



CITY OF MARYSVILLE

ACCESS MANAGEMENT GUIDELINES

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Access Management Guidelines

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It is the intent of the City of Marysville to improve and manage the roadways in their jurisdiction effectively by establishing access management guidelines to achieve this goal. The primary objective of establishing access management guidelines is to expedite the movement of traffic. This is achieved by clearly identifying access points, providing connections between adjacent properties to reduce trips on through streets, and reducing delay by minimizing the number of conflict points between opposing traffic flows and separating turning movements from through movements wherever necessary and practicable. If access points are allowed to occur at random along a roadway with little or no thought given to proper design or long term effects, it will be very costly, perhaps impossible, to correct the situation once development along the corridor is complete. Some existing conditions can be corrected. However, they typically require a significant cooperative effort between private property owners and governmental agencies. Prevention by application of access management techniques to new corridors or existing roads in sparsely developed areas is important to prevent the need for costly retrofit remedies.

Successful application of access management techniques create a corridor with a uniform driving environment which improves traffic safety by providing sufficient sight distance and time to react to potential hazards. It also provides property owners and developers access to their site that is as quick, convenient, and reasonable as possible for the property's approved use.

A. Authority

The ability to adopt and enforce Access Management guidelines or an ordinance is part of the range of authority granted by the state to local units of government to regulate the design and construction of the streets within their jurisdiction. In Ohio, the authority to adopt and enforce these regulations to properly authorized planning commissions is granted to boards of county commissioners and legislative bodies of villages and cities (Ohio Revised Code 711.05 and 711.09, attached). Each of the governmental bodies is given the authority to base their approval of subdivision plats on the subdivider's compliance with these regulations. To ensure uniform application of access management guidelines and achieve a cohesive and well-managed road network, it is important to coordinate decisions made by city, village, township or county planning commissions, zoning officials, traffic engineers, and ODOT. Coordination of access management decisions between involved agencies, property owners and developers can be achieved at the pre-meeting required by the traffic impact study standards that are being concurrently developed for the City.

Limitations in the authority to enforce access management guidelines exist in that a property owner cannot be denied reasonable access to a site unless compensation is paid for the loss of use of the property. However, it must be noted that the legal obligation mandates a municipality to provide "reasonable" access, not "unlimited" access. In addition, the guidelines are also more effectively used and more easily applied to currently developing corridors than those that will develop in the future. Emphasis is on prevention although correction of some existing conditions can be remedied as the use of a property changes. Such changes happen slowly but can be an essential part of a long-term plan for any community. It should also be understood that access management guidelines are also not a



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solution to all traffic problems and do not necessarily negate the need for road widening or additions.

B. Access Management Categories

The access management guidelines shall apply to all existing, planned or proposed roadways within the jurisdiction of the City of Marysville. New or proposed roadways within City not identified on the adopted Thoroughfare Plan should be designed to interconnect with the existing roadway network in a uniform and efficient manner.

The functional classifications of the City of Marysville roadways fall into one of three classifications: arterial, collector, or local. The difference in the classifications depends on the trade off between providing mobility to through traffic with higher speeds and volumes and the degree of permitted access to the abutting land. This trade off between mobility and access for the street classifications is shown in **Figure A**.

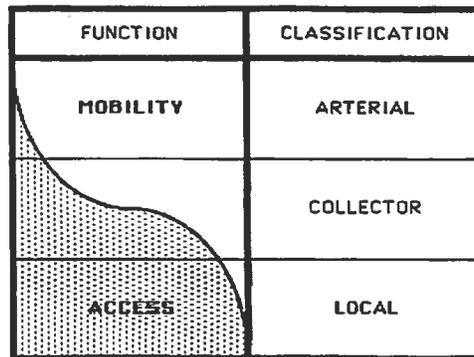


FIGURE A. Relationship of Roadway Function and Classification
SOURCE: Adapted from the State Highway Commission of Wisconsin

SOURCE: Adapted from the State Highway Commission of Wisconsin

There are five access management categories based on the functional classification of roadways that define the relative responsibilities for each classification to provide mobility and access to adjacent properties. These categories are similar to those assigned by ODOT to their state highways. **Table 1** describes the types of roads and general provisions allowed for each of the five access management categories. Access Category V applies to minor collector roadways and local roadways. Design and access to these roadways typically follow local subdivision and street design regulations and, therefore, access management controls for Category V roadways are not included in these guidelines.

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Table 1. Access Category Description and General Guidelines

Category	FACILITY DESCRIPTION	General Design Guidelines
I	High speed, high volume, long distance through traffic for interstate, intrastate, intercity travel; All Interstate and Freeway type facilities are included in this category.	Multi-lane; median; access at interchange; no direct private access allowed
II	Relatively high speed, high volume, long distance through traffic for interstate, interregional, intercity, and some intra-city travel. Typically includes state routes, major arterials and facilities in an early stage of design, which could become Category I as funding and priorities allow.	Access at interchange or public street intersection; no direct private access allowed unless there are no other reasonable means to provide access or if such access prevents more impact to traffic operations, such as an additional signal. Access is through connections to public streets that intersect Category II roadways. This is the highest category allowing at-grade intersections. Traffic signals should be avoided and grade separations should be considered for high volumes cross streets or other cases where signals do not meet warrants. Where traffic signals must be installed their effect on the mainline traffic flow should be minimized through signal coordination.
III	Moderate to high speed, volumes, and longer distances for interregional, intercity, and intra-city travel; Typically includes arterials, some collectors and some state routes. This category is appropriate for areas that have some historic, minor dependence on the highway to serve land access and where financial and social costs of attaining full control would substantially exceed benefits.	General provision is that one private access point will be provided for each parcel unless it can be shown that additional access points are necessary and that they would not be detrimental to the safety and operation of the roadway.
IV	Balances service for access and mobility at moderate to high speeds and volumes for moderate to short distances providing intercity, intra-city, and intra-community travel. Typically includes collectors, and some local roads	One direct access allowed per parcel with additional access allowed if it meets access safety, design, and operational standards.
V	Low to moderate volumes, speed and distance serving intra-city, intra-community traffic. Typically includes most local streets and roads providing local land access where there is little value in providing for high speed travel.	Providing form reasonable and safe access to abutting property is an important purpose of this category but should still consider safe mobility.

Sources: Ohio Department of Transportation, State Highway Access Management Manual, 2001, Ohio State Highway Access Category Table.

Oregon Department of Transportation Access Management Classification and Spacing Standards, 1996.

Urban, suburban and rural have typically been used in the past to identify the highway environment to define access control. The primary dilemma with adding these labels to functional classifications or access categories is that urban areas tend to expand. Areas once rural in nature become urban as the suburban fringe spreads. Since the location of what is termed the “urban growth boundary” does not negate the need to protect important facilities from over development, the urban, suburban and rural labels have not been applied to the



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functional class and access management categories contained in the Marysville Thoroughfare Plan.

There remains the difficulty in applying the access management guidelines corresponding to functional classifications to central business districts such as downtown City of Marysville. Major roadways in town have served as main streets historically and have numerous access points, short blocks, and on street parking. The downtown atmosphere is important and preserving that feel is desired by the community. Although access conditions may be deficient according to current guidelines and the desired level of operation, these 'main street' facilities in the fully developed urban areas should not have their access category changed. Such routes should have their access treatment accepted or "grandfathered" because upgrading would be disruptive to the local economy and culture, too costly to justify, and maybe impossible. This acceptance does not infer that options are not available to improve traffic flow and operation on downtown major routes. Such areas require evaluation and the preparation of an access management plan specific for the downtown City of Marysville area and which addresses the particular needs of the community. Access management guidelines should be applied to other roadways within the City limits as reasonably and practically as feasible. Such "grandfathering" of access treatment may also apply to other fully developed areas in and adjacent to the City.

City of Marysville roadways included in the Marysville Thoroughfare Plan have been assigned to one of five access management categories based on their functional classifications. Generally, the classifications were assigned a category as shown in **Table 2** unless an existing condition placed it differently. The minimum guidelines for driveway, signalized and unsignalized intersection spacing contained in this report are what is desired to provide access while emphasizing through travel according to the function desired for the roadway. The guidelines should be applied to City roadways where attainable for current conditions or as opportunities occur as development progresses. If it becomes apparent due to existing or future conditions that a particular roadway or section of roadway will be unable to attain the specifications for its assigned access category, or if it is shown to require a greater degree of control, the City Engineer may assign a more applicable access management category or provide a specific access management plan to the roadway. **Appendix A** contains a specific alphabetical listing of the access category assigned to roadways in the City of Marysville included in the Thoroughfare Plan.



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Table 2. General Assignment of Functional Classifications to Access Management Categories

Access Management Category	Road Functional Classification
Category I	Freeway
Category II	New Major Arterial Road Undeveloped Major Arterial Road
Category III	Major Arterial Roads Minor Arterial Roads
Category IV	Major Collector Roads
Category V	Minor Collector Roads Local Roads

C. Minimum Driveway and Unsignalized Intersection Spacing

To minimize the potential for accidents and delay to through vehicles, driveways and low volume unsignalized intersections on Category III, and IV roadways should be separated by the minimum distance measured from near edge to near edge of adjacent driveways as shown in **Table 3** according to the posted speed limit on the roadway. Additionally, the spacing of adjacent driveways should be as uniform as possible between major intersections. Distances between adjacent one way driveways with the inbound drive upstream from the outbound drive can be one half the distances shown on Table 3 providing that other requirements are satisfied. Driveways and low volume, unsignalized intersections are not permitted on Access Category I (Freeway) roads. Private direct access to Category II roadways shall be permitted only when the property in question has no other reasonable access to the public roadway network. All private direct access points to Category II roadways, existing and planned, shall be designated as “Temporary” and requirements of Section 4 of these guidelines shall apply.

Table 3. Minimum Driveway and Unsignalized Intersection Spacing for Access Management Category III and IV Roadways

Posted Speed Limit (mph)	Minimum Driveway Spacing (feet)
25	150
30	200
35	250
40	325
45	495
50	550
55	605

Source: ODOT State Highway Access Management Manual standards for Class III and Class IV roadways.



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1. Number of Access Points

Each existing tract of land is entitled to one direct or indirect access point to the public roadway network provided that its location and design meet the sight distance and design requirements of City of Marysville Street Standards. Where the roadway frontage of a tract of land is greater than 500 feet, an additional access point may be allowed if determined by the City of Marysville Engineer that the access point will not adversely affect the capacity of the roadway.

2. Coordination of Access Points

Major access points on opposite sides of Category II, III and IV roadways shall be aligned with each other. If not so located, the City of Marysville Planning Commission may impose turning movement restrictions as determined necessary. In order to maximize the efficient utilization of access points, access drives shall be designed, located, and constructed in a manner to provide and make possible the coordination of access with and between adjacent properties developed (existing or future) for similar or compatible uses. As a condition of approval for construction, use, or reuse of any access point, the City of Marysville Engineer may require that unobstructed and unencumbered access be provided from any such access point to the adjacent properties.

3. Consolidation of Existing Access Points

Whenever the use of a parcel of land changes, or two or more parcels of land are assembled under one purpose, plan, entity, or usage, the existing driveway permits become void. The new permit should be based upon the owner/developer's plans to use some or one existing drives and/or close or relocate other driveways. Any such new or re-authorized access point must be in compliance with these access management guidelines.

4. Temporary Access Points

In some circumstances, due to phased development or future roadway improvement plans, it is possible to allow an access point with a design or location which will ultimately interfere with the operation of traffic on the through street or is otherwise not in compliance with the access management guidelines, but for now is the best practical alternative. Such an access point should be designated as "Temporary" upon approval by the City of Marysville Engineer with the understanding that as additional development occurs or when certain traffic conditions on the roadway are met, the temporary access must be converted to a new access scheme which meets all applicable requirements of the access management guidelines. Any access point classified as "Temporary" should be noted on the plot plan or site plan submitted for approval and also upon the deed of the property in question. When a property served by a temporary access point is provided an alternate means of access, such as a connection to a frontage road, an intersection street, or a shared driveway, City of Marysville Engineer may require that the temporary access be eliminated, altered, or limited to certain turning movements. To ensure that temporary access points do not remain in use indefinitely, a plan should be completed and approved by the City of Marysville Engineer for the eventual and permanent access point(s) before the temporary access is allowed.



D. Minimum Signalized Intersection Spacing

Preserving the quality of traffic flow and safety requires the spacing of signals that assures continuous, progressive movement. Uniform, or near uniform, signal spacing is necessary for the most efficient traffic flow. The optimal spacing of signals depends on cycle length and posted speeds. Long cycle lengths combined with high speeds require long distances between signals. Shorter cycle lengths and lower speeds enable closer spacing between signals. The need for a traffic signal at a new or existing intersection shall be determined by a warrant analysis using the Ohio Manual of Uniform Traffic Control Devices and conducted by a qualified traffic engineer. The spacing of major signalized intersections for Category II, III, and IV roadways is shown in **Table 4**. Intersections are not allowed on Category I (Freeway) roads.

Table 4. Minimum Signalized Intersection Spacing for Access Management Category I, II, III and IV Roadways

	Access Categories		
	I	II	III & IV
Preferred Spacing	At-Grade Intersections Not Permitted	1 mile	1 mile
Acceptable Spacing		½ mile	½ mile
Minimum Spacing		½ mile	¼ mile

Source: ODOT State Highway Access Management Manual standards for Class III and Class IV roadways.

E. Other Access Management Techniques

There are a number of access management techniques that can be implemented to improve the efficiency and operation of City of Marysville roadways. The use of frontage or backage roads, shared driveways, and interconnecting parking areas serves to localize access needs and reduces the use of the through roadway for travel between adjacent properties. If parking lots in areas of commercial development are sufficiently interconnected, a consumer wanting to shop at several different locations can travel between those sites without interfering with the traffic on the adjacent roadway. Other techniques such as medians, dual turn lanes or exclusive turn lanes can be used to minimize conflict points allowing a safer and more efficient operation of the roadway. Once a specific access control problem has been identified, one or a combination of techniques may be used to improve the condition. **Tables 5, 6, and 7** provide a list of objectives with a corresponding selection of techniques that can be used to gain insight into possible access management solutions.

TABLE 5. ROADWAY DESIGN AND OPERATIONS TECHNIQUES

FUNCTIONAL OBJECTIVES

Limit Number of Conflict Points	<p><u>Limit Number of Basic Crossing Conflict Points</u></p> <ul style="list-style-type: none"> • Install median barrier with no left turn access • Install median divider with left turn deceleration lanes • Install one-way operations on the highway • Channelize median openings to prevent left turn ingress and/ or egress maneuvers <p><u>Limit Encroachment Conflicts</u></p> <ul style="list-style-type: none"> • Widen right through lane to limit right turn encroachment onto the adjacent lane to the left • Install channelizing islands to prevent left turn deceleration lane vehicles from returning to the through lanes <p><u>Reduce Area of Conflict</u></p> <ul style="list-style-type: none"> • Install physical barrier to prevent uncontrolled access along property frontages • Install medial channelization to control the merge of left turn egress vehicles
Limit Maximum Deceleration Requirements	<p><u>Reduce Roadway Speeds</u></p> <ul style="list-style-type: none"> • Regulate roadway speed limit consistent with driveway operations • Utilize traffic signals where warranted to meter traffic for larger gaps <p><u>Increase Driveway Speeds</u></p> <ul style="list-style-type: none"> • Restrict parking on the roadway next to driveways to increase driveway turning speeds <p><u>Increase Driver Perception Time</u></p> <ul style="list-style-type: none"> • Install visual cues of the driveway • Alter terrain or roadway geometrics for increased sight distance • Improve sight distance by preventing parking on the roadway either totally or partially or for specified time periods • Improve sight distance by preventing parking on the right-of-way
Remove Turning Vehicles or Queues from Sections of the Through Lanes	<p><u>Improve Left Turn Operations</u></p> <ul style="list-style-type: none"> • Install a two way left turn lane • Install continuous left turn lane • Install alternating left turn lane • Install isolated median and deceleration lane to shadow and store left turning vehicles • Install left turn deceleration lane in lieu of right angle cross over • Install medial storage for left turn egress vehicles • Increase storage capacity of existing left turn deceleration lane <p><u>Improve Right Turn Operations</u></p> <ul style="list-style-type: none"> • Install continuous right turn lane <p><u>Completely Separate Driveway from Through Traffic</u></p> <ul style="list-style-type: none"> • Construct a local service road (backage or frontage) • Construct a bypass road • Reroute through traffic

SOURCE: Technical Guidelines for the Control of Direct Access to Arterial Highways, J. C. Glennon, FHWA



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TABLE 6. DRIVEWAY LOCATION TECHNIQUES

FUNCTIONAL OBJECTIVES

Limit Number of Conflict Points	<u>Limit Number of Basic Crossing Conflict Points</u>	<ul style="list-style-type: none"> • Locate driveway opposite a 3 leg intersection or driveway and install traffic signals where warranted • Install two one way driveways in lieu of one two way driveway • Install two two-way driveways with limited turns in lieu of one standard two-way driveway
Separate Basic Conflict Areas	<u>Increase Minimum Spacing of Access Points</u> <u>Increase Average Spacing of Access Points</u>	<ul style="list-style-type: none"> • Regulate minimum spacing of driveways • Regulate minimum corner clearance • Regulate minimum property clearance • Optimize driveway spacing in the permit authorization stage • Regulate maximum number of driveways per property frontage • Consolidate access for adjacent properties • Require roadway damages for extra driveways • Buy abutting properties • Deny access to small frontage • Consolidate existing access whenever separate parcels are assembled under one purpose, plan entity or usage • Designate the number of driveways permitted to each existing property and deny additional driveways regardless of future subdivision of that property • Require access on collector street (when available) in lieu of additional driveway on roadway
Limit Maximum Deceleration Requirements	<u>Increase Driver Perception Time</u>	<ul style="list-style-type: none"> • Regulate minimum sight distance • Optimize sight distance in the permit authorization stage
Remove Turning Vehicles or Queues from Sections of the Through Lanes	<u>Provide Supplementary Access to a Single Property</u>	<ul style="list-style-type: none"> • Install supplementary one-way right turn driveways to divided highway • Install supplementary access on collector street when available • Install additional driveway when total driveway demand exceeds capacity

SOURCE: Technical Guidelines for the Control of Direct Access to Arterial Highways, J. C. Glennon, FHWA



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F. Variance

Unique locations, unusual land conditions or specific access needs may require access designs, locations or spacing that vary from the access management guidelines. In cases where the guidelines cause unreasonable hardship on a particular landowner or in a situation where an alternative access plan has been submitted that meets the objective of the guidelines although not in strict compliance, a waiver or variance may be granted. It should be noted that a variance should be the exception rather than the rule, as overuse will cause lack of compliance and respect for the access management guidelines. The developer or landowner should provide a technical study conducted by a qualified transportation engineer to justify the waiver showing that it is impossible to provide reasonable access to the property if the guidelines are not followed.

G. Access Management Plans

An access management plan or corridor study should be prepared for areas which experience existing congestion and poor access controls or have atypical conditions for their assigned access category. Such a plan can identify improvements to the access and operational systems within a corridor to minimize traffic conflicts and delays while maintaining reasonable exposure and access to development fronting the route. Access management plans apply the guidelines but allow for compromise solutions to avoid undue hardships on owners and users of the existing developments. A plan provides long term solutions for 'retro-fit' conditions or improvement of poor access by such items as closure of driveways, temporary access permits, or formation of parking association. When an access management plan is adopted by the community as an official planning document, it takes precedence over the provisions of the guidelines for the access category assigned to the corridor.

H. Summary

The intent of providing access management guidelines is not to place unreasonable demands on developers but to ensure that the provision of vehicular access to private property does not interfere with the safety and welfare of those using the public roadways. Where conflicts between public and private interests exist, the guidelines should be used as a path rather than a barrier toward a solution.

Benefits from implementation of access management techniques is not forthcoming "overnight" and therefore sometimes difficult to justify. As deterioration of existing road operations has been gradual, improvement necessary to restore the functional integrity will also be gradual. However, the slow reversal process and preservation of new or existing corridor operation reaps benefits in cost savings, safety, reduction of energy consumption, and the creation of aesthetically pleasing corridors.



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Sources:

State Highway Access Management Manual, Ohio Department of Transportation, 2001.

Access Management Classification and Spacing Standards prepared for Oregon Department of Transportation by Robert D. Layton, Oregon State University, 1996.

Arterial Street Access Control Study, prepared by Jeffrey Kern, Tri-County Michigan Regional Planning Commission.

Access Management: A Policy for Local Communities prepared by the Ohio-Kentucky-Indiana Regional Council of Governments, March, 1998.

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