

Technical Report #2

Indiana Statewide Access Management Study

**Access Classification System for
Indiana Statewide Mobility Corridors**

REVISED DRAFT

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Indiana Department of Transportation
Long-Range Transportation Planning Division

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1.0 EXECUTIVE SUMMARY

(Will be prepared in conjunction with a final draft report incorporating INDOT comments.)

2.0 INTRODUCTION

2.1 *Study Description*

The overall objective of this study is to assist INDOT in the development and implementation of an access control strategy that will support the refinement of the INDOT Long-Range Transportation Plan in terms of implementing the Statewide Mobility Corridor Concept. The work activities involve a review of the Indiana access management process to identify its limitations, as well as opportunities for its refinement. The following highlights some of the key project issues that are addressed in the scope of work:

- Crafting a pragmatic approach that fits Indiana’s conditions.
- Reflecting the diversity of transportation conditions in Indiana.
- Addressing Indiana’s institutional and policy environment.
- Explaining the benefits of access management enhancements.
- Drawing creatively from lessons learned in other states.
- Assessing what can be accomplished within the existing framework.
- Establishing agreement on recommendations and implementation approach.
- Improving stakeholder understanding about access management.

2.2 *Scope of this Report*

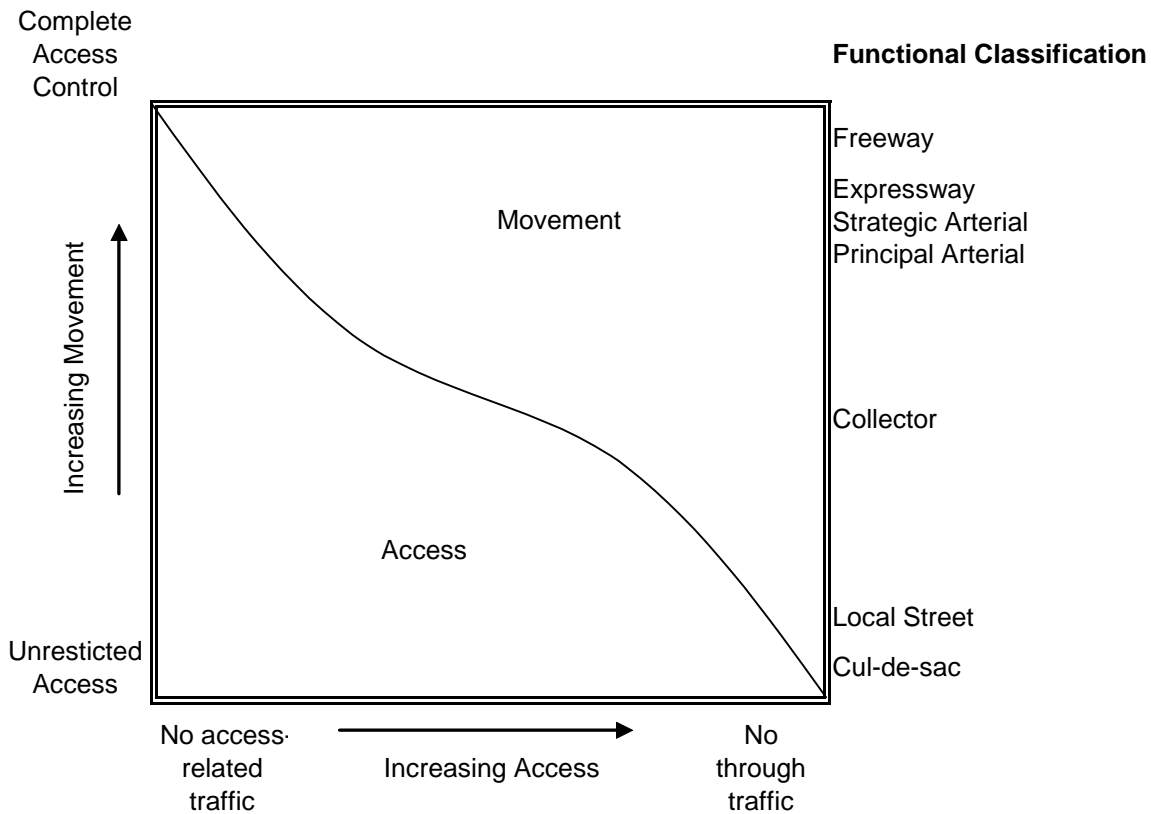
As part of the Indiana Statewide Access Management Study, Urbitran Associates has reviewed the Planning Level Corridor Hierarchy in the INDOT 25-Year Plan within the context of developing an access classification system for Indiana State roadways. As part of this effort, access classification systems from numerous state DOTs were examined within the context of the INDOT corridor hierarchy. A draft access classification system has been prepared for review based on these efforts. This report provides:

- A general overview of access classification systems and their importance;
- Descriptions of the systems used by various state DOTs;
- A draft access classification system for the State of Indiana that is based on INDOT’s Planning Level Corridor Hierarchy concept and applies lessons learned in other states.

3.0 WHAT IS AN ACCESS CLASSIFICATION SYSTEM?

Roadways generally serve two functions: moving vehicles and providing direct access to property. The primary purpose of access management is to protect the functional integrity of the roadway system by ensuring that roadways maintain their planned movement-versus-access functions. Figure 1 illustrates the balance between movement and access functions for roadways of various functional classifications. As shown in Figure 1, higher-order roadways, such as strategic or principal arterials, have a higher degree of access control (e.g., longer driveway spacing) to preserve their movement function. On the other hand, local streets have less restrictive access control because they are primarily intended to provide access to abutting properties.

Figure 1 – Movement versus Access balance by Functional Classification



Developing an access management program involves three basic steps:

- 1) Defining an access classification system, consisting of various access categories;
- 2) Establishing access management criteria for each access category; and
- 3) Assigning an access category to each roadway.

This report primarily addresses the first item listed above. The second item will be addressed in a subsequent effort as part of this study. The third item—the actual assignment of roadways to specific access categories—is beyond the scope of this study.

In essence, an access classification system is a hierarchy of access categories that forms the basis for the application of access management. Each access category sets forth criteria governing the access-related

standards and characteristics for corresponding roadways. These access categories ultimately define where access can be allowed between private developments and the roadway system, and where it should be denied or discouraged. They define spacing standards for signalized intersections, and where a driveway should be restricted to right-in/right-out operation. Defining access categories involves consideration of the following factors:

- 1) *Roadway Functional Classification System* – As alluded to above, the foundation of an access classification system is the functional classification system (arterial, collector, etc.) that reflects the general purpose of each roadway within the transportation system.
- 2) *Roadway Design Characteristics* – In addition, roadway characteristics associated with geometric design (such as the number of lanes, shoulder widths, design speed, and particularly median treatments) should be considered in defining access categories.
- 3) *Degree of Urbanization* – Factors (such as intersection frequency, development intensity, traffic volume, and speed conditions) can be used to help define the degree of urbanization, and could be considered in defining access categories.

For simplicity of planning and administration, it is advisable that the access classification system should consist of a relatively low number of access categories. Table 1 shows a generalized approach to assigning access categories, based on seven basic roadway classes.

Table 1 – Correlation between Access Categories and Roadway Classification

Access Category	Roadway Functional Classification	Direct Property Access	General Geometric Design Features
1	Freeway	No	Multi-lane Median
2	Expressway	No	Multi-lane Median
3	Strategic Arterial (a)	Restrict or Deny (b)	Multi-lane Median
4	Principal Arterial	Restrict or Deny (c)	Multi-lane (d) Median
5	Other Arterial	Yes	Multi-lane or 2-Lanes
6	Collector	Yes	2-Lanes
7	Local / Frontage Road	Yes	2-Lanes

- (a) = This functional class does not currently exist in Indiana.
 (b) = Right-turns only when provided
 (c) = Right-turn and left-turn entry and right-turn only exit when provided
 (d) = Might be two-lanes in some rural areas

As shown in Table 1, direct property access is prohibited from freeways and expressways (Access Categories 1 and 2). Direct property access is denied or restricted for the arterial class roadways (Access Categories 3 and 4); however, access may be provided where no reasonable alternative access is available. Direct property access is permitted under access categories 5 and 6. However, there may be

limitations on the number and location of access points. Direct property access is allowed in Access Category 7, subject to safety considerations (e.g. sight distance).

4.0 ACCESS CLASSIFICATION SYSTEMS IN OTHER STATES

Several state DOTs have formally implemented statewide access management programs. For illustrative purposes, the access classification systems associated with seven representative states (Florida, New Jersey, Oregon, South Dakota, Colorado, Ohio, and Minnesota) are described below.

4.1 Florida

The Florida DOT has a system of seven access categories designated by number and defined as follows:

Category 1 – Limited access. These roadways include Interstate facilities, other freeways, and toll roads. The following subclasses are recognized:

- a. Central Business District (CBD) and CBD fringe areas.
- b. Existing urbanized areas other than 1a.
- c. Transitioning urban areas other than 1a and 1b.
- d. Rural areas.

Category 2 – Highly-controlled access characterized by median openings, a limited number of connections, and infrequent traffic signals with a system of existing or planned service roads.

Category 3 – Controlled access with existing or planned non-traversable medians and long spacing between signals, with access connections where abutting land has not been fully built-out.

Category 4 – Same as Category 3 but without a non-traversable median.

Category 5 – This category is used where abutting land has been built out to a greater extent than Categories 3 and 4. Highways have existing or planned non-traversable medians.

Category 6 – Same as Category 5 but without a non-traversable median.

Category 7 – This category is used in urbanized areas where the abutting land use is built out to the maximum feasible density.

Table 2 shows the access classification system and required spacing distances along roadways under the jurisdiction of the Florida DOT.

Table 2 – Florida DOT Access Classification System

Access Category ¹	Median Type	Connection Spacing (feet)		Median Opening Spacing (feet)		Signal Spacing (feet)
		> 45 mph	≤ 45 mph	Directional	Full	
2	Restrictive with service roads	1,320	660	1,320	2,640	2,640
3	Restrictive	660	440	1,320	2,640	2,640
4	Non-restrictive	660	440	N/A	N/A	2,640
5	Restrictive	440	245	660	2,640 / 1,320 ²	2,640 / 1,320 ²
6	Non-restrictive	440	245	N/A	N/A	1,320
7	Both types	125		330	660	1,320

1: Access Category 1 includes limited access facilities.

2: 2,640-foot spacing for roadways with posted speed > 45 mph and 1,320-foot spacing for roadways with posted speed ≤ 45 mph

N/A = Not applicable

A roadway classification team located in each Florida DOT District Office is responsible for assigning access categories to State roadways in accordance with an adopted agency procedure. The team also has the guidelines for determining the feasibility of installing a median where none exists, which in turn affects the roadway’s access category.

Highways of statewide importance, identified as the Florida Interstate Highway System, are to be designated no lower than Category 3 in accordance with the highway’s level of importance. Access Categories 3 and 4, and also Categories 5 and 6, differ from each other only in terms of the presence or absence of a median. Therefore, Florida DOT effectively uses four basic categories of non-freeway roadways.

Access Categories 2, 3, 4, 5, and 6 each have two sub-categories for speed (>45 mph and ≤45 mph); to a certain extent, this indirectly reflects the urban versus rural distinction, although it should be recognized that many suburban roadways have speeds exceeding 45 mph. The net result is a total of 11 categories for access management and design purposes.

4.2 New Jersey

The access classification system used by NJDOT, shown in Table 3, is based on New Jersey’s functional classification system and whether the roadway is within an urban or rural area. There are further distinctions within each area and functional class based on whether the segment is “high-speed” or “low-speed”, as well as the cross-sectional design and median treatment (divided, undivided multi-lane, or 2-lane). As a result, NJDOT has a total of 54 cells in the access classification matrix. There are six access levels associated with this classification system. These access levels are:

Access Level 1 – Fully-controlled access.

Access Level 2 – Access at street intersections or grade-separated interchanges.

Access Level 3 – Right-turn access to/from an access point with left-turn access via jughandle where signalized spacing standards met.

Access Level 4 – Right-turn access to/from an access point, left-turn ingress via a left-turn lane, and left-turn egress from an access point.

Access Level 5 – Access to/from an access point limited by spacing requirements and safety considerations.

Access Level 6 – Access to/from an access point limited by edge clearance and safety considerations.

Table 3 shows the NJDOT access classification system and assigned access levels.

Table 3 – New Jersey DOT Access Classification System Showing Access Levels

Access Class	Urban Characteristics					
	High Speed (≥ 45 mph)			Low Speed (< 45 mph)		
	Divided	Undivided, Multi-Lane	2-lane	Divided	Undivided, Multi-Lane	2-lane
Accessible Principal Arterials	3	4	4	3	4	5
Minor Arterials	3/4	4	5	3/4	4	5
Collector Roads	4	5	6	4	5	6
Local Roads	4	6	6	4	6	6
Access Class	Rural Characteristics					
	High Speed (≥ 50 mph)			Low Speed (< 50 mph)		
	Divided	Undivided, Multi-Lane	2-lane	Divided	Undivided, Multi-Lane	2-lane
Accessible Principal Arterials	2	4	4	3	4	5
Minor Arterials	2	4	5	3/4	4	5
Major Collectors	3/4	5	6	4	5	6
Minor Collectors	4	5	6	4	5	6
Local Roads	4	6	6	4	6	6

Note: For cells with access level 3/4, the access level will depend on department plans for the route.

4.3 Oregon

The Oregon Department of Transportation (Oregon DOT) uses “level of importance” (Statewide, Regional, or District level of importance, as identified in the State Transportation Plan and the 1999 Oregon Highway Plan) to derive access categories for all State roadways. Five speed levels and two area types (urban and rural) are used to identify specific categories. The two area types are further stratified by six roadway types (two rural and four urban). As Table 4A shows, these distinctions result in 60 categories of non-expressway roadways. The values given in Table 4A represent minimum access spacing standards for unsignalized driveways; signal spacing standards supercede these values.

Table 4A – Oregon DOT Access Classification System – At-Grade Intersections

Level of Importance	Posted Speed (mph)	Rural		Urban			
		Expressway (ft)	Other (ft)	Expressway (ft)	Other (ft)	UBA ^a (ft)	STA ^b
Statewide Highway	≥55	5,280	1,320	2,640	1,320	-	-
	50	5,280	1,100	2,640	1,100	-	-
	40-45	5,280	990	2,640	990	-	-
	30-35	-	770	-	770	720	^c
	≤25	-	550	-	550	550	^c
Regional Highway	≥55	5,280	990	2,640	990	-	-
	50	5,280	830	2,640	830	-	-
	40-45	5,280	750	2,640	750	-	-
	30-35	-	600	-	600	425	^c
	≤25	-	450	-	450	350	^c
District Highway	≥55	5,280	700	2,640	700	-	-
	50	5,280	550	2,640	550	-	-
	40-45	5,280	500	2,640	500	-	-
	30-35	-	400	-	400	350	^c
	≤25	-	400	-	400	350	^c

a: UBA – The Urban Business Area recognizes existing and future areas of commercial activity with highway facilities that emphasize maintaining existing speeds and through movement of traffic while balancing the needs for access to abutting properties.

b: STA – A Special Transportation Area is to have highway facilities that emphasize access to community activities, businesses, and residences and accommodate pedestrians along and across the highway in a downtown, business district, or community center, including those in unincorporated communities.

c: Existing city-block spacing or block spacing identified in the local comprehensive plan. Public road connections are preferred over private driveways, and in STAs private driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum spacing for driveways is 175 feet or mid-block if the current city block spacing is less than 350 feet.

The values indicated under the “Expressway” columns in Table 4A correspond to the required spacing distances for at-grade intersections only. Table 4B provides Oregon DOT’s spacing criteria for interchanges.

Table 4B – Oregon DOT Access Classification System – Interchanges¹

Access Management Classification	Area	Interchange Spacing^{2,3}
Interstate ⁴ and Non-Interstate Freeways (NHS)	Urban	3 miles (5 kilometers)
	Rural	6 miles (10 kilometers)
All Expressways on Statewide (NHS), Regional and District Highways	Urban	1.9 miles (3 kilometers)
	Rural	3 miles (5 kilometers)

1: The spacing standards in Table 4B are for planning and design of new interchanges on freeways or expressways. A major deviation study is required to change these standards.

2: Crossroad to crossroad centerline distance.

3: A major deviation study is required to change these planning spacing standards.

4: Interstate interchange spacing must be in conformance with federal policy.

Under the Oregon DOT access classification system, where a right of access exists, access is allowed to a property at less than the designated spacing standard only if that property does not have reasonable alternative access and the designated spacing standard cannot be accomplished. If possible, other options (such as joint access) should be considered. Where the right of access exists, the number of driveways serving a single property is limited to one, even when the property frontage exceeds the spacing standards. More than one driveway may be considered if, in the judgment of the Region Access Management Engineer, additional driveways will not interfere with driver expectancy and the safety of through traffic on the highway.

Driveways are to be located where they do not create undue interference or hazard to the free movement of normal highway or pedestrian traffic. Locations on sharp curves, steep grades, areas of restricted sight distance, or at points which interfere with the placement and proper functioning of traffic control signs, signals, lighting, or other devices that affect traffic operation are not permitted.

If a property becomes landlocked (no reasonable access exists) because a driveway cannot be safely constructed and operated, and all other alternatives have been explored and rejected, Oregon DOT might be required to purchase the property. If a hardship is self-inflicted, such as by partitioning or subdividing a property, Oregon DOT does not have responsibility for purchasing the property.

4.4 South Dakota

South Dakota DOT’s access classification system, shown in Table 5, is based on the Department’s functional classification system, with further distinctions within each functional class based on whether a median is present or not (divided vs. undivided), and whether the roadway is in an urban, non-urban (rural), or non-urban low-volume area. A low-volume roadway is defined as one that has an Annual Daily Traffic volume of 550 or less.

Table 5 – South Dakota DOT Access Classification System

Level of Importance / Functional Role	Undivided or Divided	Area	Signal Spacing Bandwidth*	Signal Spacing Distance (mile)	Median Opening Spacing (mile) ¹	Minimum ² Unsignalized Access Spacing	Denial of Direct Access When Other Available
Expressway	Undivided	Non Urban	N/A	N/A	N/A	½ mile	Yes
		Urban	40-45% ⁴	1/2 ⁴	N/A	½ mile	Yes
	Divided	Non Urban	N/A	N/A	1/2 F 1/2 D	½ mile	Yes
		Urban	40-45% ⁴	1/2 ⁴	1/2 F 1/2 D	½ mile	Yes
Principal Arterials	Undivided	Low volume	N/A	N/A	N/A	N/A ³	No ³
		Non Urban	45%	1/2	N/A	660 feet	Yes
		Urban	40-45% ⁴	1/4 – 1/2 ⁴	N/A	250-660 feet ⁴	Yes
	Divided	Non Urban	45%	1/2	1/2 F 1/2 D	660 feet	Yes
		Urban	40-45% ⁴	1/4 - 1/2 ⁴	1/4 - 1/2 F ⁴ 1/8 – 1/4 D ⁴	250-500 feet ⁴	Yes
Minor Arterials	Undivided	Low volume	N/A	N/A	N/A	N/A ³	No ³
		Non Urban	45%	1/2	N/A	660 feet	Yes
		Urban	35-40% ⁴	1/4 - 1/2 ⁴	N/A	200-450 feet ⁴	Yes
Collectors	Undivided	Low volume	N/A	N/A	N/A	N/A ³	No ³
		Non Urban	N/A	N/A	N/A	N/A ³	No ³
		Urban – primarily through traffic	35-40% ⁴	1/4 - 1/2 ⁴	N/A	150-350 feet ⁴	Yes ⁵
		Urban – primarily local traffic	N/A	N/A	N/A	N/A	No ³

1: N/A = Not Applicable; F = Full Movement; D = Directional Only.

2: Stricter standards could apply if set by other jurisdictions.

3: Considerations other than unsignalized access spacing should govern, e.g. sight distance.

4: Where a range of spacing is shown, the greater distance or bandwidth would apply to posted speeds of 45 mph or higher.

5: If so conference among the governing authorities.

* Bandwidth measures how large a platoon of vehicles can pass through a series of signals without stopping for a red traffic light. It represents a “window of green” in which motorists traveling along a roadway will encounter a series of green lights as they proceed. For example, a bandwidth of 45 percent indicates that, if a traffic signal has a 100-second cycle length, there is a 45-second band in which a platoon of vehicles will encounter green lights as they travel along a roadway.

4.5 Colorado

Colorado DOT has over 20 years of experience in administering its access management code. As shown in Table 6, the code currently describes a total of eight access categories, based on the level of importance of the roadway and the degree of urbanization of the surrounding area.

Table 6 – Colorado DOT Access Classification System

F-W Interstate System, Freeway Facilities	
E-X Expressway, Major Bypass	
Rural	Non-Rural
R-A Regional Highway	NR-A Regional Highway
R-B Rural Highway	NR-B Arterial NR-C Arterial
FR Frontage Roads ^a	

a = Rural and non-rural

The following is a description of each access category and its associated access standards:

Freeway Interstate System, Freeway Facilities (F-W) – Intended to carry high speed traffic and relatively high traffic volumes over medium and long distances. Provides for interstate, interregional, intraregional, intercity, and (in larger urban areas) intracity travel.

Expressways, Major Bypass (E-X) – Intended for high speed traffic and to accommodate relatively high traffic volumes. Provides for interstate, interregional, intraregional, intercity, and (to a lesser degree) intracity travel. Direct access to property is subordinate to service of through traffic.

Regional Highway Rural (R-A) -- Intended to accommodate medium to high speed traffic and relatively high traffic volumes. Provides for interregional, intraregional, and intercity travel. Direct access to property is subordinate to service of through traffic. Normally assigned to National Highway System routes, significant regional routes in rural areas, and other routes of regional or state significance.

Rural Highway (R-B) – Intended to accommodate moderate to high speed traffic, and low traffic volumes providing for local rural travel needs. This designation may be assigned to low-volume minor arterials, secondary collectors, and local highway sections that do not normally serve significant regional, state, or interstate travel demands. These facilities typically provide for rural transportation needs, including farm-to-market and farm-to-farm travel. They may include high-speed frontage roads.

Non-rural Regional Highway (NR-A) – Intended to accommodate medium to high speed traffic, and provide for medium to high traffic volumes over medium and long distances. Provide for interregional, intraregional, intercity, and intracity travel needs in urban and suburban areas. Serve as major arterials in smaller cities and towns. Direct access to property is subordinate to service of through traffic. Normally assigned to National Highway System routes and other routes of regional or state significance.

Non-rural Arterial Highway (NR-B) – Intended to accommodate moderate travel speeds, and relatively moderate to high traffic volumes over medium and short distances. Provide for intercity, intracity, and intercommunity travel. Routes generally not of regional, state, or national significance. Typically assigned within portions of cities and towns with established roadside development. Provides service to through traffic movement, but allows for more direct access.

Non-rural Arterial Highway (NR-C) – Intended to accommodate low to moderate travel speeds, and relatively moderate traffic volumes over medium and short distances. Provide for intercity, intracity, and intercommunity travel. Routes generally not of regional, state, or national significance. Typically assigned in areas of extensive established roadside development and downtown areas where assignment of a higher category is unrealistic. Provides a balance between through traffic movement and direct property access.

Frontage Roads (FR) – This designation is assigned only to roadways designated as frontage or service roads that have no intended purpose of serving long-distance traffic movements. Access needs take priority over through traffic movement. Providing safe and reasonable access to abutting properties is the primary purpose.

As noted above, the access categories for Colorado account for the basic functional classification of the roadway and the urban/rural nature of the area, as well as the desired travel speed and movement-versus-access characteristics. The spacing requirements associated with each of the access categories described above are very comprehensive and detailed, with a variety of caveats to account for a wide range of potential access scenarios. *For the sake of brevity, the access spacing criteria for Colorado are not included in this report, but are available upon request.*

4.6 Ohio

Ohio DOT’s access classification system consists of five (5) access categories. A summary of the design and operational standards in the Ohio DOT system is described in Table 7 below.

Table 7 – Ohio DOT Access Classification System

Access Category	Traffic Function	Design Standards	Operational Standards
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.	Public access via interchanges only. Minimum posted speed of 55 mph.
II	Relatively high speed, high volume, long distance through traffic for interstate, interregional, intercity and some intra-city travel. Typically includes Expressways and facilities in an early stage of design, intended to become Category I as funding and priorities allow.	Access at interchange or public street intersection; no direct private access allowed unless property retains deeded rights and then for RT. LT may be allowed if (1) the access does not have potential for signal, and (2) travel circuitry exceeds two miles, and (3) the Department determines that the LT can meet all safety, design and operational standards. This is the highest category allowing at-grade intersections.	Access via interchange or public at-grade intersection. Signalized intersections should be spaced at 1 mile. ½-mile spacing allowed where there is no reasonable access to the general street system. Minimum posted speed of 50 mph in areas without signals, and minimum of 45 mph in areas with signals.
III	Moderate to high speeds, volumes, and distances for interregional, intercity, and intra-city travel. Typically includes rural arterials, high speed urban arterials, and some urban collectors.	No direct private access if property owner has reasonable alternative access or opportunity to obtain such access; when allowed, generally for RT only. LT may be allowed if (1) the LT does not have potential for signal, and if (2) the Department determines that the LT does not cause congestion or safety problem or lower the level of service, and (3) alternatives to the LT would cause roadway and intersection operation and safety problems, and (4) the LT does not interfere with operation of street system or access to adjacent properties.	On rural highway sections, signalized intersections should be spaced at 1 mile; ½-mile spacing is allowed where there is no reasonable alternative access to the general street system. On urban highway sections, signalized intersections should be spaced at ½-mile; ¼-mile may be allowed where there is no reasonable alternative access to the general street system. Minimum posted speed of 45 mph in areas without signals, and minimum of 35 in areas with signals.
IV	Balanced service for access and mobility at moderate to high speeds and volumes in rural areas for moderate to short distances and low to moderate speeds and volumes in urban area providing intercity, intra-city, and intra-community travel. Typically includes rural collectors, low to moderate speed urban arterials, and most urban collectors.	One direct access allowed per parcel; additional access may be allowed if the Department determines it meets access safety, design, and operational standards. All turn movements may be allowed if the Department determines they meet safety, design and operational standards.	On rural highway sections, signalized intersections should be spaced at 1 mile; ½-mile spacing is allowed where there is no reasonable alternative access to the general street system. On urban highway sections, signalized intersections should be spaced at ½-mile; ¼-mile may be allowed where there is no reasonable alternative access to the general street system. Minimum posted speed of 35 to 55 mph in undeveloped areas, and 25 to 45 mph in developed areas.
V	Low volume rural highways, rural and urban streets and roads. Typically includes routes providing local land access, including frontage roads.	All turning movements allowed subject only to safety considerations.	One direct private access per parcel.

Additional tables in Ohio’s State Highway Access Management Manual outline more detailed requirements for left-turn and right-turn lanes, acceleration lanes, and spacing standards based on whether the subject driveway is a high-volume, medium-volume, low-volume, or a “minimum use” driveway.

4.7 Minnesota

Minnesota DOT’s access classification system consists of seven (7) primary access categories and five subcategories (F, A-F, A, B and C) relating to area type, as shown in Table 8. The primary categories are based on the functional classification of the roadway and its strategic importance within the statewide highway system. The subcategories address the specific facility types and differing patterns of land use that surround the roadway. Table 8 also shows the range of posted speeds that may be encountered in each subcategory, but these are purely intended to be descriptors and are not specific standards for a given subcategory.

Table 8 – Minnesota DOT Access Classification System

Category	Area Type	Functional Classification	Statewide Strategic Importance	Typical Posted Speed
1 High Priority Interregional Corridors				
1F	All Areas	Interstate Highways	High Priority Interregional Corridor	90 – 110 km/h (55 – 75 mph)
1A-F	All Areas	Principal Arterials	High Priority Interregional Corridor	90 – 110 km/h (55 – 65 mph)
1A	All Areas	Principal Arterials	High Priority Interregional Corridor	90 – 110 km/h (55 – 65 mph)
2 Medium Priority Interregional Corridors				
2A-F	All Areas	Principal Arterials	Medium Priority Interregional Corridor	90 – 110 km/h (55 – 65 mph)
2A	Rural/Exurban/ Bypass	Principal Arterials	Medium Priority Interregional Corridor	90 – 110 km/h (55 – 65 mph)
2B	Urban/Urbanizing	Principal Arterials	Medium Priority Interregional Corridor	60 – 90 km/h (40 – 55 mph)
2C	Urban Core	Principal Arterials	Medium Priority Interregional Corridor	50 – 60 km/h (30 – 40 mph)
3 High Priority Regional Corridors				
3A-F	All Areas	Principal Arterials	High Priority Regional Corridor	90 – 110 km/h (55 – 65 mph)
3A	Rural/Exurban/ Bypass	Principal/Minor Arterials	High Priority Regional Corridor	70 – 110 km/h (45-65 mph)
3B	Urban/Urbanizing	Principal/Minor Arterials	High Priority Regional Corridor	60 – 70 km/h (40 – 45 mph)
3C	Urban Core	Principal/Minor Arterials	High Priority Regional Corridor	50 – 60 km/h (30 – 40 mph)
4 Principal Arterials in Primary Trade Centers				
4A-F	All Areas	Principal Arterials	Metro/Major Urban	90 – 110 km/h (55 – 65 mph)
4A	Rural/Exurban/ Bypass	Principal Arterials	Metro/Major Urban	70 – 90 km/h (45 – 55 mph)
4B	Urban/Urbanizing	Principal Arterials	Metro/Major Urban	60 – 70 km/h (40 – 45 mph)
4C	Urban Core	Principal Arterials	Metro/Major Urban	50 – 60 km/h (30 – 40 mph)
5 Minor Arterials				
5A	Rural/Exurban/ Bypass	Minor Arterials		70 – 90 km/h (45 – 55 mph)
5B	Urban/Urbanizing	Minor Arterials		60 – 70 km/h (40 – 45 mph)
5C	Urban Core	Minor Arterials		50 – 60 km/h (30 – 40 mph)
6 Collectors				
6A	Rural/Exurban/ Bypass	Collectors		70 – 90 km/h (45 – 55 mph)
6B	Urban/Urbanizing	Collectors		60 – 70 km/h (40 – 45 mph)
6C	Urban Core	Collectors		50 – 60 km/h (30 – 40 mph)
7 Special Access Plan				
7	All	All	All	All

Descriptions of all categories and subcategories are as follows.

CATEGORIES

Category 1 – High Priority Interregional Corridors

Access Category 1 is intended for High Priority Interregional Corridors that connect Primary Trade Centers with the Twin Cities Metropolitan Area. According to the Interregional Corridor System plan, these roadways are key corridors providing interstate and intrastate travel. Performance measures for High Priority Interregional Corridors have been established and are based on an average peak hour corridor travel speed of 100 km/h (60 mph) or more. Access management along these corridors strongly emphasizes mobility. The functional class of these roadways is either Interstate or Principal Arterial.

Category 2 – Medium Priority Interregional Corridors

Access Category 2 is intended for Medium Priority Interregional Corridors that connect Secondary Trade Centers to Primary Centers. According to the Interregional Corridor System plan, these roadways are corridors of significant importance, providing interstate and intrastate travel. Performance measures for Medium Priority Interregional Corridors have been established and are based on average peak hour corridor travel speeds of 90 km/h (55 mph) or more for rural and all other areas, and between 50 and 90 km/h (30 to 55 mph) for urban and urbanizing areas. Access management along these corridors strongly emphasizes mobility. The functional class of roadways within this access category is Principal Arterial.

Category 3 – High Priority Regional Corridors

Access Category 3 is intended for Regional Corridors that connect the smaller trade centers to the rest of the state. The primary function of these roadways is to provide mobility between smaller communities within the state, though in some cases where a supporting road network or a hierarchical grid pattern has not been established, these roadways will also provide access to adjacent properties. Performance measures for High Priority Regional Corridors are based on average peak hour corridor travel speeds of between 50 and 70 km/h (30 to 45 mph) for urban and urbanizing areas, and 70 km/h (45 mph) or more for rural and all other areas. The functional classification of these roadways may be either Principal Arterial or Minor Arterial.

Category 4 – Principal Arterials in Primary Trade Centers

Access Category 4 is intended primarily for roadways designated as Principal Arterials within the Twin Cities Metro Area and Primary Regional Trade Centers. These roadways are intended to provide the mobility element of a larger roadway network. Lower category roadways feed into these roadways. Within the Twin Cities Metropolitan Area, an average corridor travel speed of 65 km/h (40 mph) is the desired performance target. These roadways range from fully grade-separated facilities to two-lane urban streets.

Category 5 – Minor Arterials

Access Category 5 is intended primarily for roadways designated as Minor Arterials. These roadway segments can serve both as mobility corridors and as the primary road for accessibility. There is great variability among the roadways in Minnesota that are functionally classified as Minor Arterials. In fully developed urban cores and central business districts, they tend to carry high volumes of traffic and provide a high degree of access as well. As a result, posted speeds may be in the range of 50 to 55 km/h (30 to 35 mph), with much lower peak hour operating speeds due to congestion. In urban/urbanizing areas, Minor Arterials carry longer 5 to 8 km (3 to 5 mile) sub-regional trips with typical posted speeds ranging from 60 to 90 km/h (40 to 55 mph). In these settings, access needs to be more carefully managed.

In rural areas with much less dense development and no supporting road network, Minor Arterials may be required to accommodate higher travel speeds while also providing direct access to adjacent properties.

Category 6 – Collector

Access Category 6 is intended primarily for roadways designated as Collectors. Their primary function is to provide access to the adjacent land by serving as a connection between the local street network and the arterial roadways. Like Minor Arterials in rural areas, Collectors may be required to accommodate both higher speed travel and direct property access.

Category 7 – Specific Access Management Plans

This category is intended to address roadway segments where a specific access management plan has been developed. The specific plan approach may provide a long-term retrofit strategy in areas where existing developments do not meet recommended access spacing and allowance and will likely prevent future development from fully conforming to access guidelines. The specific access plan should identify all existing and proposed points of access, traffic signals, and roadway design elements. The plan should also address existing and proposed land use and the supporting road network. The specific access management plan should specify existing non-conforming access points and the conditions under which such access shall be brought into compliance with the plan. Category 7 plans must be officially endorsed by Mn/DOT and the local land use and road authorities.

SUBCATEGORIES

For each access category type discussed above, a range of subcategories is provided to address differing land use conditions along each roadway segment. With the understanding that a roadway may change character as it passes through or around a community, these subcategories were developed to recognize general land-use patterns adjacent to the roadway and the intended purpose of the roadway.

Subcategory F – Freeway

This subcategory is intended for roadway segments designated as Interstate Highways. This access designation is independent of the surrounding land use. No private access is permitted and public access will be permitted only at grade-separated interchanges.

Subcategory A-F – Full Grade Separation

This subcategory is intended for those roadway segments planned or designed to be fully grade separated. This access designation is independent of the surrounding land use. No private access is permitted and public access will be restricted to interchanges only. This subcategory will typically be associated with a segment of a four lane divided expressway as it passes through or around an urban center.

Subcategory A – Rural/Exurban/Bypass Areas

This subcategory is intended for road segments extending through agricultural or forested areas with limited development. It will also be assigned to areas planned as long term low-density exurban areas characterized by scattered large lot residential development and limited commercial and industrial land use. This sub-category is also intended for roadway segments that have been designed and constructed as high-speed urban bypasses. Roadways in this sub-category will generally be expected to operate at higher speeds, typically 80 km/h (50 mph) or more.

Subcategory B – Urban/Urbanizing Areas

This subcategory is intended for areas outside of urban cores that are either urbanized or planned for urbanization with a full range of urban services, especially a local supporting street network. This subcategory will generally apply to areas within municipal boundaries. In cases where this subcategory is applied to areas experiencing or anticipating urban development outside municipal boundaries, Mn/DOT will expect the local land use authority---township or county---to manage development and ensure property access is available through the local road network. In assigning Urban/Urbanizing designations to trunk highways, Mn/DOT will consider the adopted plans, development regulations, and local street extension plans and policies of the local community. This subcategory is not intended to be assigned to short roadway segments serving individual, isolated developments. Roadways in this sub-category will generally be expected to operate at a somewhat reduced speed compared to the overall corridor.

Subcategory C – Urban Core

In general, this designation is intended only for roadways extending through fully developed town centers and central business districts, characterized by short blocks and a grid system of intersecting streets. Individual lots will typically be small, 0.10 ha (1/4 acre) or less, with little or no on-site parking. Buildings will usually be situated close to the street. Sidewalks and on-street parking are common. In some larger urban areas, the major thoroughfare through the urban core no longer serves as the primary mobility corridor but has been supplemented by the construction of additional highways, arterials, and/or bypasses. Jurisdiction of the older roadway may have been transferred from Mn/DOT to the city or county. In some smaller communities or regional centers, however, additional roadways and by-passes will not be present due to the lack of overall travel demand or environmental constraints, and the major thoroughfare must accommodate both local and through trips. In this case, lower speeds on the highway through the urban core can be expected. If a community desires to promote a new pedestrian-oriented urban core, such an area should be designed and oriented to attain access to the larger roadway network via lower category roads, such as Collectors and, perhaps, some Minor Arterials. Therefore, in general, new or expanded urban core area subcategory will only be assigned to roadways within Access Category 5 and 6.

5.0 INDOT MOBILITY CORRIDOR CONCEPT

In conjunction with development of the 2000-2025 Long-Range Plan, INDOT instituted a planning-level corridor hierarchy system for roadways under its jurisdiction. This corridor hierarchy system places State highways into one of three tiers as follows:

5.1 Tier 1: Statewide Mobility Corridors

Statewide Mobility Corridors represent the highest tier within the Indiana State highway system. These include roadways that provide connections to major metropolitan areas within the state and to major metropolitan areas in neighboring states. It includes the national Interstate System within Indiana, as well as most other routes on the Principal Arterial System. These roadways serve as freight arteries and, as such, are considered vital to the economic development of the state. As stated in the INDOT 25-Year Plan, characteristics typical of Statewide Mobility Corridors include:

- Upper-level design standards
- Uninterrupted traffic flow
- Intended for high-speed traffic
- Serves long-distance trips
- Can accommodate heavy commercial vehicle traffic
- Typically a multi-lane, divided highway facility
- Fully-controlled access is desirable; no less than partial access control is acceptable
- Railroad and highway grade-separations are desirable
- By-passes of congested areas are desirable
- No interactions with non-motorized vehicles or pedestrians

5.2 Tier 2: Regional Corridors

Regional Corridors are the middle tier of the Indiana State highway system and are meant to accommodate interregional travel within the State. They are intended to provide moderate to high-speed connections to smaller cities and regions, and provide access to the Statewide Mobility Corridors. As stated in the INDOT 25-Year Plan, characteristics typical of Regional Corridors include:

- Mid-level design standards
- Intended for moderate to high-speed traffic
- Uninterrupted traffic flow to the extent practical in rural areas
- Accommodates medium-distance trips and moderate volumes of through traffic
- Can accommodate moderate volumes of commercial vehicle traffic
- Has the potential to accommodate heavy local traffic volumes
- Intersections with railroads and other highways are at-grade, with consideration for grade-separation
- Typically multi-lane or high-level two-lane highway facilities
- Partial access-control is desirable
- Conventionally routed through cities and towns (no by-passes)
- Moderate interaction with non-motorized vehicles and pedestrians

5.3 Tier 3: Local Access Corridors

Local Access Corridors comprise the remainder of the State highway system. They accommodate traffic traveling at lower speeds and provide intercounty and intracounty access between small towns and rural areas on the order of 10 to 15 miles apart. They provide direct access to local residences and businesses. As stated in the INDOT 25-Year Plan, characteristics typical of Local Access Corridors include:

- Lower-level design standards
- Intended for low to moderate-speed traffic
- Intersections with railroads and other highways are at-grade
- Access control is minimal
- Accommodates short-distance trips and low volumes of through traffic
- Can accommodate moderate local traffic volumes
- Typically a two-lane facility, with some exceptions for multi-lane facilities
- Routed through cities and towns (no by-passes)
- Frequent interaction with non-motorized vehicles and pedestrians

6.0 DRAFT ACCESS CLASSIFICATION SYSTEM FOR INDOT

This section describes the development of the access classification system for INDOT, including comments provided by the Study Advisory Committee (SAC) at the April 14, 2005 and September 26, 2005 meetings and a description of the classification system recommended for further consideration.

6.1 Comments Provided by Study Advisory Committee

Based on the review of the Planning Level Corridor Hierarchy for Indiana and access classification systems used in other states, two preliminary draft access classification systems were developed and presented to the SAC for discussion purposes at the April 14, 2005 meeting. The following is a summary of key comments made by SAC members at that meeting with respect to the preliminary draft access classification systems:

- The three-tier categorization of urban streets (urban, suburban, and intermediate) in the INDOT *Roadway Design Manual* should be considered for application to the access classification system.
- The *Roadway Design Manual* may be used as a mechanism for implementing access management.
- “Local Access Corridors” should probably be called something else. The terminology may be misinterpreted by some people, because “local” is a term often used in reference to municipalities. These roadways may simply be called “Access Corridors”. However, these facilities also serve mobility needs and some volume of through traffic.
- “Suburban” access categories may be needed.
- “Transition” access categories may be needed between the “rural” and “urban” categories. This would include areas that fall between urban centers and rural/suburban centers that are expected to develop over time.
- The Statewide Mobility Corridor (SMC) category could be expanded to differentiate between 4-lane and 2-lane roads. There are 2-lane roads that are designated as SMCs, but they may serve a different purpose than 4-lane SMCs.
- The access classification system could consider projected traffic volumes under the 30-year planning horizon for the highway.
- Traffic volume (ADT) could be considered as a criterion in the access classification system.

Based on the comments above, the draft access classification system was subsequently revised by the consultant team and presented to the SAC, as a revised draft, at the September 26, 2005 meeting. The following is a summary of key comments made by SAC members at that meeting with respect to the revised draft access classification system:

- Tier 3 could be simply called “Access Corridors” or “Sub-Regional Corridors.”
- One driveway per parcel is too permissible for Tier 3 roadways from an access management perspective, especially since they comprise approximately 50-percent of all State roadways identified under the Statewide Mobility Corridor Concept. Also, despite their ranking at the

bottom of the three-tier classification system, they are still part of the State highway system and need to be protected.

- In applying the access classification system, INDOT should consider the planned future conditions of State roadways, rather than existing conditions. INDOT needs to answer the question: “What do we want these roadways to look like in the future?”
- The Statewide Mobility Corridor designations for all roadways should be revisited by INDOT periodically (possibly annually) to determine if the designations are appropriate, given changes in each roadway’s function and/or development of adjacent properties.
- The basic criteria for access spacing should be speed.
- A next step in the access classification system process is to identify the percentage of roadways that fall into each access category and sub-category. This will enable the consultant team to identify how the access classification system tables may be consolidated.
- The consultant team should determine whether Ohio DOT presents driveway spacing guidelines or standards as part of their access classification system. Is there flexibility or are there rigid standards? If spacing *standards* are used for INDOT, the access classification system should identify what should be done if one cannot meet the standard. *Subsequent correspondence with access management officials at the Ohio DOT revealed they use guidelines with respect to access management on the State highway system.*
- Three specific actions trigger the need to apply the access classification system to a particular roadway:
 - 1) A driveway permit application;
 - 2) A significant change in the abutting land use; and
 - 3) A road reconstruction project.Otherwise, no action is required by INDOT.
- Special Transportation Areas (STAs) are a good idea to address areas that have unique access and mobility needs. However, they need to be narrowly-defined to prevent their overuse as a “special case.” STAs are analogous to specialty zoning.

6.2 Revised Draft Access Classification System

Based on the SAC comments above, the draft access classification system was revised. Table 9A provides an overview of the draft access classification system recommended for further consideration. As shown in Table 9A, the draft access classification system uses the Planning Level Corridor Hierarchy as the primary basis for a tiered system of access categories. Because interstate highways and freeways are of the highest level of importance and are fully access-controlled, they represent the highest category within the draft access classification system. However, spacing criteria for these roadways are already established in other sources such as the INDOT *Roadway Design Manual* and AASHTO’s *A Policy on Geometric Design of Highway and Streets* (the “Green Book”).

**Table 9A
Draft Access Classification System for INDOT
Overview**

Level of Importance / Access Category	Type	Traffic Function	Design Standards
Interstate Highways and Freeways		Accommodates high-speed, high-volume, and long-distance through traffic for interstate, intrastate, or intercity travel. Also can provide a major connection between suburban areas and metropolitan centers.	Multi-lane roadways with full access-control. Access via interchanges only (no direct private access to abutting properties allowed). All roadways are multi-lane and median-controlled/divided. At-grade intersections and access driveways not permitted under any circumstances. Interchange spacing is in accordance with the INDOT <i>Roadway Design Manual</i> .
Tier 1: Statewide Mobility Corridor	A	Provides connections to major metropolitan areas within the State and to neighboring states. Provides accessibility to cities and regions around the state. Accommodates high-speed and long-distance trips. Can accommodate heavy commercial vehicle traffic. Includes most rural non-Interstate routes on the Principal Arterial System.	Includes all multi-lane roadways. Access generally occurs only at interchanges or at-grade public street intersections. Some movements at public street intersections may need to be restricted based on existing and projected operating conditions and intersection spacing. Private access to abutting properties is <u>not</u> allowed, unless property has no reasonable alternative access (via joint-use driveways or frontage roads) or opportunity to obtain such access.
	B	Same traffic function as Tier 1, Type A. Generally provides key rural connections between metropolitan areas.	Includes only 2-lane roadways. Access generally only occurs via at-grade public street intersections. Some movements at public street intersections may need to be restricted based on existing and projected operating conditions and intersection spacing. Private access to abutting properties is <u>not</u> allowed, unless property has no reasonable alternative access (via joint-use driveways or frontage roads) or opportunity to obtain such access.
Tier 2: Regional Corridors	A	Provides connections to smaller cities and regions, feeds traffic to the Statewide Mobility Corridors, and provides for regional accessibility. Accommodates moderate to high-speed traffic, medium distance trips, and moderate volumes of through traffic and commercial vehicle traffic. Can accommodate local heavy traffic volumes.	Includes all multi-lane roadways. Generally median-controlled/divided. Public street connections occur at-grade. Private access to abutting properties is allowed. Full movements and signalization are allowed for public street connections and "commercial major" driveways only. All other private driveways are limited to unsignalized, right-in/right-out (median-controlled) access, with left-turns allowed conditionally subject to INDOT review and approval.
	B	Same traffic function as Tier 2, Type A.	Includes only 2-lane roadways. Public street connections occur at-grade. Private access to abutting properties is allowed. Full movements are allowed at all private driveways, with the exception of access driveways located within 300 feet of an existing (or potential future) signalized intersection which must be right-in/right-out (with left-turn access allowed conditionally subject to INDOT review and approval). Signalization is allowed for public street intersections and "commercial major" driveways only.
Tier 3: Sub-Regional Corridors	A	Typically provides access to local residences and businesses in rural areas and small towns. Accommodates moderate to low speed traffic, short distance trips, and moderate local traffic volumes.	Includes all multi-lane roadways. Public street connections occur at-grade and may be signalized. "Commercial major" driveways may also be signalized. Full movements are allowed at public street intersections and all private access driveways.
	B	Same traffic function as Tier 3, Type A.	Includes only 2-lane roadways. Public street connections occur at-grade and may be signalized. "Commercial major" driveways may also be signalized. Full movements are allowed at public street intersections and all private access driveways.
Special Transportation Areas		STAs could be implemented on roadways of all Tiers, and depend on location. STAs typically apply to roadways aligned through towns or environmentally-sensitive areas. They may range in function (between access and mobility) based on the needs of the community and environmental concerns.	Unique context-sensitive design and special access management treatments are established based on the particular mobility and access needs of the location, in accordance with general guidelines.

Tiers 1 and 2 of the access classification system include all “Statewide Mobility Corridors” and “Regional Corridors,” respectively, on the INDOT highway system. Tier 3 of the access classification system includes all “Local Access Corridors” on the INDOT highway system. However, because Local Access Corridors serve a mobility function and accommodate some through traffic volume, the term “Sub-Regional Corridors” has been used instead for Tier 3 roadways in the access classification system.

As shown in Table 9A, Statewide Mobility Corridors (Tier 1), Regional Corridors (Tier 2), and Sub-Regional Corridors (Tier 3) are each subdivided into two subcategories (Type “A” and Type “B”) that reflect distinct variations within each of these Tiers. For all three tiers, the Type “A” distinction applies exclusively to multi-lane roadways, and the Type “B” distinction applies exclusively to two-lane roadways. The purpose for this distinction was to reflect the different characteristics associated with two-lane roadways.

In addition, as Table 9A shows, a separate access category for “Special Transportation Areas” (STAs) is included to reflect the special access needs found in environmentally-sensitive areas and along traditional “main streets” (roadways characterized by mixed land uses, pedestrian activity, and a role as a community focal point, etc.). STAs may have a range in function between access and mobility, and are intended to incorporate unique context-sensitive design and access management treatments based on the particular needs of the locality and the function of the facility.

A summary of the key differences in spacing guidelines for the three tiers is as follows:

Tier	Ideal Signalized Intersection Spacing Guideline*	Minimum Acceptable Bandwidth for Deviation from Ideal Signalized Intersection Spacing		Functional Area near Signalized Intersections for Right-In/Right-Out Access Only
		Urban	Rural	
1A and 1B	½ mile	45%	50%	400 feet
2A and 2B	½ mile	40%	45%	300 feet
3A and 3B	½ mile	35%	40%	200 feet

* A ¼-mile spacing guideline applies to all State highways with speeds ≤ 40 mph located within a built-up urban area, regardless of tier.

As shown above, the ideal spacing guideline for signalized intersections on all tiers of the State highway system is ½ mile in most cases. The ½ mile spacing typically accommodates progression speeds ranging between approximately 30 mph and 60 mph, depending on the length of the signal cycle that is selected.

As noted in the table above, for State highways with posted speeds of 40 mph or less that are located in built-up urban areas, a ¼ mile spacing guideline applies. Currently, these conditions would apply to a total of approximately 6.8 miles of the INDOT highway system under Tiers 3A and 3B. The ¼ mile spacing typically accommodates progression speeds ranging between approximately 15 mph and 30 mph, depending on the length of the signal cycle that is selected.

Where the ideal signal spacing guidelines cannot be met, a deviation may be allowed, provided a minimum acceptable bandwidth criterion can be met. As shown above, this minimum acceptable bandwidth criterion varies depending on the tier of the State highway system, and the location of the highway in either an urban or rural area.

Bandwidth measures how large a platoon of vehicles can pass through a series of signals without stopping for a red traffic light. It represents a “window of green” in which motorists traveling along a roadway will encounter a series of green lights as they proceed. For Tier 1 State highways, the minimum

bandwidth is defined to be 45-percent in urban areas and 50-percent in rural areas. This means that if a traffic signal has a 100-second cycle length, there is a 45-second band in which a platoon of vehicles will encounter green lights as they travel along a State highway in urban areas, and a 50-second band for rural areas. In addition to minimum bandwidth, the signal spacing for a particular roadway is also a function of the cycle length of the signals and the desired progression speed for that roadway.

In addition, to reduce potential turning conflicts near signalized intersections, direct property access would be restricted to Right-In/Right-Out (RIRO) movements within a specified distance of such intersections. As shown in the table above, this distance would again depend upon which tier of the State highway the access driveway is located.

The spacing guidelines for unsignalized intersections and driveways are based on speed as specified in Table 8.1 of INDOT's *Driveway Permit Manual*, irrespective of tier. The decision-making process with respect to the application of the access spacing guidelines may also consider existing and projected future traffic volumes and the type of environment (built-up, intermediate, suburban, and rural). In general, greater flexibility is needed for lower speed roadways in built-up areas.

Driveways should not be situated within the longitudinal length of an auxiliary lane from an adjacent intersection along any State highway. It should be noted that auxiliary lane criteria are not defined as part of the access classification system described above. The criteria for various types of auxiliary lanes are defined in the *Roadway Design Manual* and the *Driveway Permit Manual*, based on the roadway cross-section, traffic volume, and speed.

Tables 9B through 9G provide the following details for Tiers 1, 2 and 3:

- Type of access permitted (at-grade intersection, private driveway)
- Traffic movements allowed (full movements, right-in/right-out only, etc.)
- Traffic control devices permitted (traffic signal, STOP sign)
- Spacing criteria for public intersections and driveways

Detailed descriptions of each access category, corresponding to Tables 9B through 9G, are provided below.

6.2.1 Tier 1A – Statewide Mobility Corridors (Multi-Lane)

Tier 1A is comprised of all multi-lane Statewide Mobility Corridors on the INDOT system. At-grade, public street intersections are permitted along these roadways and may be signalized contingent upon the intersection meeting the warrant criteria set forth in the *Manual on Uniform Traffic Control Devices* (MUTCD) and provided INDOT concurs with the signal installation based on spacing and other considerations. Full turning movements may be allowed for public street intersections, although INDOT may require some movements be restricted based on intersection spacing requirements, and existing and projected operating conditions.

Table 9B
Draft Access Classification System for INDOT
Tier 1: Statewide Mobility Corridors - Type "A" (Multi-Lane Roadways)

		At-Grade Public Street Intersections	Access Driveways ^{1,2}	
			Commercial Major	All other driveways
Permitted?		Yes	Restricted	Restricted
Traffic movements allowed		Full movements ³	Full movements ³	RIRO ⁴
Traffic control devices		Traffic signal ⁵	Traffic signal ⁵	STOP ⁶
Spacing criteria	Urban areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁷	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁸	Ideal <u>signalized</u> spacing = 1/2 mile ⁸	
	Rural areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁷	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁹	Ideal <u>signalized</u> spacing = 1/2 mile ⁹	

Notes:

- 1: Driveways should not be situated within the longitudinal length of an adjacent auxiliary lane.
- 2: Driveways are allowed if property owner has no reasonable alternative access (or opportunity to obtain such access) and joint-use driveways and frontage roads are infeasible.
- 3: Some movements may need to be restricted based on intersection spacing, and existing and projected operating conditions. Limited to Right-In/Right-Out movements for driveways within 400-feet of an existing (or potential future) signalized intersection. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 4: Right-In/Right-Out (RIRO) driveways are allowed if property owner has no reasonable alternative access (or opportunity to obtain such access) and joint-use driveways and frontage roads are infeasible. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 5: Traffic signal installation subject to traffic signal warrant criteria per MUTCD and additional assessment by INDOT, including signal criteria. Where warrants are satisfied, the new approach should be situated opposite an existing 3-leg intersection, if present.
- 6: STOP control applies to the access driveway and not to the State highway.
- 7: Except where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied.
- 8: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 45%.
- 9: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 50%.

Access driveways are restricted under Tier 1A, and may be allowed by INDOT only if the property owner has no reasonable alternative access (or opportunity to obtain such access), and joint-use driveways and frontage roads are infeasible. Full turning movements may be allowed for Commercial Major driveways (i.e. those requiring an auxiliary lane), although INDOT may require some movements be restricted based on intersection spacing requirements, and existing and projected operating conditions. Commercial Major driveways may also be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation. All other driveways are restricted to Right-In/Right-Out (RIRO) movements, with left-turn access allowed contingent upon INDOT review and approval.

The spacing criteria for all signalized intersections and driveways on Tier 1A State highways are based on an ideal signalized intersection spacing of ½ mile. Where this ideal signal spacing cannot be met, a minimum green bandwidth of 45-percent in urban areas and 50-percent in rural areas is required.

The spacing criteria for all unsignalized intersections and driveways is based on speed as indicated in Table 8.1 of the *Driveway Permit Manual*, except for locations where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied instead. The distribution of mileage by posted speed along existing Tier 1A roadways on the INDOT highway system, and the corresponding spacing distances (based on Table 8.1 of the *Driveway Permit Manual*) are shown below:

30 mph roadway	→ 185-foot spacing	→ 0.2 miles
35 mph roadway	→ 245-foot spacing	→ 20.2 miles
40 mph roadway	→ 300-foot spacing	→ 1.8 miles
45 mph roadway	→ 350-foot spacing	→ 75.7 miles
50 mph roadway	→ 395-foot spacing	→ 42.5 miles
55 mph roadway	→ 435-foot spacing	→ 599.1 miles
Total Tier 1A mileage =		739.5 miles

Of the total Tier 1A mileage, 715.3 miles are undivided multi-lane roadways and 24.2 miles are divided multi-lane roadways, and 229.3 miles are in urban areas and 510.2 miles are in rural areas.

6.2.2 Tier 1B – Statewide Mobility Corridors (Two-Lane)

Tier 1B is comprised of all two-lane Statewide Mobility Corridors on the INDOT system. At-grade, public street intersections are permitted along these roadways and may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation. Full turning movements are generally allowed for public street intersections.

Access driveways are restricted under Tier 1B, and may be allowed by INDOT only if the property owner has no reasonable alternative access (or opportunity to obtain such access), and joint-use driveways and frontage roads are infeasible. Full turning movements may be allowed for driveways permitted on Tier 1B roadways, with the exception of those located within 400-feet of an existing (or potential future) signalized intersection, in which case the driveway is restricted to RIRO movements only (left-turn access may be allowed conditionally upon INDOT review and approval). Commercial Major driveways may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation.

The spacing criteria for all signalized intersections and driveways on Tier 1B State highways are based on an ideal signalized intersection spacing of ½ mile. Where this ideal signal spacing cannot be met, a minimum green bandwidth of 45-percent in urban areas and 50-percent in rural areas is required (same criteria as Tier 1A).

The spacing criteria for all unsignalized intersections and driveways is based on speed as indicated in Table 8.1 of the *Driveway Permit Manual*, except for locations where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied instead. The distribution of mileage by posted speed along existing Tier 1B roadways on the INDOT highway system, and the corresponding spacing distances (based on Table 8.1 of the *Driveway Permit Manual*) are shown below:

30 mph roadway	→ 185-foot spacing	→ 0.3 miles
35 mph roadway	→ 245-foot spacing	→ 45.0 miles
40 mph roadway	→ 300-foot spacing	→ 4.3 miles
45 mph roadway	→ 350-foot spacing	→ 11.6 miles
50 mph roadway	→ 395-foot spacing	→ 46.6 miles
<u>55 mph roadway</u>	<u>→ 435-foot spacing</u>	<u>→ 485.8 miles</u>
Total Tier 1B mileage =		593.6 miles

Of the total Tier 1B mileage, 73.6 miles are in urban areas and 520.0 miles are in rural areas.

Table 9C
Draft Access Classification System for INDOT
Tier 1: Statewide Mobility Corridors - Type "B" (2-Lane Roadways)

		At-Grade Public Street Intersections	Access Driveways ^{1,2}	
			Commercial Major	All other driveways
Permitted?		Yes	Restricted	Restricted
Traffic movements allowed		Full movements	Full movements ³	Full movements ³
Traffic control devices		Traffic signal ⁴	Traffic signal ⁴	STOP ⁵
Spacing criteria	Urban areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁶	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁷	Ideal <u>signalized</u> spacing = 1/2 mile ⁷	
	Rural areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁶	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁸	Ideal <u>signalized</u> spacing = 1/2 mile ⁸	

Notes:

- 1: Driveways should not be situated within the longitudinal length of an adjacent auxiliary lane.
- 2: Driveways are allowed if property owner has no reasonable alternative access (or opportunity to obtain such access) and joint-use driveways and frontage roads are infeasible.
- 3: Limited to Right-In/Right-Out movements for driveways within 400-feet of an existing (or potential future) signalized intersection. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 4: Traffic signal installation subject to traffic signal warrant criteria per MUTCD and additional assessment by INDOT, including signal criteria. Where warrants are satisfied, the new approach should be situated opposite an existing 3-leg intersection, if present.
- 5: STOP control applies to the access driveway and not to the State highway.
- 6: Except where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied.
- 7: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 45%.
- 8: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 50%.

6.2.3 Tier 2A – Regional Corridors (Multi-Lane)

Tier 2A is comprised of all multi-lane Regional Corridors on the INDOT system. At-grade, public street intersections are permitted along these roadways and may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation. Full turning movements generally are allowed for public street intersections.

Access driveways are allowed under Tier 2A subject to certain restrictions. Full turning movements generally may be allowed for all Commercial Major driveways, with the exception of those located within 300-feet of an existing (or potential future) signalized intersection, in which case the driveway is restricted to RIRO movements only (left-turn access may be allowed conditionally upon INDOT review and approval). Commercial Major driveways may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation. All other driveways are restricted to RIRO movements, with left-turn access allowed contingent upon INDOT review and approval.

The spacing criteria for all signalized intersections and driveways on Tier 2A State highways are based on an ideal signalized intersection spacing of ½ mile. Where this ideal signal spacing cannot be met, a minimum green bandwidth of 40-percent in urban areas and 45-percent in rural areas is required.

The spacing criteria for all unsignalized intersections and driveways is based on speed as indicated in Table 8.1 of the *Driveway Permit Manual*, except for locations where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied instead. The distribution of mileage by posted speed along existing Tier 2A roadways on the INDOT highway system, and the corresponding spacing distances (based on Table 8.1 of the *Driveway Permit Manual*) are shown below:

30 mph roadway	→ 185-foot spacing	→ 9.5 miles
35 mph roadway	→ 245-foot spacing	→ 35.8 miles
40 mph roadway	→ 300-foot spacing	→ 0.2 miles
45 mph roadway	→ 350-foot spacing	→ 85.1 miles
50 mph roadway	→ 395-foot spacing	→ 31.0 miles
<u>55 mph roadway</u>	<u>→ 435-foot spacing</u>	<u>→ 186.6 miles</u>
Total Tier 2A mileage =		348.2 miles

Of the total Tier 2A mileage, 311.6 miles are undivided multi-lane roadways and 36.6 miles are divided multi-lane roadways, and 183.8 miles are in urban areas and 164.4 miles are in rural areas.

Table 9D
Draft Access Classification System for INDOT
Tier 2: Regional Corridors - Type "A" (Multi-Lane Roadways)

		At-Grade Public Street Intersections	Access Driveways ¹	
			Commercial Major	All other driveways
Permitted?		Yes	Yes	Yes
Traffic movements allowed		Full movements	Full movements ²	RIRO ³
Traffic control devices		Traffic signal ⁴	Traffic signal ⁴	STOP ⁵
Spacing criteria	Urban areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁶	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁷	Ideal <u>signalized</u> spacing = 1/2 mile ⁷	
	Rural areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁶	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁸	Ideal <u>signalized</u> spacing = 1/2 mile ⁸	

Notes:

- 1: Driveways should not be situated within the longitudinal length of an adjacent auxiliary lane.
- 2: Limited to Right-In/Right-Out movements for driveways within 300-feet of an existing (or potential future) signalized intersection. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 3: Limited to Right-In/Right-Out movements. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 4: Traffic signal installation subject to traffic signal warrant criteria per MUTCD and additional assessment by INDOT, including signal criteria. Where warrants are satisfied, the new approach should be situated opposite an existing 3-leg intersection, if present.
- 5: STOP control applies to the access driveway and not to the State highway.
- 6: Except where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied.
- 7: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 40%.
- 8: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 45%.

6.2.4 Tier 2B – Regional Corridors (Two-Lane)

Tier 2B is comprised of all two-lane Regional Corridors on the INDOT system. At-grade, public street intersections are permitted along these roadways and may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation. Full turning movements generally are allowed for public street intersections.

Access driveways are allowed under Tier 2B subject to certain restrictions. Full turning movements generally may be allowed for all driveways, with the exception of those located within 300-feet of an existing (or potential future) signalized intersection, in which case the driveway is restricted to RIRO movements only (left-turn access may be allowed conditionally upon INDOT review and approval). Commercial Major driveways may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation.

The spacing criteria for all signalized intersections and driveways on Tier 2B State highways are based on an ideal signalized intersection spacing of ½ mile. Where this ideal signal spacing cannot be met, a minimum green bandwidth of 40-percent in urban areas and 45-percent in rural areas is required (same as Tier 2A).

The spacing criteria for all unsignalized intersections and driveways are based on speed as indicated in Table 8.1 of the *Driveway Permit Manual*, except for locations where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied instead. The distribution of mileage by posted speed along existing Tier 2B roadways on the INDOT highway system, and the corresponding spacing distances (based on Table 8.1 of the *Driveway Permit Manual*) are shown below:

25 mph roadway	→ 185-foot spacing*	→ 1.3 miles
30 mph roadway	→ 185-foot spacing	→ 5.4 miles
35 mph roadway	→ 245-foot spacing	→ 221.7 miles
40 mph roadway	→ 300-foot spacing	→ 0.3 miles
45 mph roadway	→ 350-foot spacing	→ 71.7 miles
50 mph roadway	→ 395-foot spacing	→ 250.1 miles
<u>55 mph roadway</u>	<u>→ 435-foot spacing</u>	<u>→ 1,619.0 miles</u>
Total Tier 2B mileage =		2,169.5 miles

*Table 8.1 of the *Driveway Permit Manual* does not identify spacing for 25 mph roadways. Therefore, the 30 mph spacing is used as a default.

Of the total Tier 2B mileage, 312.4 miles are in urban areas and 1,857.1 miles are in rural areas.

Table 9E
Draft Access Classification System for INDOT
Tier 2: Regional Corridors - Type "B" (2-Lane Roadways)

		At-Grade Public Street Intersections	Access Driveways ¹	
			Commercial Major	All other driveways
Permitted?		Yes	Yes	Yes
Traffic movements allowed		Full movements	Full movements ²	Full movements ²
Traffic control devices		Traffic signal ³	Traffic signal ³	STOP ⁴
Spacing criteria	Urban areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁵	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁶	Ideal <u>signalized</u> spacing = 1/2 mile ⁶	
	Rural areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁵	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁷	Ideal <u>signalized</u> spacing = 1/2 mile ⁷	

Notes:

- 1: Driveways should not be situated within the longitudinal length of an adjacent auxiliary lane.
- 2: Limited to Right-In/Right-Out movements for driveways within 300-feet of an existing (or potential future) signalized intersection. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 3: Traffic signal installation subject to traffic signal warrant criteria per MUTCD and additional assessment by INDOT, including signal criteria. Where warrants are satisfied, the new approach should be situated opposite an existing 3-leg intersection, if present.
- 4: STOP control applies to the access driveway and not to the State highway.
- 5: Except where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied.
- 6: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 40%.
- 7: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 45%.

6.2.5 Tier 3A – Sub-Regional Corridors (Multi-Lane)

Tier 3A is comprised of all multi-lane Local Access Corridors on the INDOT system. At-grade, public street intersections are permitted along these roadways and may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation. Full turning movements generally are allowed for public street intersections.

Access driveways are allowed under Tier 3A subject to certain restrictions. Full turning movements may be allowed for driveways permitted, with the exception of those located within 200-feet of an existing (or potential future) signalized intersection, in which case the driveway is restricted to RIRO movements only (left-turn access may be allowed conditionally upon INDOT review and approval). Commercial Major driveways may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation.

The spacing criteria for all signalized intersections and driveways on Tier 3A State highways are based on an ideal signalized intersection spacing of ½ mile. Where this ideal signal spacing cannot be met, a minimum green bandwidth of 35-percent in urban areas and 40-percent in rural areas is required.

For Tier 3A State highways with posted speeds of 40 mph or less that are located in built-up urban areas, a ¼ mile spacing guideline applies. Currently, these criteria would apply to a total of approximately 2.9 miles of the INDOT highway system under Tier 3A. The ¼ mile spacing typically accommodates progression speeds ranging between approximately 15 mph and 30 mph, depending on the length of the signal cycle that is selected.

The spacing criteria for all unsignalized intersections and driveways is based on speed as indicated in Table 8.1 of the *Driveway Permit Manual*, except for locations where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied instead. The distribution of mileage by posted speed along existing Tier 3A roadways on the INDOT highway system, and the corresponding spacing distances (based on Table 8.1 of the *Driveway Permit Manual*) are shown below:

30 mph roadway	→ 185-foot spacing	→ 10.7 miles
35 mph roadway	→ 245-foot spacing	→ 89.3 miles
40 mph roadway	→ 300-foot spacing	→ 8.1 miles
45 mph roadway	→ 350-foot spacing	→ 128.1 miles
50 mph roadway	→ 395-foot spacing	→ 117.6 miles
55 mph roadway	→ 435-foot spacing	→ 49.6 miles
Total Tier 3A mileage	=	403.4 miles

Of the total Tier 3A mileage, 260.5 miles are undivided multi-lane roadways and 142.9 miles are divided multi-lane roadways, and 270.5 miles are in urban areas and 132.9 miles are in rural areas.

**Table 9F
Draft Access Classification System for INDOT
Tier 3: Sub-Regional Corridors - Type "A" (Multi-Lane Roadways)**

		At-Grade Public Street Intersections	Access Driveways ¹	
			Commercial Major	All other driveways
Permitted?		Yes	Yes	Yes
Traffic movements allowed		Full movements	Full movements ²	Full movements ²
Traffic control devices		Traffic signal ³	Traffic signal ³	STOP ⁴
Spacing criteria	Urban areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁵	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁶	Ideal <u>signalized</u> spacing = 1/2 mile ⁶	
		Ideal <u>signalized</u> spacing = 1/4 mile for roadways ≤ 40 mph in built-up urban areas	Ideal <u>signalized</u> spacing = 1/4 mile for roadways ≤ 40 mph in built-up urban areas	
	Rural areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁵	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁷	Ideal <u>signalized</u> spacing = 1/2 mile ⁷	

Notes:

- 1: Driveways should not be situated within the longitudinal length of an adjacent auxiliary lane.
- 2: Limited to Right-In/Right-Out movements for driveways within 200-feet of an existing (or potential future) signalized intersection. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 3: Traffic signal installation subject to traffic signal warrant criteria per MUTCD and additional assessment by INDOT, including signal criteria. Where warrants are satisfied, the new approach should be situated opposite an existing 3-leg intersection, if present.
- 4: STOP control applies to the access driveway and not to the State highway.
- 5: Except where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied.
- 6: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 35%.
- 7: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 40%.

6.2.6 Tier 3B – Sub-Regional Corridors (Two-Lane)

Tier 3B is comprised of all two-lane Sub-Regional Corridors on the INDOT system. At-grade, public street intersections are permitted along these roadways and may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation. Full turning movements generally are allowed for public street intersections.

Access driveways are allowed under Tier 3B subject to certain restrictions. Full turning movements may be allowed for all driveways permitted, with the exception of those located within 200-feet of an existing (or potential future) signalized intersection, in which case the driveway is restricted to RIRO movements only (left-turn access may be allowed conditionally upon INDOT review and approval). Commercial Major driveways may be signalized contingent upon the intersection meeting the warrant criteria set forth in the MUTCD and provided INDOT concurs with the signal installation.

The spacing criteria for all signalized intersections and driveways on Tier 3B State highways are based on an ideal signalized intersection spacing of ½ mile. Where this ideal signal spacing cannot be met, a minimum green bandwidth of 35-percent in urban areas and 40-percent in rural areas is required (same as Tier 3A).

For Tier 3B State highways with posted speeds of 40 mph or less that are located in built-up urban areas, a ¼ mile spacing guideline applies. Currently, these criteria would apply to a total of approximately 3.9 miles of the INDOT highway system under Tier 3B. The ¼ mile spacing typically accommodates progression speeds ranging between approximately 15 mph and 30 mph, depending on the length of the signal cycle that is selected.

The spacing criteria for all unsignalized intersections and driveways is based on speed as indicated in Table 8.1 of the *Driveway Permit Manual*, except for locations where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied instead. The distribution of mileage by posted speed along existing Tier 3B roadways on the INDOT highway system, and the corresponding spacing distances (based on Table 8.1 of the *Driveway Permit Manual*) are shown below:

30 mph roadway	→ 185-foot spacing	→ 35.3 miles
35 mph roadway	→ 245-foot spacing	→ 345.6 miles
40 mph roadway	→ 300-foot spacing	→ 58.7 miles
45 mph roadway	→ 350-foot spacing	→ 372.1 miles
50 mph roadway	→ 395-foot spacing	→ 4,035.3 miles
55 mph roadway	→ 435-foot spacing	→ 838.3 miles
Total Tier 3B mileage =		5,685.3 miles

Of the total Tier 3B mileage, 502.1 miles are in urban areas and 5,183.2 miles are in rural areas.

Table 9G
Draft Access Classification System for INDOT
Tier 3: Sub-Regional Corridors - Type "B" (2-Lane Roadways)

		At-Grade Public Street Intersections	Access Driveways ¹	
			Commercial Major	All other driveways
Permitted?		Yes	Yes	Yes
Traffic movements allowed		Full movements	Full movements ²	Full movements ²
Traffic control devices		Traffic signal ³	Traffic signal ³	STOP ⁴
Spacing criteria	Urban areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁵	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁶	Ideal <u>signalized</u> spacing = 1/2 mile ⁶	
		Ideal <u>signalized</u> spacing = 1/4 mile for roadways ≤ 40 mph in built-up urban areas	Ideal <u>signalized</u> spacing = 1/4 mile for roadways ≤ 40 mph in built-up urban areas	
	Rural areas	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i> ⁵	<u>Unsignalized</u> spacing per Table 8.1 of <i>Driveway Permit Manual</i>	Spacing per Table 8.1 of <i>Driveway Permit Manual</i>
		Ideal <u>signalized</u> spacing = 1/2 mile ⁷	Ideal <u>signalized</u> spacing = 1/2 mile ⁷	

Notes:

- 1: Driveways should not be situated within the longitudinal length of an adjacent auxiliary lane.
- 2: Limited to Right-In/Right-Out movements for driveways within 200-feet of an existing (or potential future) signalized intersection. Left-turn access may be allowed conditionally subject to INDOT review and approval.
- 3: Traffic signal installation subject to traffic signal warrant criteria per MUTCD and additional assessment by INDOT, including signal criteria. Where warrants are satisfied, the new approach should be situated opposite an existing 3-leg intersection, if present.
- 4: STOP control applies to the access driveway and not to the State highway.
- 5: Except where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied.
- 6: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 35%.
- 7: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 40%.

7.0 REFERENCES

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