Contractor)

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Signature (Reviewing Engineer)



## **5. CONSTRUCTION AND MAINTENANCE BONDS**

### **a. Construction Bonds**

All construction shall be complete within 2 years after approval of preliminary plat. To insure roads, streets and required drainage and drainage structures are constructed in a timely manner, and in accordance with the terms and specifications contained in this Order, the developer shall file a Construction Bond, executed by a Surety Company authorized to do business in this State, and made payable to the County Judge of Hill County, Texas.

The bond amount shall be equal to one hundred percent of the estimated cost of construction including drainage structures.

The construction bond shall be presented to the Commissioners Court with the preliminary plat.

The construction bond shall remain in full force and in effect until all the roads, street and drainage and drainage structures in the subdivision have been completed to the satisfaction of the County and the construction bond has been released by a Court Order from the Commissioners' Court.

In the event any or all of the streets, roads, drainage and drainage structures as constructed by the Owner fail to meet the requirements of the foregoing specifications and the said Owner fails or refuses to correct the defects called to his attention in writing by the County, the unfinished improvements shall be completed at the cost and expense of owner.

### **b. Maintenance Bonds**

To insure roads, streets, and required drainage and drainage structures are maintained to the satisfaction of the Road and Bridge Department of Hill County, a maintenance bond executed by a Surety Company authorized to do business in this state, and made payable to the County Judge of Hill County, Texas, and shall be substituted for the construction bond at the time of release of said construction bond.

The bond amount shall be equal to ten percent of the estimated cost of construction including drainage structures.

The conditions of the maintenance bond shall be that the Owner shall guarantee to maintain, to the satisfaction of the County, all of the streets, roads, drainage structures and drainage ditches and channels which have been constructed to specification with construction security released by Court Order from Commissioners Court, in a good state of repair for a period of two years from the date of official release of construction security.

Periodical inspection of all the streets, roads, drainage and drainage structure for which maintenance security is held, will be made by the County during the period of liability covered by the maintenance bond. In the event any or all of the streets, roads, drainage and drainage structures are not being maintained in a good state of repair,

the Owner will be so advised in writing and, if after 60 days, he fails or refuses to repair said items, they shall be maintained by County at the cost and expense of owner.

The release of any bond shall be by order of the Commissioners Court. To request a release the developer who posted the bond in question shall present a written request to release said bond. The request shall contain a statement by the Engineer responsible for the design of said work stating that he has made inspections of such improvements and recommends their acceptance by the County. Attached to his letter shall be one set of "as built" drawings and digital media containing the "as built" plan sheets in the format and medium specified by the County showing the work to be accepted for use by the County.

**c. Irrevocable Letter of Credit (In Lieu of Bond)**

An Irrevocable Letter of Credit may be submitted in lieu of bonds, for the purpose of insuring a developer's promise to construct and maintain the roads and drainage of facilities in a subdivision.

Irrevocable Letters Of Credit in lieu of Bonds are required under the same conditions as Construction and Maintenance Bonds and must be acceptable by Hill County's District Attorney and Commissioners Court.

## SECTION X - SUBDIVISION PLAT CANCELLATION

1. A person owning real property in the County that has been subdivided into lots and blocks or into small subdivisions may apply to the Commissioners Court of the County in which the property is located for permission to cancel all or part of the subdivision, including a dedicated easement or roadway, or to reestablish the property as acreage tracts as it existed before the subdivision. If on the application, it is shown that the cancellation of all or part of the subdivision, or it is shown that the purchaser agrees to the cancellation, the Commissioners Court by order shall authorize the owner of the subdivision to file an instrument canceling the subdivision in whole or in part. The instrument must describe the subdivision or the part of it that is cancelled. The Commissioners Court shall enter the order in its minutes. After the cancellation instrument is filed and recorded in the deed records of the County, the County Tax Assessor-Collector shall assess the property as if it had never been subdivided.
2. The Commissioners Court shall publish notice of an application for cancellation. The notice must be published in a newspaper in the County, in the English language for at least three weeks before the date on which action is taken on the application. The Commissioners Court shall take action on an application at a regular term. The published notice must direct any person who is interested in the property and who wishes to protest cancellation to appear at the time specified in the notice.
3. If delinquent taxes are owed on the subdivision tract for any preceding year, and if the application to cancel the subdivision is granted as provided by this section, the owner of the tract may pay the delinquent taxes on an acreage basis as if the tract had not been subdivided. For the purpose of assessing the tract for a preceding year, the County Tax Assessor-Collector shall back-assess the tract on an acreage basis.
4. On application for cancellation of a subdivision or any phase or identifiable part of a subdivision, including a dedicated easement or roadway, by the owner of 75% of the property included in the subdivision, phase, or identifiable part, the Commissioners Court by order shall authorize the cancellation in the manner and after notice and hearing as provided by Subsections (a) and (b). However, if the owners of at least 10 percent of the property affected by the proposed cancellation file written objections to the cancellation with Court, the grant of an order of cancellation is at the discretion of the Commissioners Court.
5. To oppose the cancellation or closing of a roadway or easement in a subdivision, a person must own a lot or part of the subdivision that:

- a. Abuts directly on the part of the roadway or easement to be cancelled or closed;  
or
  - b. Is connected by the part of the roadway or easement to be cancelled or closed,  
by the most direct feasible route, to:
    - 1) The nearest remaining public highway, county road, or access road to the  
public highway or county road; or
    - 2) Any common amenity of the subdivision which has not been cancelled.
6. A person who appears before the Commissioners Court to protest the cancellation of all or part of a subdivision may maintain an action for damages against the person applying for the cancellation and may recover as damages an amount not to exceed the amount of the person's original purchase price for property in the canceled subdivision or part of the subdivision. The person must bring the action within one year after the date of the entry of the Commissioners Court order granting the cancellation.

# SECTION XI - SUBDIVISION IMPROVEMENTS ACCEPTANCE PROCEDURE

## **GENERAL**

All conditions of Preliminary Plat and engineer plans must be met. All construction must be in accordance with approved plans and construction standards set forth herein or as may be adopted by the Commissioners Court.

## **PRELIMINARY ACCEPTANCE OF CONSTRUCTION**

As each phase of the road, drainage and utility construction is completed, the developer shall notify the County Engineer or designee, in writing and pay the inspection fee for each required inspection.

The County Engineer, or his designee, shall then inspect the improvements and give written notice of any deficiencies. Should it be deemed necessary to ascertain compliance with county construction specifications, the County Engineer or his designee, may require copies of test results performed by a certified laboratory.

Upon rectification of deficiencies and re-inspection, the County Engineer or his designee, shall recommend to the Commissioners Court to issue a statement of preliminary acceptance of construction and shall establish a date considered to be the date of completion of public improvements. The owner will be responsible for all maintenance until final acceptance of the roads by the Commissioners Court ("the maintenance period").

## **RECORD CONSTRUCTION PLANS**

After the subdivision roads, streets and drainage improvements have been completed by the owners or sub-divider, one set of Mylar record construction plans of all underground utilities, street and drainage improvements that have been constructed shall be filed with the County Engineer, or his designee, prior to acceptance of the public improvements.

### **1. DRIVEWAY/CULVERT APPLICATION AND PERMIT**

- a. Application Procedures:

- 1) Culvert Permit Application – The Property Owner will complete the culvert permit application and pay the required fee. The property owner may not begin installation of the culvert until the application is approved by the Precinct and the requirements of Sections 7.3 A, and 7.3 B are satisfied. If it is determined a culvert is to be constructed in a Flood Safety Hazard Zone, a Development Permit will also be required. The culvert permit will not be granted until the requirements set forth in the application have been met.
- 2) Sizing will be conducted by the County Engineer utilizing acceptable engineering practices and taking into consideration the constraints of ROW, extent of downstream grading required, finished floor elevation of proposed residential structures and existing structures, and the overall lay of the land for the best end result. The minimum driveway culvert size is 18” diameter.
- 3) Culvert Permit – Once the requirements of the permit application have been met the County will issue a Culvert Permit (Exhibit A)
- 4) Double driveway permits are considered one location. However, both culverts must be completed prior to final acceptance.

b. Special Requirements and Conditions

- 1) The property Owner is responsible for placing a stake to mark the proposed location of the driveway/culvert. After the stake has been set the property owner/contractor is responsible for notifying the Precinct and/or Development Team so the location can be researched so proper sizing of the culvert may proceed. The culverts and/or safety ends are not allowed to cross property lines without a written agreement between both property owners.
- 2) All culverts shall be corrugated steel only (CMP). The length shall in no case be less than 20 feet or more than 50 feet (not inclusive of the length of the safety ends). Driveways for gas well
- 3) access may use reinforced concrete pipe (RCP).
- 4) The Owner is required to call 48 hours in advance for inspections.
- 5) “Temporary” driveway/culverts are not permitted on County Roads without permission being requested in writing and granted by the County.

c. Existing Culverts

Existing Culverts that are in good condition and that do not have any blockages or other restrictions will be allowed to remain in the “as-is” condition. All Culverts will be required to have concrete safety end treatments (SET’s) installed in accordance with the culvert policy section 1.2. If the existing culvert does have concrete safety ends a culvert permit will be issued without changes to the existing culvert.

d. Permit Fees

See attached fee schedule.

## **2. COUNTY ROADWAY UTILITY CROSSING SPECIFICATIONS**

### **a. Authority**

The Hill County Commissioners Court hereby authorizes the Development Support Team to review and approve utility requests.

- b.** An application for utility permit must be completed with the County including a written request detailing the utility installation and specific location must be submitted to the County Engineer or his designee. A schematic of the proposed installation is required along with a profile view of the bore if applicable to your request. Please include with your request, a map outlining the county road in which the utility will be located.
- c.** Specifications for utility installations within County ROW are set forth from the Texas Practice, County and Special District Law Section 40.14 Utility lines.
- d.** Authorization for utility installation is also based on the requesting company adhering to the policies stated in the Hill County Subdivision Rules and Regulations,” Utility Installation Specifications.”
- e.** Traffic control devices i.e. signs, cones, etc. must be used when work is being performed in the county ROW.
- f.** All utility lines shall be installed as near as practical to the outside limits of the County road ROW. This is also to include above ground installation and the setting of utility poles. No ditching machinery shall be operated upon the crown of any roadway unless specifically permitted.
- g.** All utility lines shall be buried at a depth of not less than forty two (42) inches from the lowest point of a minimum design bar ditch depth of thirty (30) inches at top of conduit below the existing grade line of the area of installation.
- h.** All utility lines crossing a county road shall be bored and encased with a minimum schedule 40 steel and the ends shall be sealed with end caps.
- i.** At all points where borings are made in public ROW, the applicant will replace and recompact the subgrade and will restore the roadway section to the same or better condition as existed prior to the bore.
- j.** The applicant will remove and relocate its utility lines should it become necessary in order to accommodate widening, realigning, and/or improving County roads at no cost to Hill County.
- k.** The applicant shall, from the commencement of the installation of utility lines and thereafter for a period of twelve (12) months from the date the installation is completed and accepted, assume all responsibility for damages resulting to the landowner to any other person caused by the installation of the utility lines and

shall hold Hill County harmless from any obligation or claim or damages that may be alleged or result from such utility construction or operation. Applicant agrees to indemnify Hill County for any costs or expenses including, but not limited to, reasonable attorney's fees, which Hill County may be legally required to pay, resulting from damages caused by the installation. The indemnity by the applicant shall cover claims occurring during the twelve (12) month period. The applicant shall also reimburse Hill County for its costs and expenses in repairing a bore during the twelve (12) month warranty period.

- l. A copy of the applicant's Letter of Approval must be on location at each job site at all times.
- m. Before commencing any work on County roads or County ROW under the authority of this Letter of Approval or by any other claimed authority (including such work as trimming and/or cutting trees, and/or ROW, etc.), the applicant Company shall notify the County of the approximate time that work will commence, which notice shall be at least forty-eight (48) hours prior to commencing said work.
- n. Should Commissioners Court find it necessary to employ an inspector or inspectors to enforce these provisions, a charge will be made by the County to the applicant to pay the costs of employing said inspector or inspectors.



# SECTION XII - VARIANCES

## **VARIANCES GRANTED**

Variations may be granted by the Commissioners Court upon recommendation from the Development Support Team.

1. A variance may be granted when the Commissioners Court finds:
  - a. That there are special circumstances or conditions applying to the land or building for which the variance is sought, circumstances or conditions are peculiar to such land or building and do not apply generally to land or buildings in the same district or neighborhood, and that said circumstances or conditions are such that the strict application of the provisions of these Rules and Regulations would deprive the applicant of the reasonable use of such land or building; and
  - b. The granting of such variance will not be detrimental to the public welfare.
  - c. The granting of the variance is necessary for the reasonable use of the land or building and that the variance as granted by the Court is the minimum variance that will accomplish this purpose; and
  - d. The literal enforcement and strict application of the provisions of these Rules and Regulations will result in an unnecessary hardship inconsistent with the general provision and intent of these Rules and Regulations and that in granting such variance the spirit of these Rules and Regulations will be preserved and substantial justice done.

## SECTION XIII - ENFORCEMENT

1. **COMMISSIONERS COURT AUTHORITY:** The Commissioners Court of Hill County shall have the authority to refuse to approve and authorize any map or plat of any such subdivision, unless such map or plat meets the requirements as set forth in these Subdivision Rules and Regulations.
2. **REQUEST FOR PROSECUTION:** At the request of the Commissioners Court of Hill County, the County Attorney or other prosecuting attorney representing the County may file an action in a court of competent jurisdiction to:
  - a. Enjoin the violation or threatened violation of a requirement established by or adopted under these Rules and Regulations; or
  - b. Recover damages in an amount adequate for the County to undertake any construction or other activity necessary to bring about compliance with a requirement established by or adopted under these Rules and Regulations.
  - c. A person commits an offense if the person knowingly or intentionally violates a requirement established by or adopted under this Act by the Commissioners Court. An offense under this subsection is a Class B misdemeanor.
  - d. A requirement that was established by or adopted under Chapter 435, Acts of the 55th Legislature, Regular Session, 1957, as amended (Article 6626a, Vernon's Texas Civil Statutes), or Chapter 151, Acts of the 52nd Legislature, Regular Session, 1951 (Article 2372k, Vernon's Texas Civil Statutes), before September 1, 1983, and that, after that date, continues to apply to a subdivision of land is enforceable under subsection (a). Knowing or intentional violation of these requirements are an offense under subsection (c).

# SECTION XIV - SEVERABILITY

If any provision of these Rules and Regulations or the application thereof to any person or circumstances is held valid, the validity of the remainder of the Rules and Regulations and the application thereof to other persons and circumstances shall not be affected.

APPROVED this the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Hill County Judge

\_\_\_\_\_  
Commissioner Precinct No. 1

\_\_\_\_\_  
Commissioner Precinct No. 2

\_\_\_\_\_  
Commissioner Precinct No. 3

\_\_\_\_\_  
Commissioner Precinct No. 4

**Hill County PLATTING FEE SCHEDULE**

County Platting Fees	\$100.00 plus \$20.00 per lot
Engineering Plan Review Fee	Two (2) percent (%) of the cost of the street & drainage Improvements
Plat Review Fee	\$150.00 for the 1st and for each subsequent review
Replatting Fee	\$200.00 plus \$20.00 per lot
Variance	\$200.00 (nonrefundable)
Road & Drainage Inspection Fee	greater of \$200.00 or (3%) of construction cost

\*Plats and plans must be submitted on thumb drive or other acceptable media in a format accepted and approved by the Development Team.

APPROVED By Hill County Commissioners Court this the \_\_\_\_\_ day of \_\_\_\_\_,  
\_\_\_\_\_.

\_\_\_\_\_  
Hill County Judge

\_\_\_\_\_  
Commissioner Precinct No. 1

\_\_\_\_\_  
Commissioner Precinct No. 2

\_\_\_\_\_  
Commissioner Precinct No. 3

\_\_\_\_\_  
Commissioner Precinct No. 4

## ATTACHMENTS

**Hill County APPLICATION FOR PLATS**

A COMPLETE APPLICATION FORM MUST ACCOMPANY NEW PLAT SUBMITTAL

Preliminary Plat \_\_\_\_\_ Minor Plat \_\_\_\_\_ Re-Plat \_\_\_\_\_ Final Plat \_\_\_\_\_ Fees Paid \$ \_\_\_\_\_

**Description of Property:**

Subdivision Name: \_\_\_\_\_

Total Numbers of Lots: \_\_\_\_\_ Total Acreage: \_\_\_\_\_

Property Location: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Applicants:**

Owner(s): \_\_\_\_\_

Complete Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Applicant: \_\_\_\_\_

Complete Address: \_\_\_\_\_

\_\_\_\_\_

Phone Number: \_\_\_\_\_

PAGE TWO OF THIS APPLICATION MUST BE COMPLETED

Hill County APPLICATION FOR PLAT, PAGE TWO

Applicant must check each item submitted with the plat:

**REQUIRED FOR ALL PLATS:**

- |                                                                  |                                                                                 |
|------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <input type="checkbox"/> Project Name                            | <input type="checkbox"/> Tax Certificate (NOT RECEIPT)                          |
| <input type="checkbox"/> Application Form & Fees                 | <input type="checkbox"/> Notes as Required (See Attached)                       |
| <input type="checkbox"/> Water and Utility Company Approval      | <input type="checkbox"/> North Arrow                                            |
| <input type="checkbox"/> "E.T.J." note or Approval by City       | <input type="checkbox"/> Scale Figure & Scale Bar                               |
| <input type="checkbox"/> Vicinity Map                            | <input type="checkbox"/> Size 18"x24"                                           |
| <input type="checkbox"/> Owners Name, Address & Phone            | <input type="checkbox"/> Boundary Lines Identified                              |
| <input type="checkbox"/> Surveyor/Engineer Name, Address & Phone | <input type="checkbox"/> Lots & Blocks Identified                               |
| <input type="checkbox"/> Adjacent Properties Identified          | <input type="checkbox"/> Easements                                              |
| <input type="checkbox"/> 30' Front Bldg. Lines                   | <input type="checkbox"/> All Dimensions                                         |
| <input type="checkbox"/> Flood Plain Statement/Boundary          | <input type="checkbox"/> Approval Letter from TXDOT for entrance on State Roads |
| <input type="checkbox"/> Plat Certifications                     | <input type="checkbox"/> OnSite and Off Site Drainage Study                     |
| <input type="checkbox"/> Two (2) Copies of Plat for review       |                                                                                 |

**ADDITIONAL REQUIREMENTS FOR PRELIMINARY PLAT ONLY:**

- |                                                     |                                                          |
|-----------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Engineering Plans          | <input type="checkbox"/> Contour Lines                   |
| <input type="checkbox"/> Physical Features          | <input type="checkbox"/> Drainage Easements              |
| <input type="checkbox"/> Street & Road Interconnect | <input type="checkbox"/> Scale not larger than 1" = 300' |

**ADDITIONAL REQUIREMENTS FOR REPLAT, MINOR & FINAL PLAT:**

- |                                                       |                                                          |
|-------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Deed Restrictions            | <input type="checkbox"/> 2 x 3 Recording Block           |
| <input type="checkbox"/> P & Z Note & Yards           | <input type="checkbox"/> Co. Judge Signature Block       |
| <input type="checkbox"/> Monuments, Pins & B.M.'s Set | <input type="checkbox"/> Required Signatures             |
| <input type="checkbox"/> Street & Road Interconnect   | <input type="checkbox"/> Owners Certificate              |
| <input type="checkbox"/> RPLS Certificate             | <input type="checkbox"/> Acreage Shown                   |
| <input type="checkbox"/> Drainage Easements           | <input type="checkbox"/> Scale not larger than 1" = 200' |
| <input type="checkbox"/> Metes & Bounds               | <input type="checkbox"/> Match Lines                     |
| <input type="checkbox"/> 16' Easements                | <input type="checkbox"/> Street Names                    |
| <input type="checkbox"/> Contour Lines if Required    | <input type="checkbox"/> Utility Providers Approval      |

Submitted By: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

**EXTRA TERRITORIAL JURISDICTION (ETJ) AFFIDAVIT**

I \_\_\_\_\_ DO HEREBY SWEAR OR AFFIRM THAT THE  
PROPERTY WITHIN THE \_\_\_\_\_

SUBDIVISION IS, TO MY KNOWLEDGE:

WITHIN THE TERRITORIAL JURISDICTION OF \_\_\_\_\_  
(CITY NAME)

NOT WITHIN THE EXTRA TERRITORIAL JURISDICTION OF ANY CITY.

SWORD TO AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_,  
\_\_\_\_\_.

NOTARY PUBLIC, \_\_\_\_\_ COUNTY TEXAS.