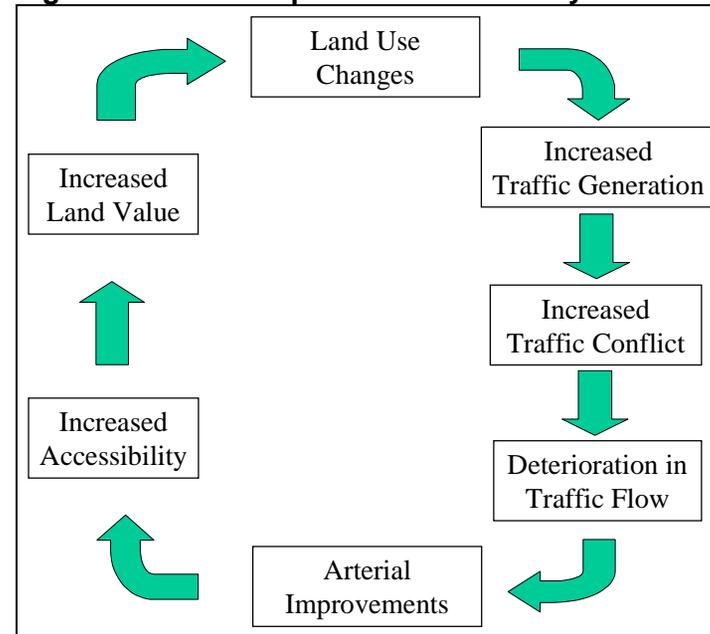


**Uncontrolled Development**

Iowa has invested enormous amounts of resources into its arterials. These highways are vital links between communities and serve as essential corridors for commerce, trade, tourism, and recreational travel. However, in an all too familiar pattern, residential and commercial growth has occurred along the arterials serving the state’s cities. This growth often creates a need for expensive highway improvements including additional travel lanes, bypasses, turning lanes, and intersection signalization (Figure 2).

**Figure 2—The transportation land use cycle**



Source: Adapted from Endnote (2)

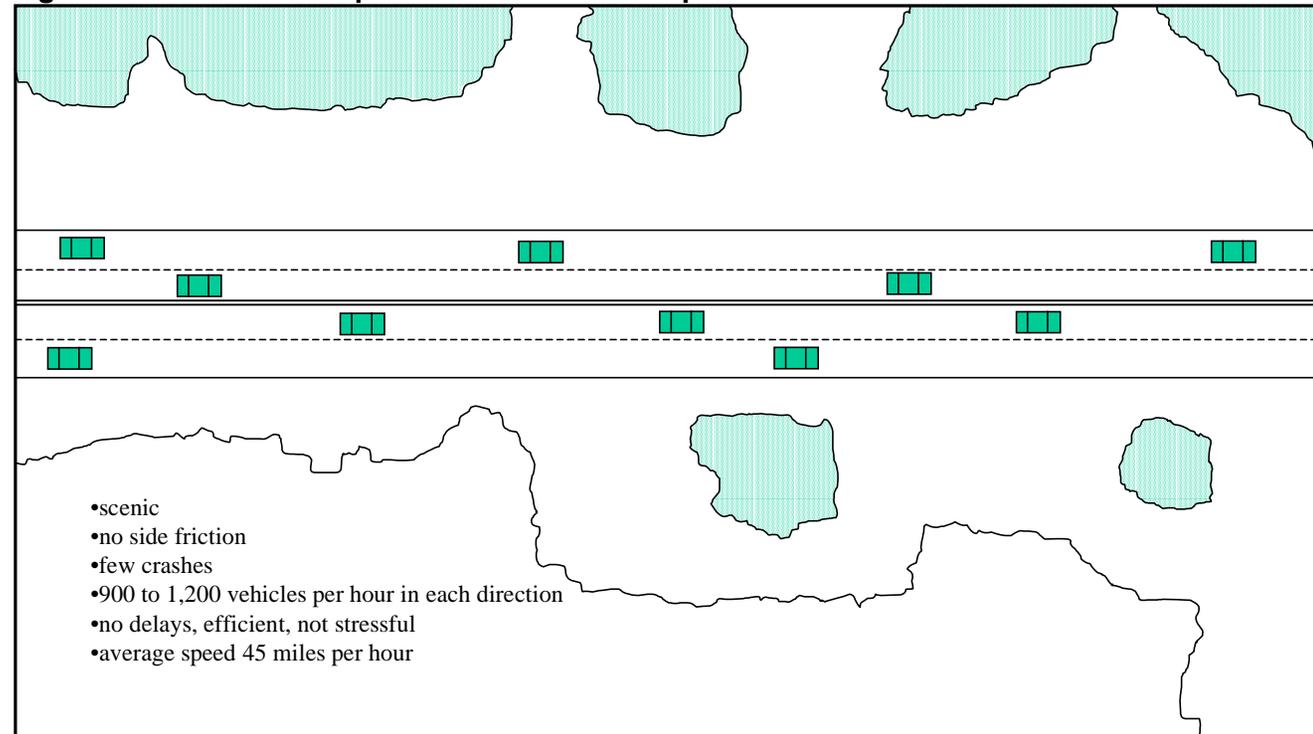
Unfortunately, few communities have enacted ordinances to control the rate and quality of this arterial roadside development, and taxpayers must bear the costs associated with strip development, traffic congestion, safety problems, and expensive remedial highway improvements.

## 2-Current Problems

### Why Does It Happen?

Strip development occurs so slowly that it is seldom viewed as a crisis until traffic problems become severe. Development therefore is often allowed to continue in a haphazard manner until the problems become unbearable (Figures 3–5).

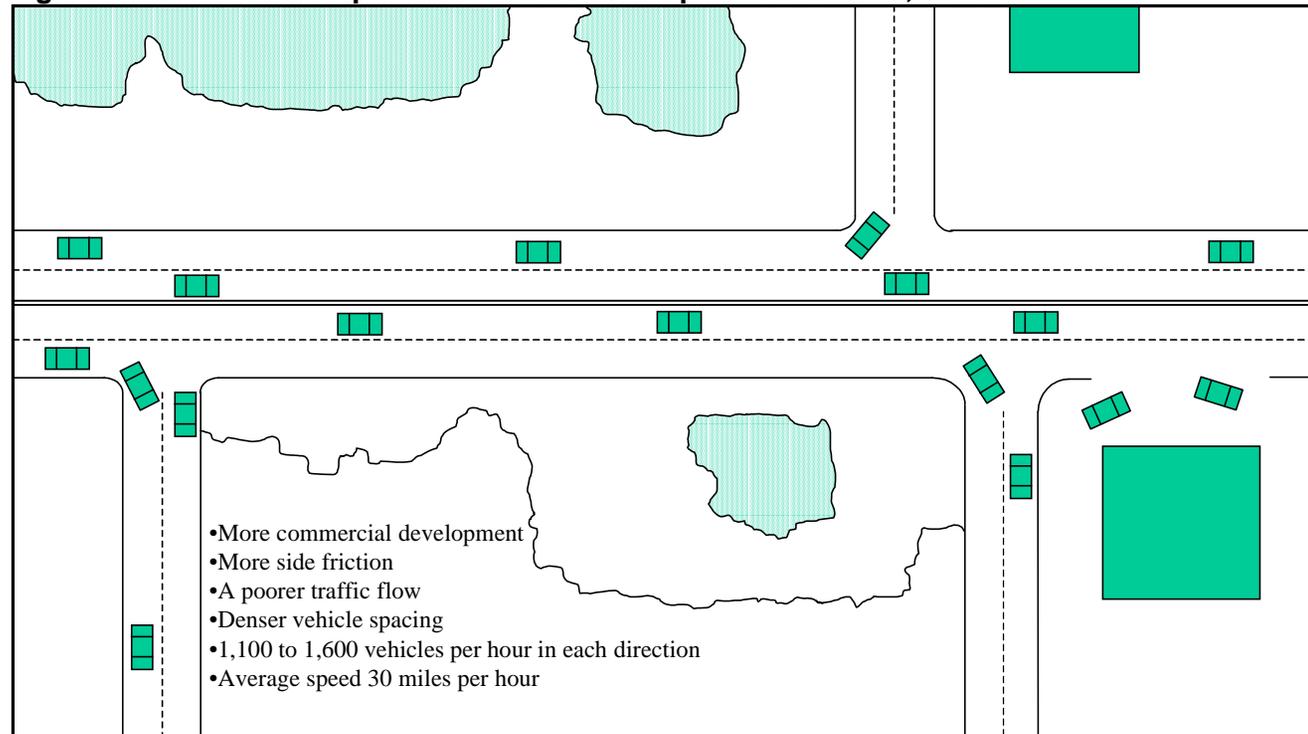
**Figure 3—Cumulative impact of roadside development over time**



Source: Adapted from Endnote (3)

Arterials that carry large volumes of traffic are attractive locations for strip development. Residential and commercial developments locate along the arterial over time until strip development becomes the predominant land use pattern. The ability of the arterial to move traffic then becomes seriously compromised, resulting in increased traffic congestion and reduced safety. Ironically, it is often the small and medium-scale businesses that cumulatively create the worst problems.

**Figure 4—Cumulative impact of roadside development over time, continued**

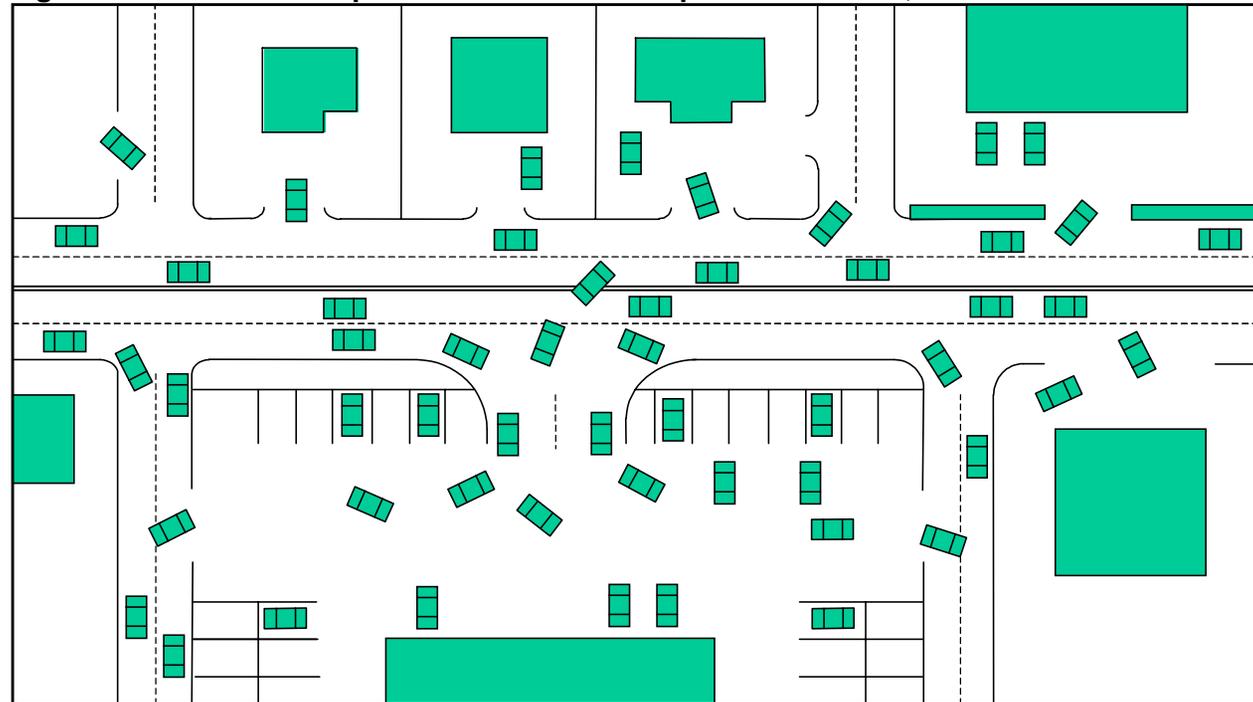


Source: Adapted from Endnote (3)

## 2-Current Problems

Inefficient zoning and street layout forces a business to connect driveway access to the arterial. If side streets had been developed correctly, driveway access could have been rerouted to these streets.

**Figure 5—Cumulative impact of roadside development over time, continued**



- Too much side friction
- Excessive congestion
- More crashes

- Through traffic slowed
- Too many driveways and intersections
- Inadequate spacing between driveways and intersections
- Too many conflict points and left turns

- Highly stressful
- 1,300 to 2,000 vehicles per hour in each direction
- Average speed 20 miles per hour.

Source: Adapted from Endnote (3)

### State and Local Collaboration

The Iowa Department of Transportation (DOT) has the right to restrict access on state roads, but when these roads pass through cities, both the DOT and the municipality must agree to allow access to a business or residence. The level of restriction that the DOT can exert over an arterial depends on the level of access control rights that have been purchased. Every parcel of land is required by law to have reasonable access to it, and it is not always possible to limit driveways to a set spacing throughout the length of an arterial. In many cases, cities have zoned a section of land in such a way that many small parcels must be granted access onto the arterial or else they would have no access at all.

Additionally, growth occurs not only on state roads but also on county roads just outside of cities and on city streets. The state cannot solve all of these development problems by itself.

### Solving the Problem

City and county governments have the potential to better control all land development along an arterial. If it is a state controlled roadway, the city and the state jointly control the roadway and access to it. In Iowa, reasonable access does not mean that access has to be provided directly off a main street or highway. In some cases, reasonable access may be provided off side streets or roads. Local governments therefore can prepare and adopt comprehensive planning and zoning ordinances to guide the overall development patterns and even prohibit strip development. Regardless of the existence of an effective comprehensive plan, cities can also enact access management controls to regulate the placement and design of driveways.

#### *Marshalltown Case Study: Poor Access Control—Old U.S. Highway 30*

The city of Marshalltown, population 25,000, is located in central Iowa at the intersection of U.S. Highway 30 and Iowa Highway 14 about 40 miles northeast of Des Moines. U.S. Highway 30, which travels through Marshalltown in an east-west direction, serves intrastate traffic in central Iowa. This highway provides an example of how poor management of access can lead to great expense later on.

Originally, U.S. Highway 30 bisected the center of the city. In 1954, the state constructed a bypass to relieve the traffic congestion caused by local development. This bypass rerouted U.S. Highway 30 around the south side of the city. However, access was not sufficiently managed following the

## 2-Current Problems

construction. Almost all adjacent properties were allowed separate driveway access to the bypass, and by the mid-1990s, uncontrolled access had again begun to hinder traffic flows and adversely impact safety (Figure 6).

**Figure 6—Original U.S. 30 bypass**



In an effort to improve the highway's safety and service, the Iowa DOT determined the most viable solution would be the construction of a second bypass south of the city. A second bypass was less costly than retrofitting the original bypass, which would have involved purchasing additional right-of-way, relocating businesses, and constructing service roads for proper access. The second bypass

opened in 1996. It is a four-lane facility with fully controlled access at grade-separated interchanges (Figure 7).

**Figure 7—Second U.S. 30 bypass**



Marshalltown's experience demonstrates how uncontrolled development can hurt traffic operations. It also shows the high cost of not properly managing access along a major highway.