Design Standards & Criteria

City of Mansfield design standards are located within several independent documents. Lot dimensions, cul-de-sac criteria, private street criteria, etc. are found within the Subdivision Control Ordinance. In addition to the information listed below, the Standard Construction Details contain information relevant to design policy.

Streets

The City of Mansfield Master Thoroughfare Plan governs roadway alignment, right-of-way and cross-section requirements.

Street design and access control guidelines are in draft form and available from David Boski, Transportation Engineer, david.boski@mansfield-tx.gov.

Sanitary Sewer

- Residential sewer services to be located 5' downstream (as the street flows) from the centerline of the lot.
- Sewer services to be 6".
- Non-residential sewer mains to be 8" minimum.
- Minimum grade for sewer lines: 6" = 0.60%, 8" = 0.40%, and 10" = 0.25%
- Minimum depth of cover for sewer lines within subdivisions is 6' from flowline of pipe to top of curb. Concrete encasement of sewer lines and services is required if less than 3.5' of cover.

Water

- Residential water services to be located 5' upstream from the centerline of the lot.
- Residential water services to be 1" copper with ¾" angle stop. Individual service taps required for each lot, bullheads not permitted.
- Profiles are required on 12" and larger mains.
- Air and vacuum release valves are required on 12" and larger mains.

Drainage

The City of Mansfield Storm Water Management Design Manual is the combination of a Local Criteria Section and the NCTCOG iSWM Design Manual for Site Development. The Local Criteria Section is available on the Engineering page of the City's website. Some general highlights are listed below.

- All storm drainage systems shall be designed to convey fully developed flow rates for on-site and off-site drainage areas.
- All drainage systems shall be designed to contain the 25-year ultimate developed storm. The 25-year ultimate developed flow must not exceed curb depth. 100-year ultimate developed flows shall be contained within drainage easement and/or ROW. Safe overflow routing with supporting calculations shall be provided and indicated on plans.
- Where a drainage low point flows between residential lots, use 100-year underground design with an earthen swale for emergency overflow or 25-year design underground and a concrete curbed flume to carry the difference between the 100-year and the 25-year flow.
- Culverts at street crossings shall be 100-year design unless approved otherwise.
- Calculation methods and rainfall data can be found in the Local Criteria Section and iSWM Design Manual.
- Inlet time = 10 minutes
- Minimum curb inlet length is 10 feet.
- The City of Mansfield encourages the preservation of natural drainage ways. This requires a backwater hydraulic analysis to determine easement needs. Buffer zones must also be provided for access and to guard against nuisances created from natural erosion processes. See the City's Local Criteria Section for specific easement width and set back requirements.
- Maximum acceptable earthen slopes are 4:1.
- Off-site impacts will be assessed on a case-by-case basis and may result in downstream analysis, improvements or detention requirements.
- Refer to the Flood Damage Prevention Ordinance for floodplain regulations.