



SERVICE UNITS: MEASURING A DEVELOPMENT'S IMPACT

Service Units are a standardized measure of consumption or use attributable to new development. Service Units are used to calculate various types of impact fees. A water meter, for example, is a type of service unit used for measuring water and wastewater impact fees. In transportation planning, Service Units are used to define the relationship between the capacity of roadways (supply) and the traffic generated by new development (demand).



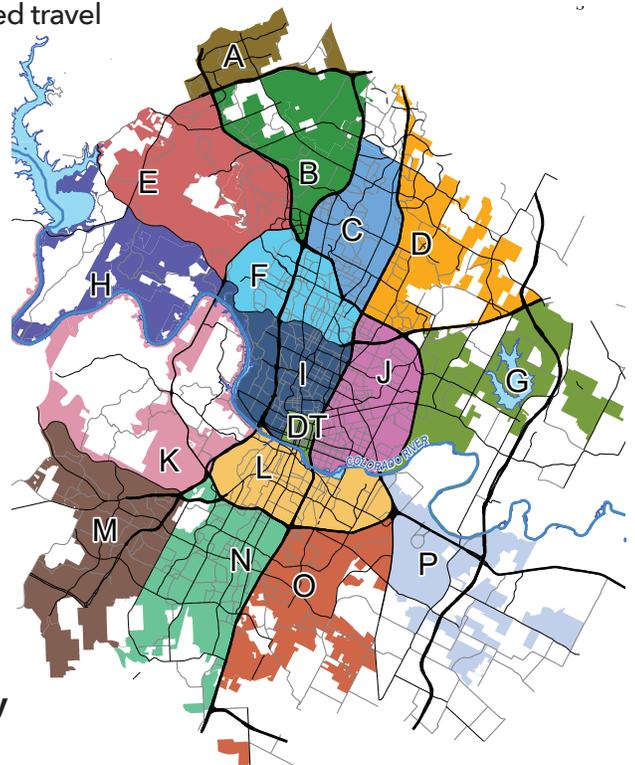
EQUITABLE.
PREDICTABLE.
TRANSPARENT.

The City of Austin is proposing to develop and implement a Street Impact Fee Program. A Street Impact Fee would be a charge assessed on new development to pay for the construction or expansion of roadway facilities that are necessitated by and benefit that new development.

In August 2016, the City hired a consultant to assist with the technical analysis required by Chapter 395 of the Texas Local Government Code to determine the maximum assessable Street Impact Fee. Ultimately, City Council would consider adoption of an ordinance establishing the Street Impact Fee and the policies related to administering the program. The City anticipates presenting a proposed policy to Council in 2020. Staff will provide briefings and updates to Council, hold public hearings and engage in stakeholder outreach throughout the process.

The unit of measure used for roadway impact fees, as defined by accepted engineering and planning standards, is **vehicle-miles traveled (VMT)** - one vehicle traveling one mile during a given time period. The Street Impact Fee is determined by multiplying the cost per service unit by the number of service units, or VMT, projected for the proposed development in the afternoon, or PM peak period of the day. Service Units are calculated based on historical traffic data and trends over a 10-year period, within the political subdivision in which the new development is located.

The purpose of the study is to calculate the cost per vehicle-mile for each of Austin's Service Areas, representing the cost required per unit of supply to meet anticipated travel demand growth over a 10-year period. Each of the 17 service areas in the city has a unique cost per vehicle-mile and is limited in size by requirement of state law.



**Street Impact Fee Study
Service Area Map**





HERE ARE A FEW OF THE COMPONENTS AND THEIR DEFINITIONS THAT HELP DETERMINE SERVICE UNITS

Trip Generation Rates:

An estimated volume of traffic during peak hours and for a particular land use based on a unit of intensity, such as dwelling units, 1,000 square feet of floor space, or number of rooms. A nationally accepted resource for trip generation rates is the Institute of Transportation Engineers (ITE) Trip Generation Manual, which is used to inform trip generation rates in the study.

Some example trip generation rates include 0.99 peak hour trips for a single-family residence, or 1.15 peak hour trips per 1,000 sq. ft. of office.

Trip Length:

The average distance of vehicle trips associated with a particular land use. Trip lengths in the study are determined from several sources, including data from the National Household Travel Survey and Travel Demand Modeling. To account for different travel patterns in the City, the report determines trip length based on whether a service area is inside or outside of "the Loop" of highways around Austin (loosely US 183, SH 71 and Loop 360).

SERVICE UNIT = TRIP RATE x TRIP LENGTH

Where:

- Trip Rate = PM Peak Hour Trip Rate
- Trip Length = Smaller of Average Trip Length * 50% or 6 miles

Travel Demand Factors:

Travel demand factors (TDF) represent the number of service units a development generates based on land uses within the development. For example, a single family house outside "the Loop" generates 4.26 service units, or vehicle miles, of demand. This number is multiplied by the fee per service unit in a Service Area to determine the impact fee for a development.

The LUVMET, a table in the SIF report, relates a TDF to a list of land uses common to the majority of developments. This can be used to determine the number of service units for a development and a Street Impact Fee, based on the service area the development is within.

SAMPLE CALCULATIONS

Single-Family Residence

Trips:	.99 Vehicles (PM Peak) (ITE)
X Trip Length:	4.30 Miles* *Outside the Loop
= Vehicle-Miles:	4.26 Vehicle Miles

Big Box Retail Store

Trips:	3.81 Vehicles (PM Peak) (ITE)
Reduction for Pass-by Trips:	34% (ITE) 2.51 Vehicles (PM Peak)
X Trip Length:	2.91 Miles* *Inside the Loop
= Vehicle-Miles:	7.30 Vehicle-Miles

TO LEARN MORE, VISIT
austintexas.gov/streetimpactfee



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