

Access Management

Roads serve two basic purposes; mobility of users and access to property. Unfortunately, these two purposes can often be in conflict when meeting the needs of traveler safety, efficient travel time, reducing delays, and other competing needs. This conflict has led to the development of access management.

What is access management?

Access is defined as approaching and entering properties and land use facilities. Transportation access may be provided via driveways, frontage roads, median openings on divided roadways, intersections and interchanges. Access management is a set of techniques that State and local governments can use to control access to highways, major arterials, and other roadways. The benefits of access management include improved movement of traffic, reduced crashes, and fewer vehicle conflicts.

Access management proactively manages vehicular access points on roadways⁽¹⁾ and controls how and where vehicles turn on or off the road. It also can require or encourage land owners to include access management strategies in development projects. Access management is the planning, design, and implementation of land use and transportation strategies to preserve a safe and efficient flow of traffic while accommodating the access needs of adjacent development⁽²⁾.

State laws allow road authorities to manage access points by installing medians, closing median openings, and restricting turning movements into and out of properties.

Access management includes:

- Limiting access points along the roadway.
- Limiting conflicts at driveways and intersections.
- Increasing the distance between conflict points so vehicles don't turn and cross in a chaotic way.

Why access management?

Too many entry points, intersections, and closely-spaced traffic signals on major roads cause congestion and increase crashes^(2, 3, and 4). Research shows that roadways with lower



40%

In Minnesota, rural 2-lane county roadways with more than 8 access points per mile have crash densities 40% higher than comparable roadways with fewer access points⁽⁵⁾.

Figure 1: Crash Density vs. Access Density on County Roadways⁽⁵⁾

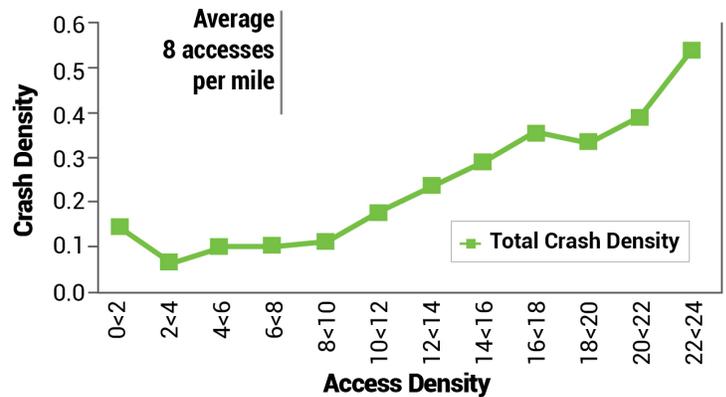
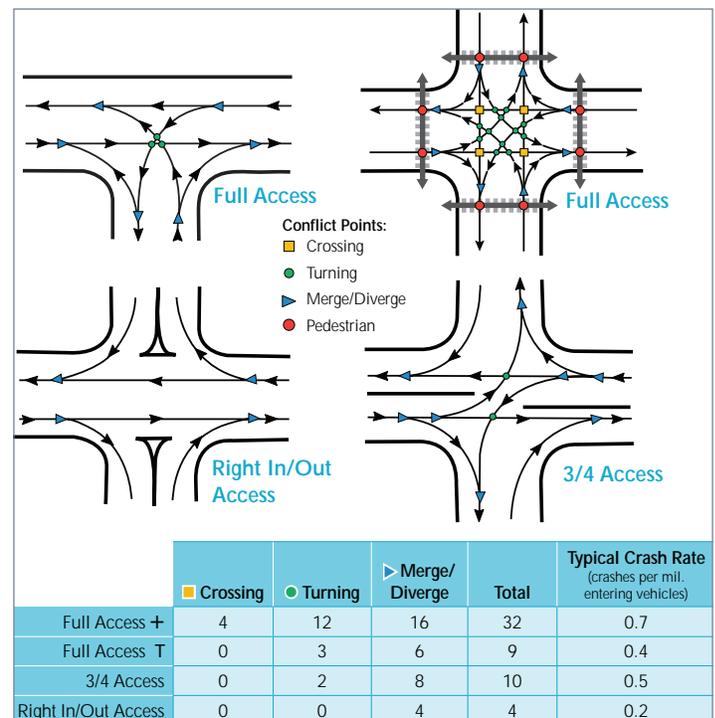


Figure 2: Intersections - Conflict Points Traditional Design⁽⁶⁾



number of access points have less crashes than comparable roadways with higher number of access points⁽⁵⁾.

- Rural and urban state highways with higher than average accessibility have crash densities 50% to 70% higher than similar highways with lower accessibility (Figure 1).
- The number of conflict points at an intersection is correlated to the number of approach legs.
- Reducing the number of legs or restricting specific crossing movements can help eliminate conflict points and reduce the overall crash rates (Figure 2).

What are the benefits of access management⁽⁴⁾?

Successful implementation of access management projects will:

- Reduce hazardous conditions and crashes
- Increase roadway capacity
- Improve travel times
- Support economic development
- Improve traffic movement

How effective is access management?

Access management is a proven effective safety strategy. Properly implemented access management strategies have shown to reduce the frequency and rate of crashes. Access management strategies include:

- Reducing access points along rural and urban two-lane roadways: **30%-40% reduction in crashes.**
- Adding left-turn lanes along 2-lane rural roads: **35% reduction in intersection related crashes.**
- Converting full access intersections to reduced conflict designs: **60%-85% reduction for all crashes and 95% for severe crashes.**

Where should access management be implemented?

Road authorities should consider developing and managing their roadway system to balance the mobility and safety for through traffic and accessibility for property owners. All roadways benefit from access management strategies. A comprehensive road system with prioritized access management strategies includes managing⁽⁶⁾:

- Major arterials intended to move high volumes of traffic.
- Local streets to provide access to abutting property and minimize travel speeds, traffic volumes, and the level of through traffic.
- Minor arterials and collectors that are at-risk from serving dual/ competing functions of moving traffic and land access (such as turning lanes, medians, and minimum driveway separations).

What are the additional considerations?

When developing access management strategies, road authorities should consider the following, balanced with other needs⁽⁴⁾:

- Business impacts tend to be minimal from access management projects.
- Business owners may incorrectly link access management projects with adverse economic impacts.
- Some areas of business see growth as a result of access management projects due to improved traffic operations.
- Counties need to coordinate access management initiatives regarding land development with city governments that typically have land use authority. **END**

References

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