

Tarrant County Subdivision Regulations

Commissioners Court Meeting | Project Briefing

August 29, 2023

Team Introduction



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Tarrant County

Today's Purpose

- Present an Overview of the Updated Development Regulations
 - What's new?
- Discussion
 - Any thoughts or feedback?



Overview of Subdivision Regulations



Why Update the Subdivision Regulations

1. Bring the regulations into alignment with the current state code
 - [HB 3167 \(2019\)](#)
2. Update drainage, transportation, and platting
3. Public Safety
 - [Two points of access](#)
4. Setup the update process for the Subdivision ILAs with local cities

Please note that the current subdivision regulations document has been divided into two documents to improve readability by allowing readers to find relevant information more quickly.

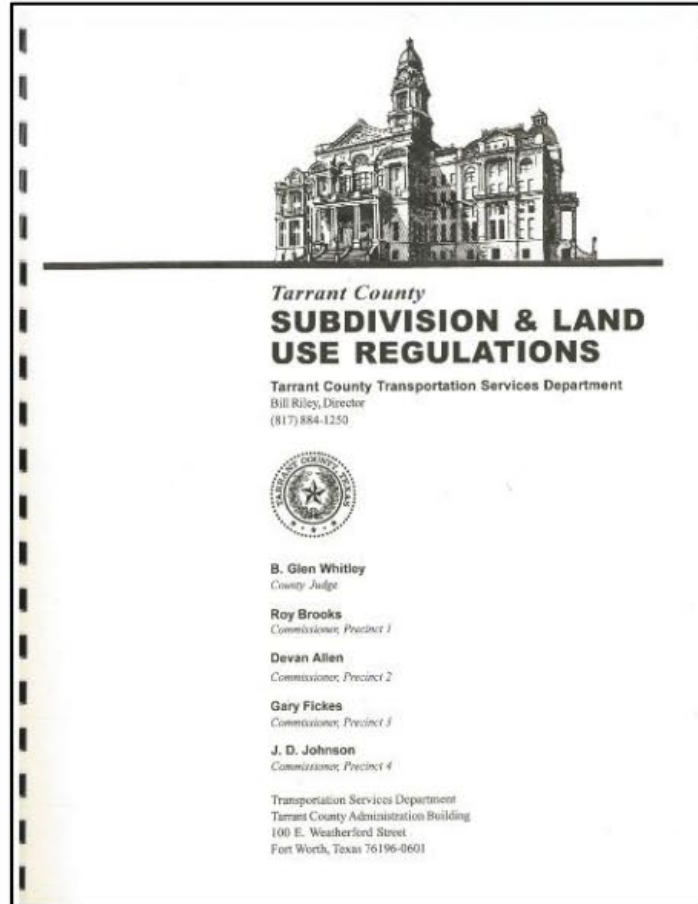


Figure 1. Current Document Cover Page

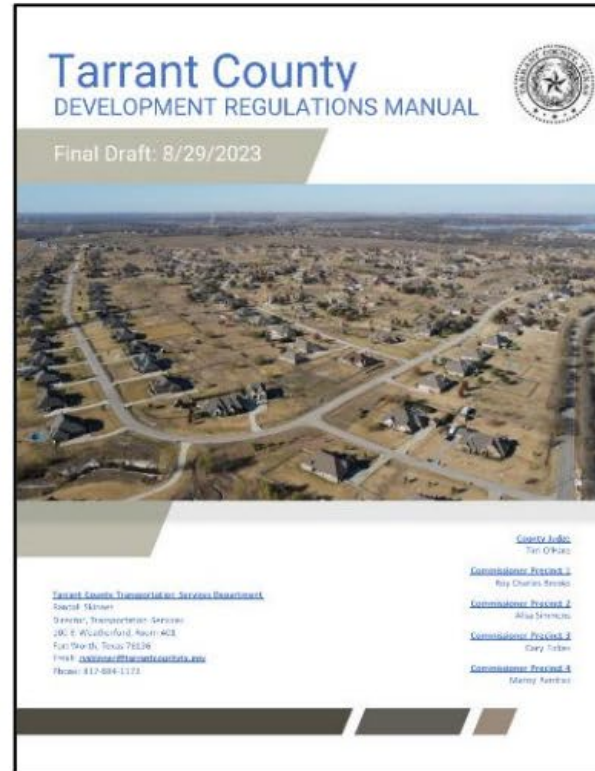


Figure 2. New Development Regulations (SR) Cover Page

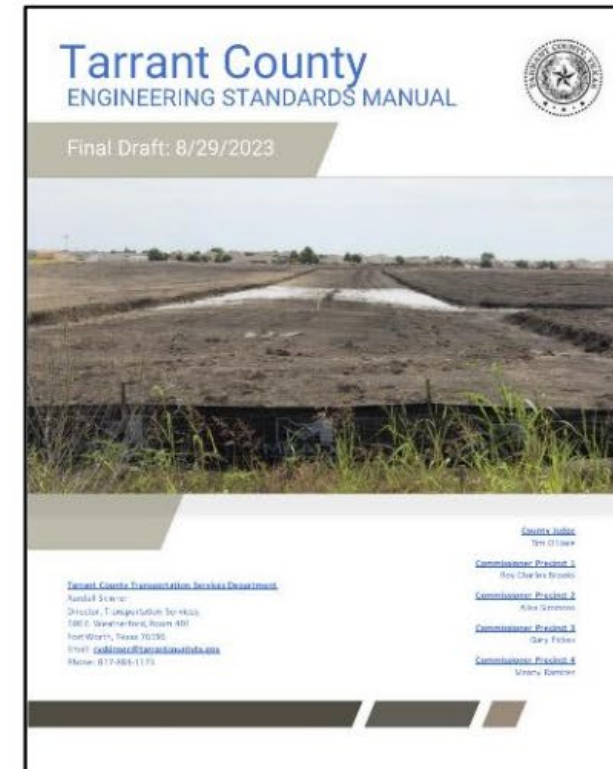


Figure 3. New Engineering Standards Manual (ESM) Cover Page

Drainage Design Standards (Part 1 of 3)

The following summarizes the changes to Section K (Drainage Standards) of the current Subdivision Regulations, which have been relocated into a new document titled the "Tarrant County Engineering Standards Manual."



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Drainage Design Standards (Part 1 of 3)

1)

Bar Ditch Geometry

- a. Updated bar ditch criteria. (See ESM Pages 13-14)
- b. Increased the minimum required right-of-way from 60' to 70' to address drainage.



Drainage Design Standards (Part 1 of 3)

- 2) Lot-to-Lot Drainage
- a. Added lot-to-lot drainage standards. (See ESM Page 7)
 - b. The section prohibits lot-to-lot drainage unless demonstrated by Hydrologic and Hydraulic (H&H) analyses that there are no adverse impacts to adjacent lots or that flows are contained in a private drainage easement.



Drainage Design Standards (Part 1 of 3)

- 3) Adverse Drainage Impacts Prohibited
- a. It is now required that post-development stormwater discharge shall not cause adverse drainage impacts to adjacent or downstream properties. (See ESM Page 7)
 - b. Adverse drainage impacts include increases in water surface elevations for the 5-, 10-, 25-, and 100-year storm events unless contained in the existing channel, roadway, drainage easement, and/or right-of-way.



Drainage Design Standards (Part 1 of 3)

4)

Drainage Design Calculations

- a. Reviewed and updated the drainage design calculations. (See ESM Page 8)
- b. The section requires all appropriate calculations showing runoff and capacity of onsite and receiving drainage structures shall be provided for all drainage areas and structures, including design and 100-year flow rates, velocities, hydraulic grade lines, capacities, and headwater depths.



Drainage Design Standards (Part 1 of 3)

5)

Hydrologic Analysis

- Established acceptable methods for estimating stormwater runoff. (See ESM Page 9)
- Text and tables have been added regarding land use considerations, time of concentration, and rainfall estimation.

Table 1: Hydrology Methods

Hydrologic Method	Drainage Area Size Limitation
Rational Method	< 100 acres
Modified Rational Method	< 100 acres
Unit Hydrograph (SCS)	Any size
Unit Hydrograph (Snyder's)	> 1 acre
TxDOT Regression Equation	10 to 100 square miles (rural design applications)
USGS Regression Equation	3 to 40 square miles (urban design applications)

Table 2: Recommended Runoff Coefficient Values

Description of Area	Runoff Coefficients
Lawns	0.10 – 0.35
Agricultural	0.30
Forest	0.15
Open Water	1.00
Business:	
Downtown Areas	0.95
Neighborhood Areas	0.70
Residential:	
Single Family (1/8 ac lots)	0.65
Single Family (1/4 ac lots)	0.60
Single Family (1/2 ac lots)	0.55
Single Family (1+ ac lots)	0.45
Multi-Family Units (Light)	0.65
Multi-Family Units (Heavy)	0.85

Drainage Design Standards (Part 1 of 3)

6) Hydraulic Design

- a. Reviewed and updated the hydraulic design criteria. (See ESM Page 12)
- b. Text and tables have been added for hydraulic design criteria (closed storm sewers, open channels, roadside ditches, culverts, and detention ponds), general design criteria (maximum permissible flow velocities for drainage features, such as natural streams, open channels, pipes, and culverts) and street design (e.g., no water overtopping the roadway).

Table 4: Hydraulic Design Criteria

Minimum Design Standards for Various Facilities		
Structure Type	Design Frequency	Check Frequency (Fully Developed)
Closed Storm Sewers	10-yr	100-yr
Engineered Open Channels	25-yr	100-yr
Roadside Ditches	5-yr	100-yr
Driveway Culverts	5-yr	100-yr
Minor Culverts (< 20 feet wide)	25-yr	100-yr
Bridge Class Culverts (> 20 feet wide)	25-yr	100-yr
Span Bridge	25-yr	100-yr
Detention Ponds	5-, 10-, 25-, 100-yr	100-yr

Drainage Design Standards (Part 1 of 3)

7)

Downstream Evaluations

- a. Added section for downstream evaluations (See ESM Page 15)
- b. The downstream evaluation aims to protect downstream properties from adverse impacts that may occur from increased runoff and increased velocities due to upstream development.
- c. The developer designs the subdivision to maintain existing sheet flow conditions at outfalls.



Drainage Design Standards (Part 1 of 3)

8) Stormwater Detention Requirements

- a. Added section for stormwater detention requirements. (See ESM Page 16)
- b. Depending on the analysis, stormwater detention may be required to mitigate adverse flood impacts of the 5-, 10-, 25- and 100-Year Storm Events.
- c. This section establishes design criteria, standards for outlet structures, construction and inspection standards, and maintenance standards.



Drainage Design Standards (Part 1 of 3)

9)

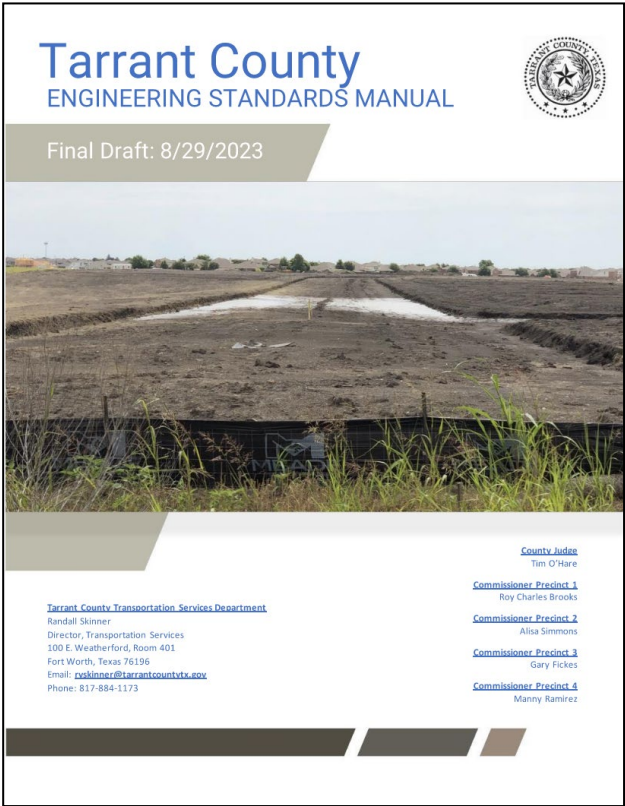
Drainage Easements

- a. Added standards for off-site drainage easements. (See ESM Page 19)
- b. Per Section 2.08.B, "Off-site drainage Easements may be required downstream to address adverse impacts to adjoining properties."



Roadway Construction and Design Standards (Part 2 of 3)

The following summarizes the changes to Section H (Typical Sections), Section I (Construction Standards), and related roadway elements within Section G (Subdivision Requirements) of the current Subdivision Regulations, which have been relocated into a new document titled the "Tarrant County Engineering Standards Manual."



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Roadway Construction and Design Standards (Part 2 of 3)

10) Roadway Construction Standards

- a. Reviewed and updated the roadway construction standards. (See ESM Page 21)
- b. Added the following language to cover standards beyond those contained in the ESM, "Any work, methods, materials, and equipment not addressed in this Section 3 shall conform to the current edition of TxDOT's Roadway Design Manual and Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges."
- c. Updated the standards to align with current county operations and preferences.
- d. Added the requirement for County approval for the construction of a concrete street.



Roadway Construction and Design Standards (Part 2 of 3)

11) Roadway Cross Sections and Standards

- a. Reviewed and updated the roadway cross-sections and standards. (See ESM Page 23)
- b. Added local road cross sections for rural roadway (i.e., bar ditch with 70' of ROW) and urban roadway (i.e., curb with 60' of ROW. (See ESM Page 27)
- c. The section added flexibility to the design of collector roads and arterial roads by establishing the design based on traffic volumes and compliance with [TLGC Chapter 232.003](#). The traditional cross sections have been replaced for these road types. The right-of-way and shoulder-to-shoulder width for these road types shall be approved by the County and conform with [TLGC Chapter 232.003](#). (See ESM Page 24)
- d. Added standards that the County shall determine and approve if a road or a section of a road functions as a Local Roadway, Collector Roadway, or Arterial Roadway.



Roadway Construction and Design Standards (Part 2 of 3)

12) Pavement Design

- a. Reviewed and updated the pavement design standards. (See ESM Page 24)
- b. Since soil types and land can vary across the County, the following criteria were added, "A geotechnical investigation and analysis supporting the appropriate pavement design for the proposed conditions shall be provided for review by The Department." This will allow for flexibility and the best pavement design for existing conditions.
- c. Added the following standards to promote the longevity of the roadways:
 - i. All pavement sections shall be designed for a minimum 20-year design life.
 - ii. Pavement design methodology shall be based on the American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures, current edition.

Roadway Construction and Design Standards (Part 2 of 3)

13) Driveways

- a. Reviewed and updated the driveway standards.
- b. Added the following driveway standard for best practices and developer flexibility. (See ESM Page 24)
 - i. The size and location of new driveways are subject to the approval of The Department.
 - ii. Driveways on opposite sides of the roadway must align to the maximum extent feasible to prevent conflicting traffic movements.
 - iii. Improvements to existing driveways may be required whenever development indicates the need for improvements, as determined by the County.

Roadway Construction and Design Standards (Part 2 of 3)

- 14) Layout and Geometry of Roads and Street
- a. Reviewed and updated the layout and geometry of roads and streets. (See ESM Page 25)
 - b. Adequate Roadways
 - i. The County may require additional right-of-way at certain roadway intersections for utilities, drainage, traffic control devices, and removal of sight distance obstructions.
 - ii. A subdivision constructed on an existing County roadway may be liable for damage caused to the County roadway during construction ([TLGC Section 251.160](#)).
 - c. General Requirements
 - i. When laying out roads, the subdivider must consider other existing and planned roads, topography, drainage requirements, and the number of lots the road serves.
 - ii. The arrangement of new roadways shall allow existing roadways to continue between adjacent properties or developments.
 - d. Right-of-Way Dedication and Roadway Construction
 - i. If a roadway runs through or along the perimeter of a proposed subdivision, the subdivider must dedicate right-of-way and construct all interior Roadways.
 - ii. The County may require that perimeter Roadways be proportionately constructed by the subdivider, with the subdivider's construction being roughly proportionate to the subdivision's impact on the roadway.

Roadway Construction and Design Standards (Part 2 of 3)

15) Roadway Cross Sections

- a. Reviewed and updated the roadway construction standards. (See ESM Page 26)
- b. Added local road cross sections for rural roadway (i.e., bar ditch with 70' of ROW) and urban roadway (i.e., curb with 60' of ROW). (See ESM Page 26)
- c. Replaced the existing cross sections in Section 3.01.F. This added flexibility to the design of collector roads and arterial roads by establishing the design based on traffic volumes and compliance with [TLGC Chapter 232.003](#). (See ESM Page 23)

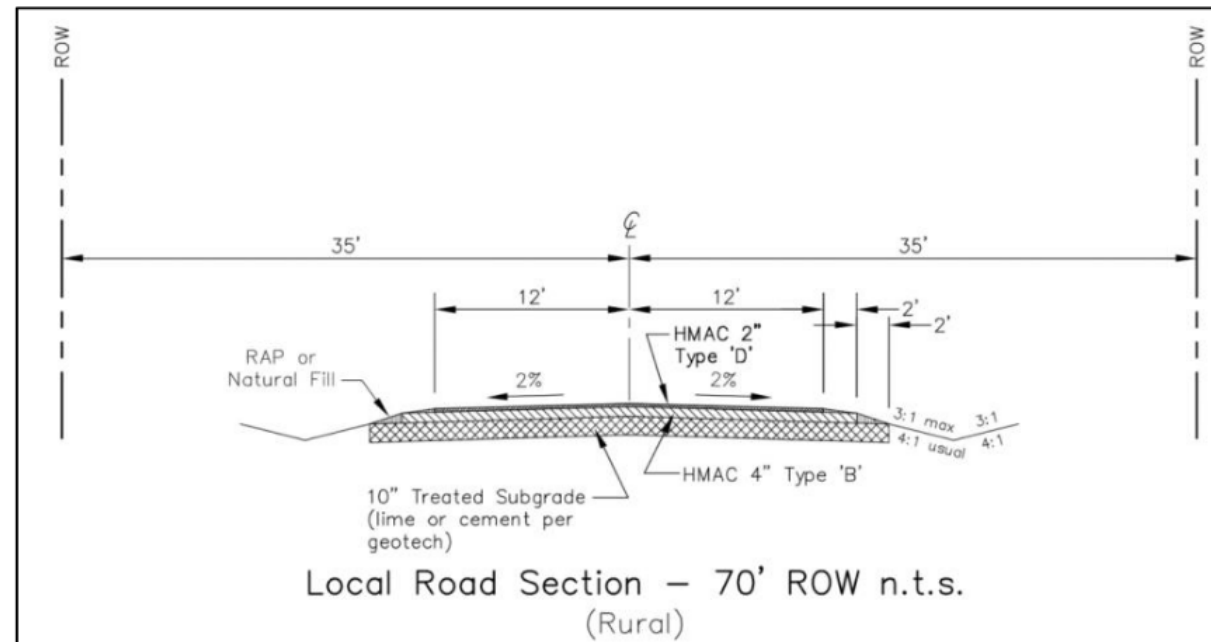


Figure 4: Local Road Section, Rural – 70' ROW n.t.s.

Roadway Construction and Design Standards (Part 2 of 3)

16) Definitions

- a. Reviewed and updated the definitions section. (See ESM Page 27)
- b. Updated and added definitions for key terms to improve the document's usability.

Development Regulations (Part 3 of 3)

The following summarizes the changes to Section B (Definitions), Section E (Platting Procedures), Section F (Water and Septic System Requirements), and Section G (Subdivision Requirements) of the current Subdivision Regulations, which have been retitled the "Tarrant County Development and Land Use Regulations."

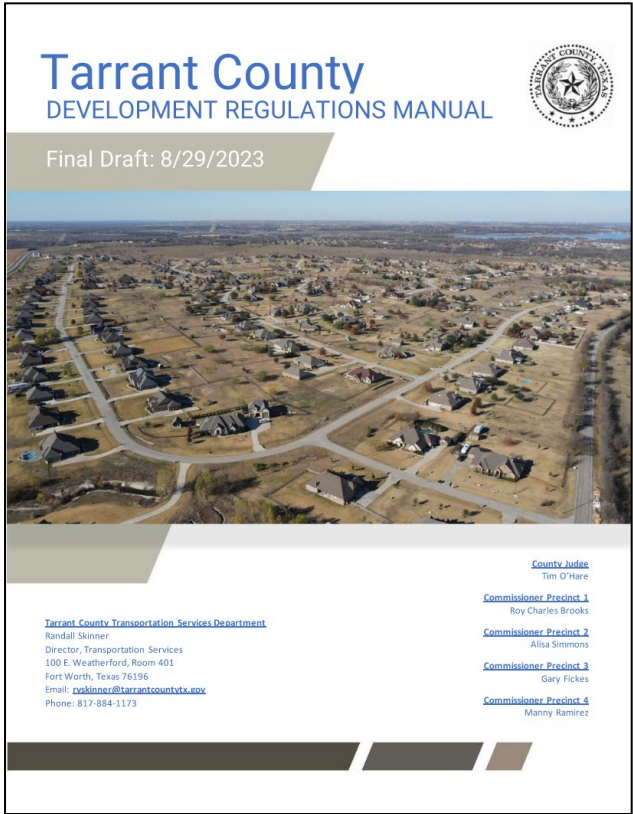


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Development Regulations (Part 3 of 3)

17) General Provision

- a. Reviewed and updated the general provisions section. (See SR Page 1)
- b. Added requirement that all infrastructure and facilities, public and private, must be of at least the capacity necessary to adequately serve the subdivision in conformance with the standards of these Development and Land Use Regulations.
- c. Added references to Texas Local Government Code (TLGC) for the requirements to plat.
- d. Clarified the Commissioners Court or the Court's designee ([TLGC Section 232.0025.\(d\)](#)) shall approve, approve with conditions, or disapprove a plat application. (See SR Pages 3 & 7)
- e. Provided for state exemptions ([TLGC Section 232.0015](#)) for platting.

Development Regulations (Part 3 of 3)

18) Application Submittal and Processing

- a. Reviewed and updated the application submittal and processing procedures. (See SR Page 5)
- b. Updated the plat approval process to be in agreement with the latest revisions from the state legislature, with the "Timely Approval of Plats" section. (See SR Page 7) Notably, this section provides for the following.
 - i. The Department shall, not later than the 10th business day after the date The Department receives the incomplete application, notify the applicant of the missing documents or other information.
 - ii. The Commissioners Court or the Court's designee shall approve, approve with conditions, or disapprove a Plat Application not later than the 30th day after the date the completed application is received.
 - iii. After the conditional approval or disapproval of a Plat Application:
 1. The applicant may submit to the County a written response that satisfies each condition for the conditional approval or remedies each reason for disapproval provided.
 2. The County may not establish a deadline for an Applicant to submit the response.
 3. The County has 15 days to respond to a response, or it is considered approved.

Development Regulations (Part 3 of 3)

19) Platting Requirements

- a. Reviewed and updated the platting requirements section. (See SR Page 11)
- b. In agreement with recent changes to state law, the County shall not require a preliminary plat. An Applicant may receive approval of a final plat before any construction plans are approved, or infrastructure is built or inspected (with the submittal of a bond).
- c. An applicant may voluntarily submit a preliminary plat or phasing plan, or a municipality may require a preliminary plat if the municipality has not delegated platting authority to the County under an executed interlocal agreement.
- d. In accordance with [TLGC Section 232.004](#), an applicant is required to submit a Construction Bond along with the final plat. Alternatively, a financial guarantee in lieu of a bond is acceptable in accordance with [TLGC Section 232.0045](#).

Development Regulations (Part 3 of 3)

20) Subdivision Design Standards

- a. Reviewed and updated the subdivision design standards (See SR Page 15)
- b. Established a petition process for converting private roadways.
- c. Added TLGC references for enabling County regulations for building setbacks under [TLGC Section 232.104](#) and [TLGC Section 233.032](#).
- d. Added TLGC references for enabling County regulations for lot frontage requirements. The regulation now states, "Pursuant to the authority of [TLGC Section 232.103](#), the County may require a minimum lot frontage in order to meet the requirements of the County's Property Access and Culvert Policy."
- e. Added that the applicant must extend or stub roads to the Subdivision boundary or phase boundary to provide a future connection with abutting Unplatted land.

Development Regulations (Part 3 of 3)

The Applicant must provide at least two (2) points of ingress and egress for a Subdivision with thirty (30) Lots or more. However, the Commissioners Court or The Department may require two (2) points of ingress and egress for a Subdivision with fewer than thirty (30) lots if certain circumstances may limit access to the Subdivision.



Development Regulations (Part 3 of 3)

21) Water and Wastewater

- a. Reviewed and updated the water and wastewater standards (See SR Page 23)
- b. Added that the County must approve water or wastewater utilities within public right-of-way or County property.
- c. Added per [TLGC Section 240.907 \(Fee for Cutting a County Road\)](#), the County may impose a fee for each cut of a County road during or as an incident to the installation, maintenance, or repair of any utilities or facilities within the public right-of-way to provide funds for the future inspection, repair, and maintenance of a Cut Road.
- d. Added the top of all utility lines must be a minimum of thirty-six inches (36") below the finished grade of where the utility will be located.

Development Regulations (Part 3 of 3)

- 22) Manufactured Home Rental Community
- a. Added regulations for Manufactured Home Rental Community pursuant to [TLGC Section 232.007](#).
 - b. These regulations require infrastructure development plans and County approval.

Development Regulations (Part 3 of 3)

23) Development or Use of County Property

- a. Added section to regulate and provide a standard of approval for construction activity proposed on County property, specifically including right-of-way. (See SR Page 27)
- b. Per [Utility Code 181](#), a gas or electric utility has a right to use the right-of-way. However, the utility is required by the State of Texas to provide notice to the Commissioners Court of the utility's construction.

Development Regulations (Part 3 of 3)

- 24) Definitions
- a. Reviewed and updated the definitions section. (See SR Page 31)
 - b. Updated and added definitions for key terms to improve the usability of the document.

Development Regulations (Part 3 of 3)

25) Appendix of Applicant Information

- a. Reviewed and updated the definitions section. (See SR Page 41)
- b. Updated and added plat checklist, plat notes, signature blocks, development guidelines in unincorporated areas, Takings Impact Assessment (TIA) Waiver, MHRC Infrastructure Development Plan checklist, Engineering Plan Review Application, Construction Bond Q&A, and Maintenance Bond Q&A.



Discussion

(Any thoughts, feedback, or important topics?)



Thank You

