

GUIDE TO ACCESS MANAGEMENT IN THE A/GFTC AREA

The Adirondack / Glens Falls Transportation Council (A/GFTC) is the Metropolitan Planning Organization (MPO) designated by the Governor of the State of New York for Warren and Washington Counties and the Town of Moreau in Saratoga County. It has the responsibility of developing and maintaining both a Regional Transportation Plan and a Transportation Improvement Program for the area's federal aid eligible highway and public transit facilities. The A/GFTC also sponsors and conducts studies and assists its member municipalities and counties with planning activities such as this Access Management Guidebook.

The purpose of this Guidebook is to provide an access management resource tailored to the needs of A/GFTC's planning and programming area. The importance and many benefits of access management have been well-documented during the past decade. This introduction will provide an overview of the field with following chapters providing more in-depth resources and reference tools.

The guidebook includes eight chapters addressing the following topics:

- Chapter 1 provides a general introduction to access management and its implementation techniques.
- Chapter 2 summarizes the tools and principles introduced in Chapter 1 using national materials.
- Chapter 3 provides case studies of the A/GFTC Area.
- Chapter 4 provides sample regulations from across the state.
- Chapter 5 includes information on permitting new access points.
- Chapter 6 includes a sample slide show for illustrating and educating the public on access management.
- Chapter 7 addresses the impacts of access management techniques on other user groups including bicycle, pedestrian and transit users.
- Chapter 8 provides reference information.

WHAT IS ACCESS MANAGEMENT?

Access Management seeks to limit and consolidate access along major roadways, while promoting a supporting street system and unified access and circulation systems for development. The result is a roadway that functions safely and efficiently for its useful life, and a more attractive corridor.¹

Public roadways are designed for two primary purposes – providing access to lands and transporting persons and goods. Without careful management, these purposes can each override the functioning

¹ [http://www.accessmanagement.gov/ Access Management Transportation Research Board Committee ADA70 Home Page](http://www.accessmanagement.gov/Access_Management_Transportation_Research_Board_Committee_ADA70_Home_Page)

of the other. A residential or educational land use is not best served by a high-speed, high-traffic roadway. Likewise, a roadway designed to move traffic through an area will work less effectively with stop-lights and intersections at too frequent intervals. Access management serves to balance these two purposes with the ultimate goal of optimizing mobility, safety and access. It is a process and a planning method that relies on a wide set of tools.

In general, access management aims to develop a continuum of road purposes. On one end are roadways designed to move large amounts of traffic efficiently over longer distances. At the other end are roadways designed to access individual parcels. By applying different geometric and development standards to these roadway types, the road system can best continue to serve its two primary purposes.

WHY ACCESS MANAGEMENT?

As part of the public infrastructure, the roadway network must be designed to most efficiently serve the public good. Doing so requires providing sufficient but not excessive infrastructure. It also requires protecting the infrastructure that is installed to ensure it is used most efficiently – reducing cut-through traffic on small, local roads while maintaining mobility on important arterial connections. Implementing access management techniques has been shown to increase safety and reduce travel time. The National Cooperative Highway Research Program (NCHRP) Report 420: Impacts of Access Management Techniques, sponsored by the Transportation Research Board, reviewed various access management techniques and examined their benefits. The report found significant limitations to the roadway with uncontrolled access points including:

- For every additional traffic signal per mile, travel speed is reduced by 2-3 miles per hour (mph).²
- Each additional access point per mile increases the accident rate by about 4 percent.³
- Each additional access point per mile reduces travel speeds by 0.25 mph up to a 10 mph decline.⁴

In addition to the quantifiable, objective benefits, access management also can improve the aesthetics and marketability of a region. By working with permitting authorities, businesses can identify optimal solutions to meet the needs of the community and industry. Some of the qualitative benefits include:

- Access management makes it easier and safer for customers, employees and trucks to reach businesses.
- Decreased congestion and reduced travel times increase the potential market area.

² Pg 2, NCHRP Report 420.

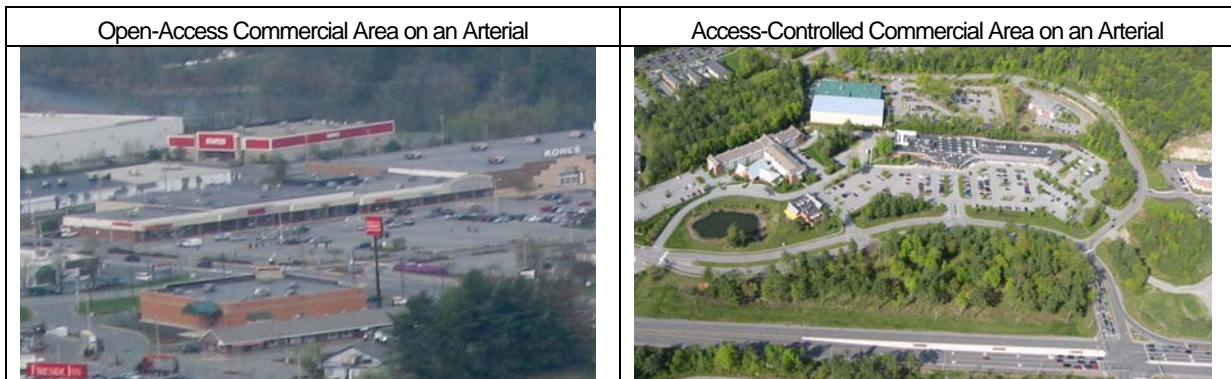
³ Pg 3, NCHRP Report 420.

⁴ Pg 5, NCHRP Report 420.

- Properly designed entrances shared by multiple businesses allow more site area for parking, more customer options to access a business, and improved landscaping or other site amenities.

Figure 1 illustrates the overall difference in an access-controlled commercial area compared to a commercial area without access guidelines.

Figure 1: Comparison Images of Access-Controlled and Open-Access Commercial Areas on Arterial Roadways



EXAMPLES OF ACCESS MANAGEMENT STRATEGIES

Implementing good access management techniques relies on (1) effective local, county, and state planning, access permitting, and development regulations that encourage the appropriate development or redevelopment of individual parcels, and (2) appropriate roadway, intersection, and driveway design.

Planning and Land Development-Based Techniques

Planning level access management techniques are implemented by municipalities, counties, and the New York State Department of Transportation (NYSDOT). These authorities regulate development and manage the road network through policies, plans, and land use codes. Long range transportation plans for A/GFTC and the state and local comprehensive plans can lay a foundation by including goals, objectives, and policies related to access management. These plans may also classify the roadway network according to function and desired level of access control.

The general policies outlined in transportation and comprehensive plans are implemented through design guidelines, such as NYSDOT’s “Policy and Standards for the Design of Entrances to State Highways”, and through local zoning codes and subdivision regulations. For example, access management overlay districts can be included in zoning regulations and may limit access based on roadway functional class, specific corridors, or activity areas.

Subdivision and site plan regulations can be used to regulate land division in accordance with desired access plans. They can require certain roadway network systems within the subdivision or limit the

number of access points on an arterial to which any given project is entitled. Regulations can require interconnections between parcels (Figure 2), limit the amount of traffic permitted to access the road network, or require new frontage roads (Figure 3, next page). Chapter 4 includes sample regulations from locations within New York State.

Figure 2: Parcel Interconnection – The image below illustrates poor access management. Instead of allowing vehicles to travel between contiguous parcels without using the road network, a physical barrier has been installed.



Figure 3: Frontage Road Installation - The image on the left illustrates use of a frontage road. Frontage roads allow for a single intersection on the primary road while providing direct access to individual parcels. In the absence of a frontage road a primary road can suffer from frequent and wide curb cuts as illustrated in the image on the right.



Design Techniques

Planning level techniques provide the foundation and framework for implementing effective access management designs. Design techniques provide specific guidance on how driveways, intersections, and roadways should be built. Proper design reduces confusion and conflicts between through and turning vehicles on an arterial; reduces conflicts between vehicles and other roadway users such as pedestrians, cyclists, and transit riders; and allows vehicles to move from one class of highway to another through safe and efficient intersections.

Design features that can affect access include: driveway width; driveway configurations that restrict certain movements; spacing of driveways and intersections; turning radii to accommodate passenger

cars, trucks, and transit vehicles; turn lanes on the arterial approach to intersections and driveways; and type of roadway median. Chapter 2 provides examples of all of these techniques. A few examples are discussed below.

The driveway shown in Figure 4 has been channeled to prevent left-turning traffic, the most dangerous and most capacity consumptive movement at intersections, into or out of the property. Eliminating left turns streamlines the vehicle flow and improves capacity and safety.

Figure 4: Driveway Channelization - As Illustrated Below, Prevents Left-Turning Traffic from Accessing the Primary Roadway



A non-traversable median, like the one illustrated in Figure 5 also eliminates left turns. In addition, a median can improve access in a corridor by redirecting traffic to intersections designed to safely and efficiently accommodate through and turning vehicles. Medians also create an opportunity to improve access for pedestrians by providing a protected refuge space for crosswalks on a multi-lane arterial.

Figure 5: Non-Traversable Median



Providing sufficient distance between driveways and intersections, referred to as corner clearance, is another example of a design technique. Corner clearance allows an intersection to operate without interference from vehicles entering or exiting a nearby curb cut. Adequate corner clearance also improves access to adjacent properties. The driveway will not be blocked by vehicles queued at the intersection and decision making for drivers entering and exiting the driveway is not complicated by

the numerous maneuvers that occur on the approaches to an intersection. Figure 6 illustrates insufficient downstream and upstream corner clearance.

Figure 6: Corner Clearance



Traffic signal spacing is another access management consideration. Spacing signals and large intersections at long, uniform distances makes it easier to coordinate traffic signals which allow for constant speeds and minimal stops along the roadway. Intersections with short cycle lengths and very low volumes can be spaced as little as $\frac{1}{4}$ mile apart while minimizing stops for vehicles traveling through along an arterial. However, more typical intersections require spacing closer to $\frac{1}{2}$ mile to minimize stops.

Figure 7: Signal and intersection spacing – As illustrated below, when signals are too close together the queues can spill back and block neighboring intersections.



THE GUIDEBOOK

The following chapters include information about access management in more detail. The contacts on the next page can answer specific questions about access management in general and specific to A/GFTC.

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