

TRAFFIC AND SAFETY INFORMATIONAL SERIES FREQUENTLY ASKED QUESTION #4

WHY CAN'T I HAVE SEVERAL DRIVEWAYS TO MY PROPERTY WHEREVER I WANT THEM?

State, city, and county governments in Iowa are legally responsible for providing and managing roadway access to roadside properties. Property owners (especially commercial property owners) generally like to have several driveways at the most convenient locations. However, too many or improperly designed access points can lead to operational and safety concerns along roadways when vehicles attempt to enter or exit driveways. Roadways with access that is not properly managed can experience lower safety and increased traffic congestion.

Access management regulations must balance the public need for safe and efficient movement and the landowner's private property right to sufficient access. The existence of driveways along a roadway does impact the safety and operation of traffic. Vehicles entering and exiting a driveway move more slowly than through traffic. A roadway with numerous driveways and/or inadequate driveway spacing has an increased number of vehicle stops and starts (i.e., conflicts). This produces a lower level of operations and safety than along roadways with restricted or regulated driveway access. A roadway with a small number of access points per mile is over three times as safe as one with a greater access density (see Table 1).

TABLE 1 Relationship between Access Density and Traffic Safety

Access Points per Mile	Crash Rate per Million Vehicles	Relative Level of Crashes
0 to 10	2.22	1
10 to 30	3.34	1.5
30 to 50	4.74	2.1
Over 50	7.38	3.3

BRW, Inc., study for the Minnesota Department of Transportation, August 1998.

A limitation on the number of driveways per property allows drivers more time and distance (i.e., reduces confusion) to complete driving maneuvers. In other words, the potential for vehicle conflicts and collisions is reduced. Recommended guidelines for driveway spacing are shown in Table 2. These guidelines are based on operating speed, roadway type, and the amount of traffic.

TABLE 2 General Guidelines for Unsignalized Access Spacing

Condition	Spacing Guidelines (feet)
Operating speed:	
30 mph	100 to 200
45 mph	300 to 550
Type of facility:	
Major arterial (e.g., most numbered state and federal highways)	300 to 500
Minor arterial (e.g., urban streets)	100 to 300
Collector (e.g., roadway connecting local streets to arterials)	100 to 200

Transportation Research Board, *Transportation Research Circular*, No. 456, March 1999.

TECHNIQUES USED TO REDUCE THE IMPACT OF ACCESS POINTS

New projects or roadway improvements should be designed to reduce the number of conflict points associated with traffic entering or exiting roadside development. Driveways should be designed to minimize the disruption turning vehicles have on the efficiency of traffic flow. Access management plans for a specific roadway can include the following:

- reducing the overall number of driveways per block or mile,
- maintaining a greater minimum distance between driveways,
- sharing driveways between properties to limit the number of conflicts, and
- requiring adequate sight distance (see below).

Access management can improve driving conditions and the safety for all motorists. Providing proper access to properties and properly designing intersections maintains safety and promotes a smooth traffic flow. Some results of successful access management include

- the separation of vehicle conflict areas,
- a reduction of interference between through and turning traffic, and
- the better maintenance of consistent speeds along major roadways.

HOW SIGHT DISTANCE IMPACTS THE LOCATION OF DRIVEWAYS

Sight distance, the length of roadway visible to a driver, must be provided at driveways for the safety of both through and turning traffic. Drivers using the roadway or entering and exiting a driveway use the sight distance provided to verify that the area is clear. Providing adequate sight distance to/from a driveway produces a safer environment because it allows drivers to adequately adjust to potential conflicts and operating impacts. Required sight distances allow vehicles to enter the roadway with only a small adjustment by the traffic along the main roadway. The requirements for driveway (or intersection) sight distance may be found in “A Policy on Geometric Design of Highways and Streets” (the American Association of State and Highway Transportation Officials).

For more information

For more information, please contact _____.