Appendix D

Access Standards Manual 2011

ACCESS STANDARDS MANUAL

FORT WAYNE

NEW HAVEN

ALLEN COUNTY

REVISED 2011

FORT WAYNE - NEW HAVEN - ALLEN COUNTY
ACCESS STANDARDS MANUAL

PAGE

Preface

The intent of the Access Standards Manual is to provide guidance for all developments to ensure safe and efficient traffic flow. The manual will be used as a **guide** by local officials to review all proposed improvements. Each improvement will be reviewed on a case-by-case basis to determine how the guidelines can be achieved given any unique characteristics while ensuring a context sensitive design.

It is recommended that applicants contact the local public agency to schedule a preliminary meeting prior to the development preliminary plans. This process will give all parties a better understanding of the project and potential requirements to reduce development cost, avoid delays, and result in an amicable project.

INTRODUCTION

Any street or highway system must address the functions of both land access and traffic movement, which are necessary but conflicting functions. Excessive roadside developments and uncontrolled driveway connections preclude the orderly and safe movement of traffic and result in poor levels of service, increased hazards, and early obsolescence of the roadway. This leaves the authorities responsible for the street or highway with the challenge of providing adequate access to properties while not sacrificing traffic operations along the route.

The rights of property owners for access are recognized. It is also understood that residential, commercial and industrial growth within an expanding metropolitan area is desirable and will occur. As travel demand and land development increases in the developing urban fringes, roadways deteriorate in their ability to accommodate traffic safely and efficiently.

It can easily be shown that traffic congestion and unlimited access adversely affects conditions for transacting business, produces accidents, negatively impacts air quality, interferes with the operation of emergency medical, fire, and police forces and, in general, reduces the enjoyment of many phases of urban life and activity.

The streets and highways constitute an important resource and a major public investment. It is essential to operate them efficiently. Access management calls for a significant improvement in access design and spacing standards in recognition that the lack of access control is the largest single cumulative design element reducing roadway safety and capacity. A well conceived, comprehensive access management program can save time and lives while maximizing the capacity of the roadway and preserving access to surrounding activities.

An Access management program thus should extend planning and engineering principles to the location, design and operation of driveways serving development along the roadway system. Access management is an effective application and a vital component of congestion management systems. Comprehensive access management programs allow traffic engineers, planners and developers to work together in developing a workable roadway system for all involved.

The primary objective of this manual is to establish guidelines for the location and design of driveways providing access from public streets and highways to developments on abutting properties. In order for the guidelines to be of maximum value, it is necessary that wide flexibility be retained in their application**. Engineering judgment should override recommended dimensions if warranted by specific traffic conditions.**

I. ACCESS MANAGEMENT ELEMENTS:

If the objectives mentioned in the Introduction are to be achieved effectively, the Access Management Program and Access Standards Manual must include the following elements:

A. Technical:
Guidelines should be followed which manage access through design and operation; use of islands, turning lanes, radii and driveway requirements. The guidelines should establish ways to coordinate internal and external access plans.

B. Legislative:
Laws relative to access control, permits, site plan guidelines, financial requirements and zoning requirements

C. Enforcement:
Procedures for monitoring adherence to regulations

D. Coordination among agencies:
Coordination between city, county, state, transportation and land use planners, traffic engineers and law enforcement agencies in the community must be maintained by the respective agencies.

Access management views the roadway and its surrounding activities as part of a single system. The goal is to coordinate the planning and design of each element to preserve the capacity of the overall road system and to allow efficient access to and from the activities along it.

The effects of any proposed access must be evaluated not only for the proposed development, but also for its impact on other development in the vicinity and the cumulative effect in the area.

To ensure safety standards and reduce congestion, a full access that will serve a development (commercial, industrial, and residential developments), that is either directly off of a major roadway or off of a roadway that intersects with a major roadway or the ramps of that roadway, is recommended to be located no less than 1,000 feet from the nearest intersection. Accesses limited to right turns into and out of the development may be permitted within the 1,000 feet when deemed appropriate by the Responsible Authority. The distance of 1,000 feet allows for adequate turning storage and deceleration tapers for both the roadway and development (a typical 45 mph speed limit would require 960 feet of taper and storage). The corridors that have been designated as major roadways in which the above applies are listed and provided in map form in Appendix A. However, when deemed appropriate by the Responsible Authority, the above may be recommended on a corridor not listed or shown in Appendix A.

II. DESIGN CONSIDERATIONS/ANALYSIS STEPS

The following types of information are necessary to reach appropriate traffic decisions regarding access for development:

A. Characteristics of the existing roadways and public transportation system; parking practices, roadway widths, daily and peak hour traffic volumes (preferably directional) established right-of-way widths, travel times and delays, signal locations, bus service routes and frequencies.

B. Characteristics of proposed developments; type, size, parking space provisions and location with respect to nearby access points.

C. Future development traffic; parking space requirements, peak traffic hours, peak-hours of specific development, and number of vehicles entering and leaving the site and their directional flow.

D. Evaluation of composite traffic on surrounding and approach roads; the addition of development traffic to highway traffic for the opening year of the development. The estimates should be realistic so that understating or overstating of demand is avoided.

E. Road system adequacy and needs; the ability of the roadway system to carry the anticipated traffic should be analyzed and improvements outlined. Future volumes should be compared with present and future capacities.

F. Access Plan: Identify the needed access changes along the adjoining roads, coordinated with the driveways leading to and from the site and the internal site plan for the development.

G. Financial responsibilities: Developers, communities, and the Responsible Authority must arrange and agree upon the timing and cost of proposed improvements.

H. Major options and issues involved with analysis of specific access locations are as follows:

1. Can full access be provided between the roadway and the development?

2. Should access be restricted to right turns into and out of the given development?

3. Should access points be relocated so that they line up with existing access to the development on opposite sides of the street or relocated away from intersections?

4. Should access points be spread to separate conflicting left turns into and out of the site, and what criteria should be considered in such circumstances?

5. Should access points be prohibited along major streets and allowed only along secondary streets?

6. If there is an access road plan in effect for the corridor, how does access for this development relate to the permanent access road entrance locations?

The objective is to assure that development can be effectively managed from a transportation perspective. Techniques include better control of conflict points, separation of turning and through traffic, and coordination of access locations with both the roadway system and internal circulation system.

III. DRAWINGS AND INFORMATION REQUIRED FOR ACCESS PERMIT APPLICATION:

All applications for permits under these regulations shall be accompanied by clear drawings. Four (4) drawings shall accompany each application form.

Information to be submitted with, or shown on the drawings shall include the following **as applicable:**

A legal description and drawing, to scale, of the entire tract of land as recorded in the office of the County Recorder. The drawing must show property dimensions, indicate existing facilities and proposed improvements, the location of those improvements, and the intended uses.

Additional attached detailed plans, drawn to scale, shall depict the following:

1) Property lines
2) Right-of-way lines
3) Intersecting roads, streets, railroads, median crossovers and drives within five hundred (500) feet of the applicant's property lines, on both sides of the roadway
4) Width and type of road surface
5) Necessary and existing pipe, tile, or other drains stating size and kind
6) Existing utilities
7) Proposed and existing driveways and approaches
8) Distance from right-of-way lines to proposed and existing structures, including gasoline pumps, signs, barriers, landscaping, etc.
9) Proposed type of surface, width and depth of driveways and approaches in compliance with standards
10) Proposed type of surface, length and width of recovery and deceleration lanes, if required
11) Proposed radii
12) Proposed treatment of right-of-way area adjacent to and between approach
13) Proposed rate of slope or grade of approaches, driveways, and the roadway centerline elevation
14) Proposed internal parking details and traffic patterns, including number of existing/proposed parking spaces.
15) Total square feet or acreage of property.
16) Total square feet of existing/proposed structures included in the development.

The drawings shall include all pertinent topography to scale, and properly dimensioned for at least 500 feet in each direction of the property, and on both sides of all roadways affected. The drawings shall also include appropriate symbols such as a north arrow, direction of lane travel, direction of drainage flow, a legend defining abbreviations and graphic representations of existing and new conditions, objects, materials, etc.

A legal description shall be submitted showing the property to be served by the permit together with a legal description of any adjoining land owned or controlled by the applicant.

IV. ADDITIONAL APPLICATION INFORMATION

A. No person, firm, corporation, or developer shall add, construct or reconstruct any entrance, driveway, or approach connecting with any public roadway, nor shall any curb along such roadway be cut, or removed without the written permit of the Responsible Authority, and only according to established requirements, including those of the Access Standards Manual and the Americans With Disabilities Act (ADA).

B. The Responsible Authority shall determine and establish such requirements and restrictions for private entrances, driveways and approaches as considered necessary to provide for drainage, adequate safety features, preservation of the roadway, and efficient movement of people and goods.

C. All work shall be inspected and approved by the Responsible Authority. The entire cost of construction shall be borne by the person, firm, corporation, or developer to whom the permit is issued.

D. The Responsible Authority is authorized to require, before granting the permit, that sufficient bond be given or cash deposit made with the Responsible Authority to ensure the carrying out of the terms of such permit. The bond or deposit shall be returned when the requirements of the permit have been met.

E. The owners or occupants of the properties adjacent to the roadway shall maintain and keep in repair all such private entrances, driveways and approaches once constructed.

F. When any roadway is constructed or reconstructed, the construction of all public road approaches and existing private approaches, together with the drainage structures required for its protection, can be included as part of the improvement of the roadway.

When the roadway is constructed or reconstructed, the Responsible Authority may require the relocation of any existing drives in the interest of safety to the motoring public. The person, firm, corporation or developer owning or occupying the properties adjacent to the roadway shall make such change in location under the direction of the Responsible Authority. Upon completion of the roadway, the owners or occupants of properties adjacent to the roadway shall keep in repair all private approaches or driveways from such roadways.

G. When there is a change in the type of business and/or land use of an existing property, regardless of how minor, a new application for a land use permit or certificate of occupancy must be submitted to the plan commission office of the responsible jurisdiction. At that time, existing access to the site may be reviewed and changes may be required depending on the impact of the change in land use.

H. The person, firm, corporation, or developer must obtain a driveway permit concurrently with the Improvement Location Permit and/or Building Permit.

I. Any person, firm, corporation, or developer violating any of the provisions of this section shall be subject to a fine not to exceed the amount as set forth as a fine for such offense by the Responsible Authority (if fine provisions exist within the particular jurisdiction).

J. The expense of relocation or replacement of any or all improvements within the right-of-way shall be the responsibility of the permittee.

K. In no case shall vehicles be allowed to stand on any portion of the roadway. It will be the owner's responsibility to close the entrance of the facility before stacking on the roadway occurs due to lack of onsite parking or circulation.

L. Construction of entrance and approach shall be completed within one year of issuance of such permit. If such construction is not completed, the permit must be renewed.

M. The angle of any drive or approach shall be 90 degrees unless otherwise approved by the Responsible Authority.

N. When access is requested to a loading dock, there must be sufficient distance between the dock and the sidewalk or right of-way to prevent encroachment while parking or maneuvering. Permits for loading dock facilities should be reviewed by respective land use staff of the Responsible Authority to ensure proper on and off-site circulation in accordance with ordinance requirements as well as those of the transportation facilities involved.

O. Liability insurance must be furnished according to the Responsible Authority's requirements.

P. The Responsible Authority reserves the right to remove or barricade nonconforming access installations.

V. TEMPORARY PERMITS:

The issuance of a Temporary Permit for the construction of access driveways will be considered under the following circumstances:

1) Temporary access is needed for construction vehicles during the site development or building construction phase of a project;

2) Temporary access is needed prior to the development and installation of an access road on adjacent properties. For example, where access roads are required or the roadway has been designated a "Limited Access Controlled Highway" and the permanent access location is not established along the frontage of the property seeking access;

3) Access is desired along a roadway scheduled for improvement by the Responsible Authority.

In all cases, a temporary permit should be prominently labeled "Temporary Access Permit" and should clearly designate an expiration time frame tied to a specific date or event. Renewal requests must be in writing and submitted to the Responsible Authority 60 days prior to the permit expiration. A written response will be returned to the permit applicant, detailing the rationale for the approval or denial of the permit extension, with a copy of the letter filed with the original permit.

Prior to a temporary permit expiring, the permitted access must be removed and the right of way restored to a condition similar to the adjacent right of way, allowing for the continuation of any roadway pavement, pavement markings, berms, drainage swales, piping, grass areas, etc.

The granting of temporary permits for access to designated "Limited Access Control Highways" or to normal roadways scheduled for improvement will be considered where such permits will be accepted by the owner or the developer with the inclusion of a suitable clause protecting the Responsible Authority against improvement costs. The permit should contain a paragraph worded essentially as follows:

"The applicant hereby states that he/she is the owner of record of the tract of land to be served by the access driveway described herein, said land being situated in the County of _____, State of Indiana, and described as follows: _____(Legal description and common address)_____
_____.

The applicant understands that the above described driveway is within the limits of a designated protected corridor, an access road plan area, or limits of existing or proposed public right-of-way and that such entrance will be removed or revised at such time that the Responsible Authority completes negotiations for access rights to the property or right-of-way. It is further understood that this permit is accepted with the full understanding that any improvement or construction on the property after _____ shall not be considered as increasing the value of the rights of access or right-of-way at such time as these rights are obtained for the purpose of developing the adjacent facility."

Since temporary permits of this sort will have a direct bearing on the acquisition of access rights and right-of-way in the future and in case the property under permit changes ownership, the Responsible Authority retains the right to require that the permit be duly recorded with the proper Agency.

The same standards and criteria shall govern temporary driveway permits as previously outlined for all driveways to roadway facilities.

VI. CLASSES OF DRIVEWAY ENTRANCES (DEFINED)

All entrances from highway or street to public, or private property shall be generally classified as follows, and a permit for each class will be required.

A) Class I - Residential Entrance

A driveway by which a street with a raised curb is connected to a one or two family residential facility such as a residence, garage, barn or other improvement. The driveway is ordinarily used only by the owner or occupant of the premises.

B) Class II - Residential Entrance

A driveway by which a street without a raised curb but with shoulders only, is connected to a one or two family residential facility such as a residence, garage, barn or other improvement. The driveway is ordinarily used only by the owner or occupant of the premises.

C) Class III - Commercial Entrance

A driveway, or driveways by which a street with raised curb is connected to public, or private property which is used for commercial, industrial, or multiple-family residential development, or for a church or school.

D) Class IV - Commercial Entrance

A driveway, or driveways by which a street without a raised curb but with a shoulder only, is connected to public or private property which is used for commercial, industrial, or multi-family residential development, or for a church or school.

E) Class V - Field Entrance

A driveway connecting a street with unimproved property that is not used commercially, such as a field, or vacant lot.

VII: GENERAL SPECIFICATIONS AND SPECIAL REQUIREMENTS FOR CONSTRUCTION OF DRIVEWAYS BY CLASSES, INCLUDING ACCESS ROADS

A. CLASS I, CLASS II, AND CLASS V (APPLIES TO ENTRANCES FOR RESIDENTIAL, PRIVATE GARAGES, AND OTHER IMPROVED AND UNIMPROVED PROPERTIES)

1. General Requirements:

a) The application shall be accompanied by a drawing, to scale, showing all existing driveway entrances, approaches, and other pertinent features on the property in question. (See Section III, Page 4)

b) Common driveways for adjacent property owners are encouraged provided a written agreement between the property owners is properly documented.

c) The location of driveways shall be such that no part of the radius shall extend beyond the extension of the adjacent property line, unless a written encroachment agreement is obtained from the adjacent property owner.

d) Drive approach surfaces shall be of a type acceptable to the Responsible Authority.

e) All access geometrics, such as entrance, location, driveway width and radii shall be in accordance with the following drawings found in Appendix B:

Drawing	Description	Page
# 1	Class I - Residential	42
# 2	Class II - Residential	43
# 5	Class V - Field	46

* Radii requirements shown on page 19.

B. CLASS III AND CLASS IV (APPLIES TO ENTRANCES FOR MULTI-FAMILY RESIDENTIAL, COMMERCIAL, INDUSTRIAL, SCHOOL, CHURCH PROPERTIES, CAR WASHES, DRIVE-IN BUSINESSES, GASOLINE STATIONS, AND FAST FOOD STATIONS)

1. General Requirements:

a) No application for access to a public street or highway will be approved until a complete site plan showing proposed land uses, improvements, layouts of parking spaces and internal traffic patterns, is submitted to the Responsible Authority and approved.

b) The application shall be accompanied by a drawing, to scale (maximum scale 1" to 50') showing all existing driveway entrances, approaches, and other pertinent planimetric and topographic features for a distance equal to the sight distance requirements as shown in Table 10 on page 28.

c) All access geometrics (drawn at a maximum scale of 1" to 50') such as entrance location, driveway spacing and width, deceleration, recovery and passing lanes, shall be in accordance with the following drawings found in Appendix B:

Drawing	Description	Page
# 3	Class III-Commercial	44
# 4	Class IV -Commercial	45
# 6	Divided Entrance	47
# 7	Approach Pavements (Undivided Roadways)	48
# 8	Approach Pavements (Divided Roadways)	49

d) It will be the responsibility of the permittee to construct any and all improvements as set forth by the approved application at the time of the entrance construction.

e) No gasoline service station will be permitted access on any corner lot which has frontage of 100 feet or less.

2. Special Requirements:

a) Two entrances

Two entrances may be permitted when circumstances warrant, based on anticipated traffic generation, road classification, average daily traffic volumes, speed limits, total feet of frontage controlled, and other engineering considerations. Two entrances will be permitted only when necessary to provide safe and efficient traffic flow and if the property does not lie within a designated protected corridor. Final determination will be at the sole discretion of the Responsible Authority.

b) Divided entrance

A divided (boulevard) entrance may be required for major traffic generators. The Responsible Authority reserves the right to permit or require a divided entrance, based on the traffic generation of the proposed use and the effect on the traffic carrying capacity of the adjacent highway. The entrance and exit drives shall be operated in a one-way pattern. The length of the median, and/or barrier curb along the right edge of the entrance should be extended a sufficient length internally to preclude conflicts within the development site which could cause traffic stacking on the roadway.

c) Entrances for use primarily by tractor-trailer combinations

Entrances for use primarily by tractor-trailer combinations may be permitted by the Responsible Authority. AASHTO WB 50 wheel path templates shall be used for geometric design.

d) Traffic control devices

Traffic control devices shall be placed or installed when warranted. All devices shall be installed in accordance with current standards found in the state or federal MUTCD (Manual on Uniform Traffic Control Devices).

1. Signage & Pavement markings

All signs and pavement markings will be in accordance with the most recent version of the MUTCD as required by the Responsible Authority.

2. Traffic Signals

Signals installed at entrances to development will be installed and interconnected as desired by the Responsible Authority. Power shall be furnished in compliance with the "Industrial and Commercial Signal Policy" (Page 37) and in accordance with the terms of the permit. Subsequent to installation, the traffic control signals will become the property of the Responsible Authority.

e) Multiple Land Use Complex

A multiple land use complex will be considered as one site and integral buildings to be constructed shall not receive separate consideration for an entrance.

f) Access Roads

Access roads may be required in designated corridors by the Responsible Authority. The Responsible Authority shall determine the width of easements (right-of-way) needed and establish the permanent access locations. Permittee shall submit a signed and recorded access road agreement and documentation of temporary access closures. See Drawing #9 of Appendix B (Page 50).

g) Standing Vehicles

In no case shall vehicles be allowed to stand on any portion of the roadway (public or private). It will be the owner's responsibility to provide sufficient on-site parking and vehicle circulation or close the entrance of the facility before such a condition occurs.

h) Auxiliary lanes

Auxiliary lanes may be required for any or all of the following reasons:

1. Existing traffic volumes
2. Projected traffic volumes
3. Accident experience
4. Anticipated trip generation
5. Existing traffic pattern
6. Number of existing lanes
7. Sight distance
8. Existing speed limit
9. Other specific traffic or site conditions

i) Median Crossovers on Divided Highways

These will be discouraged. A crossover may be allowed only when the Responsible Authority determines overall roadway efficiency would be improved. Minimum spacing would be determined by the Responsible Authority.

C. GENERAL DESIGN CRITERIA:

1. Corridor / Intersection Protection Guidelines

To ensure safety standards and reduce congestion, a full access that will serve a development (commercial, industrial, and residential developments), that is either directly off of a major roadway or off of a roadway that intersects with a major roadway or the ramps of that roadway, is recommended to be located no less than 1,000 feet from the nearest intersection. Accesses limited to right turns into and out of the development may be permitted within the 1,000 feet when deemed appropriate by the Responsible Authority. The distance of 1,000 feet allows for adequate turning storage and deceleration tapers for both the roadway and development (a typical 45 mph speed limit would require 960 feet of taper and storage). The corridors that have been designated as major roadways in which the above applies are listed and provided in map form in Appendix A. However, when deemed appropriate by the Responsible Authority, the above may be recommended on a corridor not listed or shown in Appendix A.

2. Driveway Spacing Requirements

No direct access drive to an arterial should be located within the operational area of an intersection. Table 1 presents the access-drive spacing that is required.

TABLE 1
MINIMUM DRIVEWAY SPACING DISTANCE TO REDUCE COLLISION POTENTIAL DUE TO RIGHT-TURN CONFLICT OVERLAP

SPEED (MPH)	PREFERABLE	LIMITING
30	135	100
35	245	160
40	300	210
45	350	300

3. Property Line Clearance Requirements

A minimum property clearance should also be considered so that vehicles can exit one driveway and safely enter the adjacent driveway. For this maneuver, a minimum property clearance distance of 15 ft. should be provided. The recommended property clearance shown in Table 2 and Table 3 should serve as a guideline if minimum driveway separation distances cannot be implemented directly.

TABLE 2
RECOMMENDED PROPERTY LINE CLEARANCES BY SPEED LIMITS

HIGHWAY SPEED (MPH)	PROPERTY CLEARANCE (FT)
25	50
30	60
35	75
40	90
45	115

TABLE 3
PROPERTY LINE CLEARANCES FOR COMMERCIAL AND INDUSTRIAL DRIVEWAYS BY ROAD CLASSIFICATION

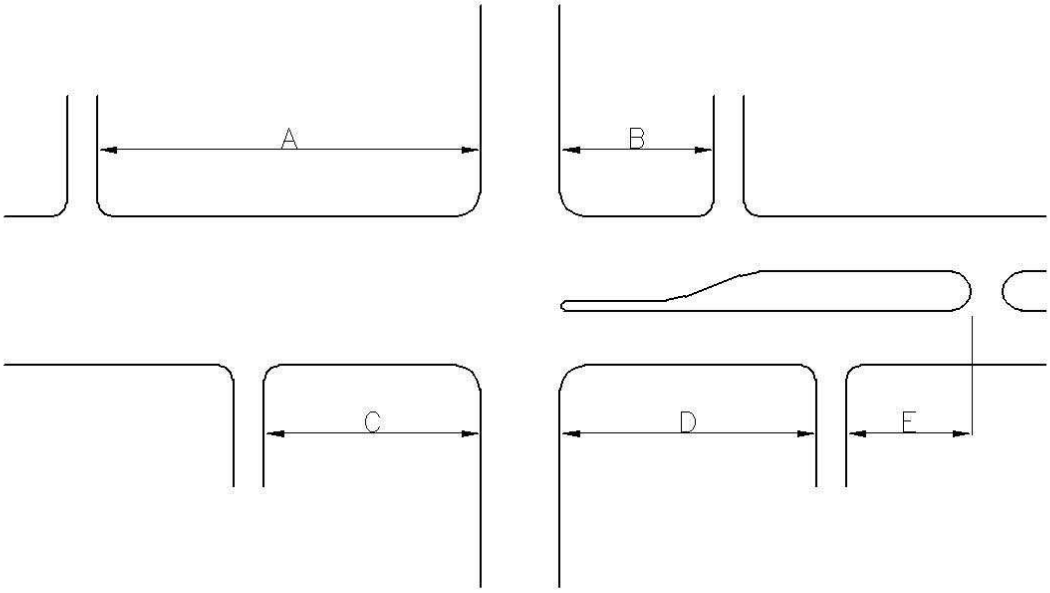
ROAD TYPE	MINIMUM PROPERTY LINE CLEARANCE (FT)
Arterial	100
Collector	75
Local	50

4. Corner Clearance Requirements

Corner Clearance on Intersecting Streets. Small corner clearance will result in a high probability that an access drive to a minor street will be blocked by vehicles stopped at the intersection. Blockage of the of an ingress maneuver presents a serious operational problem. When there are numerous turns from the major street to the minor street, traffic backup may extend into the intersection and seriously interfere with traffic movement on the major street.

Suggested minimum dimensions for design are given in Figure 1 for signalized intersection control and Figure 2 for stop-sign intersection control.

FIGURE 1
CORNER CLEARANCE FOR SIGNALIZED INTERSECTION CONTROL



MINIMUM CORNER CLEARANCE (FEET)

ITEM	FUNCTIONAL CLASSIFICATION OF ROAD		
	ARTERIAL	COLLECTOR	LOCAL
A	230	175	50
B	115	85	50
C	230	175	50
D	230	175	50
E	75	0	0

** The dimensions assume a 30 MPH operating speed. Speed limits of 35 – 45 MPH will be 2 times the noted distances, and speed limits greater than 45 MPH will be 3 times the noted distances.*

CORNER CLEARANCE REQUIREMENTS
SIGNALIZED INTERSECTION CONTROL

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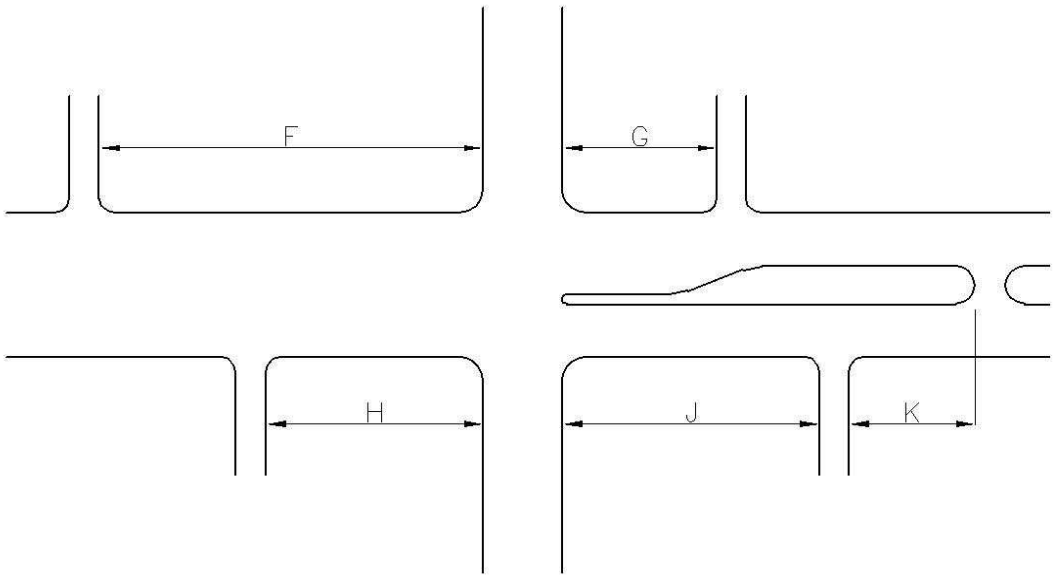
FIGURE 2
CORNER CLEARANCE FOR STOP-SIGN INTERSECTION CONTROL

5. Radii Requirements



MINIMUM CORNER CLEARANCE (FEET)

ITEM	FUNCTIONAL CLASSIFICATION OF ROAD		
	ARTERIAL	COLLECTOR	LOCAL
F	115	75	50
G	115	85	50
H	85	85	50
J	115	75	50
K	75	0	0

** The dimensions assume a 30 MPH operating speed. Speed limits of 35 – 45 MPH will be 2 times the noted distances, and speed limits greater than 45 MPH will be 3 times the noted distances.*

CORNER CLEARANCE REQUIREMENTS
STOP SIGN INTERSECTION CONTROL

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Tables 4, 5, and 6 contain the radii requirements for Class I, II, III and IV drives.

TABLE 4
RADII REQUIREMENTS FOR CLASS I - RESIDENTIAL

	Maximum	Minimum	Preferred	
			R-1	R-2
Residential	10’	5’	10’	10’
Collector	20’	10’	15’	10’
Arterial	25’	10’	25’	15’

TABLE 5
RADII REQUIREMENTS FOR CLASS II - RESIDENTIAL

	Maximum	Minimum	Preferred	
			R-1	R-2
Residential	15’	10’	10’	10’
Collector	20’	10’	15’	10’
Arterial	25’	15’	25’	15’

Note: For Class I and II drives, a minimum frontage of 125’ is required for a double drive

TABLE 6
RADII REQUIREMENTS FOR CLASS III & IV COMMERCIAL

	Maximum	Minimum	Preferred	
			R-1	R-2
Residential	30’	15’	25’	15’
Collector	40’	15’	30’	15’
Arterial	40’	20’	30’	20’
Industrial Park	40’	20’	30’	20’

***Approach pavements will be required as specified herein, or as required by the Responsible Authority (ies)*

6. General Criteria for Auxiliary Lanes

a. Graph 1 and Graph 2 are based upon trucks exceeding 30,000 pounds gross vehicle weight (G.V.W.) being less than seven percent of the DHV. If the access will have a larger percentage of vehicles exceeding 30,000 G.V.W., the access DHV values in the graphs may be reduced by one-half to require median speed change lanes in the interest of public safety.

b. Where higher left turning volumes, safety, or traffic operations necessitates, a double left turn design may be required.

c. If the design of the access is within two different speed zones, the criteria for the higher speed zone will apply.

d. **When the public safety so requires due to site specific conditions, such as sight distance, a turn lane may be required even though the criteria in this subsection are not met.**

e. When calculating the highway single lane DHV, it will be assumed that all lanes have equal volumes.

6.1 Right Turn Lanes on 2-Lane Roadways

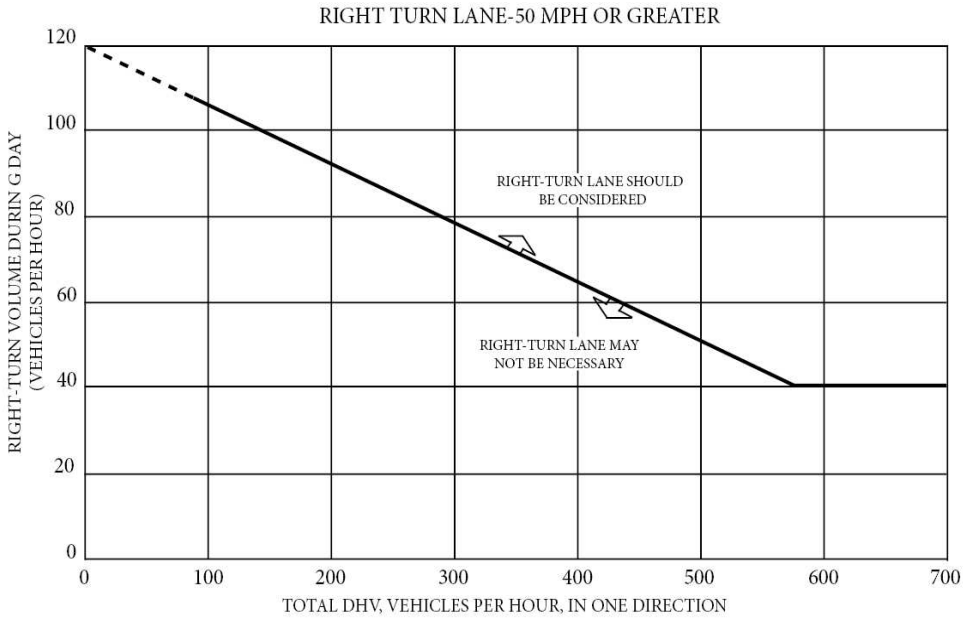
A right turn lane shall be required when one or more of the following criteria are met:

a. On rural or urban roadways where traffic satisfies the criteria in Graph 1 – Right Turn Lane Criteria

b. Where a capacity analysis determines a right turn lane is necessary to meet the level-of-service criteria.

c. Where the crash experience, existing traffic operations, sight distance restrictions, (e.g. intersection beyond a crest vertical curve), or engineering judgment indicates a significant conflict to right turning vehicles.

GRAPH 1
RIGHT TURN LANE CRITERIA



6.2 Deceleration Lanes for Left Turning Vehicles

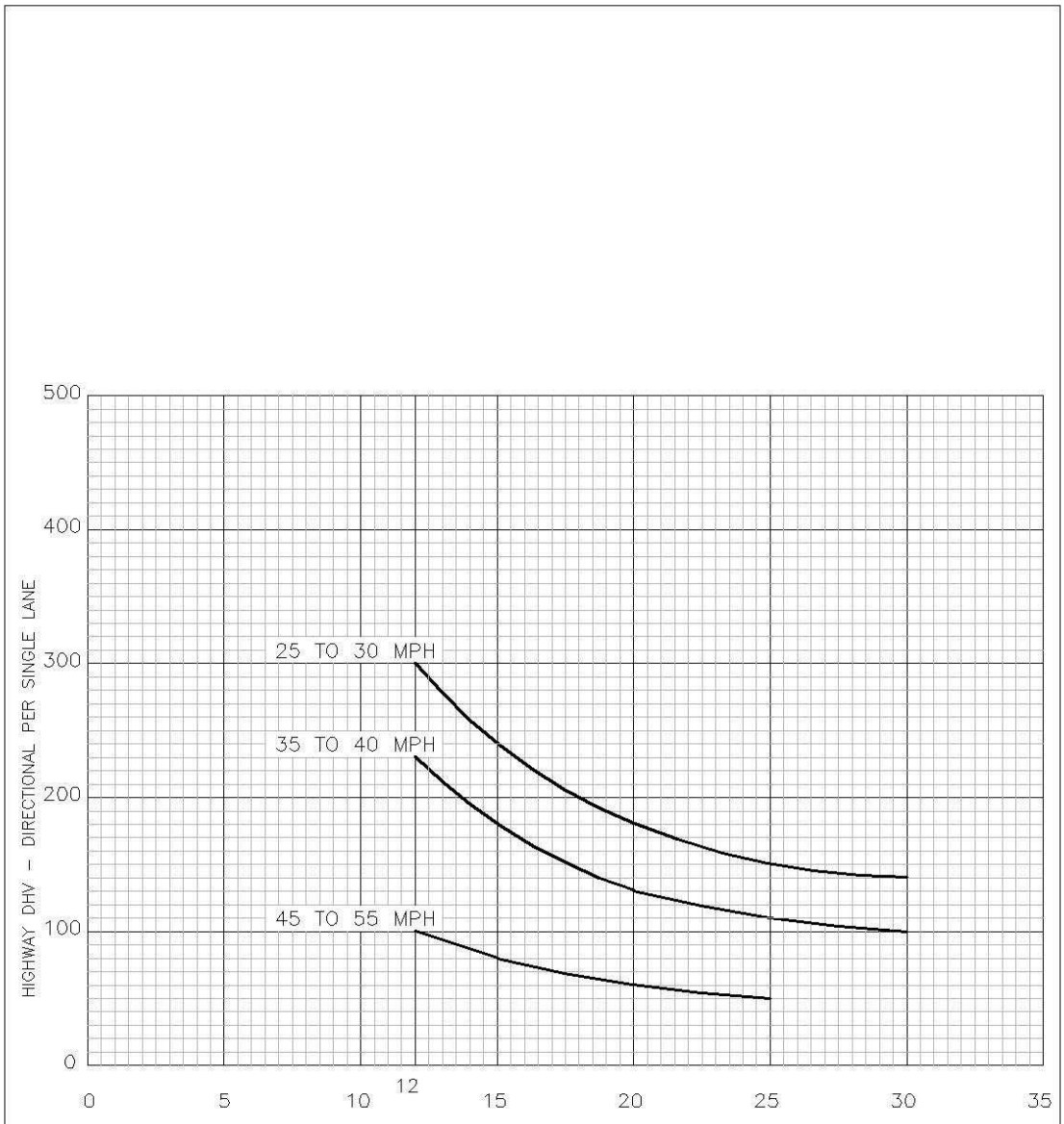
a. A speed change lane for left turning movements is required for any access according to Graph 2 when the DHV values of the highway single lane and the DHV of left turns intersect at a point on or above the curve for the posted speed.

b. Where the DHV of the left turn into the access is less than 12 DHV and the inside lane volume exceeds 250 DHV on 45 to 55 MPH highways or 400 DHV on 25 to 40 MPH highways, a left turn lane may be required due to the high traffic volumes or other unique site specific safety considerations.

c. When the access volume meets or exceeds 30 DHV on 25 to 40 MPH highways, or 25 DHV on 45 to 55 MPH highways, a left turn deceleration lane is required.

Engineering judgment may require a passing blister in some instances where left turn lanes are not determined to be necessary based on the criteria above.

GRAPH 2
LEFT TURN LANE CRITERIA



LEFT-TURN LANE CRITERIA

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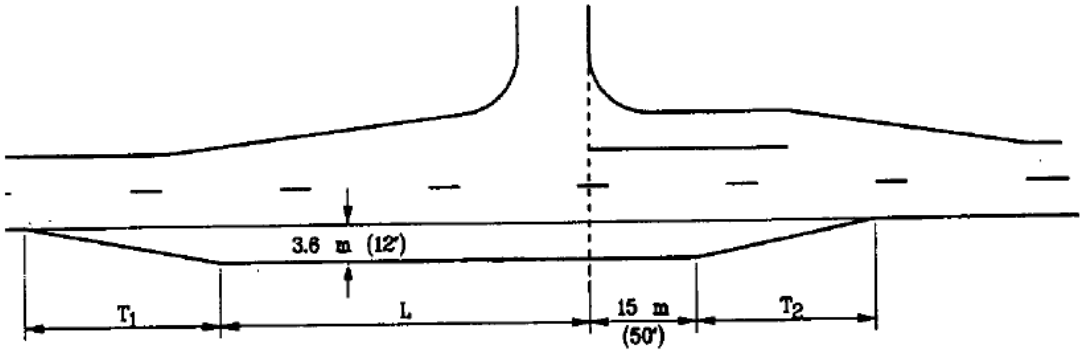
FIGURE 3
PASSING BLISTER DESIGN



Design Speed		T_1		L		T_2	
km/h	mph	meters	feet	meters	feet	meters	feet
50	31	45	148	45	148	45	148
>50 - <80	>31 - <48	60	197	45	148	60	197
>80	>48	90	296	60	197	90	296

6.3 Construction of Auxiliary Lanes (speed change lanes)

(1) When auxiliary lanes are required, they shall be constructed in accordance with this subsection and the requirements of the Responsible Authority.

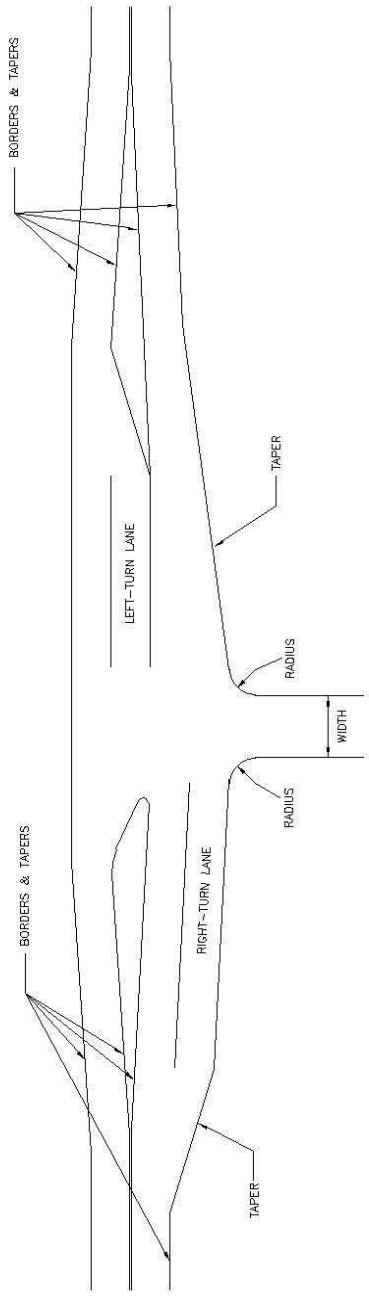
(2) Where two accesses have auxiliary lanes that overlap, or are in close proximity but do not overlap, a continuous lane shall be established between the accesses to improve roadway consistency, safety, and to maintain edge continuity.

(3) Auxiliary lane widths shall meet design standards established for RRR projects. (see Appendix C for reference)

(4) Where no curb and gutter is required, a paved shoulder shall be provided that matches the existing shoulder width along the highway or is a minimum of four feet in width, whichever is greater.

The auxiliary lane elements are illustrated in Figure 3.

FIGURE 4
AUXILIARY LANE ELEMENTS



AUXILIARY LANE ELEMENTS

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

6.4 Median Design

a. A median area is necessary in order to construct a left-turn deceleration lane as required according to subsection 5.

b. When it is necessary to widen a highway for a median and public right-of-way is made available, the highway should be widened equally on both sides in order to maintain the existing highway centerline alignment.

6.5 Storage Length

a. Additional storage length is required to accommodate turning vehicles according to the following table where vehicle turning movements for a left turn deceleration lane are 30 DHV or greater. A right turn deceleration lane shall provide for vehicle storage length when there is a controlled stop condition. Storage for right turns may be one-half the length required by Table 7.

TABLE 7

STORAGE REQUIREMENTS

Turning vehicles per hour	30	60	100	200	300
required lane length in feet	25	50	100	175	250

b. For every 15 DHV of trucks larger than a single unit, the length of the average truck plus 10 feet shall be added to the storage length required by this table.

6.6 Grade Adjustment

Auxiliary lanes including tapers required adjustments in length according to the following conditions. Auxiliary lanes shall use the following multiplication factors in determining auxiliary lane length for all highways with grades of 3 percent or greater. Grade is the ratio of the change in elevation to the length of slope. Multiply the lengths required in subsections 5.1 by the appropriate factors given in Tables 8 and 9.

TABLE 8
GRADE ADJUSTMENT FACTORS FOR DECELERATION LANES

For all posted speeds	3 to 4.9% upgrade	3 to 4.9% downgrade
	0.9	1.2
	5 to 7% upgrade	5 to 7% downgrade
	0.8	1.35

TABLE 9
GRADE ADJUSTMENT FACTORS FOR ACCELERATION LANES

Posted speed MPH	**3 to 4.9% upgrade**	**3 to 4.9% downgrade**
25 to 45	**1.3**	**.7**
50	**1.4**	**.65**
55	**1.5**	**.65**
60	**1.5**	**.6**
Posted speed MPH	**5 to 7% upgrade**	**5 to 7% downgrade**
25 to 45	**1.5**	**.6**
50	**1.8**	**.55**
55	**2.0**	**.55**
60	**2.3**	**.5**

7. Sight Distance Requirements

a. Permits shall not be issued that include design elements or allow any turning movements where the sight distance is inadequate to allow the safe movement of any motorist using or passing the access.

b. Table 10 shall be used to determine the required horizontal and vertical sight distance necessary as measured from the vehicle traveling on the highway to the access.

TABLE 10
HORIZONTAL AND VERTICAL SIGHT DISTANCE REQUIREMENTS

Posted speed, MPH	**30**	**35**	**40**	**45**	**50**	**55**
Required sight distance	**200**	**250**	**325**	**400**	**475**	**550**

1. This table is based on wet pavement conditions and the average vehicle maintaining the posted speed limit. These lengths shall be adjusted for any grade of three percent or greater using the tables in subsection 5.6.

2. For calculating this sight distance, a height of 3.5 feet shall be used for the driver's eyes and a height of 4.25 feet shall be used for a vehicle assumed to be on the centerline of the access five feet back from the edge of the traveled way. The driver's eye shall be assumed to be at the centerline of the inside lane (inside with respect to the curve) for measurement purposes.

c. In addition to the sight distance necessary for vehicles traveling on the highway to see vehicles or objects in the traveled way, it is also necessary to provide the entering vehicle adequate sight distance in order to enter or cross the highway. Table 11 shall be used to establish the minimum sight distance necessary for the entering vehicle.

1. The vehicle shall be the largest vehicle normally intended to use the access in excess of an average of one per day.

2. Sight distance shall be measured at a height of 3.5 feet from the entering driver to a height of 4.25 feet for the oncoming vehicle.

3. The entering driver's eyes shall be assumed to be 10 feet back from the edge of the traveled way.

4. If there is no median or if the median is too narrow to safely store a left turning or crossing vehicle (a 20 foot minimum for passenger cars), both directions shall be considered from the access location.

5. If the median can safely store the turning or crossing vehicle, then sight distance shall consider a two stop condition. The vehicle will stop once at the outside edge of the outside lane and again within the median. Each one-way highway direction shall be considered separately.

After sight distance requirements are met and an access permit issued, a sign structure or parked vehicle shall not be permitted where it will obstruct the required sight distance.

TABLE 11
MINIMUM SIGHT DISTANCE REQUIREMENTS FOR VEHICLES ENTERING OR CROSSING A HIGHWAY

Vehicles expected to enter or cross highway	Sight Distance in feet for each 10 MPH of posted speed limit along highway		
	2 lane	4 lane	6 lane
Passenger Car	100	120	130
Single Unit Truck	130	150	170
Multi-unit Truck	170	200	210

8. Other Design Elements

a. For all curb cuts, the vertical curve from the traveled way into the access shall be the flattest curve that can be obtained. To prevent center or overhang drag, with some allowance for load and bounce, crest vertical curves should not exceed a four inch hump in a 10-foot chord. For any access that is not a curb cut, including streets and private access using curb returns, the first 20 feet beyond the closest highway lane, including speed change lanes or the distance to the side drain, whichever is greater, shall slope down and away from the highway at a two percent grade to ensure proper drainage control.

b. **Within the right-of-way, maximum grades shall be limited to 8.33 percent for all access drives. Lesser grades may be required for drainage control purposes.**

c. The horizontal axis of an access to the highway shall be at a right angle to the centerline of the highway and extend a minimum of 40 feet beyond the traveled way. An angle between 90 and 60 degrees may be acceptable only if significant physical constraints require a skew angle less than 90 degrees and is approved based upon site specific conditions.

d. Access specifications shall ensure that the access is designed and constructed in a manner that will encourage proper use by the motorist. **Access for one-way operation shall be approved only when design conditions ensure one-way operation.**

e. An access that has a gate across it shall be designed so that the longest vehicle using it can completely clear the traveled way when the gate is closed.

f. The access shall be designed to facilitate the movement of vehicles off the highway to prevent the queuing of vehicles on the traveled way. An access shall not be approved for parking areas that require backing maneuvers within the rights-of-way of the responsible jurisdiction. All off-street parking areas must include on-site maneuvering areas and aisles to permit user vehicles to enter and exit the site in forward drive without hesitation.

g. Fill slopes and cut slopes shall be constructed either to current standards of Responsible Authority, **(AASHTO)** or to the slope of the existing highway near the access, whichever is safer. It is desirable that all side slopes have a slope of 6:1 for 12 feet. A minimum of 4:1 for six feet, than not steeper than 3:1 unless physically restricted. Tighter slopes may be permitted when necessary.

h. Access design shall provide for the safe movement of all highway right-of-way users, including but not limited to pedestrians, bicyclists, and the disabled. Sidewalks may be required where appropriate or when requested by the Responsible Authority. Bikepaths may be included in the access permit upon request by the local authority.

i. In the event it becomes necessary to remove any right-of-way fence, the posts on either side of the entrance shall be securely braced with an approved end post before the fence is cut to prevent any slacking of the remaining fence. All posts and wire removed are property of the Responsible Authority.

j. Where necessary to remove, relocate, or repair a traffic control device or public or private utilities for the construction of a permitted access, the cost shall be borne by the permittee.

k. Further details of access construction and design, including pavement thickness and specifications, curb design and specifications, roadway fill design and compaction, and other specific details, shall be provided by the Responsible Authority.

l. Installation of any traffic control device shall conform to the Indiana M.U.T.C.D. Where the access may warrant signalization in the future, phasing of the installation may be required.

m. An access that crosses or otherwise affects pedestrian, bicycle, or handicapped facilities, shall have the necessary modifications to ensure the safe crossing of the access and the safe use of the facility by pedestrians, bicyclists and the disabled.

n. Each access should be separated by a distance equal to the stopping sight distance values given in Table 11.

o. When an access permit requires the widening or reconstruction of the roadway, the design shall meet the current standards of the Responsible Authority.

p. Physical separation and delineation along a property frontage such as curb and gutter or fencing, may be required where necessary to ensure that access will be limited to permitted locations.

q. A **Clear Zone** shall meet 3R Standards. (A relatively clear and flat area beyond the edge of the roadway is important for the recovery of errant vehicles. Roadway hazards in the clear zone such as fixed objects or steep embankments may need to be removed, reconstructed or shielded by a proper barrier. In urban areas with speeds of 40 MPH or less and vertical curbs, a clear zone of at least 1.5 feet minimum should be provided. Where there is no curb in urban and rural areas and the speed is 40 MPH or less, a 10-foot clear zone should be provided. At speeds of 45 MPH or greater, a 20 to 30 foot clear zone is recommended. Within the road right-of-way, every attempt will be made to adhere to the clear zone requirements.)

r. For establishments, or development with high turnover rates and limited parking area (drive-in restaurants, drug stores, grocery stores) the parking spaces shall be laid out in such a manner as to preclude entering vehicles from interfering with traffic on the roadway.

s. The capacity and storage requirements of an above referenced intersection shall be checked by the Responsible Authority based on a projection of the existing traffic according to the current transportation plan, and if the indicated minimum dimensions are below storage requirements, they shall be increased accordingly.

t. The permittee shall be responsible for any curbing, pavement widening, deceleration lanes, recovery lanes, islands, access roads, or drainage structures required. All construction shall be of a structural design and type acceptable to the agency responsible for the adjacent public roadway.

u. No part of the driveway entrance (excluding the acceleration and deceleration lanes and flare) may extend beyond a line extended perpendicularly from the roadway centerline to the point of intersection of the property line and the right-of-way without the written permission of the adjacent property owner.

v. When the parking or driving area of a property is adjacent to a sidewalk or an alley, then a suitable non-mountable barrier must be constructed to prevent encroachment.

9. Storage Requirements

In no case shall vehicles be allowed to stand on any portion of the roadway (public or private). It will be the owner's responsibility to provide sufficient on-site parking and vehicle circulation or close the entrance of the facility before such a condition occurs.

a. Car Washes

1. A car wash shall be designed to permit storage of vehicles within the facility equal to 100% of the anticipated peak hour capacity. In units having more than 1 bay, Table 12 shall be used.

2. The exit distance for each bay shall be a minimum of 50 feet from the right-of-way line.

TABLE 12

STORAGE REQUIREMENTS FOR CAR WASHES

# of bays	*Storage requirements per bay
1	100%
2	90%
3	80%
4	80%

** Percentage of total peak hour capacity. The storage length for each vehicle shall be 22 feet.*

b. Drive-in Banks

1. Drive-in banks shall be designed in accordance with Table 13.

TABLE 13
STORAGE REQUIREMENTS FOR DRIVE-IN BANKS

Drive-in windows	Vehicles	Storage Distance (ft) Per Window
2	10	220
3	7	154
4	5	110
5	4	88
6	4	88
7	3	66
8	3	66
9	2	44

c. Gasoline Service Stations

All pump islands must be located a minimum of ten (10) feet from the right-of-way line or as required by the State Fire Marshall.

d. Fast Food Restaurants

1. A fast food restaurant shall be designed to permit vehicles within the facility equal to 100% of the anticipated peak hour capacity.

2. Access should be designed in accordance with drawings. Access should be limited to one driveway per street and may require a divided entrance.

10. Drainage

a. Each access shall be constructed in a manner that shall not cause water to enter onto the roadway, and shall not interfere with the drainage system on the right-of-way.

b. The permittee shall provide, at his or her own expense, drainage structures for the access which will become an integral part of the existing drainage system. The type, design and condition of these structures must meet the approval of the Responsible Authority.

c. Drainage structures shall not restrict the existing drainage system nor any adopted municipal drainage plan.

d. The highway drainage system is for the protection of the highway right-of-way. It is not designed or intended to serve the drainage requirements of abutting properties beyond that which has historically flowed to the right-of-way. Drainage to the right-of-way shall not exceed the undeveloped historical flow. The use of controlled flow detention ponds shall be considered to control this flow from developed properties. When curb and gutter is required, the drainage ditch should be eliminated by installing a storm sewer system. The Responsible Authority shall determine the appropriate drainage controls necessary to meet existing or projected site specific conditions.

11. Maintenance

The permittee, his or her heirs, successors-in-interest, and assigns, of the property serviced by the access shall be responsible for meeting the terms and conditions of the permit and the removal or clearance of snow or ice upon the access even though deposited on the access in the course of snow removal operations by the Responsible Authority. The Responsible Authority shall maintain in unincorporated areas the roadway drainage system, including those culverts under the access which are part of that system within the right-of-way.

12. Driveway Abandonment

At any time an existing driveway is abandoned or use of such driveway is discontinued, it shall be the responsibility of the owner of the property formerly accessed by such driveway to restore the public right-of-way to its original condition. Determination of original condition shall be made by the Responsible Authority.

VIII. VARIANCE PROVISIONS:

A. The City of Fort Wayne/Allen County Commissioners/City of New Haven, or designated appointee is hereby authorized to grant in writing, variances from strict application of these provisions provided that **all** of the following conditions are present:

1. The variance desired arises from circumstances or special conditions not ordinarily found in similar lands and districts in the jurisdiction of the Responsible Authority. These special conditions and circumstances must not result from the actions of the applicant.

2. A literal enforcement of the terms of this article will work an unusual and unnecessary hardship on the property owner or tenant by depriving the owner of all reasonable use of his property.

3. The variance granted is the minimum variance that will make possible the reasonable use of the property.

4. The granting of the variance will not adversely affect the rights of adjacent property owners or tenants.

5. The granting of the variance will not destroy the spirit and aim of this article.

6. The granting of the variance is not and will not be within the foreseeable future contrary to the public interest, safety, health, morals, convenience, prosperity or general welfare.

7. The granting of the variance requested will not confer on the applicant nay special privilege that is denied by the article to others similarly situated.

8. Time limits may be established for approval of the variance. At the expiration of that approved time period, the request must be reconsidered.

IX. TRAFFIC STUDIES

Traffic studies will be required for developments with a land use intensity greater than the threshold values given in Table 14. Traffic Impact Studies will follow guidelines for submission of information according to the INDOT standards or the City of Indianapolis Applicant's manual.

TABLE 7

TRAFFIC IMPACT STUDY THRESHOLD VALUES

LAND USE TYPE	**THRESHOLD VALUES**	
Residential	150 Dwelling Units	150 Dwelling Units
Retail	1,400 m^2	15,000 Sq. Feet
Office	3,250 m^2	35000 Sq. Feet or 3 Acres
Industrial	6,500 m^2	70,000 Sq. Feet or 3 Acres
Educational	2,800 m^2 or 250 Students	35000 Sq. Feet or 250 Students
Lodging	120 Occupied Rooms	120 Occupied Rooms
Medical	4,275 m^2	46,000 Sq. Feet

NOTE: A traffic study may not be required if an agreement between permittee and local public agency is established for needed improvements.

X. INDUSTRIAL AND COMMERCIAL SIGNAL POLICY

A. A formal signed agreement shall be negotiated between all parties prior to the beginning of the installation.

B. The Responsible Authority shall decide **when** the installation shall occur. If more than one agency is involved in jurisdiction, the improvements must be coordinated.

C. Various numerical warrants are utilized for determining the feasibility of a traffic signal. These warrants shall be labeled as "Industrial Warrants" and "Full Uniform Warrants" as prescribed by the Manual on Uniform Traffic Control Devices. If more than one governmental agency is involved from a cost standpoint, the warrant justification must be agreeable.

D. Design of installations shall be as prescribed by the Responsible Authority.

E. Ownership of all equipment will revert to the primary governmental agency responsible for maintenance.

APPENDIX A

CORRIDOR / INTERSECTION PROTECTION GUIDELINES DESIGNATED CORRIDORS

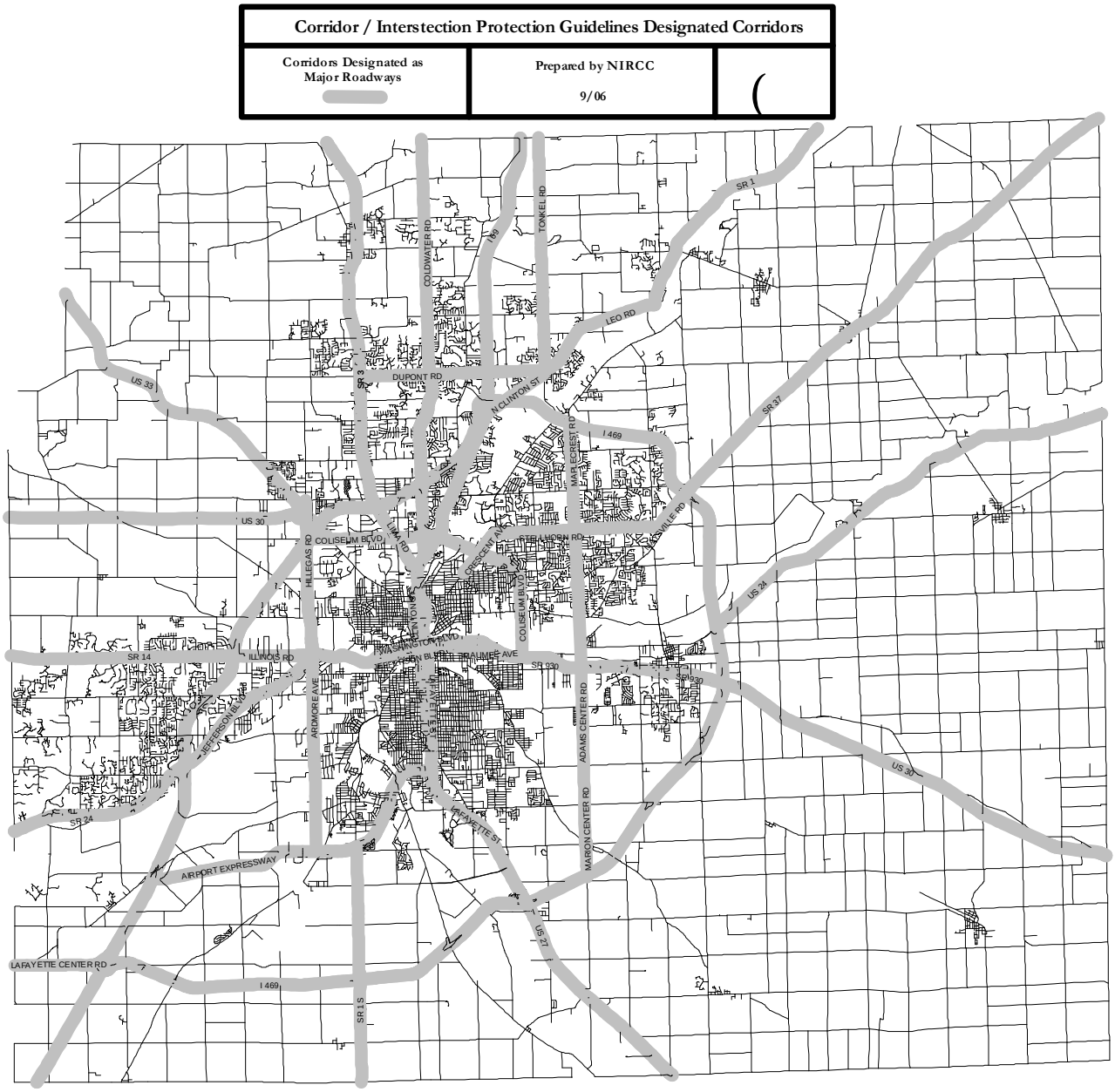
LIST OF DESIGNATED CORRIDORS

MAP OF DESIGNATED CORRIDORS

LIST OF DESIGNATED CORRIDORS

Dupont Rd / SR 1 (Leo Road)(SR 3 to North County Line Road)
Lima Rd / SR 3 (Clinton St to North County Line Rd)
Coldwater Rd (Clinton St to North County Line Rd)
Illinois Rd / SR 14 (Jefferson Blvd to West County Line Rd)
Tonkel Rd (Dupont Rd to North County Line Rd)
Airport Expressway (Lafayette St to I-69)
SR 24 (Fort to Port)
I-69
I-469
Lafayette Ctr Rd
Coliseum Blvd / SR 930
US 30
US 33
Maplecrest Rd / Adams Ctr Rd / Marion Ctr Rd (I-469 to I-469)
Ardmore Rd / Hillegas Rd / Huguenard Rd (Airport Exp to Washington Ctr Rd)
Jefferson Blvd
SR 24 (I-69 to West County Line Rd)
Washington Blvd
Maumee Ave
Crescent (Anthony Blvd to Hobson Rd)
Stellhorn Rd / Maysville Rd (Hobson Rd to I-469)
SR 37
Lafayette St
Clinton St
North Clinton St
US 27
Bluffton Rd / SR 1 (Airport Exp to South County Line Rd)

MAP OF DESIGNATED CORRIDORS



APPENDIX B

DRAWINGS

DRAWING # 1: TYPICAL CLASS I DRIVE (RESIDENTIAL) CURBED SECTION

DRAWING # 2: TYPICAL CLASS II DRIVE (RESIDENTIAL) UNCURBED SECTION

DRAWING # 3: TYPICAL CLASS III DRIVE (COMMERCIAL) CURBED SECTION

DRAWING # 4: TYPICAL CLASS IV DRIVE (COMMERCIAL) UNCURBED SECTION

DRAWING # 5: TYPICAL CLASS V DRIVE FIELD ENTRANCE

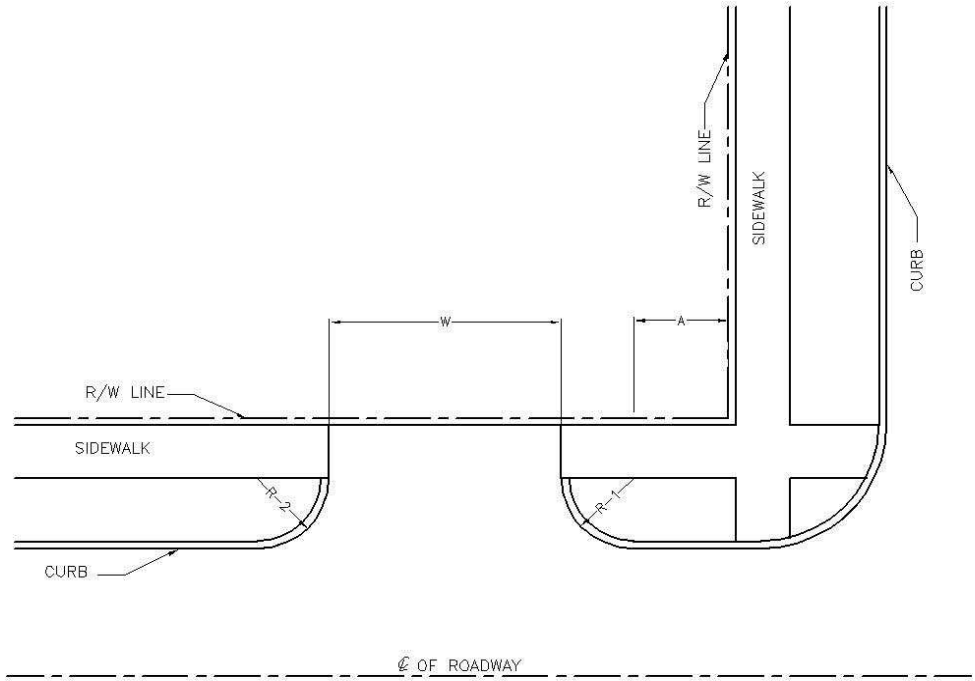
DRAWING # 6: TYPICAL CLASS III + IV DIVIDED ENTRANCE

DRAWING # 7: TYPICAL APPROACH UNDIVIDED ROADWAY

DRAWING # 8: TYPICAL APPROACH DIVIDED ROADWAY

DRAWING # 9: TYPICAL ACCESS ROAD CONCEPT

DRAWING #1



ROAD TYPE	R MAX.	R MIN.	PREFERRED	
			R-1	R-2
RESIDENTIAL	10'	5'	10'	10'
COLLECTOR	20'	10'	15'	10'
ARTERIAL	25'	10'	25'	15'

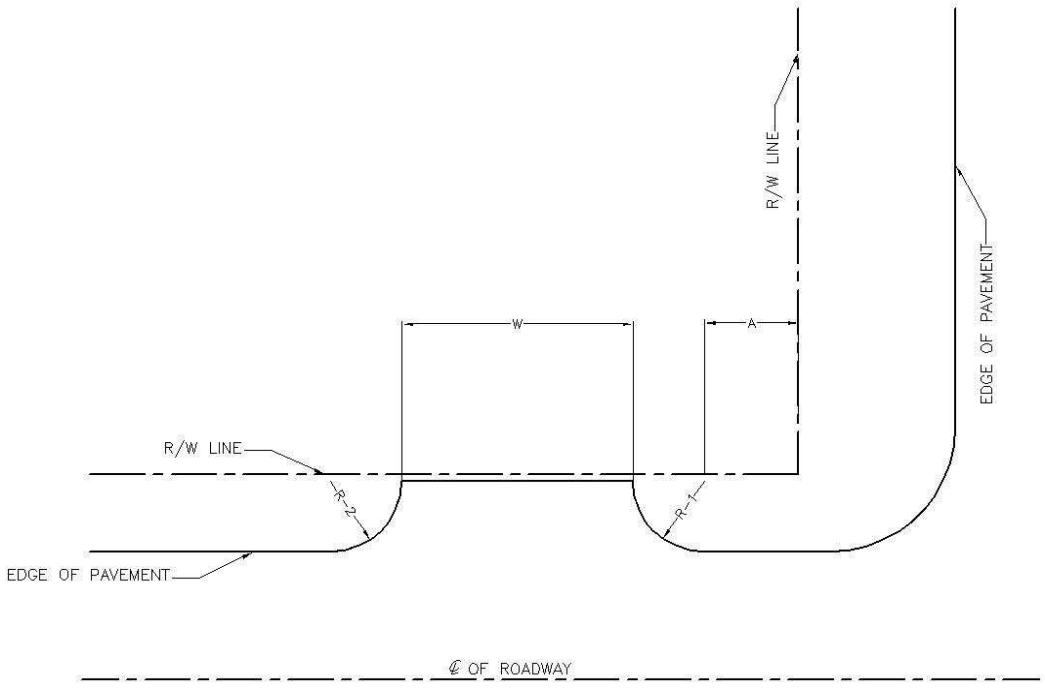
DIMENSIONS IN LINEAL FEET
W = 20' MAXIMUM, 12' MINIMUM
A = 25' MINIMUM
R = REFER TABLE

NOTE: ONLY ONE DRIVEWAY SHALL BE PERMITTED PER LOT ALONG A STREET FRONTAGE

DRAWING NO. 1 - TYPICAL CLASS I DRIVE (RESIDENTIAL)
CURBED SECTION

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #2



ROAD TYPE	R MAX.	R MIN.	PREFERRED	
			R-1	R-2
RESIDENTIAL	15'	10'	10'	10'
COLLECTOR	20'	10'	15'	10'
ARTERIAL	25'	15'	25'	15'

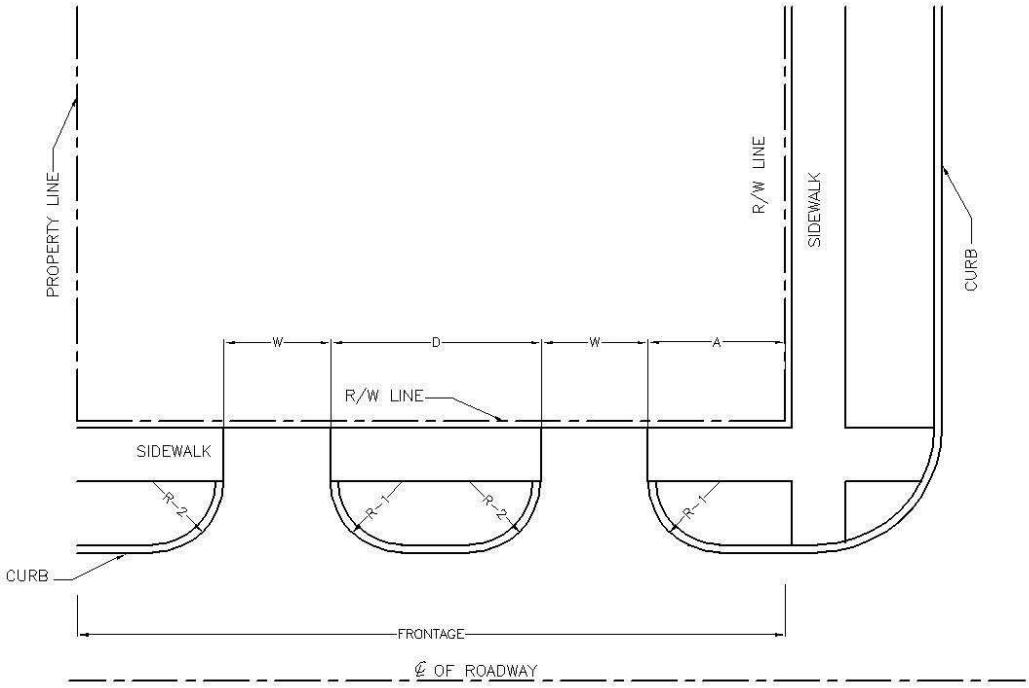
DIMENSIONS IN LINEAL FEET
W = 20' MAXIMUM, 12' MINIMUM
A = 25' MINIMUM
R = REFER TABLE

NOTE: ONLY ONE DRIVEWAY SHALL BE PERMITTED PER LOT ALONG A STREET FRONTAGE

DRAWING NO. 2 - TYPICAL CLASS II DRIVE (RESIDENTIAL)
UNCURBED SECTION

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #3



ROAD TYPE	R MAX.	R MIN.	PREFERRED	
			R–1	R–2
RESIDENTIAL	30'	15'	25'	15'
COLLECTOR	40'	15'	30'	15'
ARTERIAL	40'	20'	30'	20'
INDUSTRIAL PARK	40'	20'	30'	20'

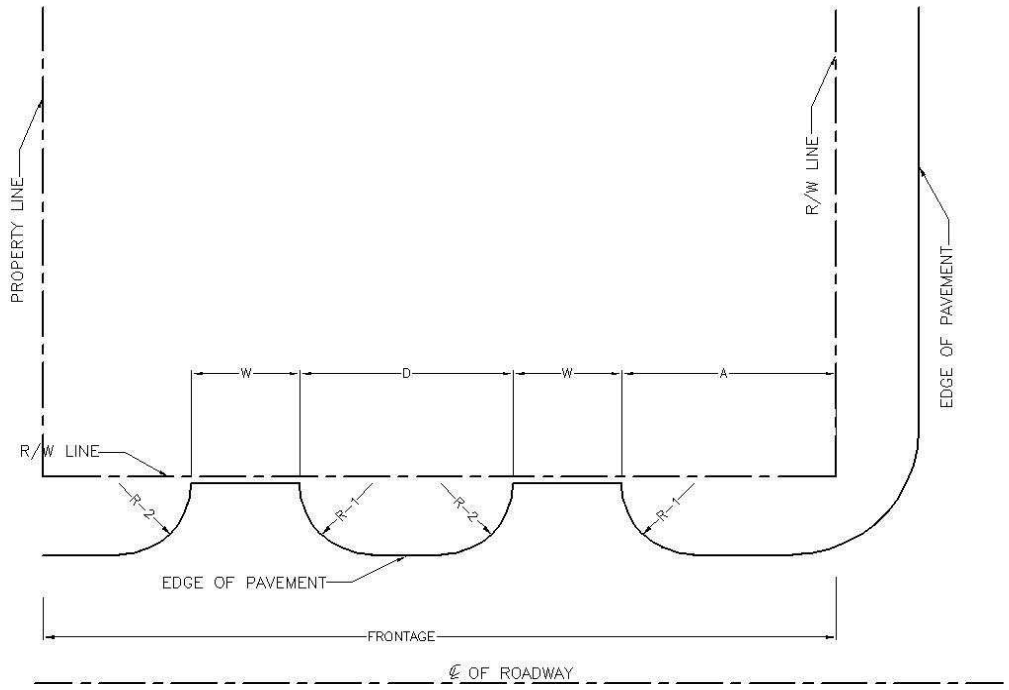
DIMENSIONS IN LINEAL FEET
A = 50' OR 25% OF FRONTAGE, WHICHEVER IS GREATER
D = SEE TEXT FOR GENERAL DESIGN CRITERIA
W = 30' MAXIMUM, 20' MINIMUM
R = REFER TABLE

NOTE: TWO ENTRANCES MAY BE PERMITTED UNDER CERTAIN CONDITIONS.

DRAWING NO. 3 - TYPICAL CLASS III DRIVE (COMMERCIAL)
CURBED SECTION

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #4



ROAD TYPE	R MAX.	R MIN.	PREFERRED	
			R-1	R-2
RESIDENTIAL	30'	15'	25'	15'
COLLECTOR	40'	15'	30'	15'
ARTERIAL	40'	20'	30'	20'
INDUSTRIAL PARK	40'	20'	30'	20'

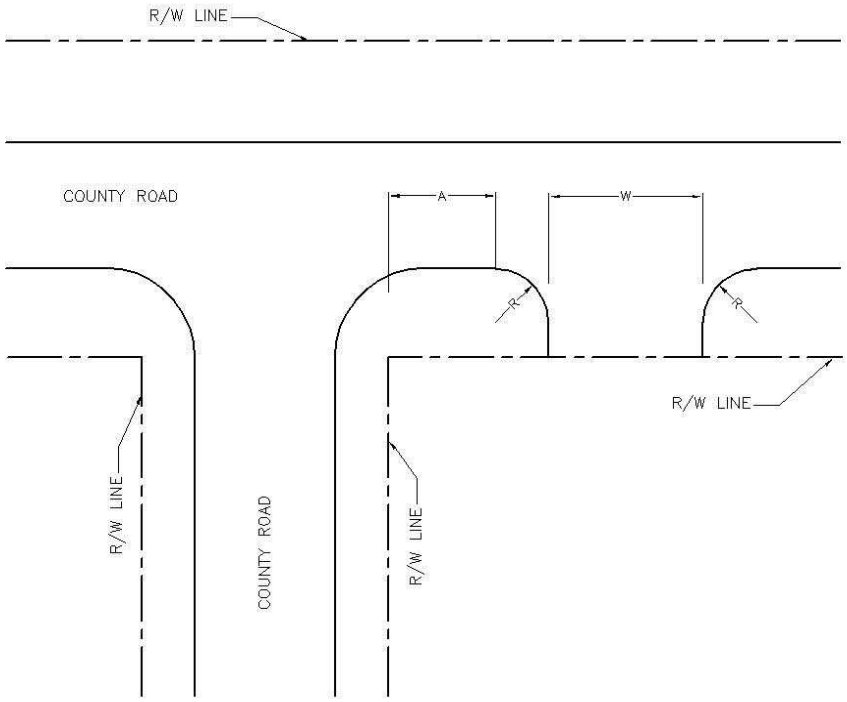
DIMENSIONS IN LINEAL FEET
A = 50' OR 25% OF FRONTAGE, WHICHEVER IS GREATER
D = SEE TEXT FOR GENERAL DESIGN CRITERIA
W = 30' MAXIMUM, 20' MINIMUM
R = REFER TABLE

NOTE: TWO ENTRANCES MAY BE PERMITTED UNDER CERTAIN CONDITIONS. SEE "SPECIAL REQUIREMENTS" SECTION.

DRAWING NO. 4 - TYPICAL CLASS IV DRIVE (COMMERCIAL)
UNCURBED SECTION

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #5



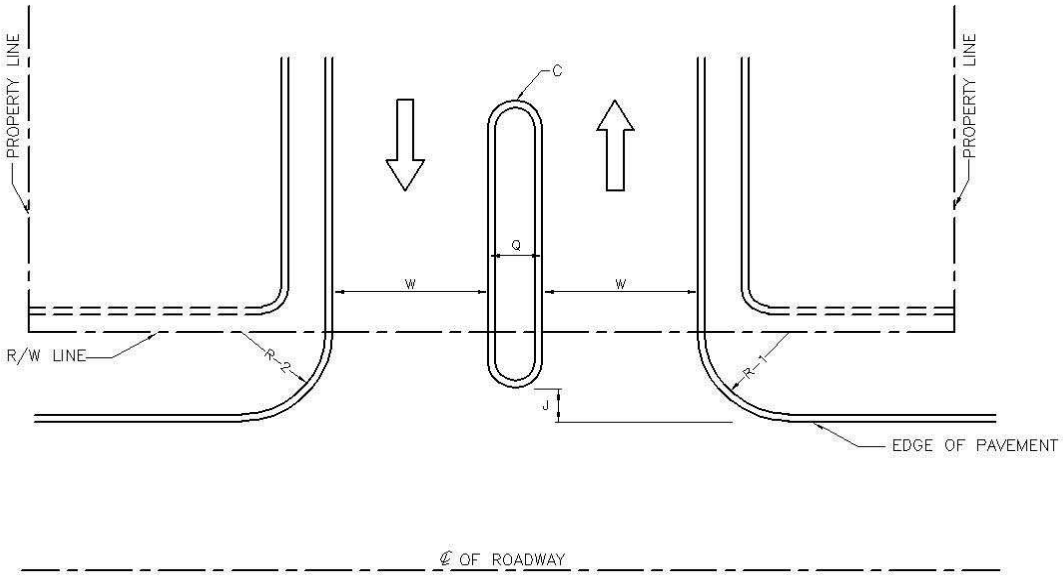
DIMENSIONS IN LINEAL FEET
W = 20' MAXIMUM, 12' MINIMUM
R = 10'
A = SEE TEXT FOR GENERAL DESIGN CRITERIA

ALL OF THOSE CONNECTING A COUNTY HIGHWAY WITH VACANT LOTS, FIELDS AND OTHER UNIMPROVED PROPERTY AND NOT USED COMMERCIALLY.

DRAWING NO. 5 - TYPICAL CLASS V DRIVE
FIELD ENTRANCE

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #6



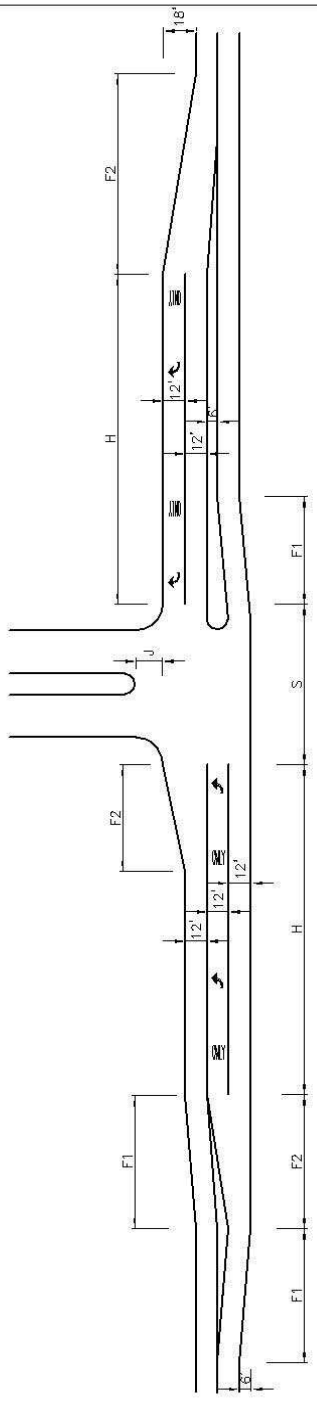
ROAD TYPE	R MAX.	R MIN.	PREFERRED	
			R–1	R–2
RESIDENTIAL	30'	15'	25'	15'
COLLECTOR	40'	15'	30'	15'
ARTERIAL	40'	20'	30'	20'
INDUSTRIAL PARK	40'	20'	30'	20'

DIMENSIONS IN LINEAL FEET
Q = 10' MAXIMUM (NON–MOUNTABLE BARRIER), 4' MINIMUM
J = VARIES 2' TO 6'
W = 24' MAXIMUM, 18' MINIMUM
R = REFER TABLE
C = CONCRETE CURB OR BARRIER (NON–MOUNTABLE)

DRAWING NO. 6 - TYPICAL CLASS III & IV
DIVIDED ENTRANCE

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #7

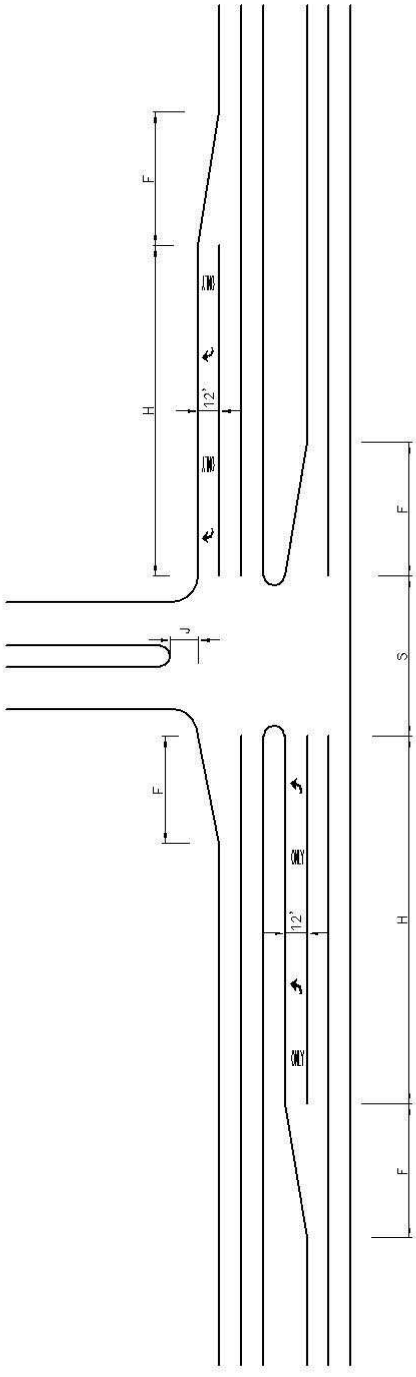


	POSTED SPEED LIMIT (MPH)					
	30	35	40	45	50	55
F1	20:1	25:1	30:1	40:1	45:1	50:1
F2	10:1	12.5:1	15:1	17.5:1	20:1	22.5:1
H	235'	275'	315'	375'	435'	485'
J	VARIES FROM 2' TO 6'					
S	REFER TO DRIVEWAY REQUIREMENTS					

DRAWING NO. 7 - TYPICAL APPROACH
UNDIVIDED ROADWAY

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #8

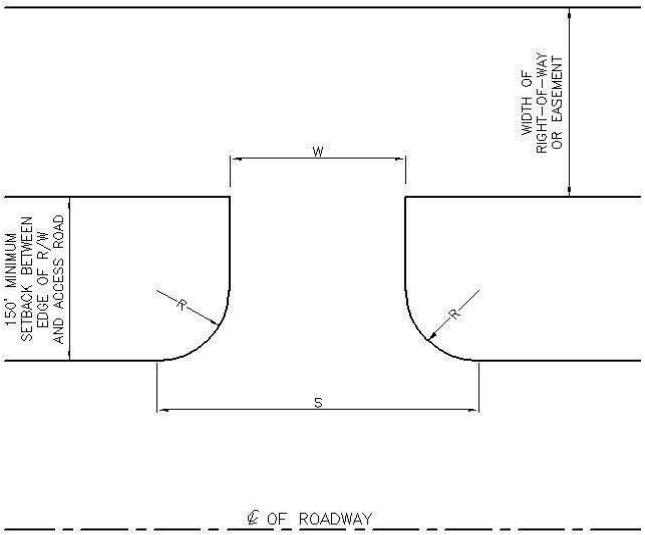


POSTED SPEED LIMIT (MPH)	30	35	40	45	50	55
F	10:1	12.5:1	15:1	17.5:1	20:1	22.5:1
H	235'	275'	315'	375'	435'	485'
J	VARIES FROM 2' TO 6'					
S	REFER TO DRIVEWAY REQUIREMENTS					

DRAWING NO. 8 - TYPICAL APPROACH
DIVIDED ROADWAY

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

DRAWING #9



ACCESS POINTS TO BE DETERMINED BY THE RESPONSIBLE AUTHORITY

DIMENSIONS IN LINEAL FEET

W = REFER TO APPROPRIATE DRIVEWAY DRAWING
R = REFER TO APPROPRIATE DRIVEWAY DRAWING
S = REFER TO APPROPRIATE DRIVEWAY DRAWING

WIDTH OF RIGHT-OF-WAY OR EASEMENT = 50' MINIMUM, 60' MAXIMUM (DEPENDENT ON DRAINAGE REQUIREMENTS)

DRAWING NO. 9 - TYPICAL ACCESS ROAD CONCEPT

ACCESS STANDARDS MANUAL
FORT WAYNE-NEW HAVEN-ALLEN COUNTY

APPENDIX C
DEFINITION OF TERMS

In the interpretation of these requirements, the word "shall" is to be interpreted as being mandatory. The word "should", "desirable", or other words of similar import are to be interpreted as being the recommendations of the Responsible Authority as denoting a factor to be considered in determining whether a permit can be issued.

ABUTTING PROPERTY A lot or parcel of land which shares all or part of a common lot line with another lot or parcel of land.

ACCELERATION LANE A speed-change lane, including tapered areas, for the purpose of enabling a vehicle entering a roadway to increase its speed to a rate at which it can more safely merge with through traffic.

ACCESS Any driveway or other point of ingress/egress such as a street, road or highway that connects to the general street system. Where two public roadways intersect, the secondary roadway shall be considered the access.

ACCESS CONTROL (LIMITED) Those roadway facilities to which the rights to access light, air or view in connection with a highway, street, or roadway is fully or partially controlled by the Responsible Authority.

ACCESS CONTROL (FULL) Access is controlled to such a degree that no access will be permitted directly to the roadway from abutting property. The physical means of access shall be limited to interchange ramps, approaches, or other facilities located on public right-of-way, at points designated by the Responsible Authority for specific entrance to or exit from the roadway facility by the general public.

ACCESS CONTROL (PARTIAL) Access is controlled to such a degree that public access will be restricted to interchange ramps, at-grade intersection approaches, or other facilities located on public right-of-way. Private driveways may be permitted at locations designated by the Responsible Authority solely for residential or agricultural purposes, when so agreed, or stipulated with the property owner when access rights are required. Any permit for such an entrance will show the limiting use. No direct access for commercial or industrial use will be allowed. All other access for abutting property will be as indicated for Full Access Control facilities. Median opening for U-turns for public use may be provided in accordance with established criteria.

ACCESS CONTROL (MINIMAL) The rights of abutting property owners of access to the public roadway are recognized. On these facilities, entrances to the roadway will be allowed for abutting property, providing such access points comply with the standards and regulations established by the Responsible Authority.

ACCESS ROAD (formerly called frontage road) Separate roadway, auxiliary to and normally located parallel (at an established setback) to a controlled access facility or protected corridor. Its purpose is the maintenance of local road continuity and provision of access to parcels adjacent to the controlled access facility.

ADT The average two-way weekday traffic volume.

AADT The annual average two-way daily traffic volume. It represents the total annual traffic for the year, divided by 365.

APPLICANT The owner of property or representative of owner applying for an access permit.

APPROACH PAVEMENT Portion of roadway adjoining the traveled way, including tapers for recovery lane, deceleration, speed change, turning movements, or other purposes supplementary to the through traffic movement. The auxiliary lane may be existing or proposed to be constructed by the applicant.

APPROPRIATE LOCAL AUTHORITY The board of County Commissioners if the access is to be located in the unincorporated area of the county and the governing body of the municipality if the access is to be located with the incorporated municipality. Also referred to as the "Responsible Authority".

ARTERIAL Signalized streets that serve primarily through traffic and provide access to abutting properties as a secondary function. An Arterial collects and distributes traffic to and from minor arterials and collectors.

BIKEWAY A pathway, often paved and separated from streets and sidewalks, designed for use by bicyclists.

CHANNELIZATION The separation or regulation of conflicting traffic movements into definite paths of travel by use of pavement markings, raised islands or other suitable means to facilitate the safe and orderly movement of traffic.

COLLECTOR Surface streets providing land access and traffic circulation service within residential, commercial, and industrial areas. It conveys traffic from arterial streets to lower order streets.

COMMERCIAL USE Activity carried out for monetary gain.

CORRIDOR A strip of land between two termini within which traffic, topography, environment and other characteristics are evaluated for transportation purposes.

DECELERATION LANE A speed-change lane, including tapered areas, for the purpose of enabling a vehicle that is to make an exit turn from a roadway to slow to a safe turning speed after it has left the mainstream of faster-moving traffic.

DESIGN SPEED A speed determined for design and correlation of the physical features of a highway which influence vehicle operations. It is the maximum safe speed that can be maintained over a specified section of highway when conditions are favorable, so that the design features of the highway govern.

DESIGN HOUR VOLUME A traffic vehicle volume determined for use in the geometric design of highways, representing traffic expected to use the facility. (Unless otherwise stated, it is an hourly volume).

DIVIDED HIGHWAY A highway with separated roadways for traffic in opposite directions, such separation being indicated by depressed dividing strips, raised curbing, traffic islands, or other physical separations, or indicated by standard pavement markings or other traffic control devices.

DRIVEWAY A private road giving access from a public way to a building or use on abutting grounds.

DRIVEWAY FLARE A triangular pavement surface that transitions the driveway pavement where it intersects the highway pavement for facilitating turning movements.

EASEMENT A right to use or control the property of another for designated purposes.

EGRESS The exit of vehicular traffic from abutting properties to a highway.

ENTRANCE The connecting line of the driveway and the approach.

EXPRESSWAY A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at major intersections.

FLOW Movement of traffic
Interrupted - Non-continuous movement of traffic.
Uninterrupted - Continuous movement of traffic.

FREEWAY An expressway with full control of access

FUNCTIONAL CLASSIFICATION A classification system that defines a public roadway according to its purposes in the local, state, and federal highway systems.

FRONTAGE ROAD See "access road"

GRADE The rate of ascent or descent of a roadway, expressed as a percent; the change in roadway elevation per unit of horizontal length.

Profile grade: The trace of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed. Profile grade means either elevation or gradient of such trace according to the context.

GRADE SEPARATION A crossing of two roadways, or a roadway and a railroad at different levels.

HIGHWAY, STREET OR ROADWAY A general term denoting a public way for purposes of vehicular travel, including the entire area within the right of way.

Recommended usage: in urban areas - roadway or street;
in rural areas - highway or road

INDUSTRIAL Shall mean the manufacture, fabrication, processing, reduction, or destruction of any article, substance or commodity, or any other treatment thereof in such a manner as to change the form, character, or appearance thereof, and including storage elevators, truck storage yards, warehouses, wholesale storage, and other similar types of enterprise.

INTERCHANGE A system of interconnecting roadways in conjunction with one or more grade separations, providing for movement of traffic between two or more roadways on different levels.

INTERCHANGE MANAGEMENT PLAN A plan similar in nature to an access control plan but limited to the immediate influence area of an interchange for the protection of its functional integrity.

INTERSECTION The general area where two or more highways join or cross, within which are included the roadway and roadside facilities for traffic movements in the area.

At-grade intersection - an intersection where all roadways join or cross at the same level.

Channelized intersection - an at-grade intersection in which traffic is directed into definite paths by islands.

LANE A strip of roadway used for a single line of vehicles.
(Also known as a traffic lane)

Auxiliary lane - The portion of the roadway adjoining the through traveled way for speed change, turning, storage for turning, weaving, truck climbing or for other purposes supplementary to through traffic.

Median Lane - A speed-change lane within the median to accommodate left-turning vehicles.

Parking Lane - An auxiliary lane primarily for the parking of vehicles.

Speed-Change Lane - An auxiliary lane, including tapered areas, primarily for the acceleration or deceleration of vehicles entering or leaving the through traveled way. (see also Acceleration/Deceleration lanes).

LEVEL OF SERVICE A qualitative measure of the effect of a number of factors including speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

M.U.T.C.D The Manual on Uniform Traffic Control Devices
(U.S. Department of Transportation and Indiana Department of Transportation)

MEDIAN The physical portion of a divided highway separating the traveled ways for traffic in opposite directions.

MEDIAN LANE A speed-change lane within the median to accommodate left-turning vehicles.

MEDIAN OPENING A gap in a median to provide for crossing and turning traffic.

MERGING The process by which two separate traffic streams moving in the same general direction combine or unite to form a single stream.

MPH A rate of speed measured in miles traveled per hour.

MULTI-RESIDENTIAL Shall mean a building or buildings designed and used for occupancy by three (3) or more families.

OPERATING SPEED The highest overall speed at which a driver can travel on a given highway under favorable weather conditions and under prevailing traffic conditions without at any time exceeding the safe speed as determined by the design speed on a section by section basis. On posted sections of highways and streets, the properly posted speed can be considered the operating speed.

PARKING CAPACITY Maximum number of parking spaces available within the proposed facility having clear access to each space.

PAVEMENT MARKINGS Markings set into the surface of, applied upon, or attached to the pavement for the purpose of regulating, warning, or guiding traffic.

PERMIT Shall mean an authorization to construct an access driveway of a specified class granted by the local governing agency upon application, and in accordance with this ordinance.

PERMITTEE Shall mean the applicant for the permit who is responsible for fulfilling all the terms and conditions of the permit.

POTENTIAL FOR SIGNALIZATION An access that has the potential within the life of the permit to meet any of the warrants for a traffic signal as defined by the M.U.T.C.D.

RESIDENTIAL Shall mean a building, designed or used exclusively for occupancy of one or two families.

RESPONSIBLE AUTHORITY The governmental body, group or department with jurisdiction and responsibility for the planning, designing, maintenance and policing of the indicated highway, street or roadway. See also "Appropriate local authority".

RIGHT OF ACCESS The right of ingress to a highway from abutting land and egress from highway to abutting land.

RIGHT OF WAY A general term denoting land, property or interest therein, usually in a strip, acquired for, or dedicated to street, roadway, or highway purposes.

ROAD (See "Highway")

SETBACK LINE A line outside of the right-of-way, established by public authority, on the highway side of which the erection of buildings or other permanent improvements is controlled.

SHOULDER The portion of the roadway contiguous with the traveled way primarily for accommodation of stopped vehicles for emergency use, and for lateral support of base and surface courses.

SIDEWALK That portion of the roadway primarily constructed for the use of pedestrians.

SIGNAL PROGRESSION The progressive movement of traffic, at a planned rate of speed without stopping, through adjacent signalized locations within a traffic control system.

SIGHT DISTANCE The length of highway visible to the driver.

> Stopping sight distance - The length of highway required to safely stop a vehicle traveling at **design speed.**
>
> Passing - The length of highway required for a vehicle to execute a normal passing maneuver as related to design conditions and design speed.

SITE An area consisting of one or more contiguous lots, or parts of lots which is to be used as one consolidated area.

SPEED-CHANGE LANE A separate lane for the purpose of enabling a vehicle entering or leaving a roadway to increase or decrease its speed to a rate at which it can more safely merge with or diverge from through traffic. Acceleration and deceleration lanes are speed change lanes.

STOPPING SIGHT DISTANCE The distance required by a driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during driver perception and reaction times and the vehicle braking distance.

STORAGE CAPACITY The distance between the right-of-way line and the vehicle customer service point.

STORAGE LANE Additional lane footage added to a deceleration lane to store the maximum number of vehicles likely to accumulate during a peak period so as not to inter with the through travel time.

STREET (See Highway)

TRAFFIC CONTROL SIGNAL Any device whether manually, electrically or mechanically operated by which traffic is alternately directed to stop and permitted to proceed.

TRAFFIC LANE The portion of the traveled way for the movement of a single line of vehicles.

TRAVELED WAY The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

VACATION The relinquishment of the public interest in right of way or activity thereon with no intention to reclaim or use again for highway purposes (also called abandonment).

ZONING The division of a municipality (or other government unit) into districts and the establishment of regulations governing the use, placement, spacing and size of land and buildings.

APPENDIX D

REFERENCES/INDEX

The standards and specifications contained in this manual are based upon good engineering judgement of the following standard engineering references used by the combined jurisdictions compiling this manual. These references are revised and amended from time to time. When appropriate, the manual will be amended to reflect changes in these references.

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3. **Driveway Permit Handbook,** Indiana Department of Highways, Indianapolis, Indiana, 1988.

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5. **Indiana Manual on Uniform Traffic Control Devices for Streets and Highways, (M.U.T.C.D.)** Indiana Department of Transportation, as amended.

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7. **The State Highway Access Code,** State of Colorado, Denver, Colorado, as amended, 1985.

8. **Traffic Engineering Handbook,** 4th edition, Institute of Transportation Engineers, Englewood Cliffs, New Jersey, 1992.

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11. **Trip Generation**, 5th edition, Institute of Transportation Engineers, Washington, D.C., 1991. (525 School Street, S.W., Suite 410, Washington, D.C. 20024-2729, USA.

12. **Design Standards for RRR Projects,** Indiana Department of Transportation, Division of Program Development, Indianapolis, Indiana, 1991.