

STATE OF TEXAS
KENDALL COUNTY



KENDALL COUNTY ORDER NO. 11-14-2022

KENDALL COUNTY DEVELOPMENT RULES

WHEREAS Kendall County has established standards for the construction of roads, drainage, water, sewage facilities and development; and

WHEREAS Chapters 232 and 233 of the Texas Local Government Code empower the County to enact subdivision rules and regulations, and to provide for their administration, enforcement and amendment; and

WHEREAS the Commissioners Court is empowered with the authority to formulate such rules and regulations; and

WHEREAS the Court, having favorably received and voted on these rules, recommends that they be adopted and enforced.

NOW, THEREFORE, BE IT ORDERED BY THE COMMISSIONERS COURT OF KENDALL COUNTY, TEXAS that the Kendall County Commissioners Court adopts the Kendall County Development Rules and Regulations set forth herein, which supersede previous rules, regulations and orders approved thereto, as the rules for development in Kendall County.

Adopted and Effective November 14, 2022

Darrel L. Lux

County Judge, Kendall County, Texas

Darlene Herrin

County Clerk, Kendall County, Texas

Development Rules

Kendall County, Texas



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Chapter 1 General Development Provisions

1.1 Title

This Document shall be known and may be cited as “the Kendall County Development Rules and Regulations,” or as “the Development Rules,” and herein may be referred to as “these Regulations.”

1.2 Statutory Authority

A. AUTHORITY TO ADMINISTER

Authority to administer these Development Regulations is vested in and delegated to the officials and decision-makers designated herein, as well as all powers granted by the Constitution and the laws of the State of Texas. The omission of a citation or reference to any authority conferred upon the officials and decision-makers, or the failure to identify authority conferred by other provisions of the Development Regulations shall not be construed as limiting the actions of such officials and decision-makers taken in accordance with and in reliance upon such authority.

B. STATUTORY AUTHORITY

These Rules and Regulations have been adopted based on authority granted to the Commissioners Court by the following:

1. The Commissioners Court has the authority to regulate the subdivision process pursuant to Local Government Code, Chapter 232, Subchapters A and E, including the authority to adopt rules and regulations governing plats and subdivisions of land within the unincorporated area of the County to promote the health, safety, morals, or general welfare of the County and the safe, orderly, and healthful development of the unincorporated area of the County pursuant to Section 232. 101, Local Government Code.
2. The Commissioners Court has been designated by the Texas Commission on Environmental Quality (TCEQ) as the authorized agent for the licensing and regulation of on-site sewage disposal systems within Kendall County and these Rules and Regulations are a necessary and reasonable exercise of the authority granted in the Health and Safety Code, Chapter 366.
3. Kendall County has been designated by the Texas Water Development Board as a county within a Priority Groundwater Management Area and the Commissioners Court has determined pursuant to Water Code, Section 35.019 that these Rules and Regulations are necessary to prevent current or projected water use in the County from exceeding the safe sustainable yield of the County's water supply; (NOTE: The Cow Creek Groundwater Conservation District (CCGCD) has the authority pursuant to chapter 36, Texas Water Code, to make and enforce rules limiting groundwater production based on tract size or the spacing of wells, by requiring water wells to be spaced a certain distance from property lines or adjoining wells, by limiting the amount of water produced based on acreage or tract size, and imposing other limitations. CCGCD has adopted rules, which specify minimum lot sizes and maximum density of subdivisions using groundwater. These Rules and Regulations are consistent with the rules adopted by CCGCD.
4. The Commissioners Court has been granted the authority and has the responsibility under the Federal Emergency Management Act to administer floodplain development regulations in Kendall County and has the authority pursuant to Water Code, Section 16.315 to take all necessary and reasonable actions to comply with the requirements

- and criteria of the National Flood Insurance Program including, but not limited to, making appropriate land use adjustments to restrict development of land which is exposed to flood damage and minimize damage caused by flood losses and to adopt comprehensive floodplain management rules that the Commissioners Court determines are necessary for planning and appropriate to protect public health and safety.
5. The Commissioners Court has the authority and responsibility pursuant to the Transportation Code, Chapters 251, 252, 253, 254, 255 and 256 to exercise general control over the roads, bridges and related drainage facilities in the County, including the authority to exercise general control over all roads, bridges, and highways in the County pursuant to Section 251.016, Transportation Code and to adopt uniform standards for naming public roads and for assigning addresses to property located in the unincorporated areas of the County pursuant to Section 251.013, Transportation Code.
 6. As authorized by Section 232.0095, Local Government Code, Kendall County adopts the provisions in Sections 212.013, 212.014, 212.015, and 212.016, Local Government Code, governing plat vacations, and replatting and plat amendments.
 7. Pursuant to Section 232.106, Local Government Code, Kendall County imposes the requirements of Sections 232.029 and 232.0291, Local Government Code, concerning utility connections.
 8. Pursuant to Section 232.108, Local Government Code, the Commissioners Court imposes the requirements prescribed by Section 232.023, Local Government Code, including the requirement that plats include or have attached a statement in English of the water and sewer facilities that will be constructed or installed to serve the subdivision, a statement specifying the date the facilities will be fully operable, and a statement by an engineer certifying that the water and sewer facilities proposed are in accordance with the model rules adopted under Section I 6.343, Water Code.
 9. Pursuant to Sections 17.43 and 17.48, Business and Commerce Code (Deceptive Trade Practices - Consumer Protection Act), Kendall County has the authority to regulate and prohibit deceptive trade practices, including any representations that goods (including real property) have characteristics that they do not have and the failure to disclose information concerning goods (including real property) offered for sale.
 10. Section 12.002, Texas Property Code, prohibits the County Clerk from recording a subdivision plat or replat unless it is approved by the proper authority. A person may not file for record or have recorded in the County Clerk's Office a plat or replat of a subdivision unless it is approved by the proper authority and has attachments required by law. A person who subdivides real property may not use the subdivision's description in a deed of conveyance, a contract for deed or other executory contract to convey that is delivered to a purchaser unless the plat or replat of the subdivision is approved as required by law and recorded with the County Clerk. A person may not file for recording a subdivision plat or replat without having attached to it an original tax certificate indicating that no delinquent ad valorem taxes are owed on the property.
 11. In addition, the Commissioners Court has authority to regulate and enforce its orders and applicable law pursuant to the following statutes:
 - a. Health and Safety Code, Chapters 121 and 122 (authority to enforce laws and appropriate funds necessary to protect the public health); Chapters 341 and 343 (nuisance abatement, including authority over disposal of human excreta, ensuring safe drinking water and sanitation of public facilities); Chapters 361, 363, 364, 365 and 368 (handling and disposal of waste and litter abatement);
 - b. Local Government Code, Section 233.061 et seq. (authority to adopt and enforce a fire code); Chapter 242 (authority to regulate subdivisions in the extraterritorial jurisdiction of a municipality); and
 - c. Property Code, Chapters 81 and 82 (authority to adopt regulations concerning condominiums); and
 - d. Water Code, Chapter 26 (authority to regulate water quality); and
 - e. powers granted to Counties and to the Commissioners Court by the Constitution and general laws of the State of Texas.

12. Rules and Regulations adopted solely pursuant to the authority granted to the County by Chapter 232, Subchapter E, Local Government Code are not intended and should not be interpreted to regulate the use of any building or property for business, industrial, residential or other purposes; the bulk, height, or number of buildings constructed on a particular tract of land, including without limitation, any restriction on the ratio of building floor space to the land square footage; or the number of residential units that can be built on a lot or per acre of land.
13. The Commissioners Court, pursuant to Texas Local Government Code 235.001, adopted the IFC 2021 Fire Code and may update, as necessary. The Commissioners Court hereby authorizes the County Fire Marshal to administer this order.
14. Pursuant to Texas Local Government Code 3000.002(c-3), the Commissioners Court has been granted authority to adopt orders regulating the installation and use of outdoor lighting within five miles of a military installation, base or camp in any unincorporated territory of the County, and for preservation of dark skies.

1.3 Applicable Rules and Regulations

The rules and regulations to which a particular development must comply are those in effect on the date the preliminary plat application for the development is submitted to the county, provided the applicant timely submits required documents and information in accordance with section 206.

The limitations and restrictions prescribed in these rules and regulations concerning lot size, minimum road frontage and building set back lines shall not apply to platted lots in subdivisions recorded and in existence prior to the effective date of these rules and regulations. However, any future alterations of the boundaries of such lots, whether through division or combination, shall be subject to the procedures set out in these rules and regulations.

1.4 Variances (Relief)

A. APPLICABILITY

1. Requests for Relief shall be submitted and decided prior to or at the same time as plat applications, affidavits of land location or permit applications.
2. No request for relief for submission of a GAR or from any of the requirements concerning a GAR shall be granted unless prior approval is granted by CCGCD.

B. PREAPPLICATION MEETING REQUIRED

1. Unless the meeting is waived by County Engineer, anyone seeking Relief from the Rules and Regulations herein shall meet first with the County Engineer before submitting a Request for Relief. A representative of the applicant may attend this meeting.
2. At the Preapplication Meeting, the County Engineer shall provide the applicant with the necessary forms to be included in the submittal, as well as a checklist of all other submittal requirements and exhibits needed to explain the need for relief.
3. There shall pass no more than three (3) months between the Preapplication Meeting and the submittal of a Request for Relief.

C. SUBMITTAL REQUIREMENTS

1. Request for Relief Form

The owner/developer (or agent representing the owner/developer) shall submit a written request for relief form (made available by the County Engineer) prior to or at the same time that the preliminary plat and/or plan for development for the proposed subdivision is submitted.

2. Application Fee
3. Proof of ownership
4. Exhibits necessary to explain or justify the relief, as identified at the Preapplication Meeting

D. COMPLETENESS

1. Once the request is submitted, the County Engineer will review the request to ensure that it contains all of the required information identified at the preapplication meeting.
2. Incomplete requests will not be accepted.
3. The County Engineer will notify applicant within 14 days whether the application has been deemed complete. If the application is incomplete, County Engineer will identify any missing information. The applicant shall provide any missing information and re-submit the request. If all items have been included in the resubmittal, the application will then be deemed complete.

E. DECISION AGENT

The Commissioners Court may grant relief from some provisions in these Rules and Regulations in accordance with the Criteria for Approval.

F. CRITERIA FOR APPROVAL

1. No relief shall be granted unless the Commissioners Court finds:
 - a. That there are special circumstances or conditions affecting the real property involved, such that the strict application of the provisions of these Rules and Regulations would deprive the applicant of the reasonable use of their property; and
 - b. that the relief is necessary for the preservation and enjoyment of a substantial property right of the applicant; and
 - c. that the granting of the relief will not be detrimental to the public, health, safety, morals or general welfare; or injurious to other property in the area; and
 - d. that the granting of the relief will not have the effect of preventing the safe, orderly and healthful development of the real property in accordance with the remaining provisions of these Rules and Regulations.
2. Financial hardship alone shall not be a basis for the Commissioners Court granting relief from these Rules and Regulations.

G. NOTIFICATION

The decision of the Commissioners Court shall be declared at the regularly scheduled Court meeting and included in the minutes of the Court meeting.

1.5 Violations, Enforcement and Penalties

A. CIVIL REMEDIES

At the request of the Commissioners Court, General Counsel to the County or another attorney representing the County shall file an action in court of competent jurisdiction to:

1. Enjoin the violation or threatened violation of these Rules and Regulations;
2. Recover damages in an amount adequate for the County to undertake any construction or other activity to bring about compliance with these Rules and Regulations.

B. CRIMINAL PENALTIES

A person commits an offense if the person knowingly or intentionally violates a requirement contained in these Rules and Regulations. An offense is a Class B misdemeanor punishable by confinement in the county jail for up to 180 days and a fine not to exceed \$2000.00 or both imprisonment and fine. A person who violates Section 12.002, Property Code, concerning provisions for recording a subdivision plat or replat or for selling or conveying lots in a subdivision plat or replat before approval and recording of the plat or replat is guilty of a misdemeanor punishable by a fine of up to \$1000.00 and confinement in the county jail for 90 days or both the fine and confinement. Violation of the provisions of Section 12.002 Property Code is also prima facie evidence of an attempt to defraud.

C. OTHER SANCTIONS.

1. The Commissioners Court may refuse to approve the plat of any subdivision unless such plat complies with all applicable provisions of these Rules and Regulations and approved financial security is provided in a timely manner to the County by the developer.
2. No lot in a subdivision may be sold or otherwise conveyed or transferred until the final plat of the subdivision is approved and recorded in compliance with these Rules and Regulations.
3. Unless exempted by Section 232.029, Local Government Code, a utility may not serve or connect any subdivided land with water or sewer services unless the utility receives a copy of the development permit issued by Kendall County Engineer's Office.
4. Unless exempted by Section 232.029, Local Government Code, a utility may not serve or connect any subdivided land with electricity or gas unless the entity receives a determination from the Commissioners Court that adequate provisions have been made for water and sewer services in the subdivision.
5. Until improvements in a subdivision have been completed in accordance with the final plat and these Rules and Regulations, the Commissioners Court shall not accept the improvements for county maintenance or release any financial security posted to ensure timely and proper completion of such improvements. In the event the improvements are not completed in accordance with the final plat and these Rules and Regulations, and the financial security is expiring, the Commissioners Court may take action to collect the financial security.

1.6 Validity and Severability

A. SEVERABILITY

The provisions of these Rules and Regulations are separable, in accordance with the following:

1. If any part of these Rules and Regulations is declared invalid, unenforceable, or unconstitutional, for any cause or reason, such invalidity, unenforceability, or unconstitutionality shall not affect, invalidate, or impair the validity, force, or effect of any other part of these Rules and Regulations.
2. If any court of competent jurisdiction shall judge invalid the application of any provision of these Rules and Regulations to a particular property, such judgment shall not affect the application of said provision to any other property not specifically included in said judgment.

1.7 Construction and Interpretation

A. TERMINOLOGY

1. “Shall” is always mandatory and is not permissive.
2. “Must” is always mandatory and is not permissive.
3. “May” is permissive.
4. “Should” is advisory and is intended to inform applicants of preferred practices and activity in the County.

B. INTERNAL CONSISTENCY

Whenever one or more provisions of the Development Regulations are in apparent conflict, the provisions shall be construed, if possible, so that effect is given to each provision. The County Engineer shall be responsible for resolving any internal conflicts or inconsistencies. Appeals to such interpretations may be made to the Commissioner’s Court.

C. REFERENCES TO LAWS AND STATUTES

Any reference to federal or state laws or any other official code or regulation shall be construed to be a reference to the most recent enactment of the particular law, and shall include any amendments to it, as may be adopted from time to time.

D. CROSS REFERENCES

References to other regulations or provisions are for the convenience of the reader. Lack of a cross-reference does not exempt a land, building, structure or use from other regulations.

E. ILLUSTRATIONS

The Development Regulations contain occasional graphics, pictures, illustrations, and drawings in order to assist the reader in understanding and applying the text. To the extent that there is any inconsistency between the text of the Development Regulations and any such graphic, picture, illustration, or drawing, the text controls, unless otherwise provided in the specific section.

F. TENSES AND NUMBERS

Unless the context clearly indicates to the contrary, words used in the present tense include the future, words used in the singular include the plural, and words used in the plural include the singular.

G. GENDER

Use of the masculine gender includes the feminine gender, and the use of the feminine gender includes the masculine.

H. DAYS, DATES AND TIME

The time within which an action is to be completed shall be computed by excluding the first and including the last day, except that if the last day is a Saturday, Sunday or legal holiday, that day shall be excluded. Unless otherwise indicated, any references to days shall mean calendar days.

1.8 Definitions

A. MEANING

For the purpose of these Rules and Regulations, the following terms, phrases, words, and their derivations shall have the meaning ascribed to them in this section.

Definitions not expressly prescribed herein shall be construed in accordance with customary usage in subdivision planning and engineering practices.

B. DEFINITIONS

1. Accent Lighting: Lighting used to emphasize or draw attention to a special object or building.
2. Affidavit of land location: A document depicting a survey of subdivided property prepared for recording, not requiring approval by the Commissioners Court but that must be submitted to the County Engineer in compliance with requirements established by the Commissioners Court.
3. Alley: An alternate access to property, commercial or residential buildings, usually to the rear of the property, intended for restricted access by property owners, and/or for commercial deliveries and/or trash pick-up, etc.
4. Amortization. The process of allocating the cost of an asset over a period of time.
5. Barn Light-style Fixture: Fixtures, usually with a mercury vapor lamp, that have a round, plastic, translucent lens that refracts and scatters the light, often allowing the source of the light to be seen off premises to constitute light trespass and light emissions to escape above the horizontal plane to pollute the night sky.
6. Border street: An existing street or a designated street, according to the Kendall County Master Thoroughfare Plan, which adjoins, but is outside the boundaries of, a development.
7. B-U-G Rating. A luminaire classification system with ratings for backlight (B), uplight (U), and glare (G)
8. Building set back line: A line located within a lot or tract of land defining the required minimum horizontal distance between a building or other structure and an adjacent road or street or property boundary. Such setbacks can be front, side, or rear. Front set back lines shall be measured from the roadway right of way line. Rear and side setback lines shall be measured from the property line.
9. Bulb. A light emitting device containing a light source.
10. Business day: A business day is a day other than a Saturday, Sunday, or County holiday.
11. Calendar Days: Consecutive Gregorian calendar days inclusive of weekends and all legal holidays.
12. Camp Bullis Dark Skies Zone: The Camp Bullis Dark Skies Zone is an area that extends five miles in all directions from the Camp Bullis boundary.
13. Canopy. A covered, unconditioned structure with at least one side open for vehicular and/or pedestrian access. (An unconditioned structure is one that may be open to the elements and has no heat or air conditioning.)
14. Certificate of Compliance: Certificate of Compliance means a Certificate signed by the County Engineer stating that infrastructure for the development has been constructed in compliance with the approved Development Plan for such development.
15. City: An incorporated municipality of the State of Texas.
16. Commercial development: Commercial development includes the development of real property for anything other than use as a single-family residence.
17. Commercial establishment: a place where commodities or services are provided, exchanged, sold or bought.
18. Conditional Letter of Map Revision (CLOMR): a letter, issued by FEMA, stating that a proposed project, if built per plan, is consistent with the requirements of the National Flood Insurance Program (NFIP). A CLOMR does not revise the effective FIRM or FIS.

19. Condominium: Condominium as used herein is defined in section 82.003(8) of the Texas Property Code.
20. Correlated Color Temperature (CCT): A measure in degrees Kelvin (°K) of light's warmth or coolness. County Engineer: County Engineer means the individual appointed by the Commissioners Court as the County Engineer of Kendall County, or the County Engineer's designee.
21. County road: A public road that has been accepted by the County for maintenance
22. County: Kendall County, Texas.
23. Cow Creek Groundwater Conservation District (CCGCD): Cow Creek Groundwater Conservation District means the district with the authority and responsibility to regulate groundwater production in Kendall County.
24. Cul-de-sac corner: Enlargement of a 90° street intersection by a 50-foot radius from the intersection of the centerlines of the two streets.
25. Cul-de-sac: A street having one outlet to another street and terminated on the opposite end by a vehicular turnaround.
26. Dark sky regulations: design standards that protect the night sky from inappropriate or excessive use of artificial light.
27. Dead-end street: A street with only one outlet and no vehicular turnaround.
28. Dedicatory Instrument: Dedicatory instrument as used herein is defined in section 82.003(11-a), Texas Property Code.
29. Deed restrictions: A restrictive covenant contained in a contract between the buyer and the seller of real property that imposes duties on the buyer or restricts the buyer's use of the land. These restrictions may be set out in the deed conveying the property or may be contained in a separate document filed for record with the County Clerk.
30. Detention time: The amount of time a body of water is actually present in a storm-water detention facility.
31. Detention: The temporary storage of storm-water runoff, with controlled peak discharge rates.
32. Developer: Any person or entity, including the owner of real property, who proposes to construct and/or constructs improvements on real property. This may or may not include a division of property. A subdivider is a developer.
33. Development for Public or Commercial Purposes: the development of land for any purpose other than as a single-family residential lot developed for a single-family dwelling.
34. Development Plan: Development Plan means a complete and exact plan for the infrastructure of a manufactured home rental community, recreational vehicle rental community, including, without limitation, the survey and all drawings and specifications required herein. [The "Development Plan" is not the same as the "Plan" defined in section 82.003(18), Texas Property Code.]
35. Development Rules: Development Rules means the Kendall County, Texas Development Rules and Regulations adopted by the Commissioners Court governing plats and subdivisions of land within the unincorporated area of Kendall County.
36. Diffuser. A translucent enclosure which surrounds or covers a light source, and through which can be seen no semblance of the image of the light source.
37. Driveway: An entrance to property from a road or street intended for motor vehicular ingress and egress to the property and further defined as follows:
 - a. Commercial: An entrance to and/or an exit from any commercial, business or similar type of establishment to a road to street.
 - b. Private: An entrance to and/or an exit from private property to a road or street for the exclusive use and benefit of the owner of the property.
 - c. Public Access: An entrance to and/or an exit from schools, churches, cemeteries, and other public places or buildings of a like character to a road or street for the use of the public generally.

38. Drop Lens or Sag Lens Fixture. A fixture, typically seen on older streetlights or parking lot lights, where the lens extends below the lowest opaque part of the fixture such that light is scattered above the horizontal plane.
39. Easement: A grant of one or more property rights by the property owner to and/or for the use by a specific person, persons, or the public generally. An easement may be granted in a document executed by the owner of the property or may result through operation of law. Types of easements include the following:
 - a. Drainage easement: The right for the passage of water drainage across private land, together with the right to enter thereon for the purpose of maintaining drainage structures and the free flow of drainage.
 - b. Fire easement: An easement intended for and/or used for fire access. This includes the right of access and/or entrance to, and the right to pass over, the property with machinery or vehicles necessary for fire safety and prevention, as well as the right to use equipment such as water storage tanks.
 - c. Ingress and egress easement: The right to enter upon and proceed across real property in order to enter or exit real property that is owned, leased, or otherwise under the control of the person, persons or entity granted the easement (such easements may be described by metes and bounds or by general reference and may be recorded or unrecorded).
 - d. Non-access easement: An easement dedicated to the county prohibiting any access.
 - e. Roadway easement: See roadway right-of-way.
 - f. Sanitary control easement: An easement located around a water well to prevent activities that could result in the contamination of the well or the underlying aquifer.
 - g. Utility easement: An easement intended for and/or used for the location of utilities, including the right of access, to, over, and/or enter the property with machinery and other vehicles necessary for the installation and maintenance of utilities.
40. Electronic Pricing Sign. A display, typically seen at service stations, consisting of LEDs or other light emitters that indicate the current price of a product.
41. Engineer: A person duly authorized and properly licensed under the provisions of the Texas Engineering Practice Act, to practice the profession of engineering.
42. Equivalent single-family connection (ESFC): As defined by CCGCD, potable water usage of a typical single-family dwelling using an average of 360 gallons of water per day.
43. Family Cemetery: A cemetery located on private land, for the interment of family members, in keeping with Texas Health and Safety Code.
44. Fire Apparatus Access Road: a road that provides fire apparatus access from a fire station to a facility, building or portion thereof, in accordance with the Fire Code. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access road.
45. Fire Lane: a road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.
46. FIRM: Flood Insurance Rate Map.
47. Fixture. An outdoor lighting assembly containing one or more lamps and including any lenses, reflectors, and/or shields designed to direct the light onto a surface or at a point in space. (see also "Luminaire")
48. Floodlight. A fixture and/or illuminating element designed to emit light over a broad area.
49. Floodplain: Any land area (normally dry) susceptible to being inundated by water from any source, including both the usual and unusual accumulation or run-off of stormwater.
50. Fully Shielded Fixtures. Fixtures, as installed, that are designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the lamps or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where the light is emitted.
51. GAR: Groundwater Availability Report

52. GIS: Geographic Information System.
53. *Glare*: Light, entering the eye directly from the source of an illumination or indirectly from reflective surfaces, that causes a person of average sensibilities visual discomfort or reduced visibility. Excessive glare can be a negative safety factor, particularly for older people and the visually impaired.
54. *Gooseneck Fixture*. A lighting fixture of many styles, typically with a long, curved metal tube connecting the illuminating element with the building or other structure and supporting a deep enclosure in which the illuminating element can be mounted such that no part of the element extends beyond the bottom of the enclosure. Gooseneck fixtures are somewhat nostalgic and reminiscent of times past. Kendall County encourages the use of gooseneck outdoor lighting fixtures as they are both night sky-friendly and support Kendall County's efforts to retain its rural ambiance.
55. GPS: Global Positioning System.
56. Grandfathering Provision. A provision of the order that exempts from the order lighting fixtures in place and operating on the date of adoption of the order.
57. Grandfathering with Sunset Provision. A provision of the ordinance that establishes a time limit for grandfathering exemptions after which the fixtures must be in compliance with the order.
58. Groundwater: Any water that is located beneath the surface of the ground.
59. Highway: A public road maintained by the Texas Department of Transportation.
60. IDA Product: An IDA-Approved outdoor lighting product is certified by the International Dark Sky Association for luminaires that minimize glare, reduce light trespass and do not pollute the night sky.
61. IFC: International Fire Code.
62. Improvements: Roads, streets, curbs, sidewalks, drainage structures, water systems, sewage disposal systems, etc., the construction of which may be required by the County; but may also include structures not required by the County such as houses, barns, garages, etc.
63. Incandescent Bulb. A traditional source of illumination consisting of a transparent or translucent glass housing containing a wire filament that emits light when heated by electricity.
64. Initial Lumens. The manufacturer-specified number of lumens of light generated by a lamp at the beginning of its service lifetime, not accounting for losses associated with lamp age.
65. Lamp. A light-emitting device or structure containing a light source. This includes but is not limited to a bulb, a tube, or an LED array.
66. LED: Light Emitting Diode.
67. Letter of Map Revision (LOMR): An official revision issued by FEMA to the currently effective Flood Insurance Rate Map.
68. Lighting. Any source of light that does not include natural light emitted from celestial objects, fire, or other natural forms of illumination. The term includes any type of lighting, fixed or movable, designed or used for outdoor illumination of buildings or homes, including lighting for billboards, streetlights, canopies, gasoline station islands, searchlights used for advertising purposes, externally or internally illuminated on- or off-premises advertising signs, and area-type lighting. The term includes luminous elements or lighting attached to structures, poles, the earth, or any other location.
69. Light Pollution: Any adverse effect of artificial light including, but not limited to sky glow, light trespass, and glare. Light pollution washes out starlight in the night sky, disrupts ecosystems, wastes energy, compromises citizen safety and security, and is documented to have adverse effects on human health.
70. Light String: Any number of bulbs, LEDs, or other light emitter connected with wire in a linear or two-dimensional array, not contained within the structure of a fixture, used for either illumination or decoration, and supported in any manner. (see also "Rope Lights")
71. Light Trespass: Light that falls beyond the property that it is intended to illuminate. Kendall County considers light trespass to be a nuisance in the legal sense of the term.

72. Logo. A representation or symbol adopted by a business, organization, or individual intended to promote instant public recognition.
73. Lot: An undivided tract or parcel of real property that is designated as a distinct and separate tract, and which is usually identified by a tract or lot number or by a symbol in a subdivision plat.
74. Low Voltage Lighting. Landscape lighting that typically use luminaries having a rated initial lumen output of 540 lumens or less.
75. Low water crossing: A roadway crossing of a dry or intermittent flowing creek, drainage easement or other low-lying area that may or may not have a bridge, culvert, or culverts, and which may be inundated by water during storm events.
76. Lumen: The unit of measurement (often abbreviated “lm”) used to quantify the amount of light produced by a bulb or emitted from a fixture (as distinct from “watt,” a measure of power consumption). A “*lumen*” is to light as a “*gallon*” is to gasoline, i.e., it is a measure of quantity.
77. Lumens per Net Acre. The total number of initial lumens produced by all lamps utilized in outdoor lighting on a property divided by the number of net acres or parts of a net acre with outdoor illumination on the property.
78. Luminaire: A luminaire is a complete lighting unit that consists of a lamp or lamps, or a lamp and ballast(s) when applicable, or lamps together with the parts designed to distribute light, to position and protect the lamps and to connect the lamps to the power supply.
79. Manufactured home park: A Manufactured Home Rental Community.
80. Manufactured home rental community: 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.
81. Manufactured home spaces: Manufactured home spaces means the areas designated on the Development Plan or Plat for the location of one manufactured home. Spaces shall be numbered consecutively on the plan to facilitate addressing and to assist law enforcement, firefighting and emergency service units in responding to emergencies.
82. Manufactured home subdivision: a plot or tract of land that is separated into two or more spaces or lots that are offered for individual sale for the installation of manufactured homes for use and occupancy as residences.
83. Manufactured home: A Manufactured Home is a structure that is transportable in one or more sections. In traveling mode, the home is eight feet or more in width and forty feet or more in length. A Manufactured Home is designed and constructed to the Federal Manufactured Construction and Safety Standards and is so labeled. When erected on site, the home is: at least 400 square feet, built and remains on a permanent chassis and designed to be used as a dwelling with a permanent foundation built to FHA criteria. The structure must be designed for occupancy as a principal residence by a single family.
84. Motion Sensor. An electronic device to control outdoor lighting such that lights are operating only when a moving object is or recently has been present.
85. Multi-family housing: A duplex, triplex, quadraplex, apartments, or condominiums, as those structures are commonly defined, and which are used or intended to be used to provide housing for more than one family in one or more buildings
86. Multi-family residential building: Multi-family residential building means a building containing four or more units that is intended for residential use and units in the building are rented, leased, or offered for rent or lease.
87. Multi-unit Development: Multi-unit development means a building containing two or more units that is located on a tract of land, when the title to any of the units is in a different person or entity than the title to the real property upon which the building containing the units is located. If the person or entity with title to a unit also has some ownership interest in the real property upon which the building containing the units is located other than one hundred percent (100%) fee simple title to the entire tract of real property upon which all buildings in the development are located, then title to the unit

- and real property are considered to be separate. Unless stated otherwise, "multi-unit development" includes a condominium.
88. Net Acre. A piece of land measured in acres exclusive of rights-of-way, waterways, drainage areas, or other non-developable areas.
 89. *Nonconforming Lighting*. Outdoor lighting fixtures that do not conform to the requirements of this Article after the date of its adoption.
 90. *Nuisance*. Any condition that substantially interferes with the use and enjoyment of property by causing unreasonable discomfort or annoyance to persons of ordinary sensibilities.
 91. On-Site Sewage Facility (OSSF): Sometimes referred to as a "septic system", a sewage treatment and disposal system, designed and constructed in accordance with applicable law and regulations that is intended and used to treat and safely dispose of wastewater and sewage generated only on the site where the system is located.
 92. Other parts: As used in Local Government Code, Section 232.001(a)(3), any improvement or area of a tract of land, including an easement, intended to be dedicated to the public or for the use of owners of property fronting on or adjacent to such improvement, area, or easement, including a part of the tract that provides less than 60 feet of fee simple road frontage for each lot or tract on a state highway, county road or a road constructed to county specifications.
 93. Outdoor Lighting: Any type of fixed or movable lighting equipment that is designed or used for illumination out of doors. The term includes billboard lighting, streetlights, searchlights and other lighting used for advertising purposes and area lighting. The term does not include lighting equipment that is required by law to be installed on motor vehicles or lighting required for the safe operation of aircraft. Except as exempted herein, non-residential lighting fixtures that are installed indoors that cause light to shine outdoors are considered outdoor lighting for the purposes of this article.
 94. Owner: The person or persons possessing fee simple title to real property.
 95. Owner's representative: Any person or entity, including a surveyor, engineer, lawyer, architect, or planner who has been given authority to represent the owner.
 96. Pavement width: The portion of a road or street that is paved and available for use by vehicular traffic including shoulders. For roads and streets where curbs are laid, it is the portion of the roadway located between the face of the curbs.
 97. Plat resubmittal: Plat resubmittal means the information provided by the applicant to the County to address the conditions of approval or reasons for disapproval of an application for a plat.
 98. Plat, amended: A plat that is prepared and submitted to correct inaccuracies in a recorded plat in order to correctly reflect existing conditions or that is prepared and submitted in order to make minor changes to the subject subdivision such as the relocation of one or more lot lines. An amended plat shall not change the character of the subdivision.
 99. Plat, final: A plat that is prepared and submitted in accordance with the requirements contained in these Rules and Regulations for the division of a tract of real property subject to final approval by the Commissioners Court.
 100. Plat, preliminary: A plat that is prepared and submitted in accordance with the requirements contained in these Rules and Regulations for the proposed division of a tract of real property subject to preliminary approval by the Commissioners Court.
 101. Plat, revised: A plat prepared and submitted in order to incorporate revisions or make substantive changes to the subject subdivision, including changes that increase the number of lots in the subdivision.
 102. Private road (or street): A road located on private property or in a private (gated) subdivision and maintained by some entity other than the County).
 103. Private (gated) subdivision: A limited-access subdivision with privately maintained infrastructure.
 104. Public access developments: Developments of schools, churches, and other public places or buildings of a like character.
 105. Public building: a place in which the possession and/or use, as well as the property in it, gives members of the public free access.

106. Public road (or street): A road that has been dedicated for public use or to which the public has obtained the right of use under applicable law, but which is not maintained by the County.
107. Recreational Vehicle (RV): A vehicle built on a single chassis, designed and constructed to be self-propelled or to be towed on its own chassis by a motor vehicle, not intended for use as a permanent dwelling, but sometimes used for that purpose.
108. Refractive Lens Cover. A plastic or glass cover on an outdoor lighting fixture that scatters light away from the fixture.
109. Residence: A place where people live.
110. Reverse Channel Signage. Signage consisting of opaque letters and/or symbols typically mounted several inches in front of an opaque surface such as a wall and illuminated by LEDs, bulbs or other light emitters embedded within the letters or symbols themselves such that the letters and symbols stand out in front of the reflected light.
111. Road frontage: That part of a tract of real property that is adjacent to and has access to a street or road.
112. Road or street: Any public or private way for the passage of vehicles and people.
113. Roadway right-of-way: Real property over which a roadway is intended to be located or is located, including necessary drainage areas, storm sewers, and culverts, that may also be used for the placement of utilities such as electricity, water, sanitary sewer, telecommunications, etc. (Also known as a roadway easement or easement for roadway purposes.)
114. Rope Lights: Any number of bulbs, LEDs, or other light emitters connected with wire in a linear or two-dimensional array, wholly enclosed in plastic covering and used for either illumination or decoration. (see also "Light Strings")
115. Rural Project: A rural project is a project where the average size of all lots is 6 or more acres, and no lot is smaller than 3 acres.
116. RV: see Recreational Vehicle
117. Sanitary control easement: (See easements above)
118. Sconce. A type of light fixture, usually decorative, that is attached to a wall in such a way that it uses only the wall for support,
119. Single-family residence: A single structure or building intended to be occupied and /or occupied by one family.
120. Sky Glow: The brightening of the nighttime sky that results from scattering and reflection of artificial light by moisture and dust particles in the atmosphere. Sky glow is caused by light escaping above the horizontal plane to the detriment of the night sky.
121. Specular Reflector. A reflector that has a mirror-like surface that reflects an image (no matter how imperfect or distorted) of a light source.
122. Spotlight: A fixture designed to light only a small, well-defined area.
123. Street, collector: A road or street designed and constructed with the primary function of collecting and distributing traffic between residential streets and county roads and State highways.
124. Street, residential: A road or street designed and constructed for the purpose of providing access to real property located within a residential subdivision and not intended for through traffic.
125. Structure: Any construction, including a building or any portion thereof, erected for the purposes of support, shelter or enclosure of persons, animals or property of any kind, including swimming pools and decks. A wooden fence shall not be considered a *structure* for purposes of these requirements.
126. Subdivide: The act of dividing a tract of land into two or more parts.
127. Subdivided tract: Subdivided tract shall mean a tract of land, as a whole, that is subdivided. The term does not mean an individual lot in a subdivided tract of land.
128. Subdivider: See Developer.
129. Subdivision: The result of subdividing a tract of land into two or more parts.
130. Surveyor: A Licensed State Land Surveyor or Registered Professional Land Surveyor authorized by applicable law to practice the profession of surveying in Texas.
131. System: For fire prevention requirements, a system means fire alarm, fire extinguishing or smoke control system.

- 132. TCEQ: The Texas Commission on Environmental Quality.
- 133. Temporary Outdoor Lighting: Luminaires used or installed for a specific short-term unconventional purpose of illuminating an outside area or object for a period of less than fourteen days, with at least thirty days passing before being used again.
- 134. Traffic Impact Analysis (TIA): An analysis of projected vehicular traffic resulting from a proposed development that is based on data and procedures approved by Kendall County and is prepared by a registered engineer, licensed in the State of Texas, who is qualified to perform such analysis.
- 135. TxDOT specifications: The standard specifications for construction and maintenance of highways, streets, and bridges adopted by TxDOT.
- 136. TxDOT: The Texas Department of Transportation.
- 137. Uplighting. Lighting that is directed in such a manner as to project light rays above the horizontal plane running through the lowest point of the fixture where light is emitted.
- 138. Urban Project: An urban project is a project where the average size of all lots is less than 6 acres, or any lot is smaller than 3 acres.
- 139. Utility (utilities): Electricity, gas, water, telephone service, sewage treatment service and other similar services transmitted over lines or through piping located on or in utility easements; may also refer to the entities that provide such services.
- 140. Variance: A grant of relief by the Commissioners Court from the terms of a regulation.
- 141. Violation: The failure of a structure or other development to be fully compliant with the community's regulations.
- 142. Wall Pack Fixtures: Fixtures of a variety of styles that commonly are attached to the exterior wall of a building or other structure and flood an area with light.
- 143. Zero lot line: The location of a building on a lot or tract of land in such a manner that one or more of the building's exterior walls rests directly on or immediately adjacent to the lot line.

Chapter 2 Platting and Land Subdivision

2.1 Land Subdivision, Generally

A. PLAT REQUIRED FOR LAND SUBDIVISION

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 subdivision of the tract, including an addition, lots, or streets, alleys, squares, parks, or other parts of the tract intended to be dedicated to 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.

A division of a tract includes a division regardless of whether it is made by using a metes and bounds description in a deed of conveyance or in a contract for a deed, by using a contract of sale or other executory contract to convey, or by using any other method.

B. JURISDICTION FOR LAND SUBDIVISION

1. Within an incorporated municipality or the extra-territorial jurisdiction of an incorporated municipality, plat applications shall be submitted and decided in accordance with any development agreement and/or any interlocal agreement between the municipality and the County.
2. For real property in Kendall County that is outside of the boundaries or extra-territorial jurisdiction of an incorporated municipality, plat applications shall be submitted to and decided by the County.

C. APPROVAL BY COUNTY REQUIRED

1. The Commissioners Court of the County must approve, by an order entered in the minutes of the court, a required plat. The Commissioners Court may refuse to approve a plat if it does not meet the requirements prescribed by or under Local Government Code, Chapter 232, or if any bond required under Chapter 232 is not filed with the County.
2. Any subdivision that has not been accepted and approved by the Commissioners Court shall not be considered a plat under these Rules. A new plat shall be required.
3. The Commissioners Court may not approve a plat unless the plat and other documents have been prepared as required by Texas Local Government Code, Section 232.0035, if applicable.
4. If no portion of the land subdivided under an approved plat is sold or transferred before January 1 of the 51st year after the year in which the plat was approved, the approval of the plat expires, and the owner must resubmit a plat of the subdivision for approval. A plat resubmitted for approval under this subsection is subject to the requirements prescribed by this Chapter at the time the plat is resubmitted.

D. NO COUNTY OBLIGATION

1. The responsibility for all costs required by these Rules and Regulations shall be borne by the developer.
2. In no event is the County required to complete the work proposed by a developer and approved by the County or to otherwise assume any obligation of the developer.

E. CONFLICT OF INTEREST

1. A person has a substantial interest in a subdivided tract if the person:

- a. has an equitable or legal ownership interest in the tract with a fair market value of \$2,500 or more;
 - b. acts as a developer of the tract;
 - c. owns 10 percent or more of the voting stock or shares of or owns either 10 percent or more or \$5,000 or more of the fair market value of a business entity that:
 - i. has an equitable or legal ownership interest in the tract with a fair market value of \$2,500 or more; or
 - ii. acts as a developer of the tract; or
 - d. receives in a calendar year funds from a business entity described by Subdivision (3) that exceed 10 percent of the person's gross income for the previous year.
2. A person also is considered to have a substantial interest in a subdivided tract if the person is related in the first degree by consanguinity or affinity, as determined under Chapter 573 of the Local Government Code, to another person who, under Subsection (b), has a substantial interest in the tract.
3. If a member of the Commissioners Court of a county has a substantial interest in a subdivided tract, the member shall file, before a vote or decision regarding the approval of a plat for the tract, an affidavit stating the nature and extent of the interest and shall abstain from further participation in the matter. The affidavit must be filed with the county clerk.
4. A member of the commissioner's court of a county commits an offense if the member violates Subsection (d). An offense under this subsection is a Class A misdemeanor.
5. The finding by a court of a violation of this section does not render voidable an action of the commissioner's court unless the measure would not have passed the Commissioners Court without the vote of the member who violated this section.

F. EXCLUSIONS FROM PLATTING REQUIREMENTS

The following divisions of real property are not subject to the requirement that a plat be submitted to Commissioners Court for approval.

In all instances in which a division of property is exempt from the requirement that the plat be approved by the Commissioners Court, the owner shall prepare and submit to the County Engineer an affidavit of fact establishing that the division complies with the requirements of one of the exceptions.

1. Agricultural, Farm, Ranch, Wildlife, Timber Production
 - a. The division of real property does not require a plat if the owner does not lay out a part of the tract described by Section 232.001(a)(3), Local Government Code; and the land is to be used primarily for:
 - i. Agricultural use, as defined by Section 103, Article VIII, Texas Constitution; or
 - ii. farm, ranch, wildlife management, or timber production use within the meaning of Section 1(d)(1), Article VIII, Texas Constitution.
 - b. If the tract ceases to be used primarily for agricultural use or for farm, ranch, wildlife management, or timber production use, the platting requirements apply.
2. Family Division
 - a. The division of real property does not require a plat if
 - i. the owner divides the tract into four or fewer parts; and
 - ii. does not lay out a part of the tract described by Section 232.001(a)(3),

- Local Government Code; and
 - iii. each of the lots is to be sold, given, or otherwise transferred to an individual who is related to the owner within the third degree by consanguinity or affinity as determined under Chapter 573, Government Code.
- b. If any lot is sold, given, or otherwise transferred to an individual who is not related to the owner within the third degree by consanguinity or affinity, the platting requirements apply.
- c. Relief from road frontage may be authorized by the County Engineer for a Family Division provided:
 - i. The property is at least twelve (12) acres before dividing, and the average size of all parts after dividing is six (6) acres;
 - ii. All other requirements of the Kendall County development rules and regulations are satisfied; and
 - iii. Each resulting lot, tract, or parcel of land must have road frontage of at least sixty (60) feet or an easement for roadway purposes (not merely an easement for ingress and egress); such roadway easement must be at least sixty (60) feet in width, identified by a metes and bounds description dedicated by the owner of the property in perpetuity for roadway purposes, be of record; and such easement must provide access from each resulting lot, tract, or parcel of land to a state highway, county road, or a road constructed to county specifications; and
 - iv. There shall be notes on the plat or affidavits of land location and deeds or instruments of conveyance or transfer as follows:
 - (a) Property cannot be sold, given, or otherwise transferred to any person not related to the grantor within the third degree of consanguinity or affinity without complying with the Kendall county development rules and regulations in effect at the time of conveyance or transfer
 - (b) property cannot be further divided without complying with the Kendall County Development Rules and Regulations in effect at the time of the division
 - (c) Any transfer or conveyance of the property must include the conveyance or transfer of the easement for roadway purposes

3. Tracts Larger Than 10 Acres

The division of real property does not require a plat if

- a. The owner divides the tract into two or more parts; and
- b. does not lay out a part of the tract described by Section 232.001(a)(3), Local Government Code;
- c. all of the lots of the subdivision are more than 10 acres in area; and
- d. each lot has at least 60 feet of fee simple road frontage on a state highway county, road or a road constructed to county specifications.

4. Veterans' Land Board Program

The division of real property does not require a plat if

- a. The owner divides the tract into two or more parts; and
- b. does not lay out a part of the tract described by Section 232.001(a)(3), Local Government Code; and
- c. all the lots are sold to veterans through the Veterans' Land Board Program. If any lot is sold, given, or otherwise transferred to an individual who is not a veteran, the platting requirements apply.

5. State, State Agency Board or Commission

The platting requirements do not apply to a subdivision of any tract of land belonging to the state or any state agency, board, or commission, or owned by the permanent school fund or any other dedicated funds of the state, unless the subdivision lays out a part of the tract described by Section 232.001(a)(3), Local Government Code. If any part of the subdivision is sold, given, or otherwise transferred to an entity that is not the state, a state agency, board, or commission, the platting requirements apply.

6. Floodplain

The division of real property does not require a plat if

- a. The owner divides the tract into two or more parts and;
- b. the owner of the land is a political subdivision of the state; and
- c. the land is situated in a floodplain; and
- d. the lots are sold to adjoining landowners.

7. Required by Lender

- a. The owner of a tract of land with a total contiguous area of at least 12 acres identifies one part as collateral, with no more than two parts total, in order to obtain a loan and comply with requirements of the lender; and
- b. the smaller part consists of at least three acres; and
- c. each part has a minimum of 60 feet of fee simple road frontage on a state highway, county road or a road constructed to county specifications; and
- d. no part is conveyed to a third party.
- e. If any part is sold, given, or otherwise transferred to a third party, the platting requirements apply.

8. Further Division

The division of real property does not require a plat if

- a. The owner divides the tract into two parts; and
- b. The owner does not lay out a part of the tract described by Section 232.001(a)(3), Local Government Code; and
- c. One new part is to be retained by the owner; and
- d. The other new part is to be transferred to another person who will further subdivide the tract subject to the plat approval requirements.

9. Undivided Interest

The owner divides the tract into two or more parts; and the owner does not lay out a part of the tract described by Section 232.001(a)(3), Local Government Code; and all parts are transferred to persons who owned an undivided interest in the original tract; and a plat is filed before any further development of any part of the tract occurs.

Relief from road frontage may be authorized by the County Engineer Undivided Interest provided:

- a. The property is at least twelve (12) acres before dividing, and the average size of all parts after dividing is six (6) acres;
- b. All other requirements of the Kendall County development rules and regulations are satisfied; and
- c. Each resulting lot, tract, or parcel of land must have road frontage of at least sixty (60) feet or an easement for roadway purposes (not merely an easement of ingress and egress); such roadway easement must be at least sixty (60) feet in width,

- identified by a metes and bounds description dedicated by the owner of the property in perpetuity for roadway purposes, be of record; and such easement must provide access from each resulting lot, tract, or parcel of land to a state highway, county road, or a road constructed to county specifications; and
- d. There shall be notes on the plat or affidavits of land location and deeds or instruments of conveyance or transfer as follows:
 - i. Property cannot be further divided without complying with the Kendall County Development Rules and Regulations in effect at the time of the division
 - ii. Any transfer or conveyance of the property must include the conveyance or transfer of the easement for roadway purposes

10. Tracts Larger Than 6 Acres

The division of real property does not require a plat if

- a. The owner divides the tract into two parts; and
- b. does not lay out a part of the tract described by Section 232.001(a)(3), Local Government Code; and no more than two tracts greater than six (6) acres are created out of the parent tract; and
- c. each lot has a minimum of 250 feet of fee simple road frontage on a state highway, county road or a road constructed to county specifications.

11. Family Cemeteries

Upon compliance with Texas Statutes and rules and regulations providing for the establishment of a family cemetery and compliance with Kendall County's Affidavit of Land Location Requirements, no further regulatory action shall be necessary for the establishment of a family cemetery, except that a note must be placed on the Affidavit of Land Location that the tract is for a private family cemetery only.

12. Transfer to adjoining landowner

- a. The division of real property does not require a plat if:
 - i. The owner divides a tract into two or more parts; and
 - ii. a landowner agrees to purchase a tract of land from an adjoining property owner so that the tract purchased can be combined to an existing tract of land
- b. Relief from road frontage and lot size may be authorized by the County Engineer for a Transfer to Adjoining Landowner provided:
 - i. there is no detrimental effect on the public health, public safety, and general welfare,
 - ii. the granting of relief is not injurious to other property in the area; and
 - iii. the granting of relief will not prevent the safe, orderly and healthful development of the land in accordance with the Development Rules and Regulations.
 - iv. A note must be placed on the Affidavit of Land Location and in the deed of conveyance that the tract of land purchased may not be separately conveyed from the tract to which it is combined, or alternatively, both tracts must be combined into one tract, either by survey contained in the affidavit of land location and/or by a survey described in an instrument filed with the official records in the county clerk's office.

G. EXCEPTIONS TO PLATTING REQUIREMENTS: AFFIDAVITS OF LAND LOCATION

1. Applicability

- a. In all instances in which a division of property is exempt from the requirement that the plat be approved by the Commissioners Court, as of May 13, 1996, the owner shall prepare and submit to the County Engineer an affidavit of fact establishing that the division complies with the requirements of one of the exceptions.
- b. The affidavit is also required in order to comply with Kendall County Geographic Information System, rural addressing, 911 emergency response requirements, and ad valorem taxing provisions.
- c. The affidavit shall comply with requirements established by the Commissioners Court and, following approval by the County Engineer, shall be filed for record in the County Clerk's Office.

2. Decision Agent

The documents shall be approved by the County Engineer.

3. Application Submittal Requirements for an Affidavit of Land Location

The documents shall meet the following criteria and will contain the following information:

a. Title

The documents must be titled "Affidavit of Land Location" and indicate the property owner shown on the deed records. The Affidavit of Land Location includes a cover sheet and a plat sheet.

b. Format

- i. The Affidavit of Land Location shall be prepared on 8½ by 14 paper.
- ii. A DWG file that includes the remainder shall also be submitted to the County Engineer.
- iii. All text must be legible.
- iv. Additional notes may be required by the County Engineer.
- v. Cover Sheet

- (a) The cover sheet shall show a location map which will identify the location of the subject property related to the nearest known points, such as road intersections, high power lines, creeks, etc.
- (b) The cover sheet shall contain the following statement with original signatures and be notarized:

I (name of owner) hereby affirm that this plat is a true and correct copy of the plat prepared by a registered public surveyor or licensed professional engineer, and that it depicts the _____ acre tract to be divided as illustrated, such tract being out of the _____ survey, Kendall County, Texas.

Subscribed and sworn to before me this ____ day of _____, 20__.

Notary Public, State of Texas

- (c) The cover sheet shall include a statement identifying which exception qualifies the property for an Affidavit of Land Location.
 - (d) The cover sheet shall include a note that the property cannot be further divided unless in compliance with the Kendall County Development Regulations in effect at the time of the division.
 - (e) The cover sheet shall bear an original signature of approval of the duly appointed representative of the County Engineer.
- vi. The plat shall show property boundaries drawn to scale, and shall include all property involved in the division, including the remainder. Multiple sheets may be used, as necessary. A match line must be used when a property is split across multiple sheets.
- vii. The plat shall show bearings and distances.
- viii. The plat shall show the location of existing roads and road name, if named, abutting or within the property to be divided. The type of road needs to be designated (county, public, or public easement road) with statement of maintenance responsibility. The plat must also show or label the right of way width.
- ix. Division off of an easement may require the private easement to be named for 911 addressing purposes.
- x. Road names must be approved by Kendall County
- xi. The existing address of the parent tract may change as a result of the division.
- xii. The plat shall show the anticipated or existing location of water well, septic systems, and sanitary control easements, if known. Well numbers shall also be provided.
- xiii. The plat shall indicate lot widths, showing that no portion of any lot is less than 60 feet in width.
- xiv. Remainders
 - (a) Any remainder that is created must have a tract number.
 - (b) If a remainder is created, a note is required that demonstrates the history of the property, written as a description of the parent tract save and except (a description of) the remainder.
 - (c) A survey may be required for remainders created prior to adoption of these Development Regulations for the issuance of permits.
 - (d) For remainders 25 acres or more, the surveyor shall approximate, label and graphically depict the remainder acreage and certify that the remainder is compliant with the requirements herein.
 - (e) A Remainder that is less than 25 acres shall require an Affidavit of Land Location.
- xv. Additional notes as required by the County Engineer.
- xvi. Caveat: If the property in question falls within the extra-territorial jurisdiction of any incorporated municipality, approval in addition to this Affidavit of Land Location requirement may be necessary and should be sought through that entity.

4. Deadline for Filing an Affidavit of Land Location

The documents shall be filed within ten (10) days of approval in the Official Records of Kendall County, Texas.

H. PRELIMINARY PLATS OPTIONAL

1. In accordance with state law, the County may not require a person to submit a Preliminary Plat as a condition for plat approval. However, an applicant may elect to follow the conventional two-stage process of Preliminary Plat and Final Plat, as this allows for a preliminary approval that is typically beneficial prior to filling for other required permits and certifications which must be included in a Final Plat submittal.
2. An applicant may choose to submit all documentation in a single plat application and forego the Preliminary Plat, in accordance with state law. However, the plat will be approved or denied based on the single application, and a new plat application or a plat resubmittal will be required for all applications that do not comply with County development regulations and application submittal requirements. This includes all required permits, certifications and approvals granted by external agencies, as well as the Performance Guarantee for public facilities.
3. As Preliminary Plat applications are voluntary and not required by law, a preliminary plat application shall not be subject to the requirement for action within 30 days.

I. PLAT SUBMISSION DATES

1. Plat applications shall only be received on Plat Submission Dates, as published by the County.
2. The date on which a complete application is received shall constitute the official submission date for the plat.

J. FEE FOR ADDITIONAL STAFF REVIEW

The County may charge the applicant an additional review fee any time the County Engineer is required to review an application, or the plans submitted in conjunction with an application, beyond the 2nd review. Any set of plan documents submitted prior to the submission of the application shall be considered when determining how many times County staff has been required to review an application.

K. SUMMARY OF PLATTING AND DEVELOPMENT PROCESS

1. The exact procedure to be followed and the specific actions required by the developer will depend on the size, nature, and complexity of the proposed development.
2. To obtain approval by the Commissioners Court of a plat, the developer shall take the following actions as appropriate, in the order listed:
 - a. Attend preliminary conference with County representatives.
 - b. Acquire all necessary certificates, permits and determinations.
 - c. Submit a request for the subdivision name and all proposed street names. (Include a location map of the proposed subdivision).
 - d. (Optional) – Submit a Preliminary Plat Application. Staff will review the Preliminary Plat for completeness and notify applicant of any missing documentation. If complete, a hearing at Commissioner's Court of the preliminary plat will be scheduled, for a decision on the Preliminary Plat Application.
 - e. Submit a Final Plat Application.
 - f. If the plat application is incomplete, notification of incompleteness will be sent within 10 days of application submittal. If incomplete, missing information must be submitted before the application will be deemed complete.
 - g. For complete applications, a hearing for a decision at Commissioner's Court shall be scheduled within 30 days of the submission date of a complete application.
 - h. Obtain approval of the plat.
 - i. Execute required financial guarantees.
 - j. Record the final plat.
 - k. Attend pre-construction conference with County representative.

- l. Obtain necessary permits for development and construction activity.
- m. Construct required improvements.
- n. If applicable, provide maintenance bond for improvements and obtain approval and/or acceptance of site improvements.

2.2 Plat Application Preliminary Conference

A. APPLICABILITY

Prior to presentation of a preliminary plat to the County, the developer shall contact the County Engineer to schedule a Preliminary Plat Application Conference.

B. ATTENDANCE

A meeting between the developer, the engineer or surveyor representing the developer, and other interested parties will be scheduled with the County Engineer to discuss procedures, specifications, and standards required by Kendall County for the subdivision of land.

C. SCHEDULE

The preliminary conference shall be scheduled not more than three (3) months prior to plat application submittal. If more than three months passes between preliminary conference and submittal date, a second preliminary conference will be required. This is to ensure that site conditions and state, federal or county laws and regulations have not changed, and that the provided checklist is still applicable.

2.3 Preliminary Plat

A. SUBMITTAL REQUIREMENTS

1. COPIES

a. Hard copies

The developer shall submit 8 black or blue line copies of the preliminary plat and accompanying documents to the County Engineer.

b. Digital Copies

The developer shall submit one digital copy of the preliminary plat in PDF format and one digital copy in DWG format.

2. MAP STANDARDS AND DIGITAL SUBMITTAL REQUIREMENTS

a. Digital copies of the Preliminary Plat application, including the application form, the plat, and all supporting documents shall be submitted to the County Engineer.

b. Digital submittal requirements:

i. One PDF of the entire submittal, including the application, the plat drawings and the supporting documentation.

ii. DWG files for all drawings, georeferenced using State Plane South Central Texas (NAD 1983) coordinate system, in US survey feet. A minimum of two GPS ground control point coordinates of said points shall be identified in the digital file.

c. All maps shall have the northing and easting for two property corners listed.

3. MAP LAYOUT

a. The required documentation and all documentation shall be in accordance with standards regulated and enforced by the Texas Board of Professional of Professional Engineers and Land Surveyors.

b. The plat shall be prepared with ink on Mylar or equivalent on sheets 18 inches wide and 24 inches long, with margins of not less than 3/8 inch on the sides.

c. The plat shall be drawn to a scale of not more than 200 feet per inch and preferably to a scale of 100 feet to the inch.

d. When more than one sheet is required to accommodate the entire area, a separate index sheet showing the entire subdivision at an appropriate scale shall accompany the plat.

e. The north arrow shall point up or to the right of the page and shall be the same on all sheets.

f. Page breaks shall avoid proposed structures or other critical features.

4. MAP CONTENTS

The following information shall be indicated in the preliminary plat:

a. Proposed name of the subdivision

i. A request for subdivision name, if required, shall be submitted as a part of the preliminary plat application.

ii. Subdivision names submitted prior to the preliminary plat will not be accepted.

- iii. The name of the subdivision shall not have the same spelling as, or be pronounced similar to the name of, any other subdivision located in the County, any incorporated city located wholly or partially in the County or located in the same postal zip code.

- b. Names of contiguous subdivisions

Names of contiguous subdivisions and/or a note that contiguous properties are not platted.

- c. Subdivision boundaries

shall be indicated by heavy lines and described accurately by metes and bounds or by bearings and distances with respect to an original corner of the original survey of which the proposed subdivision is a part.

- d. Acreage

The approximate acreage of the subdivision to the nearest one-tenth (0.1) acre.

- e. Blocks, lots, monuments and other sites within the proposed subdivision

- i. the blocks, lots, monuments and other sites within the proposed subdivision shall be identified, including a number to identify each block and each lot or site (Note: Lot and block numbers shall be systematic.);
- ii. the total number of proposed lots and the proposed density (number of total acres in the subdivision divided by the number of proposed lots);
- iii. the area of each lot or tract to the nearest one - tenth (0.1) acre;
- iv. the road frontage of each lot to the nearest foot;
- v. all building and set-back lines;
- vi. the location and dimensions of all proposed streets and/or roads, alleys, parks, other public areas, drainage structures, reservations, easements, or other rights-of-way;
- vii. the lineal feet of proposed streets and/or roads; and
- viii. area of each street and/or road right-of-way and other public use areas to the nearest one-tenth (0.1) acre; with accurate dimensions bearing or deflecting angles and length of all curves where appropriate.

- f. Road names

Road names shall be submitted with the preliminary plat, and proposed streets and/or roads in the subdivisions shall be named on the plat.

- i. In some instances, alleys, ingress and egress easements, and driveways may be named for rural addressing, 911 and emergency response purposes subject to Commissioners Court Order.)
- ii. Road names submitted prior to the preliminary plat application shall not be accepted.
- iii. Names of streets and/or roads, (and, if applicable, alleys, driveways and easements) must be approved by the Commissioners Court subject to the following requirements and restrictions:
 - (a) No name shall be similar in spelling or pronunciation to another street, road, alley, driveway or easement in the county and surrounding areas; and
 - (b) Only one street/road name can be used from a point of origin of another street/road; and

- (c) East, West, North, or South designations shall not be used in street, road, alley, and driveway and/or easement names unless the use is approved by Commissioners Court.
- g. Existing facilities:
 - i. The location, dimensions, name and description of all existing or recorded streets, roads, alleys, reservations, easements, or other public rights-of-way within the subdivision, intersecting, or contiguous with its boundaries or forming such boundaries;
 - ii. The location, description, dimensions and names (if applicable) of all existing or recorded residential lots, parks, public areas, and other sites within the subdivision;
 - iii. The location of any cemeteries;
 - iv. The location of any man-made structures of any type; and
 - v. Location of existing water wells with well number assigned by CCGCD.
- h. General Map Information
 - i. The date of preparation and date revised, if applicable;
 - ii. the north arrow shall point up or to the right of the page and shall be the same on all sheets; and
 - iii. the scale, original survey lines and sanitary control easements, if any.
- i. Ownership and Contact Information

The name(s) and address(es) of the developer, record owner of the property and engineer or surveyor with a contact telephone number for the engineer or surveyor and e-mail address, if any, of the engineer or surveyor.
- j. Topographical Information

Topographical information including contour lines to a contour interval of two (2) feet for slopes five percent (5%) or less, or ten (10) feet for slopes over five percent (5%) and extending 100 feet into the area adjacent to the subdivision. Elevations must be based on NAVD 88 datum and provide a conversion factor to NGVD 1929 datum.
- k. Location Map

Location map at a scale of not more than 2,000 feet to an inch, which shall show existing adjacent subdivisions and major streets. Where adjacent subdivisions have dead end streets adjoining the boundaries of the proposed subdivision and traffic circulation through the existing subdivision is being proposed, a note to this effect shall be included on the plat.
- l. Areas Subject to Flooding

Areas subject to flooding in accordance with the Federal Flood Insurance Program or there shall be a statement that there is no such area. (Note: FEMA maps may not show all special flood areas in the community.) All special flood hazards, to include those areas identified through the current drainage analysis. (Note: If all or part of the subdivision is located in the 100-year floodplain, the floodplain as shown on a FIRM or as verified by the floodplain study shall be shown.) Cross sections with Base Flood Elevations shall be shown with one or more cross sections per lot. Location and elevation of a benchmark (monument) shall be described in a note. For all lots located wholly or partially in the floodplain, the net acreage of the area,

if any, outside of the floodplain shall be indicated to the nearest one-tenth (0.1) acre.

m. Information About the Parent Tract

Caption setting forth the original grantee, survey number, and abstract number and a deed reference to the parent tract.

n. Plat Notes

- i. A note on the plat shall indicate the planned source of potable water and the planned method of sewage disposal. The note shall include, if applicable, a statement describing the potable water and sewage disposal facilities that will be constructed or installed to serve the subdivision, a statement certifying the date the facilities will be fully operable, and a statement by a qualified person (engineer or hydrologist) certifying that the proposed water supply and sewage disposal facilities proposed for the subdivision are in compliance with the Model Rules adopted under Section 16.643, Texas Water Code. If a water supply system and/or sewage disposal is to be constructed or developed within the subdivision, the proposed location of the site for the facilities, including, if applicable, water wells, storage tanks, and other facilities shall be indicated and proposed alternate site(s), if any, shall be shown.
- ii. A plat note shall be included which indicates the maximum percent impervious cover per lot and shall be based on the proposed impervious cover in the drainage analysis.
- iii. A note on the plat shall indicate the providers of electrical power, telephone and any other utility services.
- iv. A note on the plat shall indicate whether or not commercial waste collection and disposal services are available to the subdivision.
- v. If there are private roads, a note on the plat shall indicate that private roads shall not be maintained by the County.
- vi. Additional notes as required by the County Engineer.

5. ADDITIONAL DOCUMENTATION

The following shall be submitted with the preliminary plat:

- a. Proof of ownership of the real property where the proposed subdivision will be located as follows:
 - i. Individual(s) - copy of recorded deed.
 - ii. Partnership - copy of recorded deed and copy of Partnership Agreement.
 - iii. Corporation - copy of recorded deed, certificate of good standing or certificate to do business in the State of Texas and letter from corporation authorizing individual to act on behalf of corporation.
- b. The general drainage plan
 - i. The general drainage plan shall consist of a site plan that includes the following information:
 - (a) The drainage area(s) within the subdivision depicted on a topographic map with two-foot (2 ft.) contours on a scale of one inch (1") equals 200 feet.
 - (b) Floodplain limits for existing and proposed drainage courses
 - (c) Culvert and storm sewer locations
 - (d) Detention locations and approximate sizes

- (e) Stream centerlines (USGS blue lines)
 - ii. A letter from the Engineer of Record, stating that the size of the detention ponds in the general drainage plan are based on the land plan and drainage characteristics of the site, shall also be included with the general drainage plan.
- c. Deed Restrictions

Draft copy of subdivision deed restrictions if any are proposed by the developer. (Note: Any provision in the deed restrictions concerning further division of lots or the combining of lots should include the requirement to comply with these Rules and Regulations.)
- d. Authorized Representation

If applicable, a letter of agency authorization from the owner of the affected property authorizing another person to represent the owner before the Commissioners Court.
- e. Letter from Developer's Engineer

Letter from the developer's engineer stating that the engineer has been retained by the developer to design roads, drainage and, when applicable, sewage disposal, water systems, and other infrastructure for the proposed subdivision.
- f. Verification of Interlocal Agreements

If all or part of the subdivision is in the ETJ of a city and the interlocal agreement between the County and such city provides that the County will be responsible for subdivision platting but requires approval of certain items by the subject city, a document indicating the city's approval of such items shall be submitted.
- g. Authorization from Highway Official

If the subdivision has a proposed entrance from, or if lots in the proposed subdivision front on a U.S. or state highway, a letter of authorization from the appropriate highway official shall be submitted.
- h. TxDOT Permits
 - i. If a proposed subdivision drainage system joins or connects to the Texas Highway System, a letter of authorization, issued by the authorized representative of TxDOT, shall be submitted.
 - ii. If a proposed development proposes new access or modifies existing access for driveways onto State Highway Right of Way, a permit issued by the authorized representative of TxDOT shall be submitted.
- i. Traffic Impact Analysis
 - i. If the proposed development generates 100 Peak Hour Trips or more, a Traffic Impact Analysis (TIA) to determine the impact on proposed or existing roads and streets shall be required.
 - ii. A Traffic Impact Analysis waiver may be granted by the County Engineer and must be accompanied by proof of appropriate driveway sight distance (per Section 5.9.C.7), required TxDOT permits (if applicable), and commitments to construct or fund required deceleration turn lanes at site driveways.

- iii. Turn lane requirements and improvements to substandard border streets shall be determined by submitting completed worksheets (provided by the County Engineer upon request).
- iv. If a TIA for the subject property was previously approved within 2 years of the application date and is consistent with the proposed development, an updated TIA shall not be required.

j. Floodplain Study (CLOMR/LOMR)

- i. Land located within special flood hazard areas is designated as floodplain.
- ii. Since the floodplain is an extremely hazardous area due to the velocity of floodwaters, which carry debris, potential projectiles and erosion potential, the developer shall comply with the floodplain regulations herein.
- iii. If the proposed subdivision lies wholly or in part within the special flood hazard area, a separate and detailed floodplain study prepared by a licensed professional engineer for all water courses with 25 acres or more drainage shall be submitted to provide theoretical verification of the maximum floodwater elevations that may be expected so that the potential effect on subdivision lots may be evaluated. This study shall also be submitted to FEMA.

k. Letters and Certification from Water/Wastewater Treatment Providers

If the subdivision is to be served by public water and/or wastewater treatment system, letters from the appropriate city, district or regulatory agency having jurisdiction shall be submitted containing the information required by 5.2 Lots, 5.3 Potable Water Supply Facilities and 5.5 Sewage and Wastewater Disposal. In addition, certification as required by 5.3 Potable Water Supply Facilities and 5.5 Sewage and Wastewater Disposal shall be submitted.

- l. A GAR shall be submitted, if applicable, but does not get approved until Final Plat.
- m. Approved requests for relief shall be included in the preliminary plat application, if applicable.

B. COMPLETENESS

- 1. An application shall be considered complete when all requirements of these Rules and Regulations are satisfied.
- 2. A preliminary plat that does not comply with these Rules and Regulations shall not be considered complete and will not be presented to Commissioners Court until it is determined by the County Engineer to be complete. (Note: Requests for relief, if applicable, must be submitted in writing and approved prior to plat application submittal for the plat to be deemed complete.)
- 3. Receipt by the County of a plat application determined by the County Engineer to be complete does not imply and should not be construed as approval of the plat by the Commissioners Court.

C. REVISIONS AND RESUBMITTALS

- 1. The County Engineer shall conduct a technical review of complete applications and provide comments to the applicant regarding compliance with the Development Regulations.
- 2. For preliminary plats, a resubmittal addressing all County Engineer comments shall be required before the application is put on agenda for Commissioner's Court.
- 3. If the applicant makes any changes to the Preliminary Plat Application in response to the comments provided by the County Engineer, a Comment Response Letter shall

accompany the resubmittal. The comment letter shall describe the reasons for the changes made by the Project Engineer of Record.

4. In the resubmittal, revisions shall be identified in a clouded copy and a clean copy.

D. DECISION

1. When the Applicant has provided an application that addresses all County Engineer comments, with appropriate documentation of any revisions in the form of a resubmittal as indicated above, the County Engineer shall place the application on the Commissioners Court agenda for consideration for an upcoming meeting that is no less than 10 days and no more than 30 days from the date of submittal of the complete application.
2. Except as provided herein, the Commissioners Court shall approve, approve with conditions, or disapprove an application for a preliminary plat not later than the 30th day after the complete application is received.

3. Outcomes

A preliminary plat may be:

- a. Approved
- b. Approved with conditions
- c. Denied

E. SCOPE OF APPROVAL

1. Approval of a preliminary plat by the Commissioners Court shall be deemed approval to proceed with the preparation of the final plat.
2. If a preliminary plat is conditionally approved, the conditions identified by the Commissioners Court shall be satisfied prior to or within the final plat application.
3. Approval of the preliminary plat shall not constitute or imply approval of the final plat, nor shall approval of the preliminary plat constitute permission to record the final plat or initiate any site preparation work.
4. Site preparation may be initiated by the developer only after the Commissioners Court has approved the final plat. A developer who begins construction prior to approval of the final plat and posting of the financial guarantee required herein will be subject to enforcement actions by the County Attorney.

F. EXPIRATION

Approval of a preliminary plat by the Commissioners Court shall be effective for two (2) years from the date of approval. If no progress has been made toward completion of the project within two (2) years of approval of the preliminary plat, approval of the preliminary plat shall expire, and any fees paid to Kendall County shall be forfeited to the County.

G. AMENDMENT OF A PRELIMINARY PLAT

To amend a preliminary plat, the developer shall submit proposed amendments in writing to the County Engineer. Upon review, the County Engineer will determine whether the amendment can be addressed during final plat, or if a new preliminary plat is recommended.

2.4 Final Plat

A. APPLICATION SUBMITTAL REQUIREMENTS

1. Copies

a. Hard copies

The developer shall submit 8 black or blue line copies of the final plat and accompanying site improvement data to the County Engineer.

b. Digital Copies

- i. The developer shall submit one digital copy of the final plat in PDF format, and one digital copy of the final plat in DWG format.
- ii. Additional information may be required by the GIS Manager/9-1-1 Coordinator.
- iii. Note: The County Engineer will submit the final plat to the County Clerk for recording. After the plat is recorded, the developer is responsible for providing 2 copies of the recorded plat to the County Engineer.

2. Form and Content

The final plat shall be in the same form and contain the same information as the preliminary plat with the following additional requirements:

- a. The final plat shall incorporate any changes required by the Commissioners Court as a condition of approval of the preliminary plat.
- b. The final plat shall contain an appropriate statement of dedication of easements for utilities.

3. Map Standards and Layout

- a. All drawings shall be delivered as DWG files, georeferenced using State Plane South Central Texas (NAD 1983) coordinate system, US survey feet. A minimum of two GPS ground control point coordinates of said points shall be identified in the digital file.
- b. All maps shall have the northing and easting for two property corners listed.
- c. All documentation shall be in accordance with standards regulated and enforced by the Texas Board of Professional of Professional Engineers and Land Surveyors.
- d. The north arrow shall point up or to the right of the page and shall be the same on all sheets.
- e. The plat shall be prepared with ink on Mylar or equivalent on sheets 18 inches wide and 24 inches long, with margins of not less than 3/8 inch on the sides.
- f. The plat shall be drawn to a scale of not more than 200 feet per inch and preferably to a scale of 100 feet to the inch.
- g. When more than one sheet is required to accommodate the entire area, a separate index sheet showing the entire subdivision at an appropriate scale shall accompany the plat.
- h. Page breaks shall avoid proposed structures or other critical features.

4. Documents to Include

a. If A Complete Preliminary Plat Has Been Submitted and Approved by Commissioners Court

If a preliminary plat has been submitted and approved by the Commissioners Court as complete, then the following documents are required for a complete final plat application. If items in this list have been previously submitted with the complete preliminary plat, such do not have to be submitted with the final plat, unless there have been changes or alterations.

i. Site Improvement Data

Site improvement data with all drawings and calculations bearing the seal of a licensed professional engineer.

ii. Federal, State, District or Local Certification

Certification required by any federal, state, district, or local entity concerning protection of the environment or preservation of historical or cultural areas.

iii. Letters of Approval for Water and/or Wastewater Treatment System

If applicable, letters of approval of wastewater treatment systems and/or of public water systems from the appropriate regulatory agencies having jurisdiction and certification as required by Section 5.3 Potable Water Supply and Facilities and Section 5.5 Sewage and Wastewater Disposal.

iv. Letter of Approval for Sewage Disposal

If applicable, letter of approval from the appropriate district or city if the area is within a district or is to be connected to a city system for disposal of sewage and certification as required by Section 5.5 Sewage and Wastewater Disposal.

v. Approval of Fire Hydrant Locations

If applicable, approval of the location of fire hydrants on the water distribution lines, including hose connections, as well as approval of the plat, construction plans, water storage and water distribution system by the County Fire Marshall. See Section 5.4 Fire Suppression.

vi. Certificates of Convenience and Necessity

If applicable, a Certificate of Convenience and Necessity issued by the appropriate regulatory agency.

vii. Letters of Approval from Other Federal, State or Local Regulatory Agencies

If required, letter of approval from the Texas State Department of Health or from any other federal, state, or local regulatory agency.

viii. Letter from Utility Company(s)

A letter of approval by affected utility companies.

ix. Copy of Approved Plans for Public Water and/or Public Sewage Disposal Systems

If applicable, one copy of all plans as approved by the appropriate regulatory agency for public water or public sewage disposal systems.

x. Letter of Certification from Engineer of Record

If any portion of the plat submittal was prepared by a person who is not the engineer of record, then the engineer of record shall provide a letter stating that all third-party submittals were reviewed by the engineer of record and are applicable for the final plat submittal.

xi. Copies of final construction drawings, profiles, specifications and special conditions

Two copies of final construction drawings and profiles of all streets and drainage improvements with construction specifications, including general and special conditions.

xii. FEMA submittal

If required, a copy of the approved CLOMR/LOMR submittal to FEMA

xiii. Drainage Control

For control of drainage, the following information shall be submitted:

- (a) A general location map showing exact relation of the subdivision to the entire watershed (U.S.G.S. quadrangle 1:24,000 is satisfactory).
- (b) Two copies of the storm drainage plan, prepared to a scale of 200 feet to an inch and with the same contours and lot sizes as shown on the plat which shall comply with the following requirements:
 - (i) All street widths and grades shall be indicated, and runoff figures shall be indicated at the inlet side of all drainage ditches and storm sewers, and, if required by the County Engineer, all points in the streets at changes of grade, or where the water enters another street, storm sewer, drainage ditch or detention pond.
 - (ii) Drainage easements shall be indicated.
 - (iii) Construction details shall be shown for drainage ditches, channels, storm sewers and detention ponds.
 - (iv) Hydraulic calculations based on anticipated storm water flow from consideration of rainfall intensity, watershed area, percent runoff, time of concentration, and nature of terrain and cover shall be submitted for each storm sewer, drainage ditch, culvert, bridge and detention pond.
 - (v) Culvert center-line profiles shall accompany the hydraulic calculations to verify the length of culvert needed for the height of fill and width of right-of-way.
 - (vi) If a "French Drain System" is proposed, a statement as to the need must be furnished by the developer/subdivider's engineer, together with two (2) copies of construction drawings.

xiv. Payment of Plat Recordation Fee

Payment to the County Clerk of the plat recording fee for the required amount.

xv. Authorization to Record the Plat

A letter signed by the subdivision developer authorizing the plat to be filed for record by the County.

xvi. Final Version of Covenants and Deed Restrictions

If applicable, a final version of covenants and deed restrictions to be recorded by the developer following approval of the final plat by the Commissioners Court.

xvii. Analysis of Water Quality and Quantity

For subdivisions where potable water is to be supplied by a public water supply system, evidence of the satisfactory quality of the water must be furnished in the form of a bacteriological analysis of the water, approved by TCEQ. The entity providing water must certify that the quantity of water available is adequate to supply the number of customers that the system will serve, and any other requirements of these Development Regulations.

xviii. Additional Requirements for Private Subdivisions

- (a) The title of the final plat shall contain the phrase "A Private Subdivision".
- (b) The final plat and the deed restrictions shall contain a statement that Kendall County will neither accept nor maintain the roads or the drainage facilities within the Private Subdivision.
- (c) The final plat shall contain a statement that a homeowner's association with assessment authority shall be responsible for the maintenance of the roads in the subdivision, that membership in the association shall be mandatory for each lot owner, and that the association shall be responsible for the maintenance of the roads in the subdivision.
- (d) The final plat shall contain a statement that the roads shall be maintained in perpetuity by the homeowner's association to standard which will allow emergency vehicles access for the roadway design speed.
- (e) A copy of the maintenance plan, including maintenance activities, cycle of occurrence and schedule) for private roads, drainage and all detention facilities, shall be submitted with the final plat.
- (f) The final plat shall contain a statement that every deed shall contain notice to the grantee that all roads and drainage are private, that the homeowner's association shall be perpetually liable for maintenance, that the County will never accept them for maintenance, and that the quality of the roads must be maintained as to not affect access by public service agencies such as police, fire, and emergency medical services.

b. If a Complete Preliminary Plat Has Not Been Approved by Commissioners Court

These documents are required for a complete final plat application when a complete preliminary plat has not been approved by the Commissioners Court.

i. Map Contents

The following information shall be indicated in the plat:

- (a) Proposed name of the subdivision
 - (i) A request for subdivision name, if required, shall be submitted as a part of the preliminary plat application.

- (ii) Subdivision names submitted prior to the preliminary plat will not be accepted.
 - (iii) The name of the subdivision shall not have the same spelling as, or be pronounced similar to the name of, any other subdivision located in the County, any incorporated city located wholly or partially in the County or located in the same postal zip code.
- (b) Names of contiguous subdivisions

Names of contiguous subdivisions and/or a note that contiguous properties are not platted.
- (c) Subdivision boundaries

Subdivision boundaries shall be indicated by heavy lines and described accurately by metes and bounds or by bearings and distances with respect to an original corner of the original survey of which the proposed subdivision is a part.
- (d) Acreage

The approximate acreage of the subdivision to the nearest one-tenth (0.1) acre.
- (e) Blocks, lots, monuments and other sites within the proposed subdivision

The blocks, lots, monuments and other sites within the proposed subdivision shall be identified, including a number to identify each block and each lot or site (Note: Lot and block numbers shall be systematic.); the total number of proposed lots and the proposed density (number of total acres in the subdivision divided by the number of proposed lots); the area of each lot or tract to the nearest one - tenth (0.1) acre; the road frontage of each lot to the nearest foot; and all building and set-back lines. The location and dimensions of all proposed streets and/or roads, alleys, parks, other public areas, drainage structures, reservations, easements, or other rights-of-way, the lineal feet of proposed streets and/or roads; and area of each street and/or road right-of-way and other public use areas to the nearest one-tenth (0.1) acre; with accurate dimensions bearing or deflecting angles and length of all curves where appropriate.
- (f) Road names

Road names shall be submitted with the plat, and proposed streets and/or roads in the subdivisions shall be named on the plat.

 - (i) In some instances, alleys, ingress and egress easements, and driveways may be named for rural addressing, 911 and emergency response purposes subject to Commissioners Court Order.)
 - (ii) Road names submitted prior to the plat application shall not be accepted.
 - (iii) Names of streets and/or roads, (and, if applicable, alleys, driveways and easements) must be approved by the Commissioners Court subject to the following requirements and restrictions:
 - (a) No name shall be similar in spelling or pronunciation to another street, road, alley, driveway or easement in the county and surrounding areas; and

- (b) Only one street/road name can be used from a point of origin of another street/road; and
 - (c) East, West, North, or South designations shall not be used in street, road, alley, and driveway and/or easement names unless the use is approved by Commissioners Court.
- (g) Existing facilities:
 - (i) The location, dimensions, name and description of all existing or recorded streets, roads, alleys, reservations, easements, or other public rights-of-way within the subdivision, intersecting, or contiguous with its boundaries or forming such boundaries; and
 - (ii) The location, description, dimensions and names (if applicable) of all existing or recorded residential lots, parks, public areas, and other sites within the subdivision; and
 - (iii) The location of any cemeteries; and
 - (iv) The location of any man-made structures of any type; and
 - (v) Location of existing water wells with well number assigned by CCGCD.
- (h) General Map Information

The date of preparation and date revised, if applicable; North direction by an arrow either at the top or on the right side; the scale, original survey lines and sanitary control easements, if any.
- (i) Ownership and Contact Information

The name(s) and address(es) of the developer, record owner of the property and engineer or surveyor with a contact telephone number for the engineer or surveyor and e-mail address, if any, of the engineer or surveyor.
- (j) Topographical Information

Topographical information including contour lines to a contour interval of two (2) feet for slopes five percent (5%) or less, or ten (10) feet for slopes over five percent (5%) and extending 100 feet into the area adjacent to the subdivision. Elevations must be based on NAVD 88 datum and provide a conversion factor to NGVD 1929 datum.
- (k) Location Map

Location map at a scale of not more than 2,000 feet to an inch, which shall show existing adjacent subdivisions and major streets. Where adjacent subdivisions have dead end streets adjoining the boundaries of the proposed subdivision and traffic circulation through the existing subdivision is being proposed, a note to this effect shall be included on the plat.
- (l) Areas Subject to Flooding

Areas subject to flooding in accordance with the Federal Flood Insurance Program or there shall be a statement that there is no such area. (Note: FEMA maps may not show all special flood areas in the community.) All special flood hazards, to include those areas identified through the current drainage analysis. (Note: If all or part of the subdivision is located in the 100-year floodplain, the floodplain as shown on a FIRM or

as verified by the floodplain study shall be shown.) Cross sections with Base Flood Elevations shall be shown with one or more cross sections per lot. Location and elevation of a benchmark (monument) shall be described in a note. For all lots located wholly or partially in the floodplain, the net acreage of the area, if any, outside of the floodplain shall be indicated to the nearest one-tenth (0.1) acre

(m) Information About the Parent Tract

Caption setting forth the original grantee, survey number, and abstract number and a deed reference to the parent tract.

(n) Plat Notes

- (i) A note on the plat shall indicate the planned source of potable water and the planned method of sewage disposal. The note shall include, if applicable, a statement describing the potable water and sewage disposal facilities that will be constructed or installed to serve the subdivision, a statement certifying the date the facilities will be fully operable, and a statement by a qualified person (engineer or hydrologist) certifying that the proposed water supply and sewage disposal facilities proposed for the subdivision are in compliance with the Model Rules adopted under Section 16.643, Texas Water Code. If a water supply system and/or sewage disposal is to be constructed or developed within the subdivision, the proposed location of the site for the facilities, including, if applicable, water wells, storage tanks, and other facilities shall be indicated and proposed alternate site(s), if any, shall be shown.
- (ii) A note on the plat shall indicate the providers of electrical power, telephone and any other utility services.
- (iii) A note on the plat shall indicate whether or not commercial waste collection and disposal services are available to the subdivision.
- (iv) If there are private roads, a note on the plat shall indicate that private roads shall not be maintained by the County.
- (v) Additional notes, as required by the County Engineer.

ii. Additional Documentation

The following additional documentation shall be submitted with the plat:

- (a) Proof of ownership of the real property where the proposed subdivision will be located as follows:
 - (i) Individual(s) - copy of recorded deed.
 - (ii) Partnership - copy of recorded deed and copy of Partnership Agreement.
 - (iii) Corporation - copy of recorded deed, certificate of good standing or certificate to do business in the State of Texas and letter from corporation authorizing individual to act on behalf of corporation.
- (b) Authorized Representation

If applicable, a letter of agency authorization from the owner of the affected property authorizing another person to represent the owner before the Commissioners Court.
- (c) Letter from Developer's Engineer

Letter from the developer's engineer stating that the engineer has been retained by the developer to design roads, drainage and, when applicable, sewage disposal, water systems, and other infrastructure for the proposed subdivision.

(d) Verification of Interlocal Agreements

If all or part of the subdivision is in the ETJ of a city and the interlocal agreement between the County and such city provides that the County will be responsible for subdivision platting but requires approval of certain items by the subject city, a document indicating the city's approval of such items shall be submitted.

(e) Authorization from TxDOT

- (i) If the subdivision has a proposed entrance from, or if lots in the proposed subdivision front on a U.S. or state highway, an access permit and donation agreement, if applicable, from the appropriate highway official shall be submitted.
- (ii) If a proposed subdivision drainage system joins or connects to the Texas Highway System, a permit issued by the authorized representative of TxDOT shall be submitted.

(f) Tax Payment and Tax Certificates

An Affidavit of Ad Valorem Tax Payment with Tax Certificates from each affected taxing entity showing that all ad valorem taxes have been paid on all land included in the subdivision.

(g) Traffic Impact Analysis

- (i) If the proposed development generates 100 Peak Hour Trips or more, a Traffic Impact Analysis (TIA) to determine the impact on proposed or existing roads and streets shall be required.
- (ii) A Traffic Impact Analysis waiver may be granted by the County Engineer and must be accompanied by proof of appropriate driveway sight distance (per Section 5.9.C.7), required TxDOT permits (if applicable), and commitments to construct or fund required deceleration turn lanes at site driveways.
- (iii) Turn lane requirements and improvements to substandard border streets shall be determined by submitting completed worksheets (provided by the County Engineer upon request).
- (iv) If a TIA for the subject property was previously approved within 2 years of the application date, an updated TIA shall not be required.

(h) An approved GAR shall be submitted if applicable.

(i) Federal, State, District or Local Certification

Certification required by any federal, state, district, or local entity concerning protection of the environment or preservation of historical or cultural areas.

(j) Letters of Approval for Water and/or Wastewater Treatment System

If applicable, letters of approval of wastewater treatment systems and/or of public water systems from the appropriate regulatory agencies having

jurisdiction and certification as required by Section 5.3 Potable Water Supply and Facilities and Section 5.5 Sewage and Wastewater Disposal.

(k) Letter of Approval for Sewage Disposal

If applicable, letter of approval from the appropriate district or city if the area is within a district or is to be connected to a city system for disposal of sewage and certification as required by Section 5.5 Sewage and Wastewater Disposal.

(l) Approval of Fire Hydrant Locations

If applicable, approval of the location of fire hydrants on the water distribution lines, including hose connections, as well as approval of the plat, construction plans, water storage and water distribution system by the County Fire Marshall. See Section 5.4 Fire Suppression.

(m) Certificates of Convenience and Necessity

If applicable, a Certificate of Convenience and Necessity issued by the appropriate regulatory agency.

(n) Letters of Approval from Other Federal, State or Local Regulatory Agencies

If required, letter of approval from the Texas State Department of Health or from any other federal, state, or local regulatory agency.

(o) Letter from Utility Company(s)

A letter of approval by affected utility companies.

(p) Copy of Approved Plans for Public Water and/or Public Sewage Disposal Systems

If applicable, one copy of all plans as approved by the appropriate regulatory agency for public water or public sewage disposal systems.

(q) Copies of final construction drawings, profiles, specifications and special conditions

Two hard copies and a PDF of final construction drawings and profiles of all streets and drainage improvements with construction specifications, including general and special conditions.

(r) FEMA submittal (CLOMR/LOMR)

(i) If required, a copy of the approved FEMA CLOMR/LOMR submittal.

(ii) If the proposed subdivision lies wholly or in part within the floodplain, a separate and detailed floodplain study prepared by a licensed professional engineer for all water courses with 25 acres or more drainage shall be submitted to provide theoretical verification of the maximum floodwater elevations that may be expected so that the potential effect on subdivision lots may be evaluated. This study shall also be submitted to FEMA.

(s) Drainage Control

For control of drainage, the following information shall be submitted:

- (i) The general drainage plan shall show existing water courses, existing and proposed drainage structures for the proposed subdivision at not more than 1"=400' scale and indicating the one-hundred-year floodplain limits for all proposed drainage courses with more than a 100-acre drainage area. (Note: Submittals in the appropriate FEMA format must be prepared for any changes to latest Flood Insurance Rate Map.)
- (ii) A general location map showing exact relation of the subdivision to the entire watershed (U.S.G.S. quadrangle 1:24,000 is satisfactory).
- (iii) Two copies of the storm drainage plan, prepared to a scale of 200 feet to an inch and with the same contours and lot sizes as shown on the plat map.
- (iv) Requirements for the drainage study:
 - (a) The entire watershed drainage area(s) depicted on a 7.5-minute series U.S.G.S. map.
 - (b) The drainage area(s) within the subdivision depicted on a topographic map with two-foot (2 ft.) contours on a scale of one inch (1") equals 200 feet.
 - (c) Composite runoff coefficients.
 - (d) One-hundred-year-storm event flow rates with the floodplain limits for the existing and fully developed conditions shown on the preliminary plat.
 - (e) Proposed location of storm sewers and/or culverts.
 - (f) Proposed routing of drainage ways.
 - (g) Calculations to determine the volume of the detention pond(s) if required.
 - (h) All street widths and grades shall be indicated, and runoff figures shall be indicated at the inlet side of all drainage ditches and storm sewers, and if required by the County Engineer, all points in the streets at changes of grade or where the water enters another street or storm sewer or drainage ditch.
 - (i) Drainage easements shall be indicated.
 - (j) Construction details shall be shown for drainage ditches, channels, or storm sewer.
 - (k) Hydraulic calculations based on anticipated storm water flow from consideration of rainfall intensity, watershed area, percent runoff, time of concentration, and nature of terrain and cover shall be submitted for each storm sewer, drainage ditch, culvert, or bridge.
 - (l) Culvert center-line profiles shall accompany the hydraulic calculations to verify the length of culvert needed for the height of fill and width of right-of-way.
 - (m) If a "French Drain System" is proposed, a statement as to the need must be furnished by the developer/subdivider's engineer, together with two (2) copies of construction drawings.
- (t) Payment of Plat Recordation Fee

Payment to the County Clerk of the plat recording fee for the required amount.
- (u) Authorization to Record the Plat

A letter signed by the subdivision developer authorizing the plat to be filed for record by the County.

(v) Final Version of Covenants and Deed Restrictions

If applicable, a final version of covenants and deed restrictions to be recorded by the developer following approval of the final plat by the Commissioners Court.

(w) Analysis of Water Quality and Quantity

For subdivisions where potable water is to be supplied by a public water supply system, evidence of the satisfactory quality of the water must be furnished in the form of a bacteriological analysis of the water, approved by TCEQ. The entity providing water must certify that the quantity of water available is adequate to supply the number of customers that the system will serve, and any other requirements of these Development Regulations.

(x) Additional Requirements for Private Subdivisions

- (i) The title of the final plat shall contain the phrase “A Private Subdivision”.
- (ii) The final plat and the deed restrictions shall contain a statement that Kendall County will neither accept nor maintain the roads or the drainage facilities within the Private Subdivision.
- (iii) The final plat shall contain a statement that a homeowner’s association with assessment authority shall be responsible for the maintenance of the roads in the subdivision, that membership in the association shall be mandatory for each lot owner, and that the association shall be responsible for the maintenance of the roads in the subdivision.
- (iv) The final plat shall contain a statement that the roads shall be maintained in perpetuity by the homeowner’s association to standard which will allow emergency vehicles access for the roadway design speed.
- (v) A copy of the maintenance plan, including maintenance activities, cycle of occurrence and schedule, for private roads, drainage and all detention facilities, shall be submitted with the final plat.
- (vi) The final plan shall contain a statement that every deed shall contain notice to the grantee that all roads and drainage are private, that the homeowner’s association shall be perpetually liable for maintenance, that the County will never accept them for maintenance, and that the quality of the roads must be maintained as to not affect access by public service agencies such as police, fire, and emergency medical services.

B. FINANCIAL GUARANTEE

1. Financial guarantees must be executed before a plat can be recorded. Financial guarantees may be executed prior to plat approval, or as a condition of plat approval, to be executed prior to plat recordation.
2. Bond Requirements:

The owner of a tract shall execute a bond before subdividing the tract unless an alternative financial guarantee of a type identified herein is provided.

The bond must:

- a. be payable to the County Judge or to the Judge's successors in office; and
- b. be in an amount determined by the Commissioners Court to be adequate to ensure proper construction of the roads and streets in and drainage requirements for the subdivision based on an estimate submitted by the developer's engineer and approved by the County Engineer; and
- c. be executed with sureties as may be approved by the Court; and
- d. be executed by a company authorized to do business as a surety in this state; and
- e. be conditioned that the roads and streets and the drainage requirements for the subdivision will be constructed:
 - i. in accordance with the specifications (approved by the Commissioners Court; and
 - ii. within the time set by the Court, but not to exceed two years (from the date of approval of the final plat.

3. Financial Guarantee in Lieu of Bond

In lieu of the bond, an owner may deposit cash, a letter of credit issued by a federally insured financial institution, or another acceptable financial guarantee.

4. Procedure and Requirements for Letter of Credit

- a. If a Letter of Credit is used, it must:
 - i. list as the sole beneficiary the County Judge; and
 - ii. be conditioned that the owner of the tract of land to be subdivided will construct any roads or streets and drainage requirements in the subdivision:
 - (a) in accordance with the specifications approved by the Commissioners Court; and
 - (b) within the time set by the Court, but not to exceed two years from the date of approval of the final plat; and
 - iii. comply with the following requirements and procedures:
 - (a) The Letter of Credit shall be an irrevocable letter of credit issued by a state or federally insured bank or savings and loan association in a form approved by the County.
 - (b) The initial Letter of Credit shall be for a period of one year or such other length of time as approved by the Commissioners Court.
 - (c) The term of the renewal Letter of Credit shall be for a period of one year or such other length of time as approved by the Commissioners Court. A Letter of Credit shall remain in full force and effect until the subdivision improvements are accepted or approved by the Commissioners Court.
- b. Renewal, default, and failure to timely renew:

The Letter of Credit shall be renewed no later than 45 days prior to its expiration date in an amount equal to the amount of the original Letter of Credit or such other amount as approved by the Commissioners Court. In the event the developer fails to renew the letter of credit at least 45 days prior to the expiration date, the County will begin procedures to collect on the letter of credit as follows:

- i. Give written notice by certified mail to the developer and financial institution issuing the Letter of Credit that the developer is in default; and
- ii. Fourteen (14) calendar days after such notice is given, if the Letter of Credit has not been renewed or is otherwise not in compliance with these Rules and Regulations, the County shall make demand pursuant to the terms of the

Letter of Credit for collection of the amount of the Letter of Credit and proceed to collect the amount of the financial guarantee.

5. Procedures and Requirements for Cash Deposit:

In the event the developer deposits cash as a financial guarantee, it shall be:

- a. in an amount determined by the Commissioners Court to be adequate to ensure the proper construction of the roads and streets in and drainage requirements for the subdivision; and
- b. be submitted to the County Treasurer for deposit in an interest-bearing account; and
- c. submitted with an agreement signed by the developer acknowledging that the funds will be forfeited to the County in the event that the developer fails to complete the roads and drainage improvements in the subject subdivision in accordance with the final plat and construction drawings and specifications approved by the County and within the time set by the County, but not to exceed two years from the date of approval of the final plat, and that any interest earned on the cash while deposited shall accrue to the County.

C. COMPLETENESS

1. An application shall be considered complete if all requirements of these Regulations are satisfied.
2. If a person submits a plat application to the Commissioners Court that does not include all of the documentation required in these Regulations, the County Engineer shall notify the applicant of the missing information not later than the tenth (10th) business day after the date that the County receives the application.
3. Receipt by the County of a plat application determined by the County Engineer to be complete does not imply and should not be construed as approval of the plat by the Commissioners Court.

D. DECISION AGENT

In accordance with the procedures set out in these Regulations, the plat must be submitted to the Commissioners Court for approval.

E. DECISION

1. Once an application is deemed complete, the County Engineer shall file the application for plat approval to be considered by the Commissioners Court.
2. Except as provided herein, the Commissioners Court shall approve, approve with conditions, or disapprove with reasons an application for a plat not later than the 30th day after the application is received.
3. The Commissioners Court may refuse to approve a plat that does not meet the requirements prescribed by these Development Regulations.
4. The County Engineer may elect to provide the Applicant with comments if the application does not comply with the County's Development Regulations. If the County Engineer allows corrections, the County Engineer shall provide, in writing, a specified time frame to the applicant for corrections in the form of a Resubmittal.
5. If the applicant agrees to a Resubmittal of the Final Plat Application in response to comments provided by the County Engineer, a Comment Response Letter shall accompany the Resubmittal. The comment letter shall describe the reasons for the changes made by the Project Engineer of Record.
6. In the resubmittal, revisions shall be identified in a clouded copy and a clean copy.
7. The thirty (30) day period for the Court to take final action on a plat application may only be extended in compliance with Section 232.0025 of the Texas Local Government Code. A resubmittal shall not alter the 30-day limit for deciding the Final Plat.

F. CONDITIONAL APPROVAL

A condition for approval shall be in writing and shall cite specific reasons for the condition. The condition shall:

1. be directly related to requirements adopted under Texas Local Government Code Chapter 232; and
2. include a citation to the law, including a statute or county ordinance, that is the basis for the condition for approval or reason for disapproval.

G. DISAPPROVAL

If the Commissioners Court disapproves a plat application, the County Engineer shall provide the applicant with written notification of the Court's decision with a list of the reasons for the disapproval. The reasons shall:

1. be directly related to requirements adopted under Texas Local Government Code Chapter 232; and
2. include a citation to the law, including a statute or county ordinance, that is the basis for the condition for approval or reason for disapproval.

H. NO ACTION TAKEN OR COUNTY PROCEDURAL NONCOMPLIANCE

In the event the Commissioners Court fails to take timely final action on a plat application in accordance with this section,

1. the County shall refund the greater of the unexpended portion of the plat application fee or 50 percent of the plat application fee; and
2. the plat application is granted by operation of law; and
3. the applicant may seek additional relief in accordance with Section 232.0025, Local Government Code.
4. If the County Engineer fails to comply with the requirements for filing or for approving a plat, or the Commissioner's Court fails to comply with the requirements for deciding a plat, the plat application is approved by operation of law, unless the time for action is extended by the Commissioner's Court upon written request by the applicant, filed 7 days before the Commission is scheduled to act.

I. APPLICANT RESPONSE TO CONDITIONAL APPROVAL OR DISAPPROVAL

1. After the conditional approval or disapproval of a plat application, the applicant may submit a written response that satisfies each condition for the conditional approval or remedies each reason for the disapproval.
2. There is not an established deadline for an applicant to submit the response.
3. Completeness requirements for applicant responses

An administratively complete plat resubmittal:

- a. must adequately address each condition of approval or reason for the disapproval;
- b. must include only those changes necessary to address the condition of approval or reason for disapproval; and
- c. may not include changes unrelated to the condition of approval or reason for disapproval.

J. RECONSIDERATION OF CONDITIONALLY APPROVED OR DISAPPROVED PLATS

1. Upon receipt of an administratively complete applicant response to a conditionally approved or a disapproved plat application that requires Commission consideration, the County Engineer shall:

- a. determine if the applicant response meets the requirements of the Development Regulations, and
 - b. schedule the application for consideration by the Commission not later than the 15th day after the applicant response was submitted.
2. Upon receipt of an administratively complete applicant response to a conditionally approved or a disapproved plat or replat application subject to administrative approval, the County Engineer shall:
 - a. determine if the applicant response meets the requirements of the Development Regulations, and
 - b. either
 - i. approve or approve with conditions the plat or replat not later than 15 days after the applicant response was submitted; or
 - ii. schedule the plat or replat for the Commission to approve, approve with conditions, or disapprove with reasons not later than the 15th day after the applicant response is submitted.
3. If the applicant response is deemed administratively complete, and the Commission or the County Engineer fails to comply with the time limits for action in this section, the plat application is approved by operation of law

K. EXPIRATION

Approval of a final plat expires five (5) years from the date of approval if no progress has been made towards completion of the project. In such event, all fees paid to the County, including any financial guarantee, shall be forfeited to the County.

2.5 Recording Plats

Following approval by the Commissioners Court, the plat shall be filed and recorded with the County Clerk.

2.6 Amending Plats

A. AMENDING WITHOUT VACATING THE PRECEDING PLAT

The Commissioners Court may approve an amending plat, which may be recorded and is controlling over the preceding plat without vacation of that plat, if the amending plat is signed by the applicants only and is solely for one or more of the following purposes:

1. To correct an error in a course or distance shown on the preceding plat; and
2. To add a course or distance that was omitted on the preceding plat; and
3. To correct an error in a real property description shown on the preceding plat; and
4. To indicate monuments set after the death, disability, or retirement from practice of the engineer or surveyor responsible for setting monuments; and
5. 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; and
6. To correct any other type of scrivener or clerical error or omission previously approved, including lot numbers, acreage, street names, and identification of adjacent recorded plats; and
7. To correct an error in courses and distances of lot lines between two adjacent lots if:
 - a. both lot owners join in the application for amending the plat; and
 - b. neither lot is abolished; and
 - c. the amendment does not attempt to remove recorded covenants or restrictions; and
 - d. the amendment does not have a material adverse effect on the property rights of the other owners in the plat; and
8. To relocate a lot line to eliminate an inadvertent encroachment of a building or other improvement on a lot line or easement; and
9. To relocate one or more lot lines between one or more adjacent lots if:
 - a. the owners of all those lots join in the application for amending the plat; and
 - b. the amendment does not attempt to remove recorded covenants or restrictions; and
 - c. the amendment does not increase the number of lots; and
10. To replat one or more lots fronting on an existing street if:
 - a. the owners of all those lots join in the application for amending the plat; and
 - b. the amendment does not attempt to remove recorded covenants or restrictions; and
 - c. the amendment does not increase the number of lots; and
 - d. the amendment does not create or require the creation of a new street or make necessary the extension of county facilities.

B. NOTICE, HEARING AND APPROVAL OF OTHER LOT OWNERS NOT REQUIRED

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

C. ADMINISTRATIVE AMENDMENTS

1. The Commissioners Court desires to provide an expedited process for approval of plat amendments which correct erroneous and inaccurate information in the County records, due to deeds which have been recorded with the County Clerk's office that show

- a division or combination of property in a platted subdivision without amending or revising the plat
2. A blanket exemption is granted to existing situations as of February 27, 2006, where deeds have been recorded with the county clerk's office that show a division or combination of property in a platted subdivision without amending or revising the subdivision plat.
3. The County Engineer of Kendall County is authorized to approve plat amendments and waive the plat review fee concerning existing situations where deeds have been recorded with the county clerk's office that show a division or combination of property in a platted subdivision without prior compliance with plat revision or plat amendment procedures.
4. Such plats shall otherwise comply with the requirements contained in the Kendall County Development Rules and Regulations and be recorded in the plat records of the County Clerk's office.

2.7 Vacating a Plat

A. APPLICABILITY

The following procedure shall be accomplished as appropriate prior to a plat revision being considered for approval. Approval by the County is required before a revised plat may be filed with the County Clerk's Office.

Applies when 100% of the owners of the property located in the plat apply to vacate the plat.

B. PROCEDURE

1. The owners of a tract covered by a plat may vacate the plat at any time before any lot in the plat is sold. The plat is vacated when a signed, acknowledged instrument declaring the plat vacated is approved by the Commissioners Court and recorded in the manner prescribed for the original plat.
2. If lots in the platted subdivision have been sold, the plat, or any part of the plat, may be vacated on the application of all the owners of lots in the platted subdivision with approval of the Commissioners Court obtained in the manner prescribed for the original plat.
3. After approval by the Commissioners Court, the County Clerk shall write legibly on the vacated plat (the original plat previously filed for record) the word "Vacated" and shall enter on the plat a reference to the volume and page at which the vacating instrument is recorded.
4. On the execution and recording of the vacating instrument, the vacated plat has no effect.

2.8 Replats

A. APPROVAL

The County Engineer shall schedule the application for Commission to approve, approve with conditions, or disapprove with reasons, a replat application not later than the 30th day after the application is deemed complete.

1. Conditional Approval

A condition for approval shall be in writing and shall cite specific reasons for the condition. The condition shall:

- a. be directly related to requirements adopted under Texas Local Government Code Chapter 232; and
- b. include a citation to the law, including a statute or county ordinance, that is the basis for the condition for approval or reason for disapproval.

2. Disapproval

If the Commissioners Court disapproves a plat application, the County Engineer shall provide the applicant with written notification of the Court's decision with a list of the reasons for the disapproval. The reasons shall:

- a. be directly related to requirements adopted under Texas Local Government Code Chapter 232; and
- b. include a citation to the law, including a statute or county ordinance, that is the basis for the condition for approval or reason for disapproval.

B. RECONSIDERATION OF A CONDITIONALLY APPROVED OR DISAPPROVED REPLAT

The provisions and procedures for submitting a response for a conditionally approved or disapproved replat shall be the same as that of a conditionally approved or disapproved final plat.

C. REPLATTING WITHOUT VACATING A PRECEDING PLAT

A replat of a subdivision or part of a subdivision may be recorded and is controlling over the preceding plat without vacation of that plat if the replat:

1. is signed and acknowledged by only the owners of the property being replatted; and
2. is approved, after a public hearing on the matter at which parties in interest and citizens have an opportunity to be heard, by the Commissioners Court; and
3. does not attempt to amend or remove any covenants or restrictions of record.

D. ADDITIONAL REQUIREMENTS FOR CERTAIN REPLATS

1. A replat without vacation of the preceding plat must conform to the requirements of this section if any lot in the preceding plat was limited by deed restrictions to residential use.
2. Notice of the hearing shall be given before the 15th day before the date of the hearing by publication in an official newspaper or a newspaper of general circulation in the County; and by written notice) to the owners of lots that are in the original subdivision and that are within 200 feet of the lots to be replatted as indicated on the most recently approved county tax roll of the property upon which the replat is requested. The written notice may be delivered by depositing the notice properly addressed with postage prepaid, in a post office or postal depository within the boundaries of the County.
3. If the proposed replat requires a variance and is protested in accordance with this section, the proposed replat must receive, in order to be approved, the affirmative vote

of at least three-fourths of the members of the Commissioners Court present and voting.

4. For a legal protest, written instruments signed by the owners of at least 20 percent of the area of the lots or land immediately adjoining the area covered by the proposed replat and extending 200 feet from that area, but within the original subdivision, must be filed with the County Engineer, prior to the close of the public hearing. In computing the percentage of land area, the area of streets and alleys shall be included.
5. Compliance with this subsection is not required for approval of a replat of part of a preceding plat if the area to be replatted was designated or reserved for other than single or duplex family residential use by notation on the last legally recorded plat or in the legally recorded restrictions applicable to the plat.

E. SUBMITTAL REQUIREMENTS

1. The proposed replat shall be prepared with ink on Mylar or equivalent on sheets 18 inches wide and 24 inches long, with margins of not less than 3/8 inch on the sides. The plat shall be drawn to a scale of not more than 200 feet per inch and preferably to a scale of 100 feet to the inch. When more than one sheet is required to accommodate the entire area, a separate index sheet showing the entire subdivision at an appropriate scale shall accompany the plat.
2. The proposed replat shall comply with the requirements for a final plat.
3. The developer or his surveyor or engineer as appropriate shall submit six (6) copies of the proposed replat to the County Engineer's Office, as well as one (1) copy in DWG format and one (1) copy in PDF format.

2.9 Plat Cancellation

A. APPLICABILITY

A person owning real property in Kendall County that has been subdivided may apply to the Commissioners Court for permission to cancel all or part of the subdivision, including a dedicated easement or roadway, to reestablish the property as acreage tracts as it existed before the subdivision.

B. IF ONLY PART OF THE SUBDIVISION IS CANCELLED, THE FOLLOWING PROVISIONS APPLY:

1. A plat of the subdivision shall be prepared by the applicant showing the subdivision as it exists before cancellation of any part and showing the subdivision with the cancelled part removed.
2. The plat shall be prepared in accordance with the following requirements:
 - a. The plat shall be prepared with ink on Mylar or equivalent on sheets 18 inches wide and 24 inches long, with margins of not less than 3/8 inch on the sides.
 - b. The plat shall be drawn to a scale of not more than 200 feet per inch and preferably to a scale of 100 feet to the inch.
 - c. When more than one sheet is required to accommodate the entire area, a separate index sheet showing the entire subdivision at an appropriate scale shall accompany the plat.
3. The proposed plat of cancellation shall comply with the requirements for a final plat.
4. The developer or his surveyor or engineer as appropriate shall submit six (6) copies of the proposed plat of cancellation to the County Engineer's Office.

C. THE FOLLOWING PROVISIONS APPLY TO ALL APPLICATIONS FOR CANCELLATION OF ALL OR PART OF A SUBDIVISION.

1. The Commissioners Court shall publish notice of the application for cancellation. The notice must be published in a newspaper, published in the English language, in the County once each week for at least three weeks before the date on which action is taken on the application. The published notice will direct any person who is interested in the property in the subdivision where the cancellation is proposed and who wishes to protest the proposed cancellation to appear at the time specified in the notice.
2. If, at the public hearing on the application for cancellation, it is shown that the cancellation of all or part of the subdivision does not interfere with the established rights of any person who owns any part of the subdivision or it is shown that all persons who own any part of the subdivision agree to the cancellation, the Commissioners Court will 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 canceled. The Court will enter the order in its minutes. (Note: For cancellation of an entire subdivision, the instrument is the Court's order. For cancellation of a part of the subdivision, the instrument is the revised plat.)
3. The Commissioners Court may deny a cancellation under this section if the Commissioners Court determines the cancellation will prevent the proposed interconnection of infrastructure to pending or existing development.
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 owners of 75 percent of the property included in the subdivision, phase, or identifiable part, the Commissioners Court by order will authorize the cancellation in the manner and after notice and a hearing as provided herein. However, if the owners of at least 10 percent of the property affected by the proposed cancellation file written objections to the cancellation with the

- Commissioners Court prior to the public hearing required herein, the grant of an order of cancellation is at the discretion of the Commissioners Court.
5. To maintain an action to enjoin 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 canceled or closed; or
 - b. is connected by the part of the roadway or easement to be canceled or closed, by the most direct feasible route, to:
 - i. the nearest remaining public highway, county road, or access road to the public highway or county road; or
 - ii. any uncanceled common amenity of the subdivision.
 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's order granting the cancellation.
 7. After approval of cancellation of an entire subdivision by the Commissioners Court, the County Clerk shall write legibly on the cancelled plat (the original recorded plat) the word "Cancelled" and enter on the plat a reference to the volume and page at which the instrument of cancellation is recorded.
 8. After the cancellation instrument is filed and recorded in the official records of the County, the County Tax Assessor Collector shall assess the property that is no longer a subdivision or a part of a subdivision as if it had never been subdivided.
 9. If the application for cancellation is granted and delinquent taxes are owed on the subdivided tract affected by the cancellation for any preceding year, the owner of the affected tract may pay the delinquent taxes on an acreage basis as if the tract had not been subdivided. For the purpose of assessing taxes on the tract affected by the cancellation for a preceding year, the County Tax Assessor Collector shall assess taxes on the affected tract on an acreage basis.

Chapter 3 Permitting Procedures

3.1 General Permitting Procedure

A. PERMITS REQUIRED FOR CONSTRUCTION

1. The permits that are required for construction in Kendall County include but are not limited to:
 - a. Driveway Permit (Access Permit)
 - b. Development Permit
 - c. Dark Sky Permit
 - d. Building Permit (Fire Marshal)
 - e. Septic Permit
 - f. Right of Way Permit
2. No permits will be issued for illegal divisions of property.

B. SUBMITTAL REQUIREMENTS

The information to be included in a permit application will depend upon the checklist provided to the applicant. Requirement for certain items may be waived by the County Engineer, depending on the scope and complexity of the project.

C. STANDARDS FOR SUBMITTAL DOCUMENTS

1. Any map, study or plan submitted to the County shall comply with the County's standards for submittal documents.
2. Permit applications and all associated documents shall be submitted in both printed and digital form. as follows:
 - a. Any materials submitted in digital form shall be PDF files unless otherwise indicated.
 - b. Any materials submitted in printed form shall be submitted on letter size or tabloid size paper and shall be printed on one side of the paper.
 - c. No hand drawn plans will be accepted.
 - d. Site plans and construction drawings may be submitted on 22x34 paper.

D. COMPLETENESS REVIEW

1. When an applicant submits a permit application, the County Engineer will first review the submittal for completeness. The completeness review determines if the application contains the information identified in the checklist provided to the applicant at the Preapplication Meeting.
2. Incomplete applications will not be processed by the County. If an application is deemed incomplete, the applicant will be required to re-submit the application once the missing information has been incorporated.
3. The applicant will be notified of completeness or of missing items via email.
4. Review of the application does not begin until an application is deemed complete.

E. COMPLIANCE REQUIRED

Permits shall be granted based on compliance with the Development Rules and Regulations of Kendall County and with the laws of the State of Texas, provided the project does not create a threat to public health, safety and welfare. The County Engineer shall deny a permit for any application that does not comply with the Development Rules and Regulations of Kendall County, or with the laws of the State of Texas.

F. FEE FOR ADDITIONAL STAFF REVIEW

The County may charge the applicant an additional review fee any time the County Engineer is required to review an application, or the plans submitted in conjunction with an application, beyond the 2nd review. Any set of plan documents submitted prior to the submission of the application shall be considered when determining how many times County staff has been required to review an application.

G. REQUEST FOR RELIEF

Appeals of a decision on any type of permit shall be made to the Commissioner's Court of Kendall County.

H. IDLE APPLICATIONS

If a permit has not been granted, and the permit application has been inactive for one year due to incompleteness or to lack of applicant response to staff comments or requests for information, the permit application shall expire. After that time a new permit application will be required.

3.2 Additional Requirements for Driveway (Access) Permits

A. APPLICABILITY

1. A Driveway Permit shall be required any time a driveway that accesses a county road is to be constructed, reconstructed or modified.
2. If access is being drawn from a public road maintained by another agency, a Driveway Permit shall be required from the respective maintaining agency.
3. An address shall not be assigned to the property until a Driveway Permit has been obtained.
4. A separate application is required for each connection to a road.
5. A Driveway Permit is the first permit to be obtained for a development.
6. For commercial properties, the Driveway Permit shall be evaluated and issued concurrently with the Commercial Development Permit.

B. APPLICATION SUBMITTAL REQUIREMENTS

The application for a Driveway Permit shall include:

1. Completed application form
2. Payment of the permit fee, as established by the County
3. A copy of the plat or survey, in printed or digital form (digital copy shall be in PDF format), showing the approximate location of the proposed driveway
4. Proof of ownership
5. Agent authorization, if required
6. A Traffic Impact Analysis (TIA) shall be included in the Driveway Permit Application, except that a TIA is not required for single-family residences.

C. DECISION AGENT

1. The Road and Bridge Department is the decision agent for Residential Driveway Permits.
2. The County Engineer is the decision agent for all other Driveway Permits.

D. CRITERIA FOR APPROVAL

1. For a Driveway Permit to be granted, the proposed driveway shall provide access to the tract.
2. The driveway design shall take into account safety and drainage.
3. Driveways through the floodplain shall be on-grade or shall be designed by a professional engineer and have a floodplain study demonstrating no impact.

E. EXPIRATION

A Driveway Permit shall expire one calendar year from the date of approval.

3.3 Additional Requirements for Dark Sky Permits

A. APPLICABILITY

1. A Dark Sky Permit shall be required for any project in Kendall County, before new lighting is installed.
2. If applying for a Development Permit, the Dark Sky Permit Application shall be submitted with the Development Permit and the two shall be decided concurrently.
3. A Minor Dark Sky Permit Application may be submitted for a single-family residential lot.

B. PREAPPLICATION MEETING

1. The developer or developer's representative shall attend a preapplication meeting with the County Engineer prior to submitting an application for a Dark Sky Permit.
2. The preapplication meeting for a Dark Sky Permit can be combined with the Preapplication Meeting for the Development Permit.
3. At the preapplication meeting, the County Engineer shall review the lighting requirements with the developer or developer's representative.
4. The developer or developer's representative shall present preliminary plans for the project to the County Engineer at the meeting.
5. No more than three (3) months shall pass between the preapplication meeting and submittal of the Dark Sky Permit application. If more than three (3) months pass before the application is submitted, a subsequent Preapplication Meeting shall be required.

C. SUBMITTAL REQUIREMENTS

1. Submittal Requirements for a Minor Dark Sky Permit
 - a. Completed application
 - b. Payment of the permit application fee, as established by the County
 - c. Proof of ownership
 - d. Lighting specification sheets
 - e. Site plan/drawings showing location of the lights
 - f. Elevation view of the house with light location, if applicable
2. Submittal Requirements for a Dark Sky Permit for any other type of project or property, including but not limited to residential subdivisions
 - a. Application
 - b. Payment of the permit application fee, as established by the County
 - c. Proof of ownership
 - d. Site Plan
 - e. Engineered lighting plan
 - f. Lighting specification sheets for elements of the engineered lighting plan
 - g. Subdivision covenants and restrictions shall specify the types of fixtures that are allowed on individual lots.

D. DECISION AGENT

The County Engineer grants Dark Sky Permits.

E. SCOPE OF APPROVAL

The Dark Sky Permit shall only grant the permit holder permission to install lights on the property.

F. EXPIRATION

A Dark Sky Permit shall expire one calendar year from the date of approval.

G. PERMIT RENEWAL

1. A Dark Sky Permit may be renewed by the County, provided that a renewal request is submitted 30 days prior to the permit expiration and there are no significant changes to the project.
2. A Request for Renewal shall include the following information:
 - a. Updated construction schedule
 - b. Additional information about the project may be required for the renewal, depending on the project scope and complexity.
3. The County Engineer may not grant a renewal if the project has not been started or no significant progress can be demonstrated.
4. The County Engineer shall not grant a renewal if the project is no longer compliant with health and safety requirements as per County, State or Federal law.
5. Dark Sky Permit Renewals shall be for a period not to exceed one year of the date of the expiration of the original Permit.

H. POST-CONSTRUCTION INSPECTION

The engineer of record for the project shall direct correspondence to the County Engineer stating that the lighting has been completed in accordance with these Rules and Regulations, and in accordance with the engineer's drawings and specifications. The engineer of record may at that time request that the County Engineer conduct a final inspection. A post-construction inspection may be conducted by the County, in accordance with the County's construction procedures. A post-construction inspection is not required for a minor dark sky permit.

3.4 Additional Requirements for Development Permits

A. PURPOSE AND INTENT

Development Permits are intended for the regulation of development activity within Kendall County.

B. APPLICABILITY

1. Development Permits shall be required for any man-made change to any improved or unimproved property within the jurisdiction of Kendall County.
2. Development Permits shall be processed as one of the following types, based on the nature and scope of the project:

- a. Commercial Development Permit

An application for a Development Permit for a commercial project shall be processed as a Commercial Development Permit Application.

- b. Residential Development Permit

An application for a Development Permit for a residential development on a single-family residential lot, where part or all of the property is within the mapped 100-year floodplain shall be processed as a Residential Development Permit Application.

- c. Minor Residential Development Permit

An application for a Development Permit for a residential development on a single-family residential lot, where no part of the property is within the mapped 100-year floodplain, shall be processed as a Minor Residential Development Permit Application.

C. PREAPPLICATION MEETING

1. An applicant for a Development Permit or a representative of the applicant shall attend a meeting with the County Engineer prior to submitting a Development Permit Application.
2. The preapplication meeting must be held at least 7 days, but no more than 3 months, before submittal of a Development Permit Application.
3. The County Engineer shall provide the applicant with a checklist of submittal requirements at the preapplication meeting and shall discuss procedures, specifications and standards required by Kendall County related to development.
4. The applicant shall provide the County Engineer with preliminary plans at or before the preapplication meeting.
5. The County Engineer may waive the requirement for a preapplication meeting, depending on the scope and complexity of the project.
6. A preapplication meeting is not required for a Minor Residential Development Permit.

D. APPLICATION SUBMITTAL REQUIREMENTS

1. Submittal Requirements for Commercial Development Permit Applications
 - a. Completed application form
 - b. Payment of the permit application fee, as established by the County
 - c. A copy of the deed for the property
 - d. A copy of the plat, survey or Affidavit of Land Location, as applicable
 - e. Project Description, including:

- i. A description of all activities to occur on-site
 - ii. Sequence of activities/project phasing
 - iii. Estimated time to complete the project or phase
 - f. Site plan showing existing and proposed improvements, floodplain and setbacks
 - g. Engineering plans and construction drawings indicated on the submittal checklist provided at the preapplication meeting
 - h. Additional supporting documents indicated on the submittal checklist provided at the preapplication meeting. Additional submittals may be required for developments located within or in close proximity to the floodplain.
 - i. Traffic Impact Analysis
 - j. Documentation of federal, state and local permits, authorizations and plans that are required for the project
2. Submittal Requirements for Major Residential Development Permit (applicable for single family residential development with floodplain on-site)
 - a. Completed application form
 - b. Payment of the permit application fee, as established by the County
 - c. A copy of the deed for the property
 - d. A copy of the plat, survey or Affidavit of Land Location, as applicable
 - e. A written description of the project
 - f. Site plan showing existing and proposed improvements, floodplain and setbacks
 - g. Additional submittals may be required for developments located within or in close proximity to the floodplain
3. Submittal Requirements for a Minor Residential Development Permit (applicable for single family residential development with no floodplain on-site)
 - a. Completed application form
 - b. Payment of the permit application fee, as established by the County
 - c. A copy of the deed for the property
 - d. A copy of the plat, survey or Affidavit of Land Location, as applicable
 - e. A written description of the project
 - f. Site plan showing existing and proposed improvements and setbacks
4. The County Engineer may waive any submittal requirement that is not applicable.

E. DECISION AGENT

The County Engineer grants all Development Permits.

F. CONDITIONAL APPROVALS

The County Engineer may conditionally approve a Development Permit. In such cases, the applicant is bound to comply with the conditions, and the Development Permit shall be revoked if the applicant is found to be noncompliant.

G. RESUBMITTALS

1. An applicant may resubmit a Development Permit Application that is denied.
2. If the applicant resubmits within 6 months of the notification of the denial, the applicant may do so without attending a new preapplication meeting.
3. If the applicant resubmits more than 6 months after the notification of the denial, the applicant must restart the process by scheduling and attending a new preapplication meeting with the County Engineer, following all of the requirements for Preapplication Meetings for Development Permits.

H. SCOPE OF APPROVALS

1. A development permit authorizes the applicant to develop the subject property in accordance with the plans and documentation included in the application and approved by the County Engineer.
2. The Development Permit does not authorize any of the following activities:
 - a. Construction of driveways
 - b. Construction in the public right of way
 - c. Construction of on-site sewer facilities
 - d. Any development activity prohibited by the County or by State or Federal law.

I. EXPIRATION OF APPROVAL

1. A Development Permit shall expire one calendar year from the date of approval.
2. Development activity is no longer permitted on the subject property once the Development Permit has expired.

J. PERMIT RENEWAL

1. A Development Permit may be renewed by the County, provided that a renewal request is submitted 30 days prior to the permit expiration and there are no significant changes to the project.
2. A Request for Renewal shall include the following information:
 - a. Updated construction schedule
 - b. Additional information about the project may be required for the renewal, depending on the project scope and complexity.
3. The County Engineer may not grant a renewal if the project has not been started or no significant progress can be demonstrated.
4. The County Engineer shall not grant a renewal if the project is no longer compliant with health and safety requirements as per County, State or Federal law.
5. Development Permit Renewals shall be for a period not to exceed one year of the date of the expiration of the original Permit.

K. CHANGES AND AMENDMENTS

Any substantial change to project plans shall require a reapplication for a new Development Permit.

L. CONSTRUCTION PROCEDURE

See Chapter 4 Construction Procedure for requirements related to construction.

3.5 Additional Requirements for Building Permits (Fire Safety)

A. APPLICABILITY

All new commercial construction projects and projects involving substantial improvements to a site are required to first obtain a Building Permit.

Building Permits may not be obtained until a Development Permit has been granted.

B. PREAPPLICATION MEETING

Although a Preapplication Meeting with the Fire Marshal is not a requirement, it is strongly recommended, as it allows the Fire Marshal to provide the applicant with information about submittal requirements.

The preapplication meeting for Building Permit may be combined with that of the Development Permit. If the applicant intends to hold a combined meeting to address multiple permits, sufficient notice needs to be provided to the County to ensure that representatives of relevant departments are in attendance at the meeting.

The applicant is encouraged to bring preliminary plans to the preapplication meeting, or to provide them to the Fire Marshall beforehand.

The preapplication meeting should be held within three (3) months of the permit application. If more than three (3) months have passed, none of the checklists, forms or requirements identified at the preapplication meeting shall hold. The applicant will need to reschedule a second meeting to ensure that there have been no changes to state, federal or county regulations and requirements during the time that has elapsed.

C. SUBMITTAL REQUIREMENTS

1. Permit application
2. Application fee
3. Proof of ownership
4. Building plans
5. A digital PDF or two (2) printed sets of construction plans

D. DECISION AGENT

The County Fire Marshal shall have the authority to grant Building Permits.

E. DECISION

The Fire Marshal shall grant a Building Permit for an application that complies with the Fire Code and with the Development Rules and Regulations of Kendall County.

If no action has been taken on the permit application within 30 days of receipt, the Building Permit shall be considered approved, as stipulated in the Kendall County Fire Code.

F. APPEALS

The Board of Appeals hears and decides appeals of decisions regarding Building Permits, in accordance with the Kendall County Fire Code.

G. EXPIRATION

1. The Building Permit expires 180 days from the date of approval if construction has not begun by that time.

2. If a Building Permit expires, a new permit – and a new permit application – shall be required.

H. EXTENSION

1. An extension may be granted by the Fire Marshall, upon written request, provided the request has been made prior to the expiration of the permit.
2. The Fire Marshall may grant up to two separate six (6)-month extensions.

3.6 Additional Requirements for Septic Permits

A. APPLICABILITY

1. A septic permit shall be required prior to the installation, repair or retrofit of any septic system.
2. For commercial developments, the septic permit shall be submitted with the development permit.

B. SUBMITTAL REQUIREMENTS

1. Application
2. Application Fee
3. Proof of ownership
4. Property Survey
5. Site plan including septic system design
6. Maintenance contract and affidavit to the public (for aerobic systems)

C. DECISION AGENT

A designated representative of the County shall grant septic permits.

D. DECISION

The County shall approve or deny a Septic Permit within 30 days of determination of application completeness.

E. SCOPE OF APPROVAL

The Septic Permit shall grant the holder permission to construct the septic system on the project site, in accordance with the plans included in the permit application.

F. EXPIRATION

1. A Septic Permit shall expire one (1) year from the date of approval.

3.7 Additional Requirements for Right of Way Permits

A Right of Way Permit shall be required for any improvement other than a driveway within any public right of way in Kendall County, except for TxDOT rights of way and rights of way within the jurisdiction of a municipality. A Right of Way Permit is required for improvements underground or overhead, but is not required for construction of driveways, as driveways require a Driveway Permit.

A. APPLICABILITY

1. Right of Way Permits shall be required for any construction activity that is to occur within any public right of way that is owned by Kendall County.
2. A Minor Right of Way Permit application may be submitted where right of way work only consists of replacement or installation of overhead utilities on existing lines, the replacement of poles, the installation of 5 or fewer new poles, or as determined by the County Engineer.
3. Where requirements differ for Minor Right of Way Permits, the different requirements shall be indicated. If separate requirements are not indicated, the requirements shall be the same for both Right of Way Permits and Minor Right of Way Permits.

B. PREAPPLICATION MEETING

1. An applicant for a Right of Way Permit or a representative of the applicant shall attend a meeting with the County Engineer prior to submitting a Right of Way Permit Application.
2. The preapplication meeting must be held at least 7 days, but no more than 3 months, before submittal of a Right of Way Permit Application.
3. The County Engineer shall provide the applicant with a checklist of submittal requirements at the preapplication meeting and shall discuss procedures, specifications and standards required by Kendall County related to development and floodplain management.
4. The applicant shall provide the County Engineer with preliminary plans at or before the preapplication meeting.
5. The County Engineer may waive the requirement for a preapplication meeting, depending on the scope and complexity of the project.
6. A preapplication meeting is not required for Minor Right of Way Permit applications.

C. SUBMITTAL REQUIREMENTS

1. Submittal Requirements for Right of Way Permits

Submittal requirements may vary based on project complexity and size, but shall include, unless otherwise indicated by the County Engineer:

- a. Completed application
- b. Payment of permit application fee, as established by the County
- c. Location map
- d. Pole location map
- e. Site plan
- f. Construction plans
- g. SWP3
- h. Permanent seeding and erosion control plan
- i. Soil retention plan
- j. Traffic control plan
- k. Copy of liability insurance
- l. Documentation of notification of property owners

2. Submittal Requirements for Minor Right of Way Permits

- a. Application
- b. Application fee
- c. Location map
- d. Pole location map

D. CONDITIONAL APPROVALS

The County Engineer may conditionally approve a Right of Way Permit. In such cases, the applicant is bound to comply with the conditions, and the Right of Way Permit shall be revoked if the applicant is found to be noncompliant.

E. NOTIFICATION

The County shall notify the applicant of the decision regarding the Right of Way Permit Application within 30 days of receipt of the application.

F. IF APPLICATION IS DENIED

If an application is denied, the County shall provide reasons for the denial. If an application is denied, the applicant may resubmit at any time.

G. SCOPE OF APPROVALS

1. A Right of Way Permit authorizes the applicant to proceed with construction in the Kendall County right of way, in accordance with the plans and documentation included in the application and approved by the County Engineer.
2. The Right of Way Permit does not authorize any of the following activities:
 - a. Construction in the mapped floodplain of Kendall County
 - b. Construction of driveways
 - c. Construction of on-site sewer facilities
 - d. Any development activity prohibited by the County or by State or Federal law.
3. Expiration of Approval
 - a. A Right of Way Permit shall expire one calendar year from the date of approval.
 - b. Development activity is no longer permitted within the designated right of way area once the Right of Way Permit has expired.
 - c. If applicant does not renew a Right of Way Permit before it expires, the applicant may be required to pay the permit fee again.

H. RENEWALS

1. A Right of Way Permit may be renewed by the County, provided that a renewal request is submitted 30 days prior to the permit expiration and there are no significant changes to the project.
2. A Request for Renewal shall include the following information:
 - a. Written request for renewal
 - b. Updated construction schedule with updated target date of completion
 - c. Additional information about the project may be required for the renewal, depending on the project scope and complexity.
3. The County Engineer may not grant a renewal if the project has not been started or no significant progress can be demonstrated.

4. The County Engineer shall not grant a renewal if the project is no longer compliant with health and safety requirements as per County, State or Federal law.
5. Right of Way Permit Renewals shall be for a period not to exceed one year of the date of the expiration of the original Permit.

I. CHANGES AND AMENDMENTS

1. Any substantial change to project plans shall require a new Right of Way Permit.
2. Amendments to construction plans must be submitted by the engineer of record to County Engineer and approved by County Engineer prior to making the change.
3. Amendments require approval by the County Engineer.

J. CONSTRUCTION PROCEDURE

See Chapter 4 Construction Procedure for requirements related to construction.

Chapter 4 Construction Procedure

4.1 Applicability

- A. These procedures shall be applicable for any type of site construction.
- B. All applicable permits must be obtained before any construction activity commences.

4.2 Preconstruction Meeting

Subsequent to approval of a final plat and/or a Commercial Development Permit, and prior to initiation of construction, the developer and/or his engineer and/or contractor(s) shall request a preconstruction conference through the County Engineer. The County Engineer will schedule the conference as soon as possible. The purpose of the conference is to establish lines of communication during construction for visits to the site and observation of construction, clarifications and interpretations, inspections and tests, and construction sequence. At the conference, the contractor shall provide the county with an estimated completion date of the project.

4.3 Changes to Construction Drawings

- A. After construction of infrastructure commences, any deviation from the final plat, as approved by the Commissioners Court, including the plans, drawings and specifications for construction of roads, drainage, and other improvements must have prior approval by the county engineer.
- B. The engineer of record for the developer must request approval of any changes in writing addressed to the county engineer.
- C. The county engineer will evaluate the request in a timely manner and decide whether or not to approve the changes.
- D. The county engineer shall notify the engineer for the developer of his decision in writing.
- E. Substantial changes to construction drawings may incur an additional fee for technical review by the county engineer, in accordance with the county's fee schedule.

4.4 Post-Construction Inspections

- A. Upon completion of construction of the roads and drainage, the engineer of record for the developer shall:
 - 1. send a letter to the County Engineer stating that the roads and drainage have been completed in accordance with the final plat and the construction plans, drawings and specifications and any relief items granted by Commissioners Court,
 - 2. request either approval of the construction -in a private (gated) community- or approval and/or acceptance in a public subdivision for maintenance by the County.
 - 3. a compiled report of all material testing and construction tests shall also be provided.

4.5 Approval

- A. The county engineer will conduct an inspection of the improvements and provide the engineer of record for the developer with notice of approval or a punch list of items to be completed or corrected if necessary.
- B. A condition of approval and/or acceptance by the county of road and drainage infrastructure is the receipt by the county of two sets of "record drawings" (and a compact disc in pdf format and a compact disc in dwg format) showing the improvements as actually constructed. The drawings shall be stamped or designated "record drawings."
- C. Kendall County will not accept detention facilities.
- D. A further condition of acceptance by the county of road and drainage infrastructure is the transfer of all vendor warranties from the contractor to the county. (note: this condition is not applicable to roads and drainage infrastructure that are to be privately maintained.)

4.6 Maintenance Bonds

Before the County will release the performance guarantee for the project, and to ensure that the roads and drainage improvements are maintained to the satisfaction of the County, the developer shall provide the County with a maintenance bond, executed by a surety company holding a license to do business in the State of Texas, made payable to the County Judge, or his successor in office, and acceptable to the County, in an amount equal to fifteen percent (15%) of the total cost of the roads and drainage improvements constructed in the subdivision, as estimated by the design engineer and approved by the County Engineer, conditioned that upon completion of the improvements and approval of the improvements by the Commissioners Court, the developer will maintain the streets and drainage improvements in good condition at the developer's expense for a period of at least one (1) year after the date of approval of the improvements by the Commissioners Court. (Note: A maintenance bond is not required of private streets or roads not to be maintained by the County.)

Chapter 5 Infrastructure Standards

5.1 Access

A. GENERAL PROVISIONS:

1. The entrances and/or exits to a subdivision shall be by state highway, county road, or a road or street constructed to county specifications. Each lot in the subdivision shall front on a state highway, county road, or a road or street constructed to county specifications. Each lot or tract of land shall normally be allowed one entrance to a state highway, county road or a road constructed to county specifications (driveway entrance). The location and number of entrances to a county road is subject to approval by the County Engineer or his designated representative.
2. The spacing of driveways shall not be less than the latest adopted version of the TxDOT Access Management Manual, based on the posted speed of the street access is being drawn from. This applies to spacing between multiple driveways for a site on one property frontage, between an adjacent existing driveway on another property owner's land, or for one-half (1/2) of the driveway spacing required from the edge of a property to the driveway proposed. Driveway spacing shall be measured from throat to throat for minimum spacing distance.
3. The location and number of driveway entrances to a state highway is subject to approval by TxDOT.
4. When a proposed subdivision is adjacent to a county road, the developer shall dedicate for public use an appropriate width on the developer's side(s) of the center line of such road to allow for future improvements to the county road.
5. There shall be no reserve (or spite) strips controlling the only access to land adjacent to roads dedicated or intended to be dedicated for public use.
6. All streets and roads to be owned and maintained by a homeowners' association or similar organization, and all roads or streets located in subdivisions and dedicated to public use shall be constructed in accordance with county standards and inspected during construction by the County Engineer.
7. A second entrance shall be installed if and as required. Developments with 30 or more homes shall be provided with two means of ingress and egress. All such roads shall be designed to county standards, and in accordance with the International Fire Code, Appendix D. Additional access points may be required by the Fire Marshal.
8. New subdivisions shall be required to provide for connections to future development and unbuilt phases of projects.
9. Unless part of a plan for development (Master Plan), development of a subdivision using the roads of an existing subdivision is prohibited unless a Traffic Impact Analysis (TIA) prepared at the cost of the developer indicates, in the opinion of the County Engineer, that such development will not adversely impact the health, safety or general welfare of the occupants of the existing subdivision and provided further that the developer of the proposed subdivision agrees to restore roads in the existing subdivision to the same condition as such existed prior to construction of improvements in the proposed subdivision. The County will not approve improvements in the proposed subdivision and the financial guarantee posted by the developer of the proposed subdivision will not be released until the developer satisfies this requirement.
10. With certain exceptions, commercial truck traffic is prohibited on subdivision roads.

5.2 Lots

A. DIMENSIONAL REQUIREMENTS

- Summary of Lot Characteristics and Dimensional Requirements for Platted Lots and Tracts Created by an Affidavit of Land Location

Table 5-1 Dimensional Requirements for Platted Lots and Tracts Created by an Affidavit of Land Location

	Type of Water and Waste Disposal	Min. Lot Size	Min. Rd Frontage	Max. Density (acres per lot)	Front Setback ^{a,b}	Rear Setback	Side Setback
SINGLE-FAMILY RESIDENTIAL LOTS	Well and OSSF ^c	3 ac.	250 ft	6	50 ft	10 ft	10 ft
	Public Water and OSSF ^d	1 ac.	100 ft	1	25 ft	10 ft	10 ft
	Public Water and Wastewater ^d	N/A	50 ft	N/A	25 ft	10 ft/ 5 ft ^f	10 ft/ 5 ft ^f
ALL USES OTHER THAN ONE SINGLE-FAMILY RESIDENTIAL LOT	Well and OSSF ^{d,e}	3 ac.	250 ft	6	50 ft	25 ft	25 ft
	Public Water and OSSF ^{d,e}	1 ac	100 ft	1	25 ft	25 ft	25 ft
	Public Water and Wastewater ^{d,e}	N/A	50 ft	N/A	25 ft	25 ft	25 ft

- Notes on Lot Characteristics and Dimensional Requirements
 - The setback from an existing or proposed County Road or State Roadway shall be 50 feet.
 - For corner lots or dual frontage lots, minimum setback from any street frontage shall be 25 feet.
 - Roadway infrastructure may be maintained by the County. This does not include maintenance of detention facilities.
 - Infrastructure (roads, drainage, detention and other infrastructure) in such subdivisions shall be maintained by an entity other than the County.
 - Minimum lot size for commercial sites served by OSSF is 1 acre.
 - 5 feet is allowed if there are no obstructions in the setback area. If there are any obstructions, a minimum side setback of 10 feet shall be maintained.
- No portion of a platted lot may be less than 60 feet in width except for lots served by central water and sewer, which shall not be narrower than 50 feet.

B. ADDITIONAL REQUIREMENTS

- For lots on cul-de-sacs, the minimum road frontage for lots on county roads is 50 feet chord length. The minimum road frontage for lots on roads maintained by an entity other than the County is 30 feet chord length.
- A developer may impose larger setbacks through restrictive covenants. If larger setbacks are imposed, they shall be shown on the plat.
- Subdivisions using groundwater as a source of potable water to any degree, whether provided by individual wells or private or public water systems, shall comply with all applicable rules of the CCGCD, including, but not limited to, rules related to permits for the drilling, equipping or completing of wells; rules related to fees; rules related to the spacing of wells from property lines or adjoining wells; and rules related to limiting

- groundwater production based on acreage or tract size. Developers of such subdivisions shall provide documentation evidencing approval from CCGCD, TCEQ, the entity providing water (if any), and any other appropriate regulatory agency, that adequate water is available to serve the residents of the proposed subdivision at full build out in a safe and healthful manner and without adverse impact on the groundwater resources of Kendall County. Subdivisions served by groundwater that is derived from wells outside of Kendall County but drilled into an aquifer that extends into Kendall County, shall be subject to Kendall County's dimensional requirements and all applicable rules of the CCGCD, as if the water were derived from groundwater sources in Kendall County.
4. Additionally, subdivisions served by a wastewater treatment system shall provide certification from the provider of wastewater treatment services and any appropriate regulatory agency that adequate capacity is or will be available to serve the residents of the proposed subdivision at full build out without any adverse impact on the health, safety or general welfare of the citizens of the County.
 5. Additionally, subdivisions served by a public water system using any surface water transported from outside Kendall County or using any groundwater derived from an aquifer that does not extend into Kendall County and that is transported from outside of Kendall County shall provide documentation from the supplier of water and any appropriate regulatory agency that the developer has complied with all of the requirements of the supplier and/or regulatory agency and that the subdivision is contractually entitled to receive a sufficient supply of water on a daily and continuous basis to adequately serve the residents of the proposed subdivision at full build out in a safe and healthful manner and with no dependence on groundwater. Such subdivisions shall have restrictive covenants of record prohibiting the drilling or use of water wells as a source of potable water. The drilling and use of water wells for fire protection and/or aquifer monitoring purposes may be allowed subject to regulation by CCGCD.
 6. Each building in a subdivision depending on rainwater catchments systems as the sole source for potable water shall have catchments area and sufficient storage capacity based on sound engineering practices to provide the residents of the building with adequate potable water on a daily and continuous basis and with no dependence on groundwater. Such subdivisions shall have restrictive covenants of record prohibiting the drilling or use of water wells as a source of potable water. The drilling and use of water wells for fire protection, emergency water supply, and/or aquifer monitoring purposes may be allowed subject to regulation by CCGCD.

5.3 Potable Water Supply and Facilities

A. ADEQUATE WATER SUPPLY

The developer of a proposed development shall provide evidence that an adequate supply of potable water of sufficient quantity and quality is available to supply the proposed development in accordance with the following requirements.

1. If water wells are the source of potable water, in whole or part, the developer shall comply with all requirements of CCGCD.
2. If potable water is provided from an out of county source, the developer must provide documentation from the supplier confirming that water will be provided on a permanent daily and continual basis to supply each proposed ESFC in the proposed development with at least 0.4 acre-feet of water per year (360 gallons per day).
3. If expansion of an existing public water supply system or installation of a new public water supply system is the proposed method of water supply and distribution for the proposed development, site-specific groundwater data shall be developed under the requirements of Texas Administrative Code (TAC), Title 30, Part I, Chapter 290, Subchapter D (relating to rules and regulations for Public Water Systems) and the information developed in meeting these requirements shall be attached to the form required under TAC, Title 30, Part I, Chapter 230.3 (relating to Certification of Groundwater Availability for Platting).

B. GROUNDWATER AVAILABILITY AND THE GROUNDWATER AVAILABILITY REPORT (GAR)

1. Applicability

This subsection is applicable only to proposed developments where the proposed source of potable water is based, in whole or in part, on groundwater supplied by individual water wells, or on groundwater supplied by expansion of an existing public water supply system, or on groundwater based on creation of a new public water system.

2. Definition:

Groundwater availability shall be defined as the amount of groundwater available to a proposed development.

3. Submission of the GAR:

Prior to, or at the same time as submission of any application for relief, preliminary plat or plan for development, the developer of a proposed development shall submit a GAR prepared and certified by a Professional Engineer or a Professional Geoscientist with a current license through the Texas Board of Professional Engineers and Land Surveyors, or a Geoscientist as appropriate in accordance with the requirements for the professional practice in the State of Texas.

4. Requirements of the GAR:

The GAR shall include the following information:

- a. Name of proposed development.
- b. Any previous subdivision name or other name that identifies the tract of land where the proposed development will be located.
- c. Legal description of the property where the proposed development will be located, including the area in acres to 0.1 acre.

- d. Number of proposed lots in the proposed development.
 - e. Average size of the proposed lots, in acres to 0.1 acre.
 - f. Description of the purpose of the proposed development (For example, single family residential, multi-family residential, commercial, industrial, etc.).
 - g. Name, address, telephone number and facsimile transmission (fax) number (if any) and e-mail address (if any) of the property owner and of the person or authorized agent of the person or entity proposing to develop the proposed development.
 - h. Name, address, telephone number, fax number (if any) and e-mail address (if any) of the person preparing the GAR.
 - i. The proposed method of supply and distribution of potable water to the proposed development, including, but not limited to:
 - i. expansion of an existing public water supply system;
 - ii. a new public water supply system;
 - iii. individual water wells; or
 - iv. rainwater catchments;
 - j. The number of test wells drilled, including dry holes.
 - k. The number of wells pump tested and all test results.
 - l. Test well locations by physical address/description and by latitude and longitude.
 - m. The lithologic and geophysical logs (electrical logs) for each test well.
 - n. The State Well Report for each test well, including static water levels.
 - o. The elevation above mean sea level at each test well site.
 - p. A geological cross section of the studied area at a scale of one inch per 400 feet horizontal and one inch per hundred feet vertical.
 - q. Water production from each test well in gallons per minute from the 36-hour pump test.
 - r. Average water production from all test wells in gallons per minute from the 36-hour pump test.
 - s. The water quality results from a test conducted by a Texas Department of Health-approved laboratory, using the criteria defined in TAC, Title 30, Chapter 230, Rule 230.9.
 - t. The conclusion statement based in TAC, Title 30, Part I, Chapter 230, Section 230.11 (b) (c).
5. Data Used to Prepare the GAR

The data used to prepare the GAR shall be obtained from test wells, or a series of test wells in accordance with the following requirements:

- a. The number of test wells required shall be determined as follows:
 - i. Developments up to and including 75 acres shall require a single (one) test well.
 - ii. Developments greater than 75 acres and up to and including 250 acres shall require a minimum of two test wells.
 - iii. An additional test well shall be required for each additional 250 acres, or part thereof.
 - iv. In order to provide uniformity of test data, additional test wells shall be required for developments requiring two or more test wells, if the thirty-six-hour pump test, (detailed below), indicates a variance in production of 50% or greater between any two wells. In this case, an additional test well shall be required for each 125 acres, or part thereof instead of the 250 acres, or part thereof, specified above.

- b. The locations and well numbers of the test wells shall be shown on the plats and shall be located by latitude and longitude.
- c. All known existing, abandoned, and inoperative wells within the proposed development shall be identified, located, and mapped by on-site surveys and shown on the plats with the CCGCD registration number indicated.

(Note: All wells within the proposed development shall be registered with CCGCD and in compliance with CCGD rules.)

- d. An existing well may be used as a test well if sufficient data is available, or can be obtained, for that well to demonstrate that it meets the requirements for test wells.
- e. A previous well test may be accepted in lieu of a new test if:
 - i. the well is located within the proposed development; and
 - ii. the previous test fully meets all the requirements stated herein; and
 - iii. the previous test was conducted in an aquifer which is being considered as the source of water supply for the proposed development; and
 - iv. aquifer conditions (e.g., water levels, gradients, etc.) during the previous test were approximately the same as present conditions.

6. Pumping the Test Wells

- a. The test wells shall be pumped with a pump capable of varying its discharge rate up to sixteen (16) gallons per minute. Public Water Supply wells may be equipped to pump more than sixteen (16) gallons per minute. During the testing period the discharge rate shall be adjusted until the water level in the well stabilizes and remains constant for a pumping period of thirty-six (36) hours.
- b. After the well is pumped, water levels shall be taken every hour for thirty-six (36) hours after the test to determine the recovery rate of the well. If the water level recovers to within one (1) foot of the pre-test level before the thirty-six (36) hour period following the test, the test can be concluded.
- c. The wells shall be properly equipped with a meter properly sized for the flow rate of the well. Meter readings and water levels shall be taken prior to and at the conclusion of each test, and at least every hour during the test (pumping and recovery).
- d. Water pumped out of the well during well development shall not be allowed to influence initial well performance results.
- e. Well testing required by this section shall be performed before any acidization or other flow-capacity enhancement procedures are applied to the test well.

7. Protection of groundwater:

All necessary precautions shall be taken during construction of test wells to ensure that surface contaminants do not reach the subsurface environment and that undesirable groundwater (water that is injurious to human health and the environment or water that can cause pollution to land or other waters) if encountered, is sealed off and confined to the zone(s) of origin. Test wells shall be cased and cemented in accordance with CCGCD requirements.

8. Processing of GAR and Approval Criteria:

- a. Within four working days of receipt of a GAR, the County shall deliver the GAR to the CCGCD. Within four working days of receipt, CCGCD shall determine whether the GAR is administratively complete. If any deficiencies exist in the GAR, CCGCD shall notify the County of such deficiencies in writing within four working days of receipt so the County can provide the list of deficiencies to the developer within ten

working days of receipt by the County. Once the GAR is determined by CCGCD to be administratively complete, CCGCD shall complete its review of the GAR and provide the results of the review to the County in sufficient time for the County to comply with the time limitations of section 206.

- b. The following aquifer parameters shall be determined in the GAR:
 - i. Rate of yield and drawdown; and
 - ii. Specific capacity; and
 - iii. Efficiency of the pumped (test) well; and
 - iv. Transmissivity; and
 - v. Coefficient of storage; and
 - vi. Hydraulic conductivity; and
 - vii. Recharge of barrier boundaries if any are present; and
 - viii. Thickness of the aquifer(s).
- c. To be approved by the CCGCD, the GAR must conclusively establish that there is an adequate supply of groundwater of suitable quality to provide the proposed development with potable water in the amount of at least 0.4 acre-feet per year (360 gallons per day) per ESFC on a permanent daily and continual basis in accordance with the parameters set out in this section. The Commissioners Court will not approve a final plat for a subdivision subject to this section unless the GAR is approved by CCGCD.

9. Test Well Continuing Requirements:

- a. Test wells shall remain available for County and CCGCD for inspection.
- b. Test wells may be offered for sale in conjunction with tract sales within the platted subdivision.
- c. If test wells are to be used for any purpose other than domestic or livestock uses, the owner of the well shall comply with all applicable CCGCD requirements.
- d. Either the developer, a homeowners association or a designated property owner in the development shall be responsible for maintaining and keeping each test well accessible.

10. Additional Requirements:

Developers of proposed developments with potable water supplied by a public water system shall comply with the following requirements:

- a. Each plat shall include, or have attached, a document containing a description of the water facilities to be available in the development, identify easements dedicated for the provision of facilities and the date by which the water facilities will be fully operable.
- b. Each plat shall have attached a document prepared by an engineer registered to practice in the State of Texas certifying that the water facilities proposed for the development are in compliance with the model rules adopted under Section 16.343, Texas Water Code, a certified estimate of the cost to install the water facilities, and a certification that the water quality and connections to the lots meet, or will meet, the minimum state standards.
- c. The developer shall have available for inspection by the County and any interested person, a letter from the potable water provider stating that water is available to the development sufficient in quality and quantity to meet minimum state standards required by Section 16.343 Texas Water Code and that water of that quality and quantity will be made available to the point of delivery of all lots in the development.

11. Developments without a Public Water System or Water from an Approved Source

Developers of proposed developments without a public water system or water from an approved source to each lot shall notify every purchaser of any property located in the development, in writing, prior to conveyance of any property that there is no approved water supply and shall provide prospective purchasers with full disclosure of anticipated water availability and water quality. Copies of such written notices and disclosures shall be retained by the developer for inspection by the County, CCGCD and other appropriate authorities.

12. Drilling or Operation of Individual Water Wells Prohibited

Developments which are to be provided with potable water by a new or existing public or community water system shall, by a note on the plats and by deed restrictions or other legal means, prohibit the drilling or operation of individual water wells within such development. (Note: Subject to approval by the County and CCGCD, test wells, monitoring wells or fire-fighting wells may be located in the development.)

13. Conformity to AWWA Specifications and TCEQ Rules and Regulations Required

Public water systems, including fire hydrants, shall conform to American Water Works Associations (AWWA) specifications as to design materials, construction, and testing and comply with the rules and regulations of TCEQ.

14. Approval of Fire Hydrant Installation Required for Final Plat Approval

At the time of submission of the final plat to the County, the developer shall also submit a letter from the County Fire Marshal approving proposed fire hydrant installation in the development.

5.4 Fire Suppression

A. DEVELOPMENTS WITH FIRE HYDRANTS

The developer shall obtain approval of fire hydrants from the County Fire Marshall. Fire hydrants shall conform to AWWA specifications.

B. WATER WELL, STORAGE TANK AND FITTING REQUIREMENTS

1. In developments that are not served by fire hydrants as part of a centralized water system certified by the Texas Commission on Environmental Quality as meeting minimum standards for water utility service, and with fewer than fifty (50) lots, one well for fire protection shall be maintained and kept operational and accessible by the developer, the homeowners' association or a designated property owner. A 2,500 gallon or larger storage tank shall be provided near this well. In developments consisting of more than fifty (50) lots that are not served by fire hydrants and have no centralized water system, one or more wells for fire protection, as determined by the County Fire Marshall, shall be maintained by the developer, the homeowners' association or a designated property owner. A 5,000-gallon storage tank shall be provided near this well or wells.
2. Each storage tank shall be fitted with a four-inch (4") discharge connection from the tank connected to four-inch (4") piping terminating into a four-inch (4") riser with a four and one-half inch (4 1/2") male NST fire department connection. This connection shall have a cap on it to protect the threads when not in use. A quarter turn valve shall be located at the base of the riser to control the flow of water to this connection. If the riser is located within twenty feet (20') or less of the tank, the valve may be located on the tank.
3. Access to the well and tank shall be by a dedicated roadway easement or road shown on the recorded plat of the development. The access shall be easily accessible year-round with an all-weather road or pad capable of supporting heavy fire-fighting equipment. The riser shall be located within eight feet (8') or less of the road or pad. Fire departments shall have access to the well and tank for training and/or fire-fighting purposes at any time. The County, County Fire Departments and CCGCD shall have access to the well for monitoring and regulation purposes at any time.
4. Contact the Fire Marshal's office for additional information on storage tank requirements.

5.5 Sewage and Wastewater Disposal

A. GENERAL PROVISIONS

1. Every tract of land in the County that has a residential dwelling or any activity that generates any sewage or wastewater shall have an adequate system for treating and disposing of sewage and wastewater either by:
 - a. Connection to an approved community sewage disposal system; or
 - b. A properly located, designed, approved, and operating OSSF.
2. OSSFs can be sources of pollution to ground water, soil surface, and the environment if not properly located, sized, designed, constructed, operated and maintained.
3. Connection to a community sewage disposal facility and system is preferred and shall be required where possible.

B. COMMUNITY SEWAGE DISPOSAL FACILITIES:

1. Community sewage disposal facilities (wastewater treatment systems) shall conform to the rules and regulations of TCEQ as to design, materials, and construction. The developer of a subdivision or development shall present documentation in a form acceptable to the County indicating approval by TCEQ of the facility and wastewater discharge permit and that of any other agency responsible for regulation of sewage disposal facilities prior to approval of the final plat.
2. If a new community sewage disposal facility (wastewater treatment system) is proposed for the subdivision or development, the plans for such facility and a wastewater discharge permit must be approved by TCEQ any other appropriate regulatory agency prior to approval of the final plat by the County.
3. If it is proposed that sewage and wastewater from the development be treated and disposed of by an existing community sewage disposal system, documentation acceptable to the County must be submitted by the developer prior to approval of the final plat: (1) confirming that the sewage disposal system has previously received required approval by TCEQ or any other agency with jurisdiction; (2) confirming that the proposed facility has sufficient available capacity to adequately handle the sewage and wastewater from the proposed development at full build out; and (3) certification by an engineer that operation of the facility is in accordance with the model rules adopted under Section 16.343, Texas Water Code.

C. ON-SITE SEWAGE DISPOSAL FACILITIES (OSSF):

1. Purpose

The purpose of these requirements is to control or prohibit the installation or use of on-site sewage facilities in the County of Kendall, Texas and regulate on-site sewage facilities to abate or prevent pollution or injury to public health in Kendall County, Texas.

2. Applicability

If individual OSSFs are proposed to dispose of sewage and wastewater in a subdivision, the developer shall prominently indicate by note on both the preliminary and final plat that purchasers of lots in the subdivision are responsible for obtaining approval from the County and constructing an OSSF on the lots prior to occupancy.

3. Authority

- a. Kendall County has been designated by TCEQ as the authorized agent for the licensing and regulation of OSSF's. Before any person begins construction of an OSSF, a permit must be obtained from the County Engineer.
- b. Any OSSF installed on any lot or parcel of land in Kendall County must comply with the provisions of Chapter 285, Title 30, Texas Administrative Code, On-Site Sewage Facilities and the Kendall County Order concerning OSSF's.

4. State Law Enforced

The County of Kendall, Texas clearly understands that there are technical criteria, legal requirements, and administrative procedures and duties associated with regulating on-site sewage facilities and will fully enforce chapter 366 of the Texas Health and Safety Code (H&SC) and Chapters 7 and 37 of the Texas Water Code (TWC), and associated rules referenced in Section 8 of this Order.

5. Area of Jurisdiction.

- a. The Rules shall apply to all the area lying in Kendall County, Texas, except for the area regulated under an existing Rule and the areas within incorporated cities.
- b. These Rules shall apply to those incorporated cities or towns that have executed intergovernmental contracts with Kendall County, Texas.

6. Compliance Required

Any permit issued for an on-site sewage facility within the jurisdictional area of Kendall County, Texas must comply with the Rules and Regulations for On Site Sewage Facilities as adopted by the County.

7. On-Site Sewage Facility Rules Adopted

The Rules, Title 30 Texas Administrative Code (TAC) Chapter 285 and Chapter 30, attached hereto, promulgated by the Texas Commission on Environmental Quality for on-site sewage facilities are hereby adopted, and all officials and employees of Kendall County, Texas having duties under said Rules are authorized to perform such duties as are required of them under said Rules.

8. Incorporation by Reference

Chapters 30 and 285 of the Texas Administrative Code, and all future amendments and revisions thereto, are incorporated by reference and are thus made a part of these Regulations. A copy of these statutes is available upon request.

9. Amendments

- a. The County of Kendall, Texas wishing to adopt more stringent Rules for its On-Site Sewage Facility Order understands that the more stringent conflicting local Rule shall take precedence over the corresponding Texas Commission on Environmental Quality requirement.
- b. Listed below are the more stringent Rules adopted by Kendall County, Texas for the purpose of providing greater public health and safety protection:
 - i. Residential Lot Sizing [30-TAC 285.4(a)(1)(A)]: Platted or unplatted subdivisions served by a public water supply: Subdivisions of land created after March 13, 2006 and served by a public water supply but utilizing individual OSSF methods of sewage disposal, shall provide for individual lots having surface areas of at least 1 acre; Subdivision plats approved by the

Kendall County Commissioners Court prior to the adoption of this order are exempt from this lot size requirement. The location of an OSSF under this paragraph shall be in accordance with 285.91(10).

- ii. Residential Lot Sizing (30-TAC 285.4(a)(1)(B)): Platted or unplatted subdivisions served by individual water systems: In subdivisions of land created after March 13, 2006, and where each lot is not served by a public water supply but utilizing individual OSSF methods for sewage disposal, shall provide for individual lots having surface areas of at least 3.00 acres. Subdivision plats approved by the Kendall County Commissioners Court prior to the adoption of this order are exempt from this lot size requirement. The location of an OSSF under this paragraph shall be in accordance with 285.91(10).
- iii. Tracts Greater Than Ten (10) Acres [30-TAC 285.3(f)(2)]: A permit shall be required for all On-Site Sewage Facilities within Kendall County's area of jurisdiction regardless of acreage.
- iv. Preparation of Planning Materials (30-TAC 285.5(a)(1)(2)): Planning materials prepared by a professional engineer or professional sanitarian. All OSSF planning materials shall be prepared by a professional engineer or professional sanitarian (with appropriate seal, date, and signature) including those systems excluded in 30-TAC 285 Appendix B, Table IX.

10. Duties and Powers

The OSSF Inspector Kendall County, Texas, must be certified by the Texas Commission on Environmental Quality before assuming the duties and responsibilities.

11. Collection of Fees

All fees collected for permits and/or inspections shall be made payable to Kendall County, Texas.

12. Appeals

A person aggrieved by an action or decision of the designated representative may appeal such action or decision to the Commissioners Court of Kendall County, Texas.

13. Penalties

This Order adopts and incorporates all applicable penalty provisions related to on-site sewage facilities, which includes, but is not limited to, those found in chapters 341 and 366 of the Texas Health and Safety Code, Chapters 7, 26, and 37 of the Texas Water Code and 30 TAC Chapters 30 and 285.

5.6 Drainage

A. GENERAL REQUIREMENTS

1. Specific Intent

It is the Specific Intent of this Section to:

- a. Preserve and protect sensitive natural areas that serve an ecological function in minimizing flood damage.
- b. Create a priority for maintaining natural drainage systems wherever possible and emphasize the design and arrangement of storm water facilities as community amenities, appropriate to the planning context.
- c. Minimize the amount of impervious surface directly connected to storm water systems, and reduce the amount of flow, speed of flow and level of contaminants entering both natural and manmade storm water systems.
- d. Allow flexibility in site designs and cooperation among adjacent development sites, to allow the most efficient development of sites and encourage individual designs that support a more regional or watershed-based stormwater solutions.
- e. Integrate high-performance flood protection and storm water systems into the open space system.
- f. Encourage creative design solutions that allow areas to perform multiple functions in terms of storm water management, flood protection, open space and recreation, landscape and urban design, or other site development support functions.

2. Facilities Required

The developer shall provide an adequate storm drainage system to protect each lot from flooding. These drainage facilities may consist of a combination of natural features, swales, watercourse improvements, bridges and culverts, enclosed storm sewers and other man-made improvements to carry off stormwater. The drainage system shall use detention ponds, retention ponds and siltation ponds, individually or in concert, to control runoff and to protect downstream properties from any increase in flooding originating from the development.

3. Responsibility for Design and Construction

- a. This section contains the minimum storm drainage design criteria to be followed in the design of storm drainage facilities and demonstrates the design procedures to be used on drainage projects in this County.
- b. Drainage facilities shall be provided and constructed in accordance with the standards and specifications of these Development Regulations.
- c. The design factors, formulas, graphs and procedures described are intended to serve as guidelines. Responsibility for the actual design remains with the Engineer.
- d. It is the responsibility of the Engineer to provide all necessary calculations and designs described herein. The Engineer shall provide the data, calculations, and designs necessary to demonstrate that the design does not adversely impact the surrounding property, and that the design meets local, state, and federal rules, regulations, and requirements.
- e. The Engineer shall use available FEMA base models updated with Atlas 14 rainfall data, or best available data as required by the County Engineer, for development along FEMA floodplain areas. If a model is not available, the Engineer shall be required to provide a floodplain model in accordance with County standards and guidelines.

4. Stormwater Management

- a. Stormwater management facilities shall not be located within the building setback.
- b. Stormwater management facilities shall be provided prior to site construction or clearing.
- c. Stormwater management shall be designed and constructed to prevent adverse conditions from arising on property adjoining, upstream, adjacent and downstream of the development site. Adverse conditions include increases in peak flows, water surface elevations, flow velocity, concentration of flows and rerouting of flows.
- d. The applicant shall provide a drainage report that shows mitigation of the impacts of development on the existing downstream drainage system. Mitigation may include detention, retention, infiltration, channel improvements, and other means acceptable to Kendall County Engineer. Stormwater Management facilities shall be designed to reduce the project's post-development peak flow rates of discharge to pre-development rates for the 2, 5, 10, 25, 50, and 100-year storm events at all points of discharge.
- e. Where an adequate outfall does not exist, discharge from stormwater management facilities shall be designed to return flow to sheet flow conditions before leaving the property.

5. Construction Sequencing and Erosion Controls

The final construction plans shall be accompanied by a comprehensive and detailed report and plan for the control of erosion and sedimentation. The report shall include a construction sequencing plan which details the proposed placement, maintenance and removal of temporary erosion controls, the slope stabilization techniques which are to be employed and the restoration measures, including vegetative types, which are to be employed as part of the process of development. The plan shall list and show the location of temporary erosion controls, show the physical details of the controls, and include a construction sequencing list which will govern the timing of the use of various controls in relation to distinct steps in construction.

6. Land Clearing Restrictions

- a. No clear-cutting or rough-cutting of land shall be permitted unless a final plat or development permit is approved by Kendall County Commissioners Court, except for the limited clearing and rough-cutting which is necessary for soil testing and surveying. No other clearing or rough-cutting shall be permitted except as necessary for construction of temporary erosion and sedimentation controls until these controls are in place and approved by the County Engineer.
- b. Areas to be cleared for temporary storage of spoil or construction equipment, or for the permanent disposal of fill material or spoils, shall be shown on SW3P plan. The natural vegetation within any required water supply protection zone shall not be disturbed.

B. REQUIRED DRAINAGE STUDY

1. Drainage Study Contents

The developer/subdivider shall submit a drainage study with the final construction plans for residential subdivisions, non-residential subdivisions, and development for any other use except one single family residence on a single lot or tract.

The report shall be a stand-alone document. When references are made or assumptions are based on previously approved submitted reports, the drainage report must include the appropriate excerpts, pages, tables, and maps containing the referenced information. Assumptions made in previous reports must be verified and

substantiated. All submitted reports should be clearly and cleanly reproduced. Photocopies of charts, tables, nomographs, calculations, or any other referenced material must be legible.

Upon review, the County Engineer may require a downstream assessment in an area with known flooding problems.

The drainage study shall provide the following information, for both existing and fully developed conditions, for the entire watershed drainage area upstream of the lowest point(s) in the subdivision.

- a. General
 - i. Project location, depicted on a 7.5-minute series U.S.G.S. or aerial map.
Include land plan and limit of downstream drainage assessment if required.
 - ii. Digital Flood Insurance Rate Map (DFIRM) with site superimposed.
 - iii. Onsite Drainage Area Map (to scale), including the following:
 - (a) Time of Concentration flow paths
 - (b) Overall drainage areas for the site and indicate area for each
 - (c) Points of discharge to directly correlate with discharge summary tables
 - (d) Land use type data
 - (e) Land plan, when applicable
 - (f) Two-foot contour intervals
 - iv. Overall Drainage Area Map (to scale) including the following, when applicable:
 - (a) Time of Concentration flow paths
 - (b) Overall drainage areas for the site and indicate area for each
 - (c) Points of discharge to directly correlate with discharge summary tables
 - (d) Approximate location of downstream drainage assessment limit
 - (e) Land use type data
 - (f) Land plan, when applicable
 - (g) Two-foot contour intervals
 - v. Soil Type Map (to scale) for the project site, when applicable.
Include project area, land plan, and drainage areas
 - vi. Grading Plan (Also required in construction plans).
 - (a) Lots drain properly, including lot grading plan
 - (b) All storm drain, channel and/or pond facilities
 - (c) All proposed drainage easements, including width of easement
 - vii. Hydraulic Work Map, including the following, when applicable
 - (a) Land plan
 - (b) Proposed drainage systems including storm drains, channels, and ponds
 - (c) Cross sections associated with supporting models
 - (d) Points of discharge/flow change locations
 - (e) Appropriate flood plain limits
 - (f) Approximate location of downstream drainage assessment limit
 - (g) Two-foot contour intervals

b. Hydrology

- i. Detailed Time of concentration/Lag Time calculations.
- ii. Surface runoff coefficient calculations.

Soil Type Map to be included when SCS curve number (CN) calculations provided

- iii. Percent Impervious Cover detailed calculations.
- iv. Peak flow summary table including:
 - (a) All storm events defined in Required Drainage Study
 - (b) Associated rainfall intensity factors, when applicable
- v. Detailed calculations for hydrologic routing as stated in Drainage System Design Standards, when applicable.
- vi. Table comparing peak flows for specified conditions and storm events

c. Hydraulics

- i. 25- and 100-year flow quantities with the 25- and 100-year flood plain limits for the existing and fully developed watershed shown on the preliminary plat.
- ii. Preliminary street grades and directional flow paths sufficient to determine high points, low point, and intended drainage patterns.

- (a) Provide typical street section
- (b) Provide summary of street capacities with supporting calculations for minimum and maximum grades along all streets proposed

- iii. Proposed locations of inlets, storm drains, channels, and culvert along with supporting calculations.
- iv. All proposed drainage easements, including width of easement and configuration of channel.
- v. Calculations to determine the volume of proposed detention/retention/sedimentation ponds.

Verify if pond qualifies as a Texas Commission of Environmental Quality (TCEQ) pond

- vi. Summary of discharges and velocities at all major outlets, outfall, and at the downstream drainage assessment limit.

Specify proposed energy dissipation type and provide detailed calculations and supporting references

- d. The above information shall be supplemented with narrative text describing the watershed and the subdivision, including their general soil conditions, downstream channel conditions, all weather access. In general, all deviations from the Kendall County Development Rules and Regulations shall be included in the narrative with justification for deviation. The study shall be prepared by a professional engineer registered in the State of Texas. The drainage study shall be submitted along with the administratively complete design and construction plans with the submittal of the final plat.

2. Downstream Drainage Assessment

- a. A downstream drainage assessment, if required, shall extend from the outfall of the development/subdivision to a point downstream.

b. Adequate Outfall

- i. Location of acceptable outfall that does not create adverse flooding or erosion conditions downstream.
- ii. Evaluate discharges and velocities for the 2-year, 5-year, 10-year, 25-year, 50-year and 100-year storms.
- iii. Compare the pre- and post-development peak discharges and velocities at the downstream discharge of the development/subdivision model.
- iv. If the post-developed flows are higher than the pre-developed flows for the same frequency event, or the post-developed velocities are higher than the pre-development velocity, adverse effects shall be mitigated so post-development flows and velocities do not exceed pre-development conditions.

C. DRAINAGE EASEMENTS

1. General Requirements

- a. Natural waterways and channels should be used wherever practical to carry runoff. Any modifications to existing waterways and channels must be approved by the County Engineer. Where a development subdivision is traversed by a watercourse, drainageway, natural channel or stream, an easement or right-of-way shall be provided conforming substantially to the 100-year floodplain or channel limits of such watercourse. On channel detention is not allowed unless approved by the County Engineer.

2. Enclosed Systems

- a. Storm drainage easements shall be provided for existing and proposed enclosed drainage systems. Easements shall be centered on the systems.
- b. The easement width shall be based on the following formula:

$$W = 5' + 2H + D$$

Where:

W is the width of the easement

H is the depth of soil cover over the pipe or box structure

D is the diameter or width of pipe or box structure

3. Open Channels

Storm drainage easements along proposed or existing open channels shall provide sufficient width for the required channel and such additional width as may be required to provide ingress and egress of maintenance equipment; to provide clearance from fences and space for utility poles; to allow maintenance of the channel bank; and to provide adequate slopes necessary along the bank.

The minimum easement width shall be the width of the channel plus 15 feet on one side and 2 feet on the opposite side when channel does not abut the roadway. When such channels abut the roadway and channels entirely contained in roadway right of way the easement shall extend 2 feet on both sides of the extreme limits of the channel. The channel top width is determined by the locations where the channel side slopes intersect with adjacent grade with cross slopes less than 10 percent.

4. Overflow Drainage

Storm drainage easements shall be provided for emergency overflow drainage ways of sufficient width to contain within the easement storm water resulting from a 100-year frequency storm less the amount of storm water carried in an enclosed system.

D. DRAINAGE SYSTEM DESIGN STANDARDS

1. General Requirements

Drainage facilities shall be provided and constructed as specified by the County Engineer in accordance with the Kendall County - Development Rules and Regulations and Construction Specifications.

2. Method of Computing Runoff

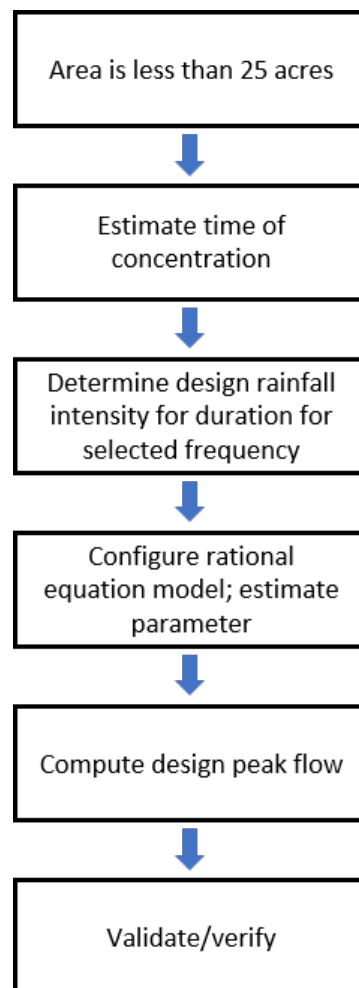
- a. The method of computing runoff shall be the Rational Method for watersheds of 25 acres or less that do not require detention or timing considerations. For watersheds with an area greater than 25 acres, or where routing of hydrographs is required, or building drainage-related facilities, a unit hydrograph prepared with computer model, as described herein, shall be used.
- b. In all cases, average antecedent conditions shall be assumed unless otherwise determined by the County Engineer.
- c. Proposed conditions watershed areas must be based upon proposed grading patterns, impervious cover percentages and land uses.
- d. When designing detention facilities or determining downstream impacts, a similar approach shall be used. In all cases, normal antecedent conditions shall be assumed unless otherwise determined by the County Engineer.
- e. Rational Method

The Rational Method is appropriate for estimating peak discharges for small drainage areas of up to about 25 acres with no significant flood storage. The Rational Method provides the designer with a peak discharge value but does not provide a time series of flow nor flow volume. The Rational Method may be used up to 100 acres drainage area to size cross drainage culverts only.

i. Assumptions and limitations

- (a) Use of the rational method includes the following assumptions and limitations:
 - (i) The method is applicable if t_c for the drainage area is less than the duration of peak rainfall intensity.
 - (ii) The calculated runoff is directly proportional to the rainfall intensity.
 - (iii) Rainfall intensity is uniform throughout the duration of the storm.
 - (iv) The frequency of occurrence for the peak discharge is the same as the frequency of the rainfall producing that event.
 - (v) Rainfall is distributed uniformly over the drainage area.
 - (vi) The minimum duration to be used for computation of rainfall intensity is 10 minutes. If the time of concentration computed for the drainage area is less than 10 minutes, then 10 minutes should be adopted for rainfall intensity computations, and the maximum time of concentration shall be 20 minutes.
 - (vii) The rational method does not account for storage in the drainage area. Available storage is assumed to be filled.

- (b) The above assumptions and limitations are the reason the rational method is limited to watersheds 25 acres or smaller. If any one of these conditions is not true for the watershed of interest or does not comply with the requirements of Kendall County, the designer should use an alternative method.
 - (c) The rational method represents a steady inflow-outflow condition of the watershed during the peak intensity of the design storm. Any storage features having sufficient volume that they do not completely fill and reach a steady inflow-outflow condition during the duration of the design storm cannot be properly represented with the rational method. Such features include detention ponds, channels with significant volume, and floodplain storage. When these features are present, an alternate rainfall-runoff method is required that accounts for the time-varying nature of the design storm and/or filling/emptying of floodplain storage. In these cases, the hydrograph method is recommended.
- ii. The steps in developing and applying the rational method



- iii. Using the Rational Method to Calculate Runoff

The rational formula estimates the peak rate of runoff at a specific location in a watershed as a function of the drainage area, runoff coefficient, and mean

rainfall intensity for a duration equal to the time of concentration. The rational formula is:

$$Q = \frac{CIA}{Z}$$

Where:

Q = maximum rate of runoff (cfs)

C = runoff coefficient

I = average rainfall intensity (in/hr)

A = drainage area (acres)

Z = conversion factor, 1 for English

iv. Rainfall Intensity

- (a) The rainfall intensity (I) is the average rainfall rate in in./hr. for a specific rainfall duration and a selected frequency. The duration is assumed to be equal to the time of concentration. For drainage areas in Texas, you may compute the rainfall intensity, which is known as a rainfall intensity-duration-frequency (IDF) relationship (power-law model).

$$I = \frac{b}{(t_c + d)^e}$$

Where:

I = design rainfall intensity (in./hr.)

t_c = time of concentration (min)

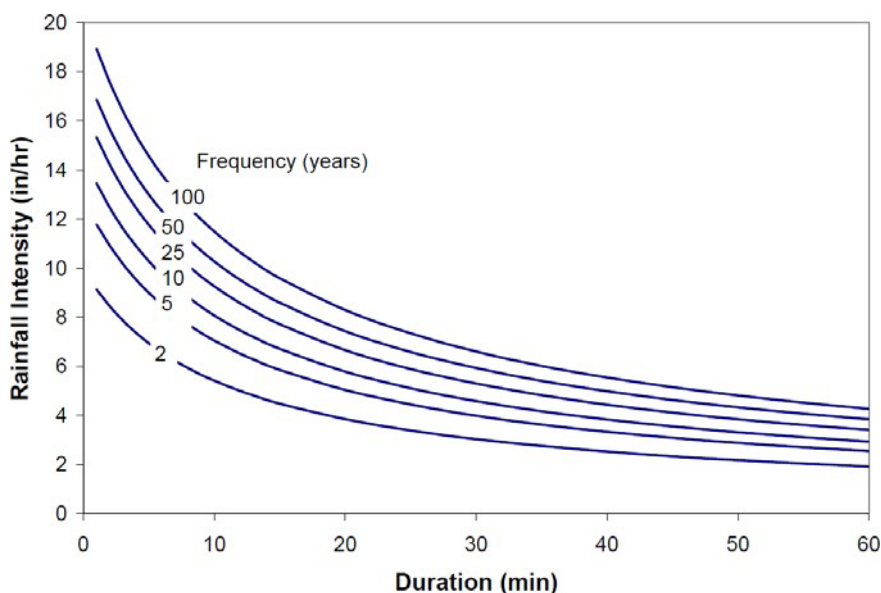
e, b, d = coefficients based on rainfall IDF data

- (b) In September 2018, the National Oceanic and Atmospheric Administration (NOAA) released updated precipitation frequency estimates for Texas. These estimates are available through [NOAA's Precipitation Frequency Data Server \(PFDS\)](#) website and the report documenting the approach is also available at the same website - NOAA Atlas 14, Volume 11: Precipitation-Frequency Atlas of the United States. This new rainfall data is considered best available data and should be used for all projects. Tabular IDF data are available from the PFDS, but linear interpolation or curve generation is needed to obtain intensity values between tabular durations. The applicant shall provide documentation/justification for the interpolation of the IDF data for approval by the County Engineer.
- (c) The general shape of a rainfall IDF curve is shown in Figure 5.1. As rainfall duration approaches zero, the rainfall intensity tends towards infinity. Because the rainfall intensity/ duration relationship is assessed by assuming that the duration is equal to the time of concentration, small areas with exceedingly short times of concentration could result in design rainfall intensities that are unrealistically high. To minimize this

likelihood, use a minimum time of concentration of 10 minutes. As the duration tends to infinity, the design rainfall tends towards zero. Usually, the area limitation of 25 acres for Rational Method calculations should result in rainfall intensities that are not unrealistically low. However, if the estimated time of concentration is extremely long, such as may occur in extremely flat areas, it may be necessary to consider an upper threshold of time or use a different hydrologic method.

(d) Typical Rainfall Intensity Duration

Figure 5-1 Rainfall IDF Curve



- (e) In some instances, alternate methods of determining rainfall intensity may be desired, especially for coordination with other agencies. Ensure that any alternate methods are applicable and documented.

v. Runoff Coefficients

(a) Urban Watersheds

The table for Runoff Coefficients for Urban Watersheds suggests ranges of C values for urban watersheds for various combinations of land use and soil/surface type. This table is typical of design guides found in civil engineering texts dealing with hydrology.

Development with unknown site plans may use runoff coefficients based on specific land use, according to Table 5.2(a). If a site plan is known, then a composite runoff coefficient, based on the percentages of different types of surfaces in the drainage area, shall be used, in accordance with Table 5.2(b).

Table 5-2(a) Runoff Coefficients for Urban Watersheds with Unknown Site Plans

Character of Surface	Grade			
	Up to 1%	Over 1% and up to 3%	Over 3% and up to 5%	Over 5%
Low density development	0.5	0.54	0.58	0.6
Medium density development	0.55	0.57	0.62	0.64
High density development, less than 40% impervious cover	0.68	0.7	0.72	0.75
High density development, 40% to 60% impervious cover	0.75	0.77	0.8	0.84
High density development, 60+% impervious cover	0.85	0.88	0.91	0.97
Undeveloped areas	0.39	0.42	0.47	0.52

Table 5-2(b) Runoff Coefficients for Urban Watersheds with Known Site Plans

Character of Surface	Grade			
	Up to 1%	Over 1% and up to 3%	Over 3% and up to 5%	Over 5%
Impervious cover (concrete, asphalt, parking spaces, roof etc.)	0.97	0.97	0.97	0.97
Grassed areas - well maintained, greater than 75% covered	0.36	0.42	0.46	0.51
Grassed areas - fair condition, 50% - 75% covered	0.41	0.46	0.49	0.53
Grassed areas - poor condition, less than 50% covered	0.47	0.5	0.53	0.55
Cultivated (ag) land	0.47	0.49	0.51	0.54
Pasture or range land	0.41	0.46	0.49	0.53
Forest or wooded land	0.39	0.42	0.47	0.52
Undeveloped areas	0.39	0.42	0.47	0.52

(b) Rural and Mixed-Use Watersheds

Table 5-3 shows an alternate, systematic approach for developing the runoff coefficient. This table applies to rural watersheds only, addressing the watershed as a series of aspects. For each of four aspects, the designer makes a systematic assignment of a runoff coefficient “component.” Using the equation below, the four assigned components are added to form an overall runoff coefficient for the specific watershed segment.

The runoff coefficient for rural watersheds is given by:

$$C = C_R + C_i + C_V + C_S$$

Where:

C = runoff coefficient for rural watershed

C_R = component of coefficient accounting for watershed relief

C_i = component of coefficient accounting for soil infiltration

C_V = component of coefficient accounting for vegetal cover

C_S = component of coefficient accounting for surface type

The designer selects the most appropriate values for C_R , C_i , C_V , and C_S from Table 5-3.

Table 5-3: Runoff Coefficients for Rural Watersheds

Watershed characteristic	Extreme	High	Normal	Low
Relief - C_r	0.28-0.35 Steep, rugged terrain with average slopes above 30%	0.20-0.28 Hilly, with average slopes of 10-30%	0.14-0.20 Rolling, with average slopes of 5-10%	0.08-0.14 Relatively flat land, with average slopes of 0-5%
Soil infiltration - C_i	0.12-0.16 No effective soil cover; either rock or thin soil mantle of negligible infiltration capacity	0.08-0.12 Slow to take up water, clay or shallow loam soils of low infiltration capacity or poorly drained	0.06-0.08 Normal; well drained light or medium textured soils, sandy loams	0.04-0.06 Deep sand or other soil that takes up water readily; very light, well-drained soils
Vegetal cover - C_v	0.12-0.16 No effective plant cover, bare or very sparse cover	0.08-0.12 Poor to fair; clean cultivation, crops or poor natural cover, less than 20% of drainage area has good cover	0.06-0.08 Fair to good; about 50% of area in good grassland or woodland, not more than 50% of area in cultivated crops	0.04-0.06 Good to excellent; about 90% of drainage area in good grassland, woodland, or equivalent cover
Surface Storage - C_s	0.10-0.12 Negligible; surface depressions few and shallow, drainageways steep and small, no marshes	0.08-0.10 Well-defined system of small drainageways, no ponds or marshes	0.06-0.08 Normal; considerable surface depression, e.g., storage lakes and ponds and marshes	0.04-0.06 Much surface storage, drainage system not sharply defined; large floodplain storage, large number of ponds or marshes

While this approach was developed for application to rural watersheds, it can be used as a check against mixed-use runoff coefficients computed using other methods. In so doing, the designer would use judgment, primarily in specifying C_s to account for partially developed conditions within the watershed.

(c) Mixed Land Use

For areas with a mixture of land uses, a composite runoff coefficient should be used. The composite runoff coefficient is weighted based on the area of each respective land use and can be calculated as:

$$C_w = \frac{\sum_{j=1}^n C_j A_j}{\sum_{j=1}^n A_j}$$

Where:

C_W = weighted runoff coefficient

C_j = runoff coefficient for area j

A_j = area for land cover j (acres)

n = number of distinct land uses

f. Computer Models

Computer models shall be prepared using the HEC-HMS software developed by the US Army Corps of Engineers Hydrologic Engineering Center. Parameters for the model shall be determined as described herein. Rainfall and runoff relationships shall be based on the TR-55 methodology and parameters provided in the National Engineering Handbook, except as modified herein. Other acceptable models include HydroCAD and Hydraflow. All published Hydrology and Hydraulic models shall be used if available (FEMA, San Antonio River Authority).

i. Runoff

The NRCS National Engineering Handbook, Part 630-Hydrology (NEH-630), shall be used for runoff calculations. Curve numbers shall be determined from the values given in TR-55. In addition, impervious cover values shall be estimated from aerial photos for existing conditions. For post-development conditions, the maximum anticipated impervious cover shall be used with the appropriate curve number for the development. An assumption that the initial abstraction is equal to 0.2 times the maximum soil retention per TR-55 shall be used unless calibration data is available to justify other figures to the satisfaction of the County Engineer.

ii. Rainfall

NOAA Atlas 14 Point Precipitation Frequency Estimates for Texas shall be used to calculate the rainfall depth-duration-frequency relationships for the model. Rainfall distribution shall be based on the Type II distribution per TR-55. The nearest station shall be used, and the station ID shall be provided in the report.

- iii. Methods other than TR-55 may be used when detailed hydrologic models are available, if approved by the County Engineer.
- iv. For watersheds greater than 10 square miles, the effects of storm centering must be taken into account. Consult with County Engineer prior to completing the model (TXDOT HDM Chapter 4 Section 13).
- v. Subareas shall be added to the model to effectively isolate the subject development.

3. Hydraulic Calculations

Hydraulic calculations shall be based on industry standard methods and as described herein, acceptable to the County Engineer and in accordance with the current Texas Department of Transportation (TXDOT) Hydraulic Design Manual (HDM).

The purpose of hydraulic calculations shall be to determine the depth, velocity, and width of flow in drainage systems. Small systems may be designed based on normal depth calculations using Manning's equation. Large systems must be modeled using acceptable computer software. Closed systems must include calculations for inlet capacity, pipe capacity, hydraulic grade line and energy grade line. Flow depths and hydraulic grade lines shall be plotted on construction plans.

a. Open Systems

Open systems include channels, swales, detention ponds and other open forms of drainage conveyance and/or storage.

i. Small Systems

Small systems have a maximum normal depth of 3.0 feet and serve a watershed smaller than 100 acres. Normal depth calculations shall be used for design based on the Manning's equation:

$$V = \frac{1.486}{n} R^{2/3} S_f^{1/2}$$

Where:

V = average flow velocity in feet per second.

N = Manning's roughness coefficient.

R = hydraulic radius = $\frac{A}{WP}$ in feet.

S_f = Friction slope in feet per foot, assumed equal to channel slope.

A = flow area in square feet.

WP = wetted perimeter in feet.

The average flow velocity and flow area are related to the discharge flow rate as follows:

$$Q = VA$$

Where Q = discharge flow rate in cubic feet per second.

ii. Large Systems

Large systems either have a normal depth greater than 3.0 feet or serve a watershed of 100 acres or more. These systems require that a backwater model be prepared to show the depth of flow and velocity in the system. Natural channels shall be modeled using HEC-RAS computer software developed by the US Army Corps of Engineers Hydrologic Engineering Center. Other channels may also be modeled using HEC-RAS. Uniform cross-section channels may be modeled using the standard step procedure in hand calculations or other software programs acceptable to the County Engineer. Both methods shall make use of the Manning's equation for channel friction losses. For natural channels, Manning's n values should be estimated using experienced judgment and information presented in publications such as the *Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains*, FHWA-TS-84-204, 1984, FHWA HEC-15, 1988, or Chow, 1959. Some of these values are given in Table 5-4.

Table 5-4: Roughness Coefficients (Manning's N)

Type of Channel and Description	Minimum	Normal	Maximum
<i>Types 1-4 are natural streams - minor streams (top width at floodstage < 100 ft)</i>			
1. Main Channels			
a. clean, straight, full stage, no rifts or deep pools	0.025	0.030	0.033
b. same as above, but more stones and weeds	0.030	0.035	0.040
c. clean, winding, some pools and shoals	0.033	0.040	0.045
d. same as above, but some weeds and stones	0.035	0.045	0.050
e. same as above, lower stages, more ineffective slopes and sections	0.040	0.048	0.055
f. same as "d" with more stones	0.045	0.050	0.060
g. sluggish reaches, weedy, deep pools	0.050	0.070	0.080
h. very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.075	0.100	0.150
2. Mountain streams, no vegetation in channel, banks usually steep, trees and brush along banks submerged at high stages			
a. bottom: gravels, cobbles, and few boulders	0.030	0.040	0.050
b. bottom: cobbles with large boulders	0.040	0.050	0.070
3. Floodplains			
a. Pasture, no brush			
1. short grass	0.025	0.030	0.035
2. high grass	0.030	0.035	0.050
b. Cultivated areas			
1. no crop	0.020	0.030	0.040
2. mature row crops	0.025	0.035	0.045

3. mature field crops	0.030	0.040	0.050
c. Brush			
1. scattered brush, heavy weeds	0.035	0.050	0.070
2. light brush and trees, in winter	0.035	0.050	0.060
3. light brush and trees, in summer	0.040	0.060	0.080
4. medium to dense brush, in winter	0.045	0.070	0.110
5. medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. dense willows, summer, straight	0.110	0.150	0.200
2. cleared land with tree stumps, no sprouts	0.030	0.040	0.050
3. same as above, but with heavy growth of sprouts	0.050	0.060	0.080
4. heavy stand of timber, a few down trees, little undergrowth, flood stage below branches	0.080	0.100	0.120
5. same as 4. with flood stage reaching branches	0.100	0.120	0.160
4. Excavated or Dredged Channels			
a. Earth, straight, and uniform			
1. clean, recently completed	0.016	0.018	0.020
2. clean, after weathering	0.018	0.022	0.025
3. gravel, uniform section, clean	0.022	0.025	0.030
4. with short grass, few weeds	0.022	0.027	0.033
b. Earth winding and sluggish			
1. no vegetation	0.023	0.025	0.030
2. grass, some weeds	0.025	0.030	0.033
3. dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
4. earth bottom and rubble sides	0.028	0.030	0.035
5. stony bottom and weedy banks	0.025	0.035	0.040
6. cobble bottom and clean sides	0.030	0.040	0.050
c. Dragline-excavated or dredged			
1. no vegetation	0.025	0.028	0.033
2. light brush on banks	0.035	0.050	0.060
d. Rock cuts			
1. smooth and uniform	0.025	0.035	0.040
2. jagged and irregular	0.035	0.040	0.050
e. Channels not maintained, weeds and brush uncut			
1. dense weeds, high as flow depth	0.050	0.080	0.120
2. clean bottom, brush on sides	0.040	0.050	0.080
3. same as above, highest stage of flow	0.045	0.070	0.110
4. dense brush, high stage	0.080	0.100	0.140
5. Lined or Constructed Channels			
a. Cement			
1. neat surface	0.010	0.011	0.013
2. mortar	0.011	0.013	0.015
c. Concrete			
1. trowel finish	0.011	0.013	0.015
2. float finish	0.013	0.015	0.016
3. finished, with gravel on bottom	0.015	0.017	0.020
4. unfinished	0.014	0.017	0.020

5. gunite, good section	0.016	0.019	0.023
6. gunite, wavy section	0.018	0.022	0.025
7. on good excavated rock	0.017	0.020	
8. on irregular excavated rock	0.022	0.027	
d. Concrete bottom float finish with sides of:			
1. dressed stone in mortar	0.015	0.017	0.020
2. random stone in mortar	0.017	0.020	0.024
3. cement rubble masonry, plastered	0.016	0.020	0.024
4. cement rubble masonry	0.020	0.025	0.030
5. dry rubble or riprap	0.020	0.030	0.035
e. Gravel bottom with sides of:			
1. formed concrete	0.017	0.020	0.025
2. random stone mortar	0.020	0.023	0.026
3. dry rubble or riprap	0.023	0.033	0.036
g. Masonry			
1. cemented rubble	0.017	0.025	0.030
2. dry rubble	0.023	0.032	0.035
j. Vegetal lining	0.030		0.500

iii. Detention Ponds

- (a) Detention ponds shall be analyzed using commercially available software approved by the County Engineer. The Modified Rational method is not accepted for detention pond sizing calculations. On channel detention is not allowed unless approved by the County Engineer. Inflow hydrographs developed in accordance with Section B, above shall be used with the design depth-volume-discharge rating curve for the pond to determine the outflow hydrograph. An outflow hydrograph shall be plotted for each of the design storms. The pond may use a combination of culverts, v-notch weirs and spillways to control the outflow from the pond. Broad Crest Weirs are not allowed. Culverts used as outflow structures must be designed for inlet control.
- (b) All new developments may require on-site detention to prevent post-development peak discharge runoff rate for the project from exceeding the pre-development peak discharge runoff rate, for the 2-, 5-, 10-, 25-, 50-, 100-year event. If detention is required, the developer shall provide design documentation by a licensed professional engineer as part of the County's development permitting process. If the engineer determines for a residential subdivision, commercial subdivision, or commercial development that the post-development peak discharge rate for the 2-, 5-, 10-, 25-, 50-, and 100-year events exceeds the pre-development peak discharge rate, he must design the drainage system in the development to mitigate the excess peak discharge flow rate to the satisfaction of the County Engineer. If a detention pond is required, drawings and specifications shall be submitted by the engineer of record to the County Engineer for review and approval. Upon completion of construction of the detention pond, the engineer of record shall direct correspondence to the County Engineer stating that the detention pond has been completed in accordance with these Rules and Regulations and in accordance with the engineer's drawings and specifications, and request that that the

County Engineer conduct a final inspection of the detention pond. An as-built/record drawing shall be provided with the certification letter.

- (c) A sediment depth marker shall be included in the detention pond design.
- (d) Permanent Detention Pond Outflow Structures:
 - (i) The outflow structure should be sized to detain the first 1.66" rainfall for 24-48 hours with complete drawdown by 48 hours. No more than 50% should drain from the facility in the first 24 hours. The emergency spillway shall be designed with 1 foot of freeboard over the 100-year storm.
 - (ii) Basin Configuration – A high aspect ratio improves the performance of detention basins; consequently, the outlets should be placed to maximize the flow path through the facility. The ratio of flow path length to width from the inlet to the outlet should be at least 2:1 (L: W). The flow path length is defined as the distance from the inlet to the outlet as measured at the surface. The width is defined as the mean width of the basin.
 - (iii) Single-Stage - A single step discharge system would consist of a culvert system (single or multiple culverts). The inlet structure would be designed in such a way that the design discharges would pass through the system and a separate emergency spillway will be provided for the emergency flows.
 - (iv) Multi-Stage - A multistage inlet would involve the placement of a control structure at the inlet end of the pipe. The inlet structure would be designed in such a way that the design discharges would pass through a weir or orifice in the lower levels of the structure. The pipe would need to be designed to carry the full range of flows.
 - (v) Weir – V-Notch or Proportional Weir as described in *HEC-22, Urban Drainage Design Manual*, current edition.
 - (vi) Culverts used as outflow structures must be designed for inlet control.
 - (vii) Any outlet from the pond must be modeled as a culvert or series of culverts for a stepped outlet.
 - (viii) All detention outfalls shall demonstrate and provide an adequate outfall in accordance with County Requirements.
 - (ix) The minimum required freeboard is 1.0 foot above the computed 100-year water surface elevation in the detention facility.
 - (x) Earthen Embankments shall have a 4' minimum top width for maintenance purposes.
 - (xi) A separate emergency spillway with the capacity to pass the 100-year design storm assuming the pond is full, and the outfall structure is clogged, shall be provided to prevent breach of the pond embankment.
 - (xii) Detention basins shall provide positive drainage through the pond with a minimum slope of 1.0% for an earthen bottom. For slopes less than 1.0%, a concrete pilot channel with a minimum slope of 0.5% should be used with a minimum width of six (6) feet.
 - (xiii) If other potential pollutants such as oils, grease, or fuel (gasoline and diesel) could be present in the site runoff, it may also be necessary to provide additional pre-treatment measures to remove these contaminants prior to the stormwater management facilities.
 - (xiv) The pond shall be accessible for maintenance.
 - (xv) Private Detention ponds in commercial sites can occur within parking lots with the following criteria:
 - (xvi) No fire lane may be located within a surface drainage pond and the maximum depth of 6" of ponded water is allowed in the parking lot.

- (xvii) Multiple signs shall be posted identifying the detention basin area. The signs shall have a minimum 1.5 square feet and contain the following Message:
- (xviii) "WARNING this area is a detention basin and is subject to periodic flooding to a depth of (provide design)."
- (xix) Criteria established by the State of Texas for dam safety (TAC Title 30, Part 1, Chapter 299) and impoundment of state waters (Texas Water Code Chapter 11) shall apply where required by the state, and where, in the Engineer's judgment, the potential hazard requires these more stringent criteria.
- (xx) The Design Engineer shall provide a maintenance plan as part of the design. The maintenance plan shall indicate the ingress and egress locations to enter and maintain the pond, dewatering plan for basins with permanent storage, maintenance roles and responsibilities, contact information for the party responsible for the maintenance, and a maintenance schedule.
- (xxi) The Design Engineer shall provide a signed and sealed "Plan Conformance" letter after the completion of the detention pond (public and private) and provide the completed letter to the County. The letter shall verify that the detention system associated with the referenced project has been constructed in general conformance with the accepted Drainage Study and construction documents on file with the County. The Plan Conformance letter shall include an as-built of the detention pond.

iv. Culverts and Bridges

Culverts and bridges shall be analyzed and designed by commercially available software approved by the County Engineer. Culverts shall be designed in accordance with the procedures acceptable to the County Engineer and in accordance with the current Texas Department of Transportation (TXDOT) Hydraulic Design Manual (HDM). Variances from this procedure shall be approved by the County Engineer. Culverts and bridges will be designed to pass the total calculated flow. Culverts shall be designed on the 10-year (10%) storm. Bridge class structures shall be designed on the 25-year (4%) storm. All structures shall be analyzed for the 50-year (2%) and 100-year (1%) storms with overtopping water surface elevations and velocities shown on construction drawings. Low water crossings are prohibited.

b. Closed Systems

Closed systems include underground storm sewers, culverts and any drainage system with the potential for being surcharged. Refer to the Hydraulic Manual published by Texas Department of Transportation, Bridge Division for design procedures, equations, parameters, and other information for design of closed drainage systems except as modified herein. Software programs acceptable to the County Engineer that use procedures and equations derived from the Hydraulic Manual may be used. Spreadsheets and other non-commercial software calculations must show each step and be adequately documented for approval by the County Engineer.

Storm sewer systems shall be designed for gravity flow with no surcharge with flows from the 5-year storm. The Hydraulics shall then be checked for the 100-year storm by plotting the hydraulic grade line and energy grade line for the system. The final system design shall not allow the energy grade line to be higher than the ground and shall maintain the hydraulic grade line below ground by at least one foot at all locations within the storm sewer system. Refer to the Hydraulic Manual

for inlet capacities, entrance loss calculations and other factors required to calculate and plot the energy and hydraulic grade lines.

4. Storm Sewers

Where storm sewers are provided, they shall be designed in accordance with the criteria for Hydraulic Calculations for Closed Systems established in this section, and the structures provided shall be designed and constructed in accordance with design criteria and assumptions used in the design. A final design report shall provide the calculations and show that the structures and facilities included in the construction plans will function as the calculations describe. Calculations of hydraulic grade shall be shown in the report and the line plotted on the profiles included in the construction plans.

5. Capacity of Open Drainage Channels

When channels abut the roadway and channels entirely contained in roadway right of way the design shall be based on the 5-year (50%) storm. When channels do not abut the roadway, the design shall be based on the 10-year (10%) storm. All open drainage channels shall be designed with at least the minimum freeboard specified in the table below.

Table 5.5: Minimum Drainage Channel Freeboard

Design Depth of Flow	Required Freeboard
Less than 5 feet	0.5 foot
5 – 10 feet	10% of design depth
More than 10 feet	1.0 foot

6. Lining of Open Drainage Channels

Use the table below to determine the channel lining used for scour protection and erosion control. The maximum calculated velocity shall be used for design. The only approved linings are as follows. No other channel linings are approved unless specifically approved by the County Engineer.

Table 5.6: Velocity Control Requirements

Maximum velocity	Type of Channel Lining Required
Less than 3 feet per second	Vegetated earth or sod lined
3 – 5 feet per second	Sod lined
More than 5 feet per second	Concrete lined

7. Design of Concrete Lined Channels

All concrete lined channels shall be designed according to the following standards, and their design must be approved by the County Engineer.

- a. From the top of the concrete lining to the top of the ditch, the side slope shall not be steeper than three horizontal to one vertical.
- b. For normal conditions, the concrete lining shall be a minimum of four inches thick and reinforced with No. 3 round bars placed not more than 18 inches on centers in both directions. Where the surface, the nature of the ground, height and steepness

of slope, or other factors become critical, the design shall be in accordance with the latest structural standards and codes and approved by the County Engineer.

- c. Where conditions warrant, erosion control blankets may be used in lieu of concrete lining approved by the County Engineer.

8. Design of Sod-Lined and Earth Channels

All sod-lined and earth channels shall be designed according to the following standards, and their design must be approved by the County Engineer.

The side slope shall not be steeper than three horizontal to one vertical.

5.7 Roads and Streets

A. TRAFFIC IMPACT ANALYSIS AND ROUGH PROPORTIONALITY

1. When a Traffic Impact Analysis (TIA) is required by these Rules and Regulations, it shall be conducted by a qualified engineer licensed in the State of Texas, in accordance with procedures and requirements of TxDOT.
2. The TIA shall be submitted to the County Engineer for review and approval by the County Engineer, subject to the requirements of these Regulations.
3. Supplemental to these Regulations, a TIA Scope and Study Area document shall be signed by the County Engineer with agreed to assumptions for the TIA study before submittal of a TIA for review in order to be considered a complete application. At a minimum, all intersections with site driveways and the first intersection at a County or TxDOT roadway for traffic entering or leaving the site shall be included in the Study Area.
4. If a development falls in the Extraterritorial Jurisdiction of a municipality, the County Engineer shall jointly sign the TIA Scope and Study Area document with the applicable municipality. If a development draws direct access to a TxDOT facility, the County Engineer shall jointly sign the TIA Scope and Study Area document with TxDOT.
5. If a TIA has been previously approved by the County Engineer, is not expired, does not change land uses, and does not increase trips by more than 10% in either peak hour, the existing TIA shall not be required to be updated.
6. The TIA shall be submitted to the County Engineer for review and approval by the County Engineer, with regard to both form and content.
7. A decision as to whether the traffic resulting from a proposed development will have an adverse impact on the health, safety, or general welfare of residents of the County, or will adversely affect county roads, shall be made by the County Engineer.
8. Mitigation shall be required per these Regulations, subject to rough proportionality.
9. TIA Content
 - a. Proposed Development Information
 - i. Existing Land Uses by land use type and intensity (building square feet, dwelling units, or other applicable units)
 - ii. Proposed Land Uses by land use type and intensity (building square feet, dwelling units, or other applicable units)
 - iii. Site Location Information & Study Area as defined by the Signed TIA Scope in graphical format on a map
 - iv. Project Build Years by Phase, with a maximum of 2 phases and maximum separation of 5 years by phase
 - v. Proposed Concept Plan or Site Plan detailing proposed land uses with intensities, points of access, and internal roadways by classification and right-of-way
 - b. Existing Conditions
 - i. Existing roadways in the study area with functional classification (based on County's classification system), speed limit, number of lanes, and pavement width information
 - ii. Existing intersections included in the study area, including any traffic signals and the maintaining agency
 - c. Intersection Capacity
 - i. Calculations for a.m. and p.m. peak hours must be performed for study area intersections (existing or future) as identified in the Signed TIA Scope, including all site driveways. Capacity Analysis must be performed for existing

traffic conditions, projected traffic conditions without site traffic, projected traffic conditions with site traffic, and projected conditions with site traffic after mitigations identifying site, non-site, and total traffic. Capacity analysis shall be completed with the HCM (latest edition) wherever possible. Capacity analysis should include the following elements, and will be presented for the overall intersection unless otherwise specified:

- (a) Intersection LOS
 - (b) V/C (for intersection if signal, stop controlled approaches if unsignalized)
 - (c) Delay (for intersection if signal, stop controlled approaches if unsignalized)
 - (d) Queueing analysis with 95% queue length (for left and right turn lanes existing or proposed)
- ii. Traffic Signal Warrants Required
 - (a) If any study area intersection or driveway has a projected combined peak hour volume of greater than 1,000 vehicles per hour, a signal warrant study must be included with the TIA. If 5 or more crashes have occurred at any study intersection in the last 3 full calendar years per the TxDOT Crash Reporting Information System (CRIS) or local police department data, a signal warrant must be performed for crash history to determine if the intersection meets warrants.

d. Roadway Segment Capacity Analysis

- i. For all roadways in the study area, including those off-site (system roadways) and internal roadways with driveway access, projected daily traffic shall be provided, showing site, non-site, and total traffic.
- ii. If projected daily traffic on an internal roadway is projected to exceed 4,000 Vehicles per day, the County Engineer may require the roadway be built to a 72' collector or include turn lane capacity at internal and off-site intersections.
- iii. If projected daily traffic on a driveway within 200 feet from the property line is projected to exceed 1,500 Vehicles per day, the County Engineer may require the roadway be built to a 72' collector or include turn lane capacity at the driveway.

e. Queuing and Internal Circulation Analysis

For sites with proposed queueing on-site, documentation of anticipated queues shall be provided in the TIA demonstrating that queues will be contained on-site.

- f. The following assumptions shall be documented in the TIA report and specified in the Signed TIA Scope:
 - i. Growth rate of existing traffic
 - ii. Trip Generation rates for peak study periods and daily traffic per the latest edition of the Institute for Transportation Engineers *Trip Generation Manual*. Internal capture calculations, pass-by trips, and any trip reductions must be included.
 - iii. Background TIA's performed that overlap the study area or fall within a 1-mile radius of the site boundary to be included in projections for future traffic additional to the growth of existing traffic and projected site traffic
 - iv. Background County or other agency projects with funding for construction that may be assumed to be complete at applicable phases of build-out for the development
 - v. Trip Distribution, based on traffic information collected for the TIA or based on historical counts within the last 3 years

- g. Documentation of Mitigations
 - i. A tabulated summary of mitigations must be provided, including cost, developer responsibility (if not 100%), and description of the improvements including dimensions (length and width) for turn lanes or roadway widenings or reconstructions.

10. TIA Mitigation Requirements

- a. Intersections within the study area that are expected to operate below level of service D, per the latest edition of the Highway Capacity Manual, under traffic conditions, including projected traffic plus site-generated traffic, must be identified, and viable recommendations made for raising the traffic conditions to level of service D or better and volume to capacity ratio < 1 . If viable recommendations cannot be made to make traffic conditions level of service D or better, then the intersection delay and 95% projected queues for all intersection turn lanes must be improved equivalent to the projected traffic conditions without site generated traffic. When physical constraints or inadequate right-of-way prevent construction of additional capacity, justification for the constraints shall be provided with approximate right-of-way based on parcel data from Kendall Central Appraisal District (KCAD) in an exhibit. If improvements recommended require offsite right-of-way acquisition, a good faith effort must be made to obtain the right-of-way required for the improvement.
- b. All driveways with projected right turn lane volumes exceeding 50 vehicles in any peak hour must provide a right turn deceleration lane with length and taper per the latest adopted TxDOT Roadway Design Manual. All left turns must be evaluated at driveways for left turn lane warrants per the latest adopted TxDOT Roadway Design manual and shall be provided at driveways if the turn lane warrant is met. Existing and proposed turn lanes must have adequate storage (exclusive of tapers) to accommodate the anticipated 95% queue length based on the Intersection Capacity Analysis.
- c. If a signal is warranted and the County Engineer concurs that a signal is needed, the developer must mitigate by constructing a traffic signal. If a traffic signal is required at a site driveway, the developer must pay 100% of the costs required to construct the traffic signal, subject to rough proportionality. If the traffic signal is required at the intersection of two public streets, then the developer must pay the proportional share of impact, calculated as the total site traffic entering the intersection relative to the total traffic entering the intersection during the highest total traffic flow peak hour.
- d. Where the proposed development abuts a roadway that is not built to the latest adopted County standards or does not have a paved width of 21 feet, the development shall improve the roadway to county standards, subject to rough proportionality.
- e. Any traffic mitigation to be used shall require approval by the County Engineer and be checked for feasibility within existing or proposed right of way.
- f. For a phased project, the improvement shall be completed and accepted no later than the completion of the phase that is satisfied by the improvement. Development permits for subsequent phases shall not be approved if required improvements for prior phases have not been completed.
- g. If an identified mitigation is being funded (fully or in part) rather than constructed, which must be approved by the County Engineer, detailed cost estimates shall be provided based on the latest TxDOT San Antonio District unit prices to determine the amount of mitigation to be funded. Planning level cost estimates may be used and defined in the Signed Scoping Document, alternatively. Funds must be paid prior to development permit approval.

B. ROUGH PROPORTIONALITY DETERMINATION AND APPEAL

1. Rough Proportionality Determination

- a. If the developer is required to bear a portion of the costs of county infrastructure improvements by the making of dedications, the payment of fees, or the payment of construction costs, the developer's portion of the costs shall not exceed the amount required for infrastructure improvements that are roughly proportionate to the proposed development, as approved by the County Engineer.
- b. A developer may submit an application for a rough proportionality determination when required to bear a portion of the costs of County infrastructure improvements.
- c. Within thirty (30) days of receipt of an administratively complete Application for a Rough Proportionality Determination, the County Engineer shall provide a Rough Proportionality Determination to the developer.

2. Appeal of the Determination

- a. A developer may appeal the Rough Proportionality Determination to the Commissioners Court. At the appeal, the developer may present evidence and testimony in accordance with the procedures adopted by the Commissioner's Court.
- b. After hearing testimony and evidence presented by the developer, the Commissioners Court shall make the applicable determination within thirty (30) days following the final submission of any testimony or evidence by the developer.
- c. The developer may appeal the determination of the Commissioners Court to a county or district court of the county in which the development project is located within 30 days of the final determination by the Commissioners Court.

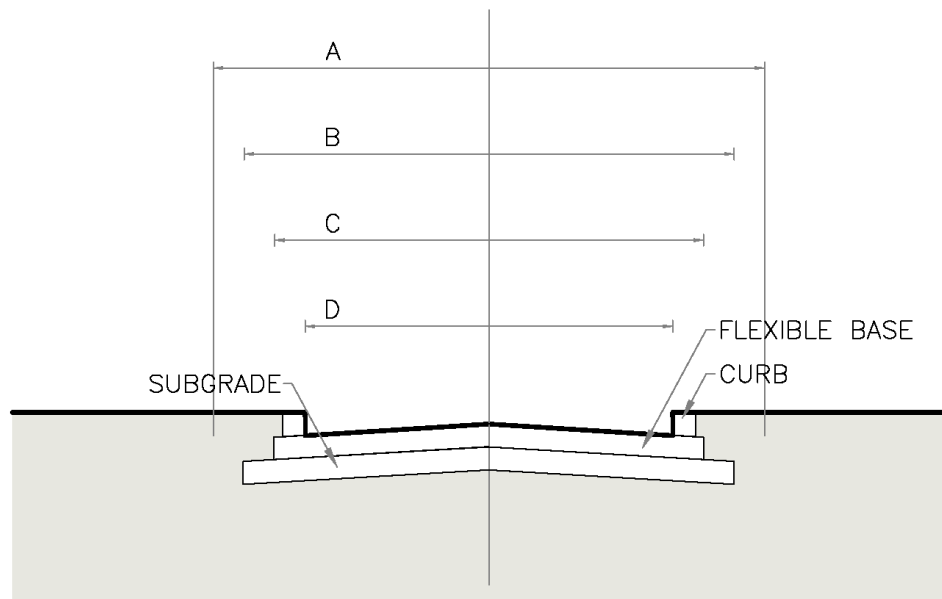
C. ROAD AND RIGHT OF WAY REQUIREMENTS FOR URBAN DEVELOPMENTS

1. Minimum requirements for new roads for Urban Developments:

Table 5.7: Minimum Requirements for New Roads – Urban Developments

	Collector ^{a,c}	County Maintained	Privately Maintained
		Residential Class A ^{a,c}	Residential Class B ^{b,c}
Minimum ROW	72 ft	60 ft	60
Design Speed (min)	45 mph	30 mph	25
Maximum Grade	10%	12%	12%
Maximum Relative Gradient	0.54%	0.66%	0.70%
Subgrade width (min)	36 ft	36 ft	36 ft
Base Width (min)	34 ft	34 ft	34 ft
Paved Width (min)	32 ft	32 ft	32 ft
Lane Width (min)	12 ft	12 ft	12 ft
Shoulder Width (min)	4 ft	n/a	n/a
Vertical Curve Crest K (min)	61	19	12
Vertical Curve Sag K (min)	79	37	26
Horizontal Curve Radius (min)	1039 ft	333 ft	200 ft
Stopping Sight Distance (min)	400 ft	200 ft	155 ft
Clear Zone (min)	10 ft	6 ft	6 ft

- a. Road may be County maintained if accepted by Commissioners Court for maintenance.
 - b. Road will be allowed in a private (gated) subdivision and shall be maintained by an entity other than the County
 - c. Trees may remain in the right of way, outside of the clear zone, if approved the County Engineer.
2. All roads shall be paved and constructed in compliance with the specifications adopted by the Commissioners Court and available in the office of the County Engineer.
3. All arterial roads in a private subdivision shall be dedicated to the public and constructed to County standards. All other roads shall be dedicated to the homeowners association for the use of the property owners, their assigns and successors, and emergency response agencies.
4. Private roads shall meet all county road standards, as indicated herein.
5. Any owner that gates the entrances to a private subdivision shall provide either a crash gate or a Knox box and a letter of approval from all of the affected emergency response agencies stating their approval of full-time access to and from the subdivision.
6. The County shall not be responsible for providing enforcement of traffic control within private subdivisions. Traffic control plans shall be consistent with the Texas Manual on Uniform Traffic Control Devices, latest edition.
7. No obstructions, including mailboxes, will be allowed within clear zone of the road. For new subdivisions, cluster mailboxes approved by the U.S. Postal Service will be required. Cluster mailboxes shall be located on easements dedicated by the owner or developer of the subdivision or in areas designated by the County, subject to approval by the Postal Service. Individual mailboxes, when allowed, shall be mounted on a break-a-way support or wooden post and shall be offset from the edge of pavement determined by clear zone requirements.

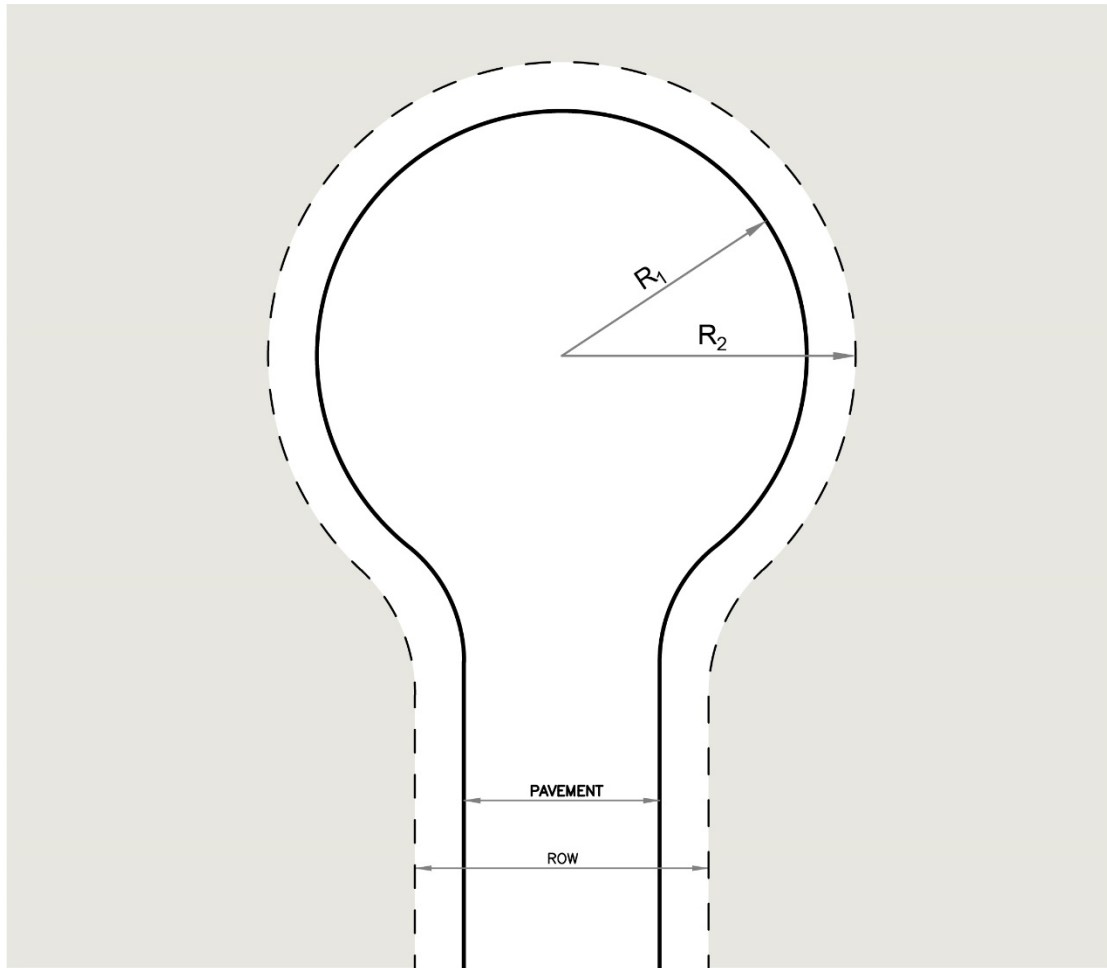
Figure 5-2: Section View of an Urban Street

	URBAN	Collector	Class A	Class B
A	ROW	72	60	60
B	Subgrade	36	36	36
C	Flexible Base	34	34	34
D	Pavement Width	32	32	32

8. Street jogs with centerline offsets of less than 150 feet are prohibited.
9. No squares, "islands," or other obstructions to traffic shall be constructed within the right-of-way of a road unless the road will be maintained by some entity other than the County.
10. All crossing roads should intersect at 90° angles. Where this is not possible, the right-of-way area located on the acute angle side of the intersection shall be cleared of all trees, brush and other obstructions for a distance of a minimum of 100 feet from both intersecting roadways. The intersecting roads shall require a minimum radius of 35 feet.
11. A divided road will not be permitted unless the road will be maintained by some entity other than the County.
12. Roundabouts may be used when approved by the County Engineer.
13. The installation of security gates or guard stations is permissible only in subdivisions with streets or roads that are maintained by some entity other than the County. Provisions shall be made by the developer, HOA, or other authorized person or entity for entry into the subdivision by County, school district, law enforcement, emergency and other public service vehicles. Security gates shall be set back from the right-of-way of any connecting road and a sufficient distance from such road to permit vehicles to stop, que, turn around and exit the entry to the subdivision without blocking any roadway or obstructing traffic.
14. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.

15. Dead-end streets (with no cul-de-sac) shall be prohibited, except when stubs are approved or required by the Fire Marshal and the County Engineer in order to permit future development. No lot shall front on a dead-end expansion street.
16. Streets intended to be continued in an expansion of an existing subdivision shall end in a cul-de-sac.
17. Cul-de-sacs shall have a turnaround right-of-way of not less than 132 feet in diameter with a paved area not less than 100 feet in diameter.
18. Widened street sections (semi-cul-de-sacs or bulges) are prohibited.
19. Curbs, where installed, shall conform to specifications adopted by the Commissioners Court and available in the office of the County Engineer. Curbs shall be constructed in accordance with current TxDOT design standards and Item 529.
20. The owner or owner's representative shall notify the County Engineer at least 24 hours prior to material delivery for a road, laying of the base course of a road, before culvert placement and concrete placement, and before paving of a road is to be started, so that the County representative will have an opportunity to visit the site to verify that specifications for the road are being met. Failure to do so may result in the road not being approved by the County.
21. Specifications for TxDOT items referred to in these Rules may be found on the TxDOT website.

Figure 5-3: Plan View of an Urban Cul-de-Sac



Cul-de-Sac Radius Measurements

R_1 (pavement)	50'
R_2 (right-of-way)	66'

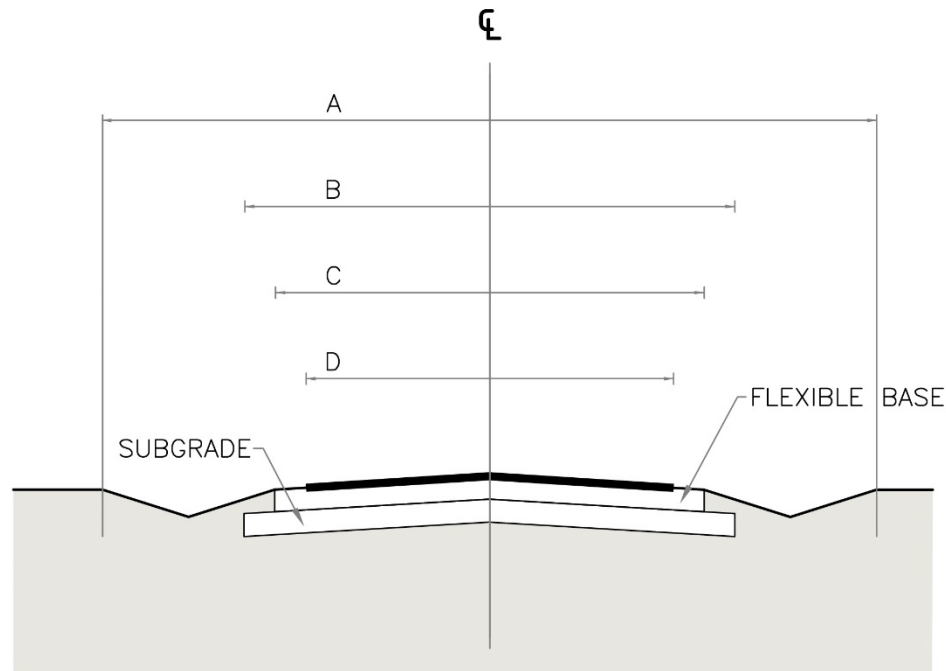
D. ROAD AND RIGHT OF WAY REQUIREMENTS FOR RURAL DEVELOPMENTS

1. Minimum requirements for new roads for Rural Developments:

Table 5-8: Minimum Requirements for New Roads – Rural Developments

	Collector ^{a,c}	County Maintained	Privately Maintained
		Residential Class A ^{a,c}	Residential Class B ^{b,c}
Minimum ROW	72 ft	60 ft	60
Design Speed (min)	45 mph	30 mph	25
Maximum Grade	10%	12%	12%
Maximum Relative Gradient	0.54%	0.66%	0.70%
Subgrade width (min)	36 ft	28 ft	26 ft
Base Width (min)	34 ft	26 ft	24 ft
Paved Width (min)	32 ft	24 ft	22 ft
Lane Width (min)	12 ft	12 ft	11 ft
Shoulder Width (min)	4 ft	n/a	n/a
Vertical Curve Crest K (min)	61	19	12
Vertical Curve Sag K (min)	79	37	26
Horizontal Curve Radius (min)	1039 ft	333 ft	200 ft
Stopping Sight Distance (min)	400 ft	200 ft	155 ft
Clear Zone (min)	10 ft	6 ft	6 ft

- Road may be County maintained if accepted by Commissioners Court for maintenance.
 - Road will be allowed in a private (gated) subdivision and shall be maintained by an entity other than the County
 - Trees may remain in the right of way, outside of the clear zone, if approved by the County Engineer.
- All roads shall be paved and constructed in compliance with the specifications adopted by the Commissioners Court.
 - All arterial roads in a private subdivision shall be dedicated to the public and constructed to County standards. All other roads shall be dedicated to the homeowner's association for the use of the property owners, their assigns and successors, and emergency response agencies.
 - Private roads shall meet all county road standards, as indicated herein.
 - Any owner that gates the entrances to a private subdivision shall provide either a crash gate or a knox box and a letter of approval from all of the affected emergency response agencies stating their approval of full-time access to and from the subdivision.
 - The County shall not be responsible for providing enforcement of traffic control within private subdivisions. Traffic control plans shall be consistent with the Texas Manual on Uniform Traffic Control Devices, latest edition.
 - No obstructions, including mailboxes, will be allowed within clear zone of the road. For new subdivisions, cluster mailboxes approved by the U.S. Postal Service is preferred. Cluster mailboxes shall be located on easements dedicated by the owner or developer of the subdivision or in areas designated by the County, subject to approval by the Postal Service. Individual mailboxes, when allowed, shall be mounted on a break-a-way support or wooden post and shall be offset from the edge of pavement determined by clear zone requirements.

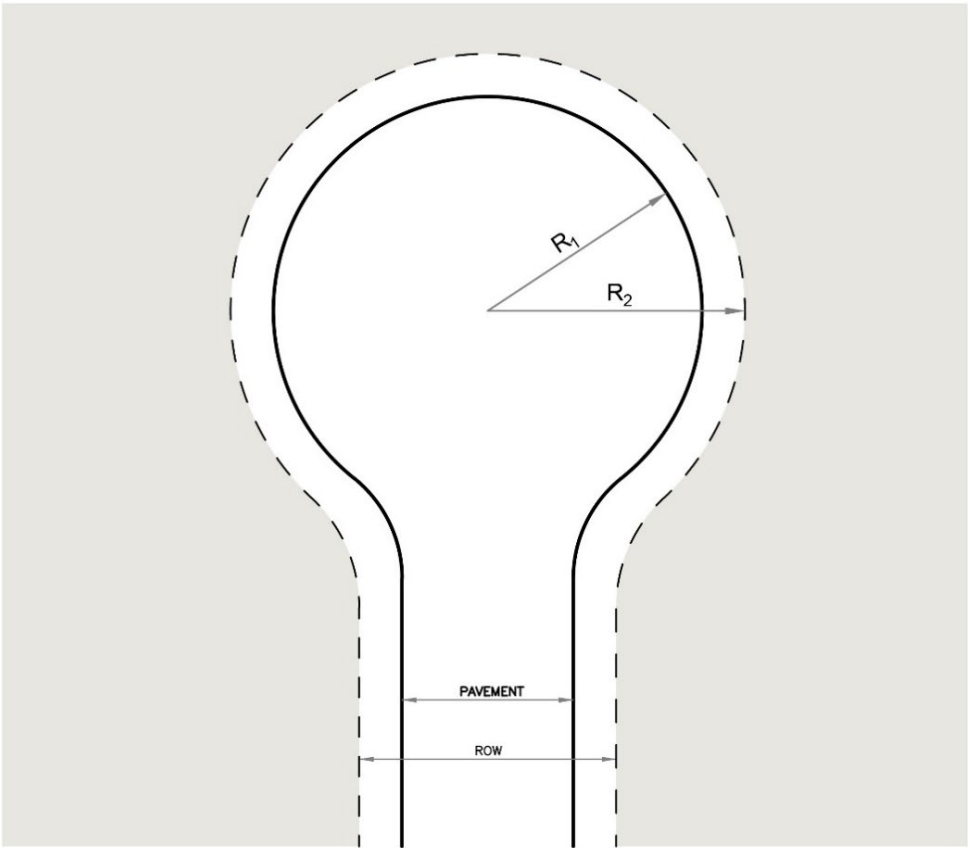
Figure 5-4: Section View of a Rural Street

	RURAL	Collector	Class A	Class B
A	ROW	72	60	50
B	Subgrade	36	28	26
C	Flexible Base	34	26	24
D	Pavement Width	32	24	22

8. Street jogs with centerline offsets of less than 150 feet are prohibited.
9. No squares, "islands," or other obstructions to traffic shall be constructed within the right-of-way of a road unless the road will be maintained by some entity other than the County.
10. All crossing roads should intersect at 90° angles. Where this is not possible, the right-of-way area located on the acute angle side of the intersection shall be cleared of all trees, brush and other obstructions to assure adequate sight distance using Intersection Sight distance using current AASHTO Sight Triangles procedures. The intersecting roads shall require a minimum radius of 35 feet.
11. A divided road will not be permitted unless the road will be maintained by some entity other than the County.
12. Roundabouts may be used when approved by the County Engineer.
13. The installation of security gates or guard stations is permissible only in subdivisions with streets or roads that are maintained by some entity other than the County. Provisions shall be made by the developer, HOA, or other authorized person or entity for entry into the subdivision by County, school district, law enforcement, emergency and other public service vehicles. Security gates shall be set back from the right-of-way of any connecting road and a sufficient distance from such road to permit vehicles to

- stop, queue, turn around and exit the entry to the subdivision without blocking any roadway or obstructing traffic.
14. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.
 15. Dead-end streets (with no cul-de-sac) shall be prohibited except when stubs are approved or required by the Fire Marshal and the County Engineer in order to permit future development. No lot shall front on a dead-end expansion street.
 16. Streets intended to be continued in an expansion of an existing subdivision shall end in a cul-de-sac.
 17. Cul-de-sacs shall have a turnaround right-of-way of not less than 132 feet in diameter with a paved area not less than 100 feet in diameter, per International Fire Code, Appendix D.
 18. Widened street sections (semi-cul-de-sacs or bulges) are prohibited.
 19. Curbs, where installed, shall conform to specifications adopted by the Commissioners Court. Curbs shall be constructed in accordance with current TxDOT Item 529 and standards.
 20. Specifications for TxDOT items referred to in these Rules may be found on the TxDOT website.
 21. The owner or owner's representative shall notify the County Engineer at least 24 hours prior to material delivery for a road, laying of the base course of a road, before the installation of culverts or the replacement of concrete, and before paving of a road is to be started, so that the County representative will have an opportunity to visit the site to verify that specifications for the road are being met. Failure to do so may result in the road not being approved by the County.
 22. Specifications for TxDOT items referred to in these Rules may be found on the TxDOT website.

Figure 5-5: Plan View of a Rural Cul-de-Sac



Cul-de-Sac Radius Measurements

R ₁ (pavement)	50'
R ₂ (right-of-way)	66'

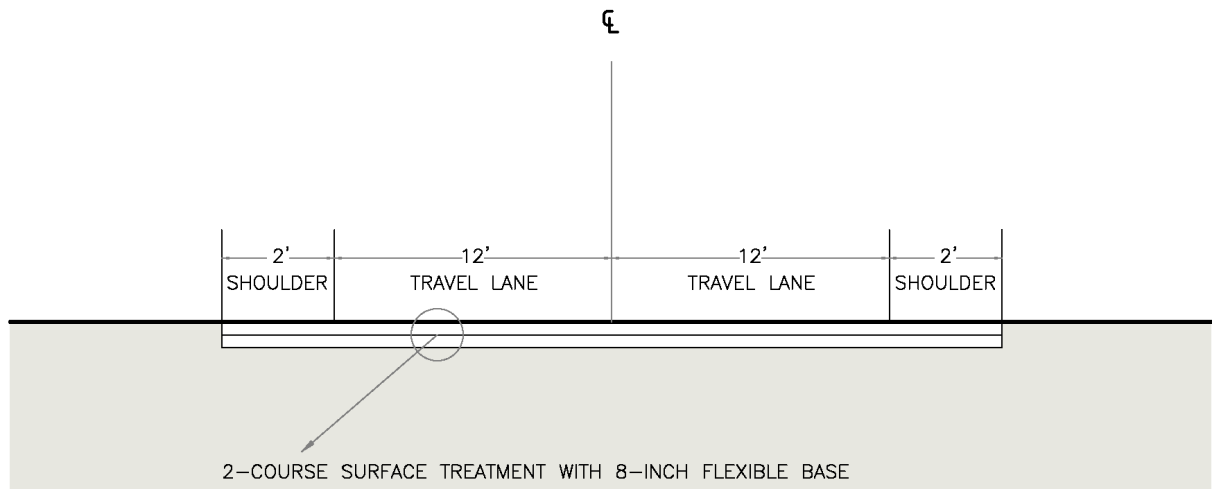
E. BORDER STREETS

1. Border streets shall be improved in accordance with the classification adopted by Kendall County, and with the Kendall County Master Thoroughfare Plan.
2. County-maintained border streets shall be classified as either Minor Collectors or Major Collectors, and shall be designed as follows:

a. Minor Collectors

- i. Right of way width: 60 feet
- ii. Two 12-foot travel lanes
- iii. Shoulders: 2 feet
- iv. Minimum pavement width: 28 feet
- v. The roadway shall be a two-course surface treatment with an 8-inch flexible base.

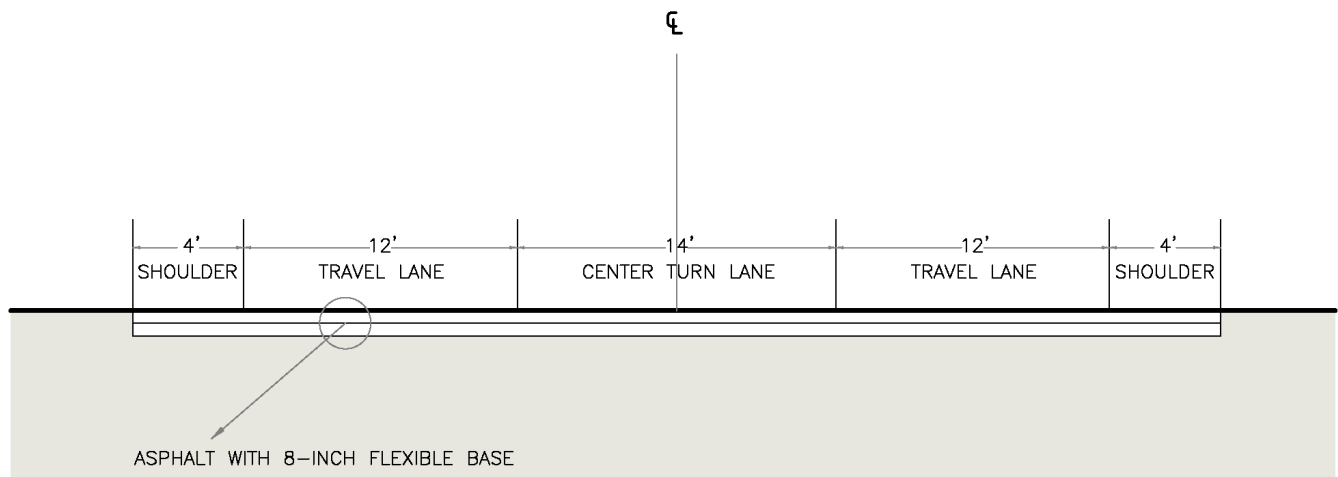
Figure 5-6: Section View of a Minor Collector



b. Major Collectors

- i. Right of way width: 72 feet
- ii. Two 12-foot travel lanes
- iii. A 14-foot center turn lane
- iv. Shoulders: 4 feet
- v. Minimum pavement width: 46 feet
- vi. The roadway shall be 2-inch asphalt with an 8-inch base.

Figure 5-7: Section View of a Major Collector



3. For TxDOT facilities, the applicant shall follow the TxDOT portion of the Master Thoroughfare Plan regarding minimum right of way requirements.
4. All roads shall be paved and constructed in compliance with the specifications adopted by the Commissioners Court and available in the office of the County Engineer.
5. All crossing roads should intersect at 90° angles. Where this is not possible, the right-of-way area located on the acute angle side of the intersection shall be cleared of all trees, brush and other obstructions for a distance of a minimum of 100 feet from both intersecting roadways. The intersecting roads shall require a minimum radius of 35 feet.
6. Curbs, where installed, shall conform to specifications adopted by the Commissioners Court and available in the office of the County Engineer. Curbs shall be constructed in accordance with current TxDOT design standards and Item 529.
7. The owner or owner's representative shall notify the County Engineer at least 24 hours prior to material delivery for a road, laying of the base course of a road, and before paving of a road is to be started, so that the County representative will have an opportunity to visit the site to verify that specifications for the road are being met. Failure to do so may result in the road not being approved by the County.
8. Specifications for TxDOT items referred to in these Rules may be found on the TxDOT website.

F. PREPARING AND CLEARING THE RIGHT OF WAY

1. The developer shall clear the right-of-way for construction operations by removing and disposing of all obstructions within the required horizontal clearance for obstructions per the TxDOT Roadway Design Manual, latest edition. Preparation of Right of Way shall be in accordance with TxDOT Standard Specifications, Item 100. However, pursuant to Section 251.016, Transportation Code, the County may remove or order removal of objects in any road right-of-way that create a safety hazard to the public. Roads, easements and driveways that provide access to any commercial, public, or residential structure shall have a minimum horizontal clearance of 12 feet and a minimum vertical clearance of 16 feet to allow passage of fire trucks, EMS units, law enforcement, and other emergency or public vehicles.
2. Trees located on private property that interfere with a clear right-of way by encroachment or over hanging branches may be removed, pruned or trimmed as necessary in order to provide adequate clearance for vehicular traffic. Tree trimming shall be in accordance with TxDOT Standard Specifications, Item 752.

(NOTE: Whenever a tree susceptible to oak wilt is trimmed, pruned or otherwise cut or damaged, the person responsible for the cut or damage shall immediately dress the cut or damaged area with paint or compound to protect the tree and adjacent trees against oak wilt.)

3. All unstable subgrade or objectionable material in the roadway shall be removed and replaced with material acceptable to the County.

G. ROADWAY EXCAVATION AND EMBANKMENT

1. Any roadway excavation necessary to attain conformance with proposed road grades and typical cross sections shall be in accordance with TxDOT Standard Specifications, Item 110.
2. When the proposed road grades and cross sections require the placing of fill material to raise the roadway, such embankment fill shall be constructed in accordance with TxDOT Standard Specifications, Item 132. Completed side slopes shall not be steeper than three-to-one (3-to-1).
3. Completed cuts shall have side slopes no steeper than three-to-one (3-to-1) unless a different slope is approved by the County Engineer consistent with the provisions of this section.
4. Requirements for slopes in cuts and on fills may be modified if the developer presents plans designed, signed and sealed by a licensed professional engineer demonstrating that cuts are in a material of adequate stability to permit a different slope, or using retaining walls to stabilize the slope or fill.
5. If blasting is required, work shall be in accordance with current TxDOT specifications, Item 7.

H. SUBGRADE AND BASE COURSES

1. The embankment, subgrade, and base-course materials shall be compacted by suitable type rollers in all cases to consolidate fill materials or to attain adequate stability of subgrade materials and base courses.
2. SUBGRADE Density Control shall be in accordance with current TxDOT Standard Specifications, Item 132. Ordinary Compaction is allowed with prior approval of the County Engineer. Proof rolling, if allowed, shall be in accordance with current TxDOT specifications, Item 216.
3. BASE Density Control shall be in accordance with current TxDOT Standard Specifications, Item 247. Compaction shall be used to attain at least 100% compaction of base courses.
4. Rolling equipment and construction methods shall be in accordance with current TxDOT specifications, Items 204, 210 and 216.
5. Prior to placing the base course, the roadbed shall be shaped to conform to the subgrade section and shall be tested to assure proper compaction. The roadbed shall be to the line and grade specified in the drawings and shall be free of holes, ruts and depressions.
6. Base materials used for roads shall conform to the requirements to current TxDOT specifications, Item 247, Flexible Base, Type A, Grade 1-2 (crushed stone or broken aggregate, excluding gravel aggregate). Pit run base materials and caliche are not allowed.
7. Before placing any material, the contractor shall provide the County Engineer with reports of analysis of the proposed materials made by an approved laboratory in accordance with current TxDOT specifications Item 247.
8. At least 48 hours before placing the base material, the subgrade shall be checked as to conformity with grade and section in accordance to approved construction plans. Subgrade shall be tested for adequate compaction in accordance to approved construction plans. It shall be the responsibility of the contractor to provide the required amount of specified material. Material deposited upon the subgrade shall be spread and shaped the same day unless otherwise directed by the County Engineer. In

the event inclement weather or other unforeseen circumstances render impractical the spreading of the material during the first 24-hour period, the material shall be scarified and spread as directed by the County Engineer. Flexible Base shall be constructed in accordance with current TxDOT specifications, Item 247.

9. The base course shall be placed, mixed, blended, and compacted by the contractor in two (2), four (4)-inch lifts, unless otherwise authorized by the County Engineer. Total compacted base material placed shall be not less than eight (8) inches in thickness. Alternative pavement designs may be submitted provided the proposed pavement section is designed by a licensed geotechnical engineer and approved by the County Engineer.

I. PAVEMENT

1. Where a road section is constructed, the flexible base shall be in accordance with Figure 5.1 for urban roads, and Figure 5.3 for rural roads.
2. The pavement shall be a "Two Course Surface Treatment" or a minimum of one and one-half (1½) inches of Hot Mix Asphaltic Concrete (HMAC). Prime coat shall be applied at the rate of 0.20 gallons per square yard.
3. The Two Course Surface Treatment shall be constructed in accordance with current TxDOT specifications, Item 316.
4. HMAC shall be produced and constructed in accordance with current TxDOT specifications, Item 340.
5. No surface treatment shall be applied when the air temperature is 60° F and falling, or when the roadway surface temperature is below 60° F. Surface treatment may be applied when the air temperature is above 50° F and rising, provided the roadway surface temperature is 60° F or above.
6. Aggregates for use on the Two Course Surface Treatment shall be in accordance with current TxDOT specifications, Item 302. Aggregate may be either Type B or Type PB.
7. Aggregates for use on the Two Course Surface Treatments shall in accordance with current TxDOT Specifications, Item 302. Grade 3 (non-lightweight). Grade 4, or Grade 5.
8. Roads with curbs or headers shall have a minimum of one and one-half (1½) inch HMAC pavement.
9. For Two Course Surface Treatment, the asphaltic material shall be Type AC-5 with two (2) percent latex, or Type AC-10 with two (2) percent latex, CRS-2 or HFRS-2 or equivalent asphalt listed by current TxDOT specifications, Item 300 for such use, and approved by the County Engineer.
10. Since asphaltic materials are very flammable, utmost care must be taken to prevent open flames from coming in contact with the asphaltic material or the gasses from the material. The contractor shall be responsible for damage from fires or other causes which may result from heating asphaltic materials.
11. For estimating purposes, the rate of application for asphaltic materials (AC) shall be 0.30 gallons per square yard for the first course and 0.35 gallons per square yard for the second course of a Two Course Surface Treatment. The actual rate used shall be approved by the County Engineer.
12. For estimating purposes, the rate of application for emulsified asphalt product shall be 0.35 gallons per square yard for the first course and 0.40 gallons per square yard for the second course of a Two Course Surface Treatment. The actual rate shall be approved by the Road Supervisor.
13. For Two Course Surface Treatment, the aggregate for the first course may be Grade 3 or 4, Type B; the second course aggregate may be Grade 4 or 5, Type PB.
14. Aggregate rock will be applied at the rate of one (1) cubic yard per 90 square yards for the first course, and at the rate of one (1) cubic yard per 100 square yards for the second course. Rolling is required to achieve a uniform embedment. The contractor shall broom-off loose aggregate. If bleeding occurs, the contractor shall apply sand or Grade 5 material to the finished surface for whatever period is required to absorb the excess asphalt.

15. Compacted HMAC shall be constructed in accordance with current TxDOT specifications, Item 340 for Hot Mix, Type D (Fine Surface).
16. The asphaltic material shall be from 3.5 to 6.5 percent of the mixture by weight, or from 8 to 15 percent of the mixture by volume.
17. The asphaltic materials for the tack coat, or prime coat, shall be cut back asphalt MC-30, or equal, in accordance with current TxDOT specifications, Item 300, for that purpose with the approval of the County Engineer.
18. Construction methods used to produce, transport, place and compact HMACP materials shall be in accordance with current TxDOT specifications, Item 340.
19. The base course shall be sprinkled as required and compacted to the extent necessary to provide not less than the 100 percent density specified and within moisture content limits defined in the geotechnical report. In addition to the requirements specified for density, the full depth of flexible base shown on the drawings shall be compacted to the extent necessary to remain firm and stable under loading by construction equipment. (Note: Construction equipment shall be limited to units not exceeding legal loads.) If the base material fails to meet the density requirements, it shall be reworked as necessary to meet these requirements. Throughout this entire operation, the shape of the base course shall be maintained by blading, and the surface upon completion shall be smooth and in conformity with the typical sections shown on the drawings and to the established lines and grades. In the area on which pavement is to be placed, any deviation in excess of one-quarter ($\frac{1}{4}$) inch in cross section and in length of 16 feet measured longitudinally shall be corrected in accordance with current TxDOT specifications Item 247. All irregularities, depressions or weak spots which develop shall be corrected immediately by scarifying the areas affected, adding suitable material as required, reshaping and recompacting by sprinkling and rolling. Should the base course, due to any reason or cause, lose the required density and moisture content or finish before the surfacing is complete, it shall be recompacted refinished and tested at the sole expense of the contractor. Prime oil in accordance with current TxDOT specifications, Item 300, shall be applied seven days from date of testing. Fine blading shall be completed during that seven-day period. Oil shall be applied at the rate of 0.20 gallons per square yard.

J. CULVERTS, BRIDGES AND STRUCTURES

1. Unless noted otherwise, when concrete is required in these regulations, concrete materials, placement methods, placement temperatures, curing, etc., shall be in accordance with current TxDOT specifications, Items 420 and 421.
2. Drainage culverts shall be of corrugated metal pipe, reinforced concrete pipe, or box culverts and shall be constructed in accordance with current TxDOT design standards and specifications, Items 460, 461, 462, or 464.
3. Manholes and inlets shall be constructed in accordance with current TxDOT design standards and specifications, Item 465. Frames, grates, rings and covers shall be constructed in accordance with current TxDOT design standards and specifications, Item 471.
4. Headwalls and wing walls shall be constructed to current TxDOT design standards and specifications, Item 466. Safety End Treatments where required shall be constructed to current TxDOT design standards and specifications Item 467.
5. Where drainage culverts are installed in roadways, concrete headwalls shall be built at the inlet and outlet. Headwalls shall have a slope corresponding to the embankment, but not exceeding a 3-to-1 slope. Minimum pipe culvert size shall be 18 inches.
6. In high embankments, structures need not be carried to toe of slope if wing walls and adequate parapet headwalls are provided with an adequate apron. For outlet velocities exceeding 8 feet per second, an energy dissipater must be installed. Designs of wing walls and parapets must be submitted for approval and bear signature and seal of the designing engineer, and the date signed.

7. The County Engineer shall be advised at least 24 hours before culverts are placed or concrete headwalls or wing walls are poured so that necessary inspections may be completed by the County.

K. TESTING AND INSPECTIONS

1. The developer is responsible for coordinating and paying for all inspections, on-site sample collections and delivery of samples to an authorized laboratory, and for on-site and off-site testing done by the laboratory. Nuclear testing methods acceptable to TxDOT are acceptable to the County. The cost for retesting of failed tests is to be borne by the developer.
2. Testing tolerances: Subgrade and base material will be acceptable provided not more than two (2) out of ten (10) consecutive gradation tests performed are outside the specified limit on any individual or combination of sieves by more than five (5) percent and where no two (2) consecutive tests are outside the specified limit. Subgrade and base material will be acceptable provided not more than two (2) out of ten (10) consecutive plasticity index samples tested are outside the specified limit by no more than two (2) points and where no two (2) consecutive tests are outside the specified limit.
3. Street, road and structures testing by an authorized laboratory is required as follows:
 - a. Street subgrade – Proctor determination required on each class of soil to be encountered. Density test – (1) each per 250 feet of street with retest as necessary (minimum of three (3) tests).
 - b. Base course – Proctor test shall be required to establish quality and moisture density relationship. Density test: One (1) each per 250 feet of street or road, with retest as necessary (minimum of three (3) tests).
 - c. Concrete structures – Inspection by County prior to concrete placement. Concrete compressive strength (minimum of three (3) tests per structure) shall be in accordance with current TxDOT specifications, Item 421. Testing will not be required for concrete curbs.
 - d. HMAC – In place density requirements will be determined in accordance with current TxDOT specifications, Item 340.
4. The developer shall provide the County with a minimum of 24-hours' notice prior to any inspection that the County is to perform. Laboratory testing companies to be used by the developer must be approved by the County.

L. ROAD MARKINGS AND SIGNS

1. All road markings and signs shall be compliant with the latest adopted Texas Manual on Uniform Traffic Control Devices.
2. Roads and streets with a minimum paved causeway of 26 feet shall be provided with a double centerline marking, using yellow paint, and shall have edge-line markings with white paint. Type 2 reflectorized pavement marking, in accordance with TxDOT specifications Item 666 is allowed in privately maintained subdivisions.
3. Where required, fire lanes shall be striped or signed, in accordance with Fire Marshal requirements. The paint shall be Type 2 reflectorized pavement markings, in accordance with current TxDOT specifications, Item 666.
4. All roads shall have standard road safety and directional signs. Signs shall be of one-piece construction, made of aluminum, and shall be in accordance with current TxDOT design standards and specifications Items 636 and 644.
5. Street name signs shall be installed at all intersections. Street name signs shall be of one-piece construction, made of aluminum, and shall be six (6)-inches in height. Signs shall be mounted in accordance with current TxDOT design standards and specifications Items 636 and 644 and shall be placed in a uniform manner in accordance with and the current Texas Manual on Uniform Traffic Control Devices.

6. Street name signs shall have white letters on a green background for county roads and state highways and shall have white letters on a brown background for private roads.
7. Reflectorized yellow object markers shall be placed on each side of all hazards at the location designated by the County Engineer and in accordance with current TxDOT design standards and Item 658.
8. All pavement markings, signs for street names, signs for vehicular traffic control, and pedestrian safety shall be in place upon completion of construction of the roads and prior to approval and/or acceptance of the roads by the County.

5.8 Driveways

A. PERMIT REQUIRED

1. Prior to constructing a private, public access, or commercial driveway entering a County road, the property owner shall obtain a permit from the County Engineer. The portion of the driveway within the right-of-way shall be constructed in accordance with the instructions contained in the permit.

B. ADDRESS

1. When a property owner obtains a permit from the County Engineer for a driveway location, if no address has been previously assigned to the location, the property owner shall also request an address for the location. In order to comply with GIS and 911 requirements, and to protect the health, safety and welfare of the residents of the County, all property owners shall prominently display the address for their property at a location within ten feet (10') of the driveway entrance to the roadway, facing the roadway, in reflectorized block letters at least four (4") in height, so that the address can be easily read by law enforcement, fire-fighting, emergency services and other public service personnel. Failure to prominently display the address for property may result in delay of provision of law enforcement, firefighting, EMS, or other services.

C. DRIVEWAY DESIGN

1. If driveway culverts are used in construction of driveways, they shall meet the following minimum specifications:
 - a. Size of the culverts shall be determined by the developer's engineer, owner's engineer, or compliance inspector subject to approval by the County Engineer.
 - b. Minimum culvert size is 15 inches for private driveways and eighteen (18) inches for public access and commercial driveways.
 - c. Construction will be in accordance with "Culverts, Bridges, and Structures" of these rules and regulations.
2. Driveway width at the right-of-way for a private driveway shall be 12 feet minimum to 24 feet maximum. Driveway width at the right-of-way for commercial and public access driveways shall be 30 feet minimum to 45 feet maximum. A minimum 5-foot radius shall be used to connect the driveway to the edge of the roadway.
3. The angle of the driveway at the intersection with the roadway shall be from 60° to 90° with 90° being preferred. Circular driveways with two entrances to the roadway may be allowed if approved by the County Engineer.
4. The location of driveway access to the roadway shall be selected so as to provide maximum safety for roadway traffic and for users of the driveway.
5. If the property that is provided access to a state highway, county road, or other roads or easements subject to regulation by the Commissioners Court is fenced and a gate is located across the driveway, the gate shall be located a sufficient distance from the state highway, county road, or other road or easement such that entering or exiting vehicles will be able to stop while the gate is being opened or closed with no part of the vehicle extending into the highway or road right-of-way.
6. Driveways shall be located to avoid inadequate sight distance.
7. Driveways shall be located to avoid flood prone areas. If a driveway is located in a floodplain, it will either be constructed on grade or the applicant shall submit to the County Engineer constructions plans accompanied by a flood study that demonstrates no impact, in accordance with these rules.

D. MAINTENANCE THE RESPONSIBILITY OF THE OWNER

Maintenance of any portion of a private, public access, or commercial driveway in the roadway right-of-way shall be the responsibility of the owner of the driveway or access route.

5.9 Lighting

A. PURPOSE

A dark night sky is a natural asset and an important element of Kendall County's appeal as a pleasant, rural community in which to live, do business, and visit. The ability to view celestial objects and the ability to live free from objectionable forms of outdoor lighting have profound social, ecological, aesthetic, economic, and health benefits for the citizens of Kendall County and the surrounding area. It is the County's policy to protect and preserve the night sky for the benefit of its current and future citizens, businesses, organizations, and visitors. The outdoor lighting regulations established herein have been adopted in order to:

1. Help preserve the rural character within the County's jurisdiction by minimizing the growth of urban sky glow and encouraging the abatement thereof;
2. Ensure outdoor lighting within the County's jurisdiction does not unduly interfere with the reasonable use and enjoyment of private and public property by minimizing annoying light trespass as defined herein;
3. Encourage the use of outdoor lighting which will preserve the natural environment, minimize glare, increase nighttime safety and security, and conserve energy.

B. FINDINGS

1. Camp Bullis is a critical training facility for the United States military, where medical personnel of all branches of the service are trained to function at night, under simulated combat conditions. The continued viability of Camp Bullis for such training purposes is essential to the readiness of the United States military, the utility of Fort Sam Houston, and the vitality of the surrounding communities' economy.
2. Kendall County has resolved to pursue certification as a Dark Sky Community by the International Dark Sky Association.

C. AUTHORITY

Local Government Code Chapter 240.032 (b-1) provides that a county with a population of more than one million that has at least five United States military bases or any county adjacent to that county that is within five miles of a United States Army installation, base, or camp may, upon the request of a United States military installation, base, or camp commanding officer, adopt orders regulating the installation and use of outdoor lighting within five miles of the installation, base, or camp in any unincorporated territory of the county. Major General Russell J. Czerw, Commanding General, US Army Medical Department Center and School and Fort Sam Houston, by letter dated July 27, 2009, and addressed to Kendall County Judge Gaylan L. Schroeder, requested that Kendall County issue an order regulating outdoor night-time lighting for new construction within five miles of the boundaries of Camp Bullis in order to protect military night training activities.

Kendall County has adopted a resolution stating its intent to become certified as a Dark Sky Community and is therefore exempt from the prohibition of the regulation of outdoor lighting, as per Local Government Code 3000.002 (c-3).

D. APPLICABILITY

These requirements are applicable for all outdoor lighting for new construction within Kendall County, and compliance is required.

1. "Grandfathering with Sunset" provision

All existing outdoor lighting that is legally installed and operating but is not in conformance with this Article on the date of its adoption shall be brought into

conformance with this Article within ten years from the date of its adoption except as follows.

- a. Development Applications. All existing outdoor lighting located on a subject property that is part of an application for a subdivision approval, or a development permit for improvements totaling at least fifty percent (50%) of the total value of the current structure shall be brought into compliance with this article before final inspection or final plat recordation, whichever is applicable.
- b. Destruction. If more than fifty percent (50%) of the total appraised value of a structure (as determined by the Kendall County Appraisal District) is destroyed by fire, wind storm, flood, or other calamity or intentionally destroyed by the owner of the property, any remaining nonconforming outdoor lighting fixtures on or associated with the structure shall be removed if the structure is to be rebuilt and replaced by new fixtures that are in conformity with the provisions of this Article.
- c. Fixture Updates. The replacement, repair, renovation, or relocation of an existing lighting fixture or modification of a nonconforming fixture after the date of adoption of this Article shall be subject to the provisions of this Article. Merely changing a light bulb or other light emitting device inside the fixture shall not be considered a fixture update.
- d. Residential Addition or Remodel. Nothing herein shall be construed to terminate a residential property's permitted nonconforming status as a result of an addition or remodel. Fixtures on such additions or remodels, however, shall be in compliance with the provisions of this Article.

E. LIGHTING PROVISIONS

1. Administration

- a. The Kendall County Engineer shall administer these provisions.
- b. Persons wishing to obtain a permit for a proposed installation of outdoor lighting shall submit a completed permit application to the County Engineer.
- c. The Commissioners Court hereby delegates to the County Engineer the authority to review permit applications and approve permits for installations that are in compliance with the terms of this Order and disapprove permits for installations that are not in compliance with these provisions.
- d. Continual proper maintenance of any permitted outdoor lighting is a condition of the approved permit.
- e. The fee for obtaining a permit under this Order shall be as set by the Commissioners Court. The County Engineer shall collect the fee at the time that a permit application is submitted to that office. Fees shall be processed and deposited in accordance with County procedures and are non-refundable.

2. Variances

The Commissioners Court may grant a variance to the requirements of this Order in accordance with the procedures and requirements set out in these Regulations. A request for variance using forms provided by the County Engineer shall be completed and submitted by the applicant in order for the Commissioners Court to consider a request for variance.

3. Exemptions

In addition to the exceptions specified elsewhere in this Article, the following are exempt from the provisions of this Article except as further noted:

- a. Traffic Lighting. Publicly maintained traffic control devices.
- b. Emergency Lighting. Temporary emergency lighting (fire, police, repair crews).

- c. TxDOT Lighting. Lighting fixtures and illumination requirements imposed by the Texas Department of Transportation (TxDOT) within TxDOT's right of way.
 - d. Vehicle Lighting. Lighting required by law to be installed on motor vehicles.
 - e. Construction Lighting. Temporary construction lighting provided workers are present and actively engaged in the construction project and the lights are positioned so they do not shine in the eyes of passing motorists, bicyclists, or pedestrians so as to create a safety hazard.
 - f. Navigation Lighting. Navigation lights such as aircraft warning beacons on water towers, electrical and wireless transmission towers, etc. However, notwithstanding terms as may be set forth in licensing agreements with the owners/operators of such lights, a white or light colored, flashing strobe light that is visible after sunset shall be deemed non-compliant unless required by state or federal government regulation.
 - g. Swimming Pool Lighting. Underwater lights such as are commonly installed in swimming pools or other water features are exempt.
 - h. Performance Lighting. Temporary lighting for outdoor theatrical or musical productions, outdoor movies, or on-the-scene nighttime television broadcasts such as television news are exempt.
 - i. Fossil Fuel Lighting. Outdoor lighting for which light is produced directly by the combustion of fossil fuels such as outdoor fire pits and ornamental items such as "tiki lamps" are exempt.
4. Public Safety and Actionable Nuisances

Notwithstanding any other provisions of this Article, the County may require the modification, removal, or limited operation of outdoor lighting fixtures found to be a public safety hazard or a public or private nuisance according to the following criteria:

- a. Criteria for Finding Outdoor Illumination to be a Public Safety Hazard:
 - i. Light trespass and glare are sufficiently intense or contrasts excessively with surrounding illumination, regardless of the intensity of the surrounding illumination, in a manner to cause impairment of visual performance or to distract from or impair the safe operation of a vehicle; or
 - ii. Light trespass or glare exists that impairs a person's visual performance or ability to avoid obstacles in his or her path.
- b. Criteria for Finding Outdoor Illumination to be a Public Nuisance Affecting the Community as a Whole:
 - i. Light escapes above the horizontal plane to pollute the night sky enjoyed by all citizens or visitors; or
 - ii. Glare onto public rights-of-way or public spaces such as parks is of sufficient intensity as to be annoying to or impair the visual acuity of a person of average sensibilities using the right-of-way.
- c. Criteria for Finding Outdoor Illumination to be a Private Nuisance Affecting an Individual Citizen or Property Owner:
 - i. Light trespass or glare exists that deprives an owner or occupant of usual and reasonable use and enjoyment of a private property; or
 - ii. Light trespass or glare exists that causes visual discomfort or impairment of visual performance in a manner that deprives any citizen of average sensibilities from the safe use of a private property.

5. Other Prohibitions

The following are specifically prohibited except as further noted:

- a. Mercury Vapor Fixtures. The installation of any mercury vapor, mercury arc, or mercury discharge fixture or lamp of any size or kind for use as outdoor lighting is prohibited.
- b. Barn Lights. The installation of any fixture with a translucent refracting lens typical of old style “barn light” fixtures for use as outdoor lighting is prohibited unless the fixture includes a full opaque shield instead of the standard translucent refracting lens and otherwise complies with the shielding requirements of this Article. The standard refracting lens is allowed only if it is painted or otherwise rendered substantially opaque.
- c. Wall Packs. The installation of any wall pack style fixture for use as outdoor lighting is prohibited unless the fixture complies with the shielding requirements of this Article, i.e., is a full cut-off fixture, shielded as necessary such that illumination is confined to the property on which the fixture is located.
- d. Drop Lenses. The installation of any publicly owned or privately-owned streetlight, area light, or other fixture with an unshielded drop lens or sag lens is prohibited.
- e. Searchlights and Lasers. The operation of searchlights or aerial laser lights used for advertising purposes is prohibited.

6. Violations, Penalty and Enforcement

- a. General penalties described in the Kendall County Development Rules and Regulations shall apply to violations hereof.
- b. It shall be a violation of this Order to install outdoor lighting without an approved permit from the County Engineer.
- c. It shall be a violation of this Order to improperly operate permitted outdoor lighting.
- d. The Criminal District Attorney is authorized to enforce these requirements in accordance with Section 240.035, Texas Local Government Code.
- e. The County shall also have the right to bring a civil action to enforce the provisions of this Article and to seek remedies as allowed by law, including, but not limited to the following:
 - i. Injunctive relief,
 - ii. Monetary damages, and
 - iii. Other relief as directed by a court with jurisdiction over the matter.

F. OUTDOOR LIGHTING STANDARDS

1. Lighting Design. Outdoor lighting shall be designed to provide the minimum lighting necessary to ensure adequate safety, visibility, and comfort, and not create or cause objectionable glare or light trespass as viewed from other properties and/or from public rights-of-way.
2. Shielding Requirement. Except as otherwise specified in this Article, outdoor lighting, regardless of lumen output, shall be fully shielded and/or aimed downward so as to minimize glare and prevent light pollution. All outdoor lighting fixtures shall be full cut-off fixtures. No outdoor lighting fixture shall permit light to shine above the horizontal plane to pollute the night sky or off the property on which it is installed.
3. Light Trespass. Except as otherwise specified in this Article, light trespass beyond property boundaries shall be deemed a nuisance and in non-compliance with the requirements of this Article.

- a. General. The source of the light (the bulb, light emitting diode, or any other light emitting device), a refractive or non-refractive lens cover, or reflector shall not be visible in a direct line of sight from any other property or public right of way.
 - b. Porchlights and Sconces. Residential porchlights and wall sconces may be unshielded and light from such fixture may be visible from beyond the property line provided the fixture has a medium to dark toned, semi- opaque diffuser installed to reduce glare or the fixture has a flat- bottomed LED light emitter or other flat-bottomed light source that prevents light from shining off the property or upward into the night sky. In no case shall the bulb, other luminous element, reflective surface, or lens cover be visible from off the property.
4. Color Temperature. All outdoor lighting, regardless of type, except as exempted herein, shall have a Correlated Color Temperature (CCT) not to exceed 3000 degrees Kelvin as recommended by the American Medical Association in order to minimize the adverse effects on human health of bluish-white light at higher CCTs. A CCT of 2700 degrees Kelvin or lower (yellowish, warm light) is preferred for all lighting.
5. Lumen Caps.

These lumen cap standards shall apply everywhere in the County except within 5 miles of Camp Bullis.

- a. Non-residential Property. To prevent over-lighting, total outdoor light output on any non-residential property shall not exceed 75,000 initial lumens per net acre in any contiguous illuminated area. This lumen per net acre limitation is an upper limit, not a design goal. Illumination design should be at the lowest levels that meet the reasonable requirements of the task. Governmental-owned streetlights used for illumination of public rights-of-way and lights that are installed indoors but shine outside the building are exempted from the lumen cap requirement.
 - b. Residential Property. Total outdoor light output (excluding governmental-owned streetlights used for illumination of public rights- of-way) on any residential property shall not exceed 25,000 lumens per net acre in any contiguous illuminated area.
 - c. Substantiation of Lumens per Net Acre Calculations. The owner of the property or his or her designated agent shall be responsible for calculating the total number of lumens per net acre on the property and for informing the County of the methodology used in the calculations. The County shall determine if the calculations are reasonable.
 - d. Outdoor Recreational Facilities. Lighting for playing fields, playing courts, swimming pools, skateboard parks, rodeo arenas, and similar recreational facilities, whether public or private, are exempt from the lumens per net acre limit. However, all such facilities whether public or private shall comply with the other standards contained herein.
6. Lighting Curfews. All outdoor lighting is encouraged to be turned off when no one is present to use the light. Curfews for signage, outdoor recreational facilities, and streetlights are specified in the respective sub-sections of this Article.
7. Illumination of Signage.
 - a. Externally Illuminated Signage.
 - i. All lighting of externally illuminated outdoor signs shall be shielded so as to minimize glare for passing motorists, bicyclists, or pedestrians.
 - ii. All legally installed externally illuminated signs shall have top-mounted luminaires which meet the shielding and grandfathering requirements contained herein.
 - iii. Bottom-mounted luminaires on externally illuminated signs shall be prohibited.

- iv. (c) Legally installed internally illuminated signs, shall be constructed of translucent materials, and the source of internal illumination shall not be directly visible through said material.
 - v. (d) Sign illumination shall be extinguished completely one (1) hour after sunset and remain off until one (1) hour before sunrise.
 - vi. (e) The illuminated surface area of an individual sign shall not exceed 200 square feet.
 - vii. (f) Luminance levels shall not exceed 340 lumens.
 - b. Lighting Curfew for Signage Outside of the 5-mile radius of Camp Bullis. Illumination of all on-premise outdoor advertising signage, both externally and internally illuminated, shall be turned off by the later of closing time or 10:00 pm, provided, however, that such signs may be turned back on prior to sunrise, but no more than one hour prior to opening.
8. Canopies.
- a. Light Trespass. Because of their common proximity to public rights-of-way, lighting of canopies typical of service stations may produce light emissions that trespasses onto public rights-of-way provided that no light is allowed to escape above the horizontal plane to pollute the night sky and that glare for motorists, bicyclists, and pedestrians is minimized. Light trespass onto private property is prohibited.
 - b. Design. All such canopy lighting fixtures be embedded within the canopy itself with no need of further shielding.
 - c. Total Under-Canopy Output: The total light output used under service station canopies, defined as the sum of all under-canopy initial lamp outputs in lumens, shall not exceed 40 lumens per square foot of canopy
 - d. Correlated Color Temperature. All canopy lighting shall have a Correlated Color Temperature of 3000 degrees Kelvin or less.
 - e. Over-lighting. Over-lighting of canopy areas for purposes of advertising is specifically prohibited.
9. Streetlights.
- a. Design. New streetlights installed in existing or proposed right-of-way or Texas Department of Transportation right-of-way in the city limits shall be full cut-off fixtures and designed, mounted, and/or shielded so as to direct the light onto the public right-of-way and not onto private property.
 - b. Repair and Replacement. Notwithstanding other provisions of this Article, existing streetlights shall be brought into compliance in the normal course of streetlight repair and replacement.
10. New County-owned Outdoor Lighting. After the effective date of this Article the County may install new publicly owned outdoor lighting, to include street lighting and lighting on other public property and rights-of-way, only upon the determination of Commissioners Court that a clear public safety danger or danger to County workers exists in the area to be lit and that the hazard can only be effectively mitigated through the use of outdoor lighting.
11. Outdoor Recreation.
- a. Design and Shielding. Lighting for all playing fields, playing courts, swimming pools, skateboard parks, rodeo arenas, and similar recreational facilities, installed or replaced on public or private property after the effective date of this Article shall utilize full cut-off fixtures and be aimed directly at the playing surface in such a manner as to minimize glare, limit light trespass off the property, and prevent light from being emitted above the horizontal plane to pollute the night sky.

- b. Lighting Curfew. Lighting for outdoor recreational facilities on public or private property is prohibited after 10:00 p.m. unless such lighting is needed to complete a specific activity or event, organized by a City-recognized entity, already in progress that began before 9:00 p.m.

12. Flagpoles.

- a. The County encourages the custom of displaying and lighting patriotic or commemorative flags on stationary flagstaffs or as may otherwise be mounted.
- b. While downward lighting is preferred, upward lighting of flagpoles with a height equal to or less than 20 feet above the ground level is permitted provided only a single spotlight is used per flagpole.
- c. Flagpoles with a height greater than 20 feet above ground level shall be illuminated from above and shall utilize one or more light fixtures, not to exceed 800 initial lumens in total, attached to the top of the flagpole or mounted above the top of the flagpole on a structure within 15 feet of the flagpole. Downward shining lights shall be shielded or have diffusers installed so as to limit light trespass off the property and minimize glare for passing motorists, bicyclists, and pedestrians. Flagpoles currently using non-conforming lighting may continue the use of such lighting so long as the use of the lighting at the flagpole is continuous. If the flagpole is repaired or replaced in a way that requires removal or replacement of the lighting, the lighting shall be brought into compliance.
- d. If a flag of the United States is displayed during the hours of darkness, it should be illuminated as recommended in the Federal Flag Code.
- e. Upward lighting of up to three (3) flagpoles per property, irrespective of the type of flag, is permitted provided a shielded spotlight is used for each.

13. Motion Sensors. The County encourages the use of motion-activated outdoor lighting as a way to reduce light pollution, save energy, and alert neighbors and public safety authorities of activity in the area of the sensor. However, notwithstanding the fact that most motion sensor-controlled fixtures can be adjusted to remain on for a limited period of time, all fixtures controlled by motion sensors shall comply with the provisions of this Article.

G. ADDITIONAL OUTDOOR LIGHTING STANDARDS WITHIN FIVE MILES OF CAMP BULLIS

1. Lighting Specifications

- a. All regulated outdoor lighting shall be IDA Products installed and maintained according to the manufactures' specifications and/or IDA's specifications with the intent to avoid interference with the night training of Camp Bullis.
- b. Maintenance and Repair of Pre-Existing or Otherwise Exempted Lighting. Compliance with the following maintenance, repair, and modified and/or upgrade provisions of the Order is required in an effort to enhance the military operations at Camp Bullis:
 - i. Except for lamp replacement, no luminaire should be repaired and/or modified to perpetuate its non-complaint existence.
 - ii. If a lamp is available that makes a luminaire conform or progress towards conformance with this Order's required illuminance level, then such a lamp should be used when the lamp is replaced.
- c. Usage of luminaires that do not conform with these specifications. Compliance with the following provisions of the Order is required in an effort to enhance the military operations at Camp Bullis.

- i. Outdoor Recreational Facilities: No outdoor recreational facility shall be illuminated by nonconforming means from 11 p.m. local time to sunrise except to conclude a specific recreational activity already in progress.
- ii. Outdoor Display Lighting: Display lighting using nonconforming outdoor luminaires with metal halide bulbs shall not be used for security lighting after 11 p.m. local time to sunrise (or after closing hours if before 11 p.m. local time to sunrise).

2. Additional Lighting Specifications by Zone

Additional lighting specifications in the Camp Bullis Dark Skies Zone shall be according to lighting zone, as follows.

- a. Lighting Zone One (LZ1)
 - i. Lighting Zone One includes areas:
 - (a) within the Camp Bullis Dark Sky Zone;
 - (b) within the Extra-Territorial Jurisdiction of the City of Boerne; and
 - (c) within 1,000 feet of the IH-10 right of way
 - ii. Additional lighting specifications for LZ1
 - (a) No light trespass is permitted beyond the property boundary.
 - (b) Fixtures shall have a Backlight, Uplight, and Glare (BUG) rating of 3,1,1.
 - (c) Lighting is limited to 1.25 lumens/sf of hardscape.
- b. Lighting Zone Two (LZ0)
 - i. Lighting Zone Zero includes all areas that are within 5 miles of Camp Bullis but that are not designated as LZ1.
 - ii. Additional lighting specifications for LZ0:
 - (a) No light trespass is permitted beyond the property boundary.
 - (b) Fixtures shall have a Backlight, Uplight, and Glare (BUG) rating of 1,0,0.
 - (c) Lighting is limited to 0.5 lumens/sf of hardscape.

3. EXEMPTIONS

- a. This Order does not apply to outdoor lighting in existence or under construction on September 1, 1975.
- b. The following types of outdoor lighting are exempt from these requirements:
 - i. Outdoor lighting that is located within five miles of a military installation, base, or camp located in the unincorporated area of a county and was installed or used before the effective date of the order, and is necessary for the operations of:
 - (a) an electric utility, power generation company, or transmission and distribution utility, as those terms are defined by Section 31.002, Utilities Code;
 - (b) an electric cooperative or a municipally owned utility, as those terms are defined by Section 11.003, Utilities Code;
 - (c) a gas utility, as defined by Section 101.003 or 121.001, Utilities Code;
 - (d) surface coal mining and reclamation operations, as defined by Section 134.004, Natural Resources Code;
 - (e) a telecommunications provider, as defined by Section 51.002 of the Utilities Code, or its affiliates; or

- (f) a manufacturing facility required by Texas Commission on Environmental Quality rule to hold a permit; or
- ii. Outdoor lighting that is located within five miles of a military installation, base, or camp located in the unincorporated area of a county and is owned or maintained for the purpose of illuminating:
 - (a) a tract of land that is maintained as a single-family residence and that is located outside the boundaries of a platted subdivision;
 - (b) a tract of land maintained for agricultural use;
 - (c) an activity that takes place on a tract of land maintained for agricultural use;
 - (d) structures or related improvements located on a tract of land maintained for agricultural use; or
 - (e) a correctional facility operated by or under a contract with the Texas Department of Criminal Justice.

5.10 Minimum Infrastructure Standards for Multi-Unit Development

A. AUTHORITY

Subchapter E of chapter 232 authorizes an urban county to regulate condominium development that constitutes a subdivision under Subchapter A.

B. APPLICABILITY

1. Any conveyance of a building, part of a building, or space within a building is a subdivision of land for which the landowner must prepare and file a plat and further that such subdivision of land is subject to regulation by the Commissioners Court under orders adopted pursuant to Subchapter E of Chapter 232 of the Local Government Code.
2. A condominium development, any other multi-family housing development, and any other development where a building, part of a building, or spaces or units on the property are sold, transferred, or otherwise conveyed to, or occupancy granted to, persons or entities by the owner of the real property whereon such building or buildings are located, regardless of whether the underlying real property is conveyed to such persons or entities, retained by the owner or conveyed or held by a third party or entity, is a subdivision of land and is subject to regulation by the Commissioners Court.
3. Where not in conflict with the provisions and requirements of these Development Regulations, these standards are applicable to any development consisting of four or more units located in the unincorporated area of the County, not including such establishments and buildings located in the ETJ of the City of Boerne.

C. EXCLUSIONS, EXCEPTIONS

These regulations are not applicable in the incorporated areas of municipalities, or in the extra-territorial jurisdiction (ETJ) of the City of Boerne.

D. GENERAL REQUIREMENTS

Where this Section 5.10 applies, the owner must have a plat prepared that complies with the final plat application requirements (Section 2.4 of these Development Regulations), with the County's Infrastructure Standards (Chapter 5 of these Development Regulations), and with any additional infrastructure standards set forth below.

1. Plat Requirements

The plat shall include written documentation to satisfy all items set forth under the requirements of these Development Regulations.

In addition to the minimum plat requirements, all plats for multi-unit development shall indicate units on the plat, either as buildings or as unit designations.

2. Plat Approval and Development Permit required: The plat must be approved and a development permit obtained before commencing any construction on the proposed location (including the clearing of land).
3. No unit or units in a multi-unit development shall be sold, conveyed or otherwise transferred to any person or entity, and no building in a multi-unit development or commercial establishment, and no public building, or multifamily residential building shall be occupied, until the plat is approved, the unit or units to be sold conveyed or otherwise transferred and all buildings located on the site are in compliance with all other County rules and regulations, and, if applicable, a Certificate of Occupancy has been issued.

4. Record Drawings and Inspections: The Commissioners Court may require inspection of the infrastructure during construction and shall require a final inspection of the infrastructure by the County Engineer. The final inspection must be completed not later than the tenth business day after the date the County Engineer receives an affidavit from the owner of the development that construction of the infrastructure has been completed in accordance with the approved plat.
5. No site grading is allowed unless and except as described in the approved construction drawings.

E. ENFORCEMENT

This Section may be enforced in the same manner as other regulations and requirements of the Commissioners Court. In addition, the following restrictions apply to utility connections in a multi-unit development, commercial establishment, public building, and multifamily residential building: A utility may not provide utility services, including water, sewer, gas, and electric services, to a development where a plat is required, or to a unit in such development, unless the owner provides the utility with a copy of the approved plat.

This applies only to:

1. a municipality that provides utility services;
2. a municipally owned or municipally operated utility that provides utility services;
3. a public utility that provides utility services;
4. a nonprofit water supply or sewer service corporation organized and operating under chapter 67, Texas Water Code, that provides utility services;
5. a county that provides utility services; and
6. a special district or authority created by state law that provides utility services.

F. MINIMUM INFRASTRUCTURE STANDARDS

Following are minimum infrastructure standards for a multi-unit development

1. Lots
 - a. Building setbacks for multi-unit developments shall be in accordance with Section 5.2 of these Regulations.
 - b. Lots shall have a minimum road frontage corresponding to the standards of Section 5.2 Lots for property on a state highway, county road or road constructed to county specifications.
 - c. Infrastructure (roads, drainage and other public improvements) shall be maintained by an entity other than the County.

2. Tract size, limitations on building height and building setback requirements:

Due to the limited equipment capabilities available in the County to fight fires, no building or structure shall exceed the maximum building height established by the Fire Code, which is three stories (35 feet) in height. Each lot or tract shall be large enough to provide adequate off- street parking for the number of motor vehicles as determined by the County Engineer to result from the occupancy or use of the unit or units located on the tract of land.

3. Drainage

Drainage facilities shall be provided and constructed as required in the Drainage section of the Development Regulations. Drainage plans shall be prepared by a licensed professional engineer experienced in hydrology analysis and shall be signed and sealed by the engineer.

4. Roads, Driveways and Road Signage

Roads, driveways and road signage shall be designed and constructed to meet the minimum infrastructure standards and requirements for construction plans contained in these Development Regulations.

5. Water Supply Specifications

The plat shall include specifications and provisions for an adequate public or community water supply in accordance with Subchapter C, Chapter 341, Texas Health and Safety Code and applicable provisions of the water availability requirements as set forth in these Development Regulations.

6. Wastewater Disposal Specifications

The plat shall include provisions for the safe, effective and sanitary treatment of wastewater. To satisfy this requirement, the plat shall comply with the wastewater requirements in the Development Rules.

G. RULES

1. Open Areas and Recreational Facilities: Sufficient open areas and recreational facilities shall be provided by the developer in the multi-unit development, commercial establishment, public building, or multifamily residential building, to serve the occupants, users, and/or guests of the development as determined by the Commissioners Court based on the number of units in the development, the size of such units, and the intended use of such units.
2. Fencing and Landscaping: The perimeter of the development shall be enclosed in privacy fencing and/or landscaping (plants, shrubs, trees etc.) to a minimum height from the ground of six feet. No chain link or wire fencing will be permitted.
3. Lighting: Sufficient lighting shall be provided within the development to illuminate all areas of the development for safety, security, law enforcement and emergency services purposes. Such lighting shall be designed and installed so that light is directed downward and outward with minimal light directed upward ("dark sky" fixtures) and shall be in accordance with 5.9 Lighting Requirements.
4. Trash and Waste Collection and Disposal: All multi-unit development shall be served by a public or commercial waste collection and disposal service that collects all trash and rubbish at least once weekly. It shall be a condition of occupancy that all owners of units in the development agree to be served by such service. All roads, street, alleys, and driveways, and all common areas shall be kept clear of all waste, trash, inoperative motor vehicles and other unsanitary, unhealthful, unsightly and nuisance conditions. All areas shall be kept mowed and free of high grass and weeds or other conditions that harbor insects, rodents or other conditions that pose a threat to the health, safety or welfare of the occupants, users, and/or guests of the development or citizens of Kendall County.
5. Parking: Unless designated on the approved plat, no on-street parking of motor vehicles will be permitted in the development. Adequate parking spaces shall be provided within the development for occupants, users, and/or guests as determined by the County Engineer, based on the number of units in the development, the size of such units, and the intended use of such units.
6. Street Names: All street names require approval by the County Engineer. Approval is obtained by submitting a request.

5.11 Minimum Infrastructure Standards for Manufactured Home Rental Communities

A. STATUTORY AUTHORITY

Texas Local Government Code, Section 232.007 authorizes the Commissioners Court to establish minimum infrastructure standards for manufactured home rental communities located in the County outside the limits of a municipality.

B. FINDINGS

The Commissioners Court finds that the minimum infrastructure standards established in this Order and the Rules adopted herein are necessary to promote the health, safety, morals, or general welfare of Kendall County and the safe, orderly, and healthful development of the unincorporated area of the county;

C. EXCLUSIONS

This Order is not applicable to subdivisions of property in the unincorporated areas of Kendall County where manufactured homes or other structures of a permanent or temporary nature are allowed to be placed or located on spaces or lots owned or to be sold or offered for sale to the owners of the manufactured homes or other structures placed or located on such spaces or lots; or to a plot or tract of land in the unincorporated area of Kendall County that is separated into two or more spaces or lots that are rented, leased, or offered for rent or lease for a term of 60 months or more or that are rented, leased, or offered for rent or lease with a purchase option. Such subdivisions and/or plots and/or tracts are subject to and shall comply with all applicable requirements of the Development Rules and Regulations.

D. GENERAL REQUIREMENTS

The owner of land located in Kendall County outside the city limits of a municipality who intends to use the land for a manufactured home rental community must have a Development Plan prepared that complies with the minimum infrastructure standards set forth below.

1. Requirements of the Development Plan:

The development Plan shall include written documentation to satisfy all items set forth under the Minimum Infrastructure Standards, Rules, and the survey as set forth herein. The Development Plan shall contain the following components:

- a. A drainage plan that complies with the provisions set forth in Subsection 5.1 herein; and
- b. A road and driveway plan that complies with the standards set forth in Subsection 5.2 herein; and
- c. Documentation of approval of water supply system and/or agreement to be provided water in accordance with these Development Regulations;
- d. Provision for the safe, effective and sanitary treatment of wastewater, in accordance with these Development Regulations;
- e. Evidence of satisfaction of other infrastructure requirements of the Development Regulations; and
- f. Survey of the manufactured home rental community that complies with the provisions set forth herein.
- g. No portion of the manufactured home rental community may be located within the floodplain.

2. Processing of the Development Plan:

Not later than the sixtieth (60th) day after the date the owner of a proposed manufactured home rental community submits a Development Plan to the County for approval, the Commissioners Court shall approve or reject the Development Plan. If the Development Plan is rejected, the County shall provide the applicant with written notice of rejection specifying the reasons for the rejection and the actions required for approval of the Development Plan. The failure to reject a plan within the period prescribed by this subsection constitutes approval of the Development Plan, provided that such sixty-day period shall begin on the date that the administratively complete plan is submitted to the County. When corrections to the plan are required by the Commissioners Court, another sixty-day period shall commence upon submission to the County of the corrected plan.

E. RECORD DRAWINGS, CERTIFICATION AND INSPECTIONS:

The Commissioners Court may require inspection of the infrastructure during construction and shall require a final inspection of the infrastructure by the County Engineer. The final inspection must be completed not later than the tenth business day after the date the County Engineer receives an affidavit from the owner of the development that construction of the infrastructure has been completed in accordance with the approved Development Plan. If the County Engineer and/or Development Engineer determine that the infrastructure complies with the Development Plan, the County Engineer will issue a Certificate not later than the fifth business day after the date the final inspection is completed. No unit or units shall be sold, conveyed or otherwise transferred to any person or entity, and no building in a multi-unit development or commercial establishment, and no public building, or multifamily residential building shall be occupied, until the Certificate of Compliance is issued and the unit or units to be sold conveyed or otherwise transferred and all buildings located on the site are in compliance with all other County rules and regulations.

F. ENFORCEMENT

The following restrictions apply to utility connections in a manufactured home rental community:

1. A utility may not provide utility services, including water, sewer, gas, and electric services, to a manufactured home rental community subject to a Development Plan, or to a manufactured home or recreational vehicle in such community unless the owner provides the utility with a copy of the Certificate of Compliance.
2. This subsection applies only to: (1) a municipality that provides utility services; (2) a municipally owned or municipally operated utility that provides utility services; (3) a public utility that provides utility services; (4) a nonprofit water supply or sewer service corporation organized and operating under chapter 67, Texas Water Code, that provides utility services; (5) a county that provides utility services; or (6) a special district or authority created by state law that provides utility services.

G. MINIMUM INFRASTRUCTURE STANDARDS

Following are minimum infrastructure standards for a manufactured home rental community:

1. Drainage

The Development Plan shall include provisions for adequate drainage. To satisfy this requirement, the Development Plan shall comply with all applicable drainage requirements of the Development Regulations.

2. Roads and Driveways

- a. Roads and/or driveways in the manufactured home rental community shall be designed and constructed to meet the minimum infrastructure standards contained herein to provide ingress and egress for fire and emergency vehicles. To satisfy this requirement, the roads shall comply with the standards and specifications for roads and streets as set forth in these Development Regulations, with modifications as follows:
 - i. A driveway as defined in the Development Rules and Regulations may be commercial, private or public and provides access from the property or a portion of the property to a highway, road, or street. A driveway shall not be used for public circulation. Minimum requirements for driveway design and construction shall be in accordance with the Development Rules and Regulations except that driveway width shall be 18 feet minimum to 22 feet maximum and minimum culvert size shall be 18 inches.
 - ii. Right-of-Way: All roadway right-of-way in a manufactured home rental community shall be reasonably cleared of all impediments including boulders, stumps, trees, or any other debris. Selective clearing may be approved by the County Engineer.
- b. Exception

Road and driveway requirements for any manufactured home rental community with 5 or fewer units on 6 or more acres of land shall be in accordance with the Kendall County Fire Code.

3. Road Signage

The developer of a proposed manufactured home rental community shall present a sign placement plan for the community and obtain approval of the plan by the County Engineer prior to construction of any roads in the community. No sign placement plan is required for driveways. The sign placement plan shall comply with the requirements for roadway signs in the Roads and Streets standards of the Development Regulations.

4. Water Supply Specifications

The Development Plan shall include specifications and provisions for an adequate public or community water supply in accordance with Subchapter C, Chapter 34I, Texas Health and Safety Code and applicable provisions of the water supply requirements of these Development Regulations.

5. Wastewater Disposal Specifications

The Development Plan shall include provisions for the safe, effective and sanitary treatment of wastewater. To satisfy this requirement, the Development Plan shall comply with the requirements for wastewater disposal in these Development Regulations.

H. RULES

1. Open Areas and Recreational Facilities

Sufficient open areas and recreational facilities shall be provided by the developer in the manufactured home rental community to serve the occupants of the community at full occupancy as determined by the Commissioners Court or its designee. At least one acre

of open space/recreational area, not including streets, roads, alleys or utility or drainage easements shall be set aside for each ten acres or part thereof developed as a manufactured home rental community.

2. Fencing and Landscaping

The perimeter of the manufactured home rental community shall be enclosed in privacy fencing and/or landscaping (plants, shrubs, trees etc.) to a minimum height from the ground of six feet. No chain link or wire fencing will be permitted.

3. Lighting:

Sufficient lighting shall be provided within the community to illuminate all areas of the community for safety, security, law enforcement and emergency services purposes. Such lighting shall be designed and installed so that light is directed downward and outward with minimal light directed upward ("dark sky" fixtures) and shall be in accordance with 5.9 Lighting Requirements.

4. Trash and Waste Collection and Disposal

All manufactured home rental communities shall be served by a public or commercial waste collection and disposal service that collects all trash and rubbish at least once weekly. It shall be a condition of occupancy that all tenants agree to be served by such service. All rental spaces and all common areas shall be kept clear of all waste, trash, inoperative motor vehicles and other unsanitary, unhealthful, unsightly and nuisance conditions. All spaces and common areas shall be kept mowed and free of high grass and weeds or other conditions that harbor insects, rodents or other conditions that pose a threat to the health, safety or welfare of the occupants of the community or citizens of Kendall County.

5. Parking

No on-street parking of motor vehicles will be permitted in manufactured home rental communities. Parking lots shall be provided within the community for overflow and guest parking.

I. SURVEY REQUIREMENTS

The Development Plan shall include a survey of the proposed manufactured home rental community prepared by a registered professional surveyor licensed in the State of Texas and shall comply with the following requirements:

1. Be an accurate survey of the property, with reference to a patent survey line and adjoining established subdivisions. The approximate acreage of the manufactured home rental community shall be shown to the nearest 0.1 acre.
2. Show the location, dimensions, names and description of all existing or recorded:
 - a. Roads, streets, alleys, reservations, easements or other rights-of-way, including storm water collection and drainage areas, within the area of the proposed manufactured home rental community and intersecting or contiguous with its boundaries or fanning such boundaries or that are proposed to serve the proposed community; and
 - b. All structures, including buildings, fences, wells (water, oil or monitor), storage tanks, fire hydrants or other fire-fighting connections, electric and other utility systems including water supply and septic collection and treatment systems located within the area of the proposed manufactured home rental community or that are proposed to serve the proposed community.

3. Show the location, dimensions, names and description of all proposed roads, streets, alleys, driveways, easements or other rights-of way for any purpose.
 - a. Street and/or road names shall be indicated.
 - i. Street and/or road names shall be approved by the Commissioners Court.
 - ii. Addresses will be assigned by Kendall County Rural Addressing)
 - b. Improvements shall be indicated.

Structures, buildings, wells, electric and other utility systems, including water lines and sewage collection and/or treatment facilities, storage tanks, fire hydrants and other fire-fighting facilities, common areas including recreational facilities and parking areas, fencing, landscaping, signage and lighting shall be indicated.
 - c. A 911 address shall be obtained for each manufactured home/RV space.
 - d. Rental spaces shall be consecutively numbered.
 - e. Rental spaces shall be delineated, in accordance with these dimensional requirements:
 - i. Subject to the additional requirements imposed by this Section, each rental space shall be at least one-quarter acre in size with front, side, and rear dimensions large enough to accommodate the manufactured home/RV to be placed on it and provide at least fifty feet of setback between the manufactured home/RV and any property line or street, road or alley, at least twenty-five feet of open space between the manufactured home/RV located on the rental space and any adjacent manufactured home/RV or other adjacent structure, and large enough to provide adequate parking for at least two motor vehicles on the rental space without obstructing any setback from a private or public road. No more than one manufactured home or RV and one storage shed shall be located on a rental space.
 - ii. Exception

Any manufactured home rental community with 5 or fewer units on 6 or more acres shall be exempt from the ¼ acre minimum rental space requirement.
4. Indicate the date of preparation, scale of survey and north arrow.
5. Topographical information shall be shown to include the following:
 - a. Contour lines at ten (10) foot intervals based on NGVD 1929 datum for slopes over 5%, and 2-foot intervals for slopes of 5% or less; and
 - b. All Special Flood Hazard areas as identified by the most current Flood Insurance Rate Maps published by the Federal Emergency Management Agency.
 - c. Manufactured home rental communities that lie within, all or part, of the flood plain are subject to additional requirements imposed by applicable laws and regulations.
6. The survey shall be on permanent reproducible paper, 18 inches vertical and 24 inches horizontal, with margins of not less than one inch. The survey shall be drawn at a scale of not more than 200 feet to one (1) inch. Where more than one sheet is necessary to accommodate the entire manufactured home rental community, an index sheet showing the entire community at an appropriate scale shall be attached to the survey. Six (6) copies of the survey shall be submitted, together with one (1) reproducible copy of the original

J. APPLICABILITY TO RECREATIONAL VEHICLES

Tracts of land located in the unincorporated areas of Kendall County containing two or more spaces that are rented, leased, or offered for rent or lease, for the location of recreational vehicles used as residential dwellings (housing for one or more persons) shall comply with the terms of these Development Regulations.

K. AUTHORITY TO ENTER PREMISES

Upon exhibiting proper identification, any law enforcement personnel or any County official, agent or employee charged with the enforcement of health, environmental, safety, or fire laws may enter any premises in the unincorporated area of the County at any reasonable time to inspect, investigate, or to enforce the provisions of this order and applicable law.