Overview

Background

Iowa’s roadways play a dual role in serving through vehicle traffic while also providing direct access to adjacent land and development. When access to major arterial and collector roadways—by way of driveways and minor public roads—is not effectively managed, the result is often an increase in crash rates, congestion, and delay for motorists. Access management is defined as the control of driveways and intersections to maintain safety at a roadway’s full traffic carrying capacity. Research has shown access management techniques to be highly effective in improving both safety and traffic operations. In fact, research on case study routes in Iowa shows that access management projects lead to an average 40 to 50 percent reduction in crash rates. These figures are also consistent with research results in other locations across the United States. In addition, access management approaches are substantially less costly than building new facilities and can even provide considerable increases in traffic capacity and travel speed. Furthermore, the businesses and land development impacts of access management projects have been shown to be either minor or positive. Drivers and business customers prefer to drive on well-managed roadways.

Previous Iowa Access Management Research and Outreach Projects

Research in Iowa and elsewhere has shown access management to be highly effective in increasing highway safety and improving traffic operations. This guidebook supplements several previous documents produced as a result of research conducted in Iowa since the late 1990s. Iowa’s access management documents and products include:

- Access Management: A Review of Recent Literature
- Access Management Awareness Program Phase II Report
- Access Management Awareness Program Phase III Training Materials
- Access Management Awareness Program Phase IV Report
- Access Management Handbook
- Access Management Toolkit: Answers to Frequently Asked Questions
- Access Management and Corridor Management One-Day Workshop

Many of these materials are readily available online at www.intrans.iastate.edu. In addition, much more information on access management, including the Transportation Research Board Access Management Manual, can be found at www.accessmanagement.info. Although the previously produced Iowa-based materials have been well-received and used extensively throughout the state, the need for additional materials focused on specific access-related issues at major arterial intersections was identified by the Iowa Department of Transportation (Iowa DOT). As a result, this guidebook was developed with assistance from an advisory committee as a resource for the planning and design of access at and around major intersections.
Overview

Purpose of This Document

While access management is an important issue for many roadways across the state, a particularly important situation occurs where two major arterial roadways meet. This, for example, would occur when a primary expressway meets with a state highway or with a higher-volume farm to market road. These “crossroads” locations are often important in terms of local and regional traffic and are also attractive locations for commercial activities that depend on market accessibility, highway traffic, and high visibility. These intersections are also where traffic crashes are more likely to happen, simply due to higher overall traffic volumes. Commercial businesses such as fueling stations, convenience stores, retail “strip” developments, big box retailers, and motels find such locations especially attractive and generally want access to be as direct as possible for their customers. Nonetheless, if access is not carefully managed at these locations, the resulting situations can compromise both safety and traffic operations.

Ultimately, this guidebook will assist staff at the Iowa DOT, metropolitan and regional planning organizations, and other agencies with both project planning and design. It will also assist in working with stakeholders who often need to be educated about why access management is important.

This guidebook addresses the importance of managing access at the intersections of major arterial roadways—roadways that carry higher volumes of traffic and are of a greater regional or local significance—through:

- illustrating both good and poor practices through case studies, using situations documented at major roadway intersections across the state of Iowa;
- documenting and defining the lessons learned from the case studies;
- discussing potential access management treatments such as frontage and backage roads, driveway access and median break spacing, new raised or flush medians, directional access, and alternative access from minor roadways; and
- explaining how to address potential land use, political, legal, and other issues in order to implement a chosen access management strategy.