

Sec. 94-311. - Traffic performance standards.

- a. *Intent.* It is the intent of this section to establish traffic performance standards to guide, control and coordinate development with the maintenance of reasonable and safe levels of service on the major thoroughfares serving the city.
- b. *Definitions.*
 1. **Major thoroughfares** means all major and minor arterial and collector streets as set forth in the traffic circulation element of the comprehensive plan of the city.
 2. **Level of service (LOS)** means the measure of a roadway's traffic carrying capability in terms of flow characteristics and operating speeds.
 - a. **Level of service "C"** means a high volume and stable flow of vehicular traffic and is the design capacity for urban roadways. (See Table X-3.)

TABLE X-3: LEVEL OF SERVICE "C"	
DESIGN TYPE	AVERAGE ANNUAL DAILY TRIPS (AADT)
Two-lane (two-way)	10,000
Two-lane (one-way)	12,000
Four-lane (undivided)	20,000
Five-lane (undivided)	24,000
Four-lane (divided)	24,000
Six-lane (divided)	36,000
Eight-lane (divided)	48,000
Six-lane expressway	72,000
Eight-lane express	96,000

- b. **Level of service "D"** means high volume and tolerable operating speeds where unstable flow characteristics are approached during peak hour periods. (See Table X-4.)

TABLE X-4: LEVEL OF SERVICE "D"	
DESIGN TYPE	AVERAGE ANNUAL DAILY TRIPS (AADT)
Two-lane (two-way)	11,500
Two-lane (one-way)	13,800
Four-lane (undivided)	23,200
Five-lane (undivided)	27,600
Four-lane (divided)	27,600
Six-lane (divided)	41,400
Eight-lane (divided)	55,200
Six-lane expressway	82,800
Eight-lane express	110,400

3. **Background traffic** means projected traffic from approved but not yet completed developments which will likely affect the major thoroughfares within the area of a proposed development.

4. **Total traffic** means the sum of the existing traffic, the background traffic, and the anticipated traffic to be generated by a proposed development.
5. **Significant impact** means either of the following:
 - a. The assigned traffic volume from a proposed development exceeds the percentage of LOS "D" capacity listed below on any links within the radius of influence that have an existing volume greater than LOS "D" capacity:
 1. Two-lane: Five percent.
 2. Four-lane: Four percent.
 3. Six-lane: Three percent.
 - b. The total assigned traffic volume from a proposed development exceeds ten percent of the total LOS "D" capacity of all links within the radius of influence that have existing volumes greater than the LOS "D" capacity.
6. **Existing average annual daily traffic (AADT)** means the data thereof established and utilized by the county metropolitan planning organization (MPO) or the state department of transportation (DOT).
7. **Land use plan** means the future land use element of the comprehensive plan of the city.
8. **Link** means the roadway segment between two intersections.
9. **Intersections** means the junction of two or more major thoroughfares.
10. **Rezoning** means any change in the zoning classification and any approval of a special exception or special use.
11. **Directly accessed** means ingress and egress of a proposed development on a major thoroughfare.
12. **Radius of development influence** means the area surrounding a proposed development as set forth in Table X-5 below or the area in which the traffic impact on major thoroughfares exceeds one percent of the LOS "C" capacity on any thoroughfare. (See Table X-3.)

**TABLE X-5:
RADIUS OF DEVELOPMENT INFLUENCE***

LAND USE	DISTANCE
Residential	5 miles or as required by DRI
Commercial or industrial:	
0 to 49,999 square feet	2 miles
50,000 to 99,999 square feet	3 miles
100,000 to 199,999 square feet	4 miles
200,000 to 399,999 square feet	5 miles
400,000 or more square feet	5 miles or as required by DRI
Other applicable uses	5 miles

*The project's radius of development influence shall be defined as road miles from the proposed project, not as a geometric radius.

13. **Capacity** means the maximum AADT volume which a link can accommodate at a particular LOS. (See Tables X-3, X-4 and X-5.)
- c. *Traffic impact study required.*
1. Any person seeking any of the following zoning approvals or development orders shall submit to the city a traffic impact study (TIS) as defined herein:
 - a. A rezoning to a commercial district;
 - b. A rezoning to an industrial district;
 - c. A rezoning which allows a higher density of residential development;
 - d. A rezoning to a planned community district or a planned development district; or
 - e. A development of significant impact (DSI) approval.
 2. Any proposed development that will generate less than one percent of the AADT capacity of LOS "C" on links directly accessed by the proposed development has no significant effect on the major thoroughfares within

the project area. A finding by the city that a proposed development has no significant effect shall obviate the necessity of a traffic impact study.

3. A proposed development that will generate from one percent to three percent of the AADT capacity at LOS "C" on links directly accessed by the proposed development has a minor effect on the major thoroughfares within the project area. The traffic impact study shall pertain to the effects of the proposed development on such links and need not concern other portions of major thoroughfares.
4. A proposed development that will generate more than three percent of the AADT at LOS "C" on links directly accessed by the proposed development has a significant effect on the LOS for major thoroughfares within the project area. A traffic impact study is required for such proposed developments and shall be submitted to the city.
5. In an approved planned community district (PCD) with an approved overall traffic impact study, additional traffic impact studies shall not be required for rezoning of tracts within such PCD to an RPDD or CPDD zoning classification, provided RPDD rezoning requests are in accord with the approved PCD concept plan and provided that proposed uses and floor area ratios of CPDD rezoning requests do not differ by more than five percent from those utilized in the overall traffic impact analysis.

d. *Traffic impact study (TIS).*

1. The TIS shall be conducted to determine whether major thoroughfares serving the proposed development exceed reasonable and safe levels of service at any time during the construction of, upon the completion of, the proposed development.
2. Major thoroughfares shall be maintained at levels of service having stable flow characteristics and shall approach unstable flow conditions only during peak traffic periods, more specifically defined as LOS "D."
3. In determining the effects of a proposed development on levels of service, the traffic impact study shall address all of the following areas:
 - a. Traffic characteristics and levels of service of existing major thoroughfares within the proposed development's radius of development influence;
 - b. Trip generation and origin-destination projects for the proposed development;
 - c. Impacts of the proposed development on affected major thoroughfares including levels of service;
 - d. Impacts of background traffic;
 - e. Radius of development influence;
 - f. Effects of phasing of the proposed development, including relationships to the long range thoroughfares plans of the city and the county metropolitan planning organization, and to the five-year work program of the county metropolitan planning organization and the state department of transportation;
 - g. Effects of roadway alterations anticipated in the proposed project, including intersection improvements, turn lanes, signalization, medians, and other improvements;
 - h. Highway and intersection design capacities;
 - i. Impacts of the proposed development on hazardous intersections (more than five accidents per year or ACC/MEV plus or minus 0.5) within the radius of influence.
4. The following standards and methods of evaluation shall be used in preparing the traffic impact study:
 - a. The traffic generated by the proposed development shall be computed and traffic assignments made for each link within the project's radius of development influence. Unless a different schedule of rates is permitted by the city, the rates published in the latest edition of the Institute of Transportation Engineer Trip Generation and Informational Report shall be used;
 - b. The AADT set forth in Table X-4 of this section shall be used as the LOS standard;
 - c. The TIS may address peak-hour intersection capacities in lieu of AADT rates. In such event, the TIS shall contain detailed intersection analysis for all intersections within the radius of development influence. The 1965 Highway Capacity Manual (including the Northwestern Nomographs) or Transportation Research Circular No. 212, "Interim Material on Highway Capacity," Transportation Research Board, January 1980, shall be referenced and used for documentation. (When current editions become available, such current editions shall be referenced.) All calculations shall be set forth;
 - d. Intersection analysis will not be required for intersections where the sum of peak-hour critical lanes volumes can be shown not to exceed 1,200 vehicles per hour;

- e. Proposed intersection improvements to increase the LOS shall be considered to the extent that calculations show that the approved links will have sufficient capacity to utilize the capacity of the intersection. Proposed intersection laneage shall be designed in conformity with accepted geometric design standards;
- f. The traffic impact study shall cover an area defined in Table X-5, or the area in which traffic assignments from a proposed development on major thoroughfares exceeds one percent of LOS "C" capacity, whichever covers the lesser area;
- g. To determine background traffic, the city shall provide an assignment of all previously approved but incomplete developments relating to the existing major thoroughfare system. Fifty percent of this assignment may be used to address the traffic impacts of background traffic. The proposed developer may present evidence to the city that the impact of background traffic is less than 50 percent. Phasing of a proposed development may be considered in the analysis of background traffic;
- h. To determine the effects of project phasing, the following may be considered:
 - 1. Separate traffic generation figures and assignments shall be provided for each phase;
 - 2. Where the elevation of phased traffic impact includes the effect of proposed roadway construction, sufficient information shall be provided regarding the proposed construction to ensure that the roadways realistically will be constructed at the assumed time;
 - 3. The phasing of previously approved but incomplete developments shall be considered when the radius of development influence of the previously approved development. An analysis shall be included of the potential positive or negative effects on the traffic generated by the project at each phase of the development; and
 - 4. The traffic impact study shall be prepared and sealed by a qualified traffic engineer licensed to practice in the state.
- e. *Review of traffic impact studies.* The traffic impact study shall be reviewed by the engineering division and by the community development and planning department of the city which shall make recommendations to the city planning board and to the city commission relative to the traffic impacts of the proposed development. The recommendations shall be based upon findings produced from the traffic impact study for each of the areas addressed in subsection (d)(3) of this section. The traffic impact shall be considered by the planning board and city commission in determining whether or not the application for rezoning or development of significant impact approval shall be granted.
- f. *Categories of review.* The categories of review are broad guidelines to be used to measure the traffic impacts of a proposed development.
 - 1. *Category A.* A proposed development that will cause a significant impact on major thoroughfares within the radius of development influence on which existing traffic volume exceeds LOS "D" shall be denied. A proposed category A development may be approved if either of the following conditions are met:
 - a. Roadway improvements necessary to offset the proposed development's traffic impact will substantially provide the LOS required on major thoroughfares serving the project and will be constructed prior to or concurrently with the traffic impact of the proposed development.
 - b. The existing, major thoroughfares impacted which are over capacity are their ultimate section and the proposed development is either one of the following:
 - 1. Residential and less than five acres and 30 units;
 - 2. Commercial and less than two acres;
 - 3. Located in an area that is almost completely developed; or
 - 4. Not predicted to cause a substantial degradation of the LOS of the impacted major thoroughfares.
 - 2. *Category B.* A proposed development that will cause a significant impact on major thoroughfares within the radius of development influence on which the total traffic exceeds LOS "D" shall be denied. A proposed category B development may be approved if the project is phased and both of the following conditions are met:
 - a. No phase will impact a major thoroughfare to a volume exceeding ten percent of the major thoroughfare's design capacity where total traffic on the major thoroughfare exceeds design capacity;
 - b. No phase will impact any major thoroughfare to a volume exceeding 20 percent of that major thoroughfare's design capacity.

3. *Category C.* Where the significant impact on a major thoroughfare within the radius of development influence on the total traffic does not exceed the volumes listed in Table X-4, the proposed development shall be approved. If the proposed development is phased, no phase shall impact a major thoroughfare by more than 20 percent of its design capacity.

(Code 1979, § 33-119; Ord. No. 3744-04, § 4, 9-27-2004; Ord. No. 4660-16, § 9, 12-5-2016)

Editor's note— See editor's note for § [94-310](#).