

## Legislation Text

---

File #: 19-538, Version: 1

---

Presenter/Contact  
Garry Ford, City Engineer  
(830) 221-4020 - [gford@nbtexas.org](mailto:gford@nbtexas.org)

**SUBJECT:**

Approval of the second and final reading of an ordinance amending Sections 114-98, 114-99, and 118-46 of the Code of Ordinances regarding access on collector or major thoroughfare streets, turn lane and traffic impact analysis requirements, and removal of references to the sub-collector street section.

**BACKGROUND / RATIONALE:**

City Council unanimously approved the first reading of an ordinance amending Sections 114-98, 114-99, and 118-46 of the Code of Ordinances regarding access on collector or major thoroughfare streets, turn lane and traffic impact analysis requirements, and removal of references to the sub-collector street section on July 8, 2019.

**This item was presented to the Development Community on January 17, 2019, Transportation and Traffic Advisory Board on February 21, 2019, and Planning Commission on May 7, 2019.**

City staff is proposing amendments to *Chapter 114 - Streets Sidewalks and Other Public Places, Article IV - Right-of-way Access and Management, Section 114-98 - General specifications for all roadways and Section 114-99 - Approval methods for granting access to roadways, and Chapter 118 - Platting, Article IV - Design Standards, Section 118-46 - Streets* of the Code of Ordinances. The proposed amendments will specify that traffic impact analysis (TIA) trip generation shall consider potential land use based on future land use and/or zoning when specific land use is unknown; add deceleration lane requirements; add provisions for residential lot access on collector and major thoroughfare streets; and remove references to the sub-collector street section.

**Traffic Impact Analysis Trip Generation**

The Code of Ordinances specifies that no master plan, plat, building permit or driveway access shall be approved unless a traffic impact analysis (TIA) is completed by the developer and approved by the city engineer. Furthermore, a TIA may also be required by the planning director, planning commission or the city council as part of a zoning change application. A TIA is intended to determine the development's traffic impact and need for any improvements to the internal and adjacent transportation system to maintain satisfactory level of service, acceptable level of safety and appropriate access provisions. A TIA should be submitted at several stages in the development process including:

- Zoning and rezoning;
- Master plan;
- Preliminary and final plat;
- Site plan review;

- Access permits; and
- Building permits.

Separate studies are not needed at each development stage; however, studies need to be updated to include more detail as site plans and development become more specific. It is critical that a TIA is submitted during the master plan and plat process to determine right-of-way needs, address community concerns, and legally specify mitigation requirements as part of city approval.

City staff received recent requests to not require a TIA at the master plan or plat stage since the specific land use was unknown or receive TIA worksheets that are not compatible with the site and just under the peak hour threshold that requires a TIA report. The city also receives requests to conduct the TIA at the time of building permit which often results in piecemeal TIA worksheets that do not address the impact of the overall development. Staff's response is the TIA shall be based on the future land use and/or zoning with consideration to existing topography, comparable properties and updated as development progresses. Furthermore, an experienced transportation professional who has specific training and experience in preparing TIA can forecast and analyze proposed developments early in the development process. The proposed amendment will codify the specific language to better address future requests.

### **Turn Lane Requirements**

Turn lanes are exclusive deceleration and storage lanes that allow for vehicles to turn left and right at intersections and driveways outside the through lane. Turn movements at intersections, especially movements that are made from lanes that are shared with through traffic, cause delays and adversely impact safety. Turn lanes are one strategy to improve operations and safety on the city's transportation system. The Code of Ordinances Section 114-98 (f) provides limited guidance on turn lanes and engineers use various guidelines or only one factor to warrant and recommend them through the TIA process. The proposed amendment will provide standard criteria with the consideration of other factors.

The guiding document for street design is the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets*. AASHTO states that warrants for turn lanes cannot be definitely stated and many factors should be considered, including speeds, traffic volumes, frequency of intersections and site conditions. Guidance for left turn lanes is provided based on opposing and advancing traffic volumes, with additional considerations for local conditions, functional classification and character of traffic.

The Texas Department of Transportation (TxDOT) guidance for right turn lanes is provided in the *Access Management Manual*. It specifies that right turn lanes should be considered when speeds are greater than 45 miles per hour and turn volume is greater than 50 vehicles per hour, and when speeds are equal to or less than 45 miles per hour and turn volume is greater than 60 vehicles per hour. The manual also specifies other conditions that may warrant the need for a right turn lane when volumes are less than provided including high crash experience, heavy peak hour flow, truck traffic and limited sight distance.

TxDOT guidance for left turn lanes is provided in the *Roadway Design Manual*. Like AASHTO, guidance for left turn lanes is provided based on opposing and advancing traffic volumes, with additional considerations for local conditions and character of traffic. In some cases, engineers use TxDOT right turn volume guidance to warrant left turn lanes.

The most recent left turn lane design guidance is provided by the National Cooperative Highway Research Program (NCHRP) sponsored by AASHTO and the Federal Highway Administration. The design guidance is based on benefit-cost approach considering delay savings, crash costs, crash reduction and construction costs. The guidelines are based on the peak hour volumes and intersection configuration. The left turn peak hour volume for a left turn lane for various scenarios, including urban/suburban streets, is 50 vehicles per hour. Additionally, the City of San Antonio's threshold for left and right turn lanes is 50 vehicles per hour, and 500 vehicles per day.

Staff recommends establishing turn lane requirements at 50 vehicles per hour following the NCHRP and City of San Antonio guidelines including review of other factors. Additional amendments are proposed to the requirements including design and construction requirements.

### **Access on Collector or Major Thoroughfare Streets**

The existing Code of Ordinances does not permit driveway access on arterial roads that require backing maneuvers in a public street right-of-way. The proposed amendment will add other thoroughfare streets (expressway, parkway and collector streets) to the list of roadway classifications where backing maneuvers from driveways is not permitted. These types of streets are designed to provide a higher level of mobility with limited access.

This amendment also addresses the operational and safety issues on collector streets in residential subdivisions. Collector streets can carry up to 5,000 vehicles per day, and it is common and best practice to restrict standard one and two-family lots fronting and driveway access on collector streets. Homes fronting collectors is a common neighborhood issue and city staff and the Transportation and Traffic Advisory Board have reviewed many traffic concerns on collector streets in New Braunfels including Sungate Drive, Dove Crossing Drive, Divine Way, Pahmeyer Road, Oak Run Parkway and Stone Gate Drive. Engineering and Police Department staff received complaints from residents when daily traffic volumes are as little as 500 vehicles per day. Furthermore, the city continues to receive new subdivision plans with residential lots fronting collectors and with planned driveway access that requires backing onto the street.

Good examples of design collectors without homes fronting and having driveway access include Southbank Boulevard, Avery Parkway, Pahmeyer Road within the Voss Farms subdivision, and the collector network in Veramendi.

The proposed amendment will revise Chapters 114 and 118 to not allow residential lot access to collector or major thoroughfare streets that require backing onto street. Residential lots having direct access on collector roadway may be platted only if:

1. All lots are greater than one acre, have a minimum lot frontage of 100 feet and provide a permanent vehicular turnaround on the lot preventing backing onto the street;
2. Permit access to lots less than one acre if a marginal access street or easement is constructed and access is spaced a minimum of 200 feet apart and from an existing driveway or street;
3. The street is classified as a residential collector with a minimum of 36 feet of pavement, has daily traffic volumes of less than 2,000 vehicles per day, and includes traffic calming measures; or
4. The street is classified as a residential collector with a minimum of 40 feet of pavement, has daily traffic volumes of less than 4,000 vehicles per day, and includes traffic calming

measures.

The marginal access street shall be designed for emergency access, on-street parking, sidewalk connection and solid waste operations that do not require backing within the marginal access street or easement.

The residential collector provision is also based on consideration of pavement width, traffic and parking operations, traffic safety and neighborhood livability. It is also a start at implementing "Complete Streets" as identified in Envision New Braunfels and addressing neighborhood concerns. A residential collector currently has a pavement width of 36 feet and maximum daily traffic of 5,000 vehicles per day. A local street has a pavement width of 30 feet and maximum daily traffic of 1,000 vehicle per day.

### **Remove References to the Sub-Collector Street Section**

The proposed amendment removes the sub-collector classification as it is not used in practice and was removed from the platting ordinance in a recent update.

### **Remove Duplicate Traffic Impact Analysis Requirements**

The proposed amendment removes the TIA requirements from Section 114 and refers to the requirements, including turn lane requirements, in Section 118.

### **Review Process**

This item was presented to City Council, Planning Commission and the Transportation and Traffic Advisory Board in 2018. Planning Commission requested that the proposed amendments be presented to the development community at a "face to face" meeting. A meeting was held with the development community on January 17, 2019. The feedback received at the meeting was related to allowing a higher traffic volume threshold for backing maneuvers onto residential collectors, removing planning commission discretion on the requirement of turn lanes, and the timing and vesting of the proposed amendments. Staff revised the proposed amendments and recommend that they become effective after city council approval. Approved master plans and plat may be vested based on application and in accordance with Chapter 245 of the Texas Local Government Code.

### **ADDRESSES A NEED/ISSUE IN A CITY PLAN OR COUNCIL PRIORITY:**

Envision New Braunfels Strategy 7: Connect All: Action 7.22: Adopt a Complete Streets policy to ensure ease of access for all people and all transportation modes.

### **FISCAL IMPACT:**

N/A

### **COMMITTEE RECOMMENDATION:**

The Transportation and Traffic Advisory Board unanimously recommended approval of the proposed amendments on February 21, 2019. The Planning Commission unanimously recommended approval of the proposed amendments on May 7, 2019.

### **STAFF RECOMMENDATION:**

Staff recommends approval of the proposed amendments to Sections 114-98, 114-99, and 118-46 traffic impact analysis trip generation, turn lanes, and access on collector or major thoroughfare streets, and removal of references to the sub-collector street section.