

Chapter Trans 76

LOCAL TRANSPORTATION AIDS

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Trans 76.001 Scope and authority. These rules are adopted pursuant to ss. 86.301 (3), 86.302 (2), and 86.303 (5), Stats., for the purpose of implementing the transportation aids formula in s. 86.30, Stats.

History: Cr. Register, May, 1978, No. 269, eff. 6-1-78; renun. from Hy 35.001, Register, December, 1983, No. 336, eff. 1-1-84.

Subchapter I—Functional Classification

Trans 76.031 Area definitions. (1) "Urban" means any urbanized area or urban place with 5,000 or more people as identified by the U. S. bureau of the census. These urban areas, and their boundaries, have been cooperatively designated and periodically updated by the state and appropriate local officials, and subsequently approved by the federal highway administration.

(2) "Rural" means any smaller urban place with less than 5,000 people, as well as the balance of the rural areas of the state.

History: Cr. Register, May, 1978, No. 269, eff. 6-1-78; renun. from Hy 35.031, Register, December, 1983, No. 336, eff. 1-1-84.

Trans 76.032 Urban land use definitions. The definitions for each of the land use types utilized in the criteria are as follows:

(1) **AIRPORTS.** The following classification of airports is based on the classification terminology developed for the Wisconsin Airport System Plan:

Scheduled Transport Airport	Type 1
General Transport Airport	Type 2
Basic Transport Airport	Type 3
General Utility Airport	Type 4
Basic Utility Airport	Type 5

(2) **RETAIL/COMMERCIAL.** (a) "Main urban area CBD" is that portion of the urban area in which the predominant land use is for intense business activity. It is the primary economic and governmental center of the urban area.

(b) "Satellite community CBD" is that portion of each satellite municipality (city or village) within the urban area which is the primary concentration of economic and governmental activity.

(c) "Regional shopping center" is a retail complex of 2 or more department stores complemented with a number of specialty stores. The complex generally has more than 40 stores, totaling 500,000 or more square feet of gross floor area, and employs 500 or more people. The shopping center normally serves a market area of 100,000 or more people.

(d) "Community shopping center" is a retail complex with one department store and several specialty shops. The complex generally has between 100,000 and 500,000 square feet of gross floor area, and employs between 100 and 500 people. It serves a multi-neighborhood market area of 10,000 or more people.

(e) "Neighborhood shopping center" is a retail complex designed to provide services to one or 2 residential neighborhoods. It generally provides such neighborhood services as a supermarket, bakery, drugstore, cleaners, and a liquor store. This type of

complex is generally less than 100,000 square feet of gross floor area.

(3) **INDUSTRIAL/WAREHOUSING.** (a) "Industrial park" is any area specifically designated and containing a number of industrial and related facilities.

(b) "Large industrial plant" is any single facility of 500,000 or more square feet of gross floor area, generally employing 500 or more people.

(c) "Small industrial plant" is any single facility of less than 500,000 square feet of gross floor area, generally employing less than 500 people.

(d) "Large warehousing" is any facility used primarily for the storage of goods that contains 100,000 or more square feet of gross floor area and employs 500 or more people.

(e) "Small warehousing" is any facility used primarily for the storage of goods that contains less than 100,000 square feet of gross floor area and employs less than 500 people.

(4) **RECREATIONAL.** (a) "Community/regional park" is a park serving the entire urban area and the surrounding vicinity within a radius of 30 miles. A park qualifies if it contains either zoological or botanical gardens, or if it provides facilities for at least 6 of the following activities:

1. Track and field
2. Major night-lighted, organized field sports (football, softball, baseball, soccer, rugby, etc.)
3. Special court sports (handball, racquetball, squash, indoor tennis, etc.)
4. Skiing (cross-country or downhill)
5. Archery
6. Bicycling
7. Curling
8. Lawn bowling
9. Model airplane flying
10. Horseback riding
11. Camping
12. Major outdoor stage shows
13. Special historic or environmental attractions

(b) "Sub-community park" is a park serving an area encompassing 3 or more residential neighborhoods, usually within a radius of 2½ miles. The park should provide facilities for at least 6 of the following activities:

1. Organized field sports (football, baseball, softball, soccer, rugby, etc.)
2. Swimming
3. Boating, canoeing
4. Fishing
5. Group picnicking
6. Par 3 golfing
7. Minor outdoor stage shows
8. Night-lighted ice hockey or skating

9. Tobogganing

10. Any of the activities listed under the community/regional park

(c) "Neighborhood park" is a park serving an area encompassing one or 2 residential neighborhoods, usually within a radius of one-half mile. The park should provide facilities for at least 6 of the following activities:

1. Playground activities
2. Baseball/softball
3. Basketball
4. Tennis (outdoor courts)
5. Picnicking
6. Sheltered picnicking
7. Ice hockey/ice skating
8. Sledding
9. Table games, crafts, etc.
10. Non-organized field sports

(d) "Marina" means any boat-berthing facility containing at least 100 berths or a comparable size parking lot.

(e) "Golf course" means any private or public 9-hole or more golf course.

(5) INSTITUTIONAL. (a) "Medical center" means any research hospital complex of regional or statewide significance.

(b) "Community hospital" means any institution for medical or surgical care primarily serving the urban areas and the nearby surrounding vicinity.

(c) "Clinic" means any facility which provides diagnoses and outpatient care but does not provide inpatient medical or surgical services.

(6) OFFICE. (a) "Large office building" means any building or group of buildings used primarily for the conduction of business or professional activities which employs 500 or more people. The total gross floor area is generally 300,000 or more square feet.

(b) "Small office building" means any building used primarily for the conduction of business or professional activities which employs less than 500 people. The total gross floor area is generally less than 300,000 square feet.

History: Cr. Register, May, 1978, No. 269, eff. 6-1-78.

Trans 76.05 Criteria for rural highway functional classification. (1) INTRODUCTION. (a) Functional classification is the process by which highways are grouped into classes according to the character of service they are intended to provide, ranging from a high degree of travel mobility to land access functions. Rural highways are classified into the following functional types:

1. Principal arterials: Principal arterials serve corridor movements having trip length and travel density characteristics of an interstate or interregional nature. These routes generally serve all urban areas greater than 5,000 population.
2. Minor arterials: Minor arterials, in conjunction with principal arterials, serve cities, large communities, and other traffic generators providing intraregional and interarea traffic movements.
3. Major collectors: Major collectors provide service to moderate sized communities and other intra-area traffic generators, and link those generators to nearby larger population centers or higher function routes.
4. Minor collectors: Minor collectors provide service to all remaining smaller communities, link the locally important traffic generators with their rural hinterland, and are spaced consistent with population density so as to collect traffic from local roads and

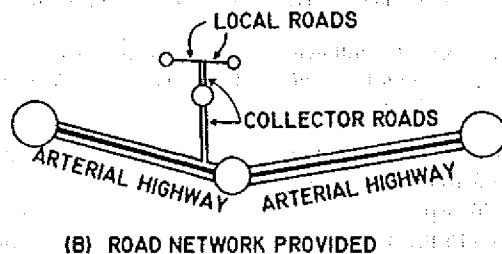
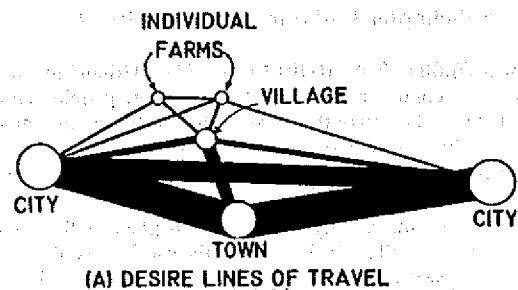
bring all developed areas within a reasonable distance of a collector road.

5. Local roads: Local roads provide access to adjacent land and provide for travel over relatively short distances on an inter-township or intratownship basis. All roads not classified as arterials or collectors will be local function roads.

(b) Figure 1 shows the relationship between types of desired trips and the resulting functional classification of the highways. Because of their interstate and interregional nature, the principal arterial and minor arterial systems must be developed on a statewide or regional basis. Similarly, because of their intercounty and intracounty nature, the major collector and minor collector systems must be developed on a countywide basis.

Source: *Highway Functional Classification*, Federal Highway Administration, July 1974.

FIGURE 1
CHANNELIZATION OF TRIPS

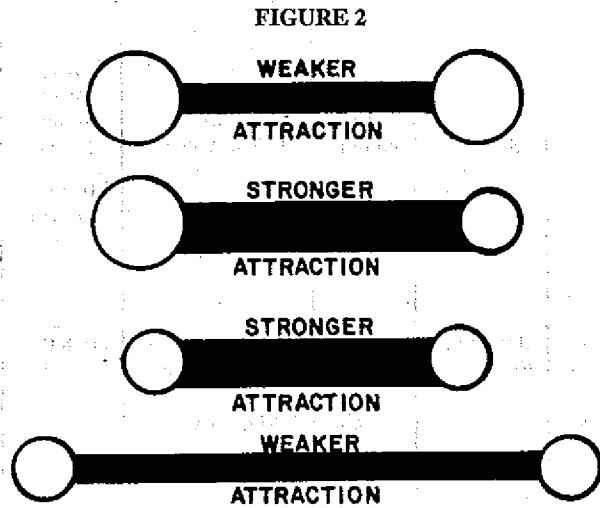


(2) CRITERIA FOR DEVELOPING FUNCTIONAL SYSTEMS. The criteria to be used in developing the functional systems are divided into 2 classes—basic and supplemental. The basic criteria should provide an initial system, to be refined by the supplemental criteria, to achieve a system within the guidelines of system mileage extent.

(a) *Basic criteria:* As shown in charts A and B, there are four basic determinants of functional classification—population service, land use service, spacing, and average daily traffic (ADT) volume. For a route segment to be justified as a particular functional classification under the basic criteria, it must meet any 2 of the 4 basic criteria.

1. Population service. a. Place classification, using population, is one of the basic techniques in determining the function of highways. Two important principles are recognized in functional classification—place classification relationships. First, the attraction between places and, hence, the traffic exchange between places is directly proportional to the size or ranking of places and inversely proportional to the distance between them. Second, a smaller place is more dependent on a larger place than 2 larger

places are on each other, given equal distances between them. Figure 2 below graphically portrays these principles.



b. These 2 principles, together with the basic premise that higher ranked places are served by higher function routes, provide the basis for establishing the functional systems from the place classification. The relationship between population and functional classification adheres to the concepts of connecting the highest ranked places first with the highest function routes, and successively connecting lower ranked places with lower function routes. The plot of descending Wisconsin population centers used for determining the population rankings and groupings is shown in Figure 3. The specific population connection-functional classification relationship is graphically portrayed in Figure 4.

c. Under these principles, only those routes actually serving the major traffic interchange between communities should be considered under the basic population service criteria. Remote arterial connections or arterial connections which are obviously made by another, more direct arterial should not be made under the basic population service criteria.

d. In some instances, several routes provide the major interchange between the same 2 population centers. One route can usually be identified as the most important connection and classified under the basic population service criteria. The other connections between the same 2 communities are considered alternate population connections. One alternate connection, shorter than the main connection, may be classified one function lower than the population connection would require, provided it meets the traffic volume criteria for that lower function. An alternate population connection also meets one supplemental criterion.

2. Land use service. a. In many instances, important traffic generators are found outside established population centers. In order to provide service to these generators, a second basic criterion—land use service—is employed. The land use criterion is divided into 2 areas. One specifically provides for arterial service to important traffic generating activities. The second aspect of the land use service criterion involves collector service to significant recreational, commercial-industrial, and institutional land uses, as well as small or seasonal population concentrations. Each land use facility is assigned a point value as shown in Table I. The sum of the land use point values along a route segment is called the "land use service index," which is used for the classification of major and minor collectors, as shown in chart B. The accumulation of land use points is restricted to counting the occurrence of

a particular facility type only once within one-half mile, regardless of the actual number of the facility type within the one-half-mile segment. In using the land use service index, any land use facility within one-half mile of an arterial or collector is considered served by that arterial or collector.

TABLE 1

	Points
Small Population Concentrations	Places 25-50 Population 2
Seasonal Population Concentrations	Places Greater than 200 Population 6
	Places 100-200 Population 4
	Places 50-100 Population 2
Commercial-Industrial Facilities	Grocery 3
	Gas Station 3
	Gas Station/Country Store Combination 3
	Restaurant, Cafe, or Tavern 2-4
	Landfill Site 2-4
	Lumber Mill 2-4
	Gravel Pit 2-4
	Mine 2-4
	Power Plant 2-4
	Industrial Site 2-4
	Salvage Yard 1-3
	Agri-Business Facilities Such As:
	Dairy
	Cheese Factory
	Grain Elevator
	Feed Mill
	Stockyard
	Forest Cropland 3
Recreational Facilities	State Park (Less than 300,000 Annual Visitation)*
	Ski Hill 6
	Golf Course 6
	Marina 5
	County Park (Less than 300,000 Annual Visitation) *
	Campground 3
	Boat Landing 3
	Sportsmen's Club 3
	Bike Trail Head 2
	Community Park 2
	Official Historical Site 2
	Other Public Lands (Hunting and Fishing Grounds) 2
	Snowmobile Trail Head 1
	Canoe Trail Head 1
	Playfield, Baseball Diamond 1
	School Playground 1
Institutional Facilities	County Institutions *
	Transportation Terminals Not Served by a Higher Function Route (Except Airports) 5
	Airports **
	Elementary School 3
	Middle or Junior High School 4
	High School 5
	State and/or Federal Headquarters *
	Medical Facilities 3-5
	Church 3
	Community or Civic Center 3

*Because of their larger service area, land use facilities under the jurisdiction of federal, state, or county government are considered to meet the land use service index for a collector. The type of collector will depend on the current average daily traffic volume on the road serving the facility.

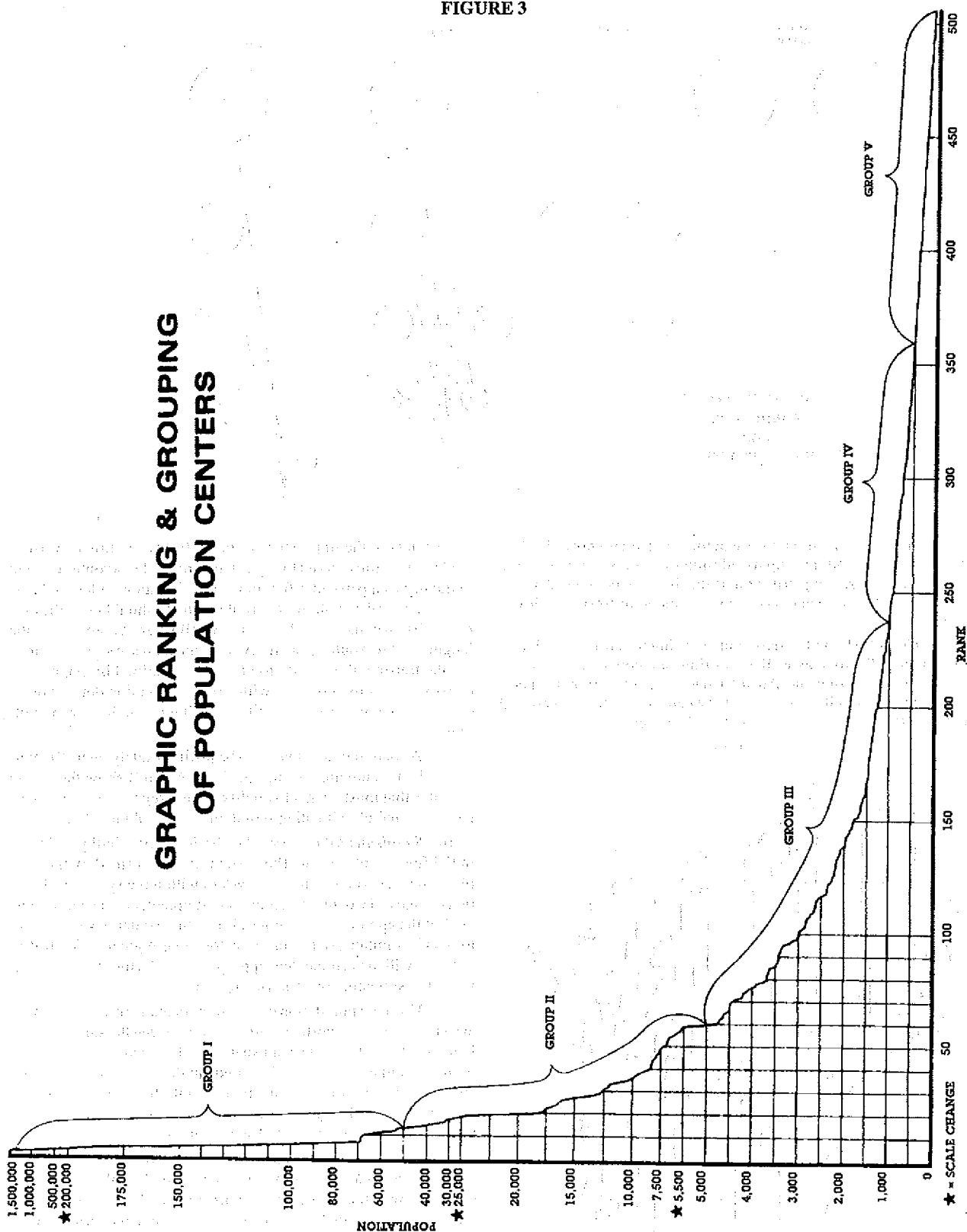
**All airports classified as basic utility airports or higher, as identified under the existing Wisconsin state classification system, are considered to meet the land use service criterion for a collector.

CHART A—ARTERIALS							
Functional System	County Population Density (Rural)	Basic Criteria				Supplemental Criteria	Mileage Percent of System Range
		Must Meet Any 2 of These				OR Must Meet Both of These Plus 90% of Traffic Volume	
		Population Service	Land Use Service	Spacing	Traffic Volume		
Principal Arterial	>43	Connect places 50,000 with other places 50,000.	Provide area access to major recreational areas of the state.	Maximum 30 Miles	>3,000		2.0-4.0 % Statewide
	<43	Connect places 5,000 with places 50,000.			>1,000		
Minor Arterial	<43	Connect places 5,000 with other places 5,000.	Serve all traffic generating activities with an annual visitation 3000,000 if not served by a principal arterial.	Maximum 30 Miles	>1,000	1. Alternate population connection. 2. Major river crossing/restrictive topography.	4.0-8.0 % Statewide
	<43	Connect places 1,000 with places 5,000 or with principal arterials.			>500		

CHART B—COLLECTORS AND LOCALS								
Functional System	County Population Density (Rural)	Basic Criteria				Supplemental Criteria	Mileage Percent of System Range	
		Must Meet Any 2 of These OR the Parenthetical Traffic Volume Alone				OR Must Meet 2 of These Plus 90% of Traffic Volume		
		Population Service	Land Use Service	Spacing	Traffic Volume			
Major * Collector	>43	Connect places 1,000 with other places 1,000. Connect places 500 with places 1,000 or higher function route. Connect places 500 with other places 500 or higher function route.	Land Use Service Index ≥16.	Maximum 10 Miles	>500 (>2,000)	1. Alternate population connection. 2. Major river crossing/restrictive topography. 3. Restrictive topography. 4. Interchange w/freeway. 5. Parallel to a principal arterial.	5.0-18.0 % Countywide With Most Counties 7.0-14.0%	
	<43	Connect places 100 with places 500 or higher function route.	Land Use Service Index ≥12.		>200 (>800)			
Minor * Collector	≥43	Connect places 100 with other places 100. Connect places 50 with places 100 or higher function route.	Land Use Service Index ≥8.	Maximum 10 Miles	>200 (>800)	1. Alternate population connection. 2. Major river crossing/restrictive topography. 3. Restrictive topography. 4. Interchange w/freeway. 5. Parallel to a principal arterial.	5.0-10.0 % Statewide	
	<43	Connect places 100 with places 100 or higher function route.	Land Use Service Index ≥5.		>100 (>400)			
Local						All Public roads not classified as arterials or collectors.		65.0-75.0% Countywide With Most Counties 68.0-72.0%
* Loop routes and stub-ended routes less than 5 miles long and meeting the basic criteria for a major collector shall be limited to a minor collector classification.								

FIGURE 3

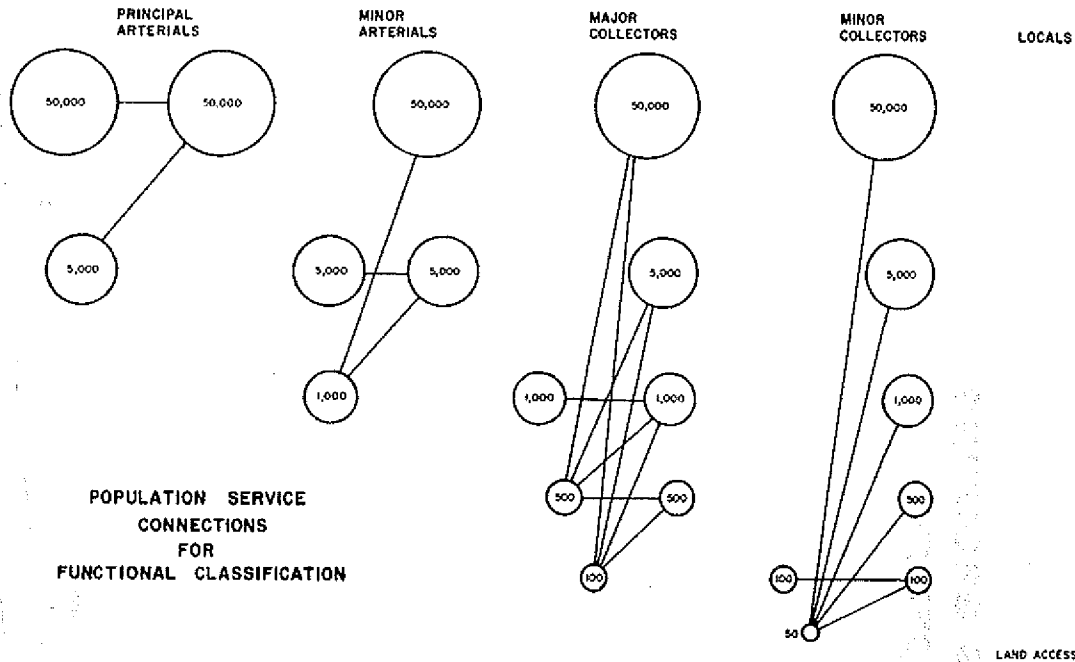
**GRAPHIC RANKING & GROUPING
OF POPULATION CENTERS**



b. Due to differences in rural population densities of the counties, 2 levels of point values of the land use service index are used in justifying a collector. As shown in chart B, for those counties with a rural population density of 43 or more persons per square mile,

one point total is used. For those counties with a rural population density less than 43 persons per square mile, a different point total is used. Map 1 shows the rural population density for each county.

FIGURE 4



3. Spacing. a. A maximum spacing criterion is shown in chart A for arterials. Both principal and minor arterials are considered together for the spacing criterion. If the distance between 2 arterials exceeds 30 miles, an intermediate segment meets one basic criterion.

b. Chart B shows the maximum spacing for collectors. Major and minor collectors, as well as arterials, are considered together for the spacing criterion. An intermediate route segment meets one basic criterion if the distance between 2 collectors, an arterial and a collector, or 2 arterials exceeds 10 miles.

tion centers or the importance of the traffic generation of various land use facilities served by a particular route. For a route segment to qualify as a particular functional classification under the basic criterion of traffic volume, the route segment should meet the current traffic volumes stated in charts A or B when averaged over the length-of-the-route segment. As with the land use service criterion, the traffic volume criterion has been stratified by population density, with those counties with a rural population density of 43 or more persons per square mile requiring the higher traffic volumes.

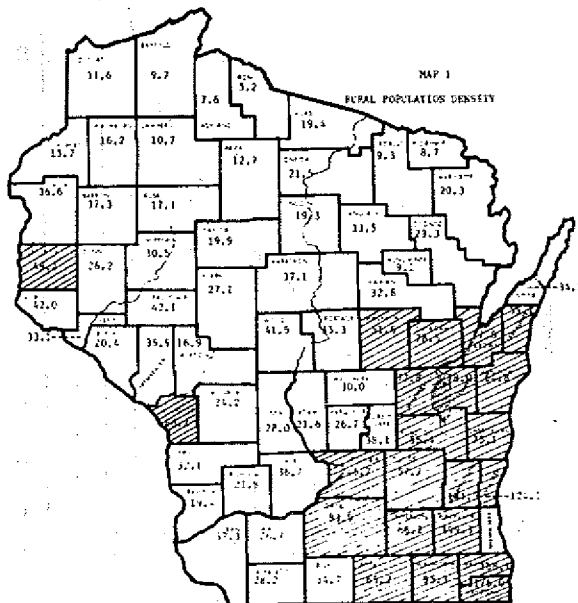
b. A route segment may also be justified solely on traffic volume. The parenthetical values in charts A and B show the traffic volumes that must be met to qualify a route segment for a particular functional classification based on traffic volume alone.

(b) *Supplemental criteria.* The basic criteria shall provide an initial functional system. The system shall be refined by the supplemental criteria to achieve a system within the system mileage percentages. Two of the following supplemental criteria, plus 90% of the appropriate current traffic volume criteria, shall be met to justify a minor arterial or collector route segment. The traffic volume will determine the appropriate collector classification when the supplemental criteria are met.

1. Alternate population connection: In many instances, several routes provide important connections between the same 2 population centers. One route can usually be identified as the most important connection and classified under the basic criteria. However, the alternate connections should be considered under the supplemental criteria. An alternate population connection meets one supplemental criterion for a minor arterial or collector.

2. Major river crossing or restrictive topography: A river crossing which avoids a travel indirection of 10 miles or greater, or a route which avoids a travel indirection of 10 miles or greater due to a topographic barrier meets one supplemental criterion for a minor arterial and for a collector. For a minor arterial, when both a major river crossing and a restrictive topographic barrier are present, they in combination shall meet only one criterion. The bridge providing the crossing shall have a design rating of H 15 or greater and may not be posted for weight restrictions.

MAP 1



4. Average daily traffic volume. a. The fourth basic criterion in rural functional classification is the current (latest available) average daily traffic (ADT) volume. Traffic volume provides a measure of the importance of the travel interchange between popula-

3. Route parallels a principal arterial: A route which parallels a principal arterial oftentimes keeps the shorter trips off the principal arterial. As such, a route paralleling a principal arterial meets one supplemental criterion for a collector.

4. Route interchanges with a freeway: A route which presently interchanges with a freeway meets one supplemental criterion for a collector.

(c) *Route continuity criteria.* Minor route segments totaling less than 25% of the length of a longer, continuous route may be functionally classified the same as the longer route if deemed necessary by the department of transportation.

(d) *System mileage percentage criteria.* 1. Because of their longer interstate and interregional nature, arterials are determined on a statewide basis. As such, the percentage of arterials must meet the guideline percentage only on a statewide basis. On that basis, the total principal arterial mileage should fall within 2.0 to 4.0% of the total rural base of public roads. The total minor arterial mileage should fall within 4.0 to 8.0% of the total rural base.

2. The collector and local percentage guidelines shown in chart B are calculated on a countywide basis. The major collector mileage should fall within 5.0 to 18.0% of the total rural base for each county, with most counties falling within the 7.0 to 14.0% range. Minor collector mileage should fall within 5.0 to 10.0% of the total rural base for each county.

3. The local mileage shall fall within 65.0 to 75.0% of the total rural county base miles. Most counties should fall within the 68.0 to 72.0% range.

4. In order not to penalize a county with a high percentage of arterials, the total arterial and collector systems may exceed 35.0% for that county by the amount the arterial systems exceed 12.0% in that county.

(3) **SPECIFIC APPLICATION FOR EACH FUNCTIONAL SYSTEM.** (a) *Principal arterials:* Principal arterials provide interstate and interregional traffic mobility. They should form a continuous system within the state and, where feasible, connect with similar function routes in adjacent states. Principal arterials shall not stub-end except for unusual geographic conditions or for irreconcilable differences at state lines.

1. Under the basic population service criteria shown in chart A, principal arterials should connect places greater than 50,000 with all other places greater than 50,000, and connect places greater than 5,000 with those places greater than 50,000. A place is considered served by a principal arterial if the principal arterial either penetrates its boundary or comes within 10 miles of the center of the place and penetrating service is provided by a minor arterial.

2. Under the basic land use service criteria shown in chart A, principal arterials should provide area access to all recreational areas of national or interstate significance, specifically:

- Apostle Islands National Lakeshore
- Wisconsin Dells Area
- Baraboo-Devils Lake Area
- Rib Mountain-Wausau Area
- Vilas County Lakes Area
- Hayward Lakes Area
- Door County Area
- Horicon Marsh Area
- Lake Geneva Area
- North Kettle Moraine Area
- South Kettle Moraine-Old World Wisconsin Area
- Iron Mountain, Michigan, Area

3. Under the basic spacing criteria shown in chart A, the distance between arterials should not exceed 30 miles.

4. Under the basic traffic volume criteria shown in chart A, principal arterials in counties of rural population density equal to 43 or more persons per square mile should have current average

daily traffic volumes greater than 3,000. Principal arterials in counties of rural population density less than 43 persons per square mile should have current average daily traffic volumes greater than 1,000.

5. Using the route continuity criteria, additional route segments may be classified as principal arterials.

6. Under the mileage percent of system criteria, principal arterials should comprise 2.0 to 4.0% of the total certified rural mileage on a statewide basis.

(b) *Minor arterials:* Minor arterials provide intraregional and interarea traffic mobility. Together with the principal arterials, they should form a continuous system and, where feasible, connect with similar function routes in adjacent states. Minor arterials shall not stub-end except for unusual geographic conditions or for irreconcilable differences at state lines.

1. Under the basic population service criteria shown in chart A, minor arterials should connect places greater than 5,000 with other places greater than 5,000, and connect places greater than 1,000 with places greater than 5,000. A place is considered served by a minor arterial if the minor arterial either penetrates its boundary or comes within 2 miles of the center of the place and penetrating service is provided by a major collector.

2. Under the basic land use service criteria shown in chart A, minor arterials shall serve all traffic generating activities with an annual visitation greater than 300,000. A traffic generating activity is considered served by a minor arterial if the main entrance is within 2 miles of the minor arterial.

3. Under the basic spacing criteria shown in chart A, the distance between arterials should not exceed 30 miles.

4. Under the basic traffic volume criteria shown in chart A, minor arterials in counties of rural population density equal to 43 or more persons per square mile should have current average daily traffic volumes greater than 1,000. Minor arterials in counties of rural population density less than 43 persons per square mile should have current average daily traffic volumes greater than 500.

5. Additional minor arterials may be classified, if justified under the supplemental criteria and 90% of the appropriate current traffic volume shown in chart A.

6. Using the route continuity criteria, additional route segments may be classified as minor arterials.

7. Under the mileage percent of system criteria, minor arterials should comprise 4.0 to 8.0% of the total certified rural mileage on a statewide basis.

(c) *Major collectors:* Major collectors provide intra-area travel mobility and land access within localized areas. Major collectors are also feeders to the arterial system from places greater than 100 population. Major collectors may be stub-ended but not isolated from the rest of the system.

1. Under the basic population service criteria shown in chart B, major collectors should connect places greater than 1,000 with other places greater than 1,000, connect places greater than 500 with other places greater than 1,000, connect places greater than 500 with other places greater than 500, and connect places greater than 100 with places greater than 500. A place is considered served by a major collector if the major collector comes within one-half mile of the center of the place.

2. Under the basic land use service criteria shown in chart B, a route segment may be classified as a major collector in counties of rural population density equal to 43 or more persons per square mile if it serves concentrations or strip development of facilities along the route segment having a cumulative point value equal to 16 or more. Similarly, a route segment may be classified a major collector in counties of rural population densities less than 43 persons per square mile if it serves concentrations or strip development of facilities along the route segment having a cumulative point value equal to 12 or more.

3. Under the basic spacing criteria shown in chart B, the distance between collectors, or collectors and arterials, should not exceed 10 miles.

4. Under the basic traffic volume criteria shown in chart B, major collectors in counties of rural population density equal to 43 or more persons per square mile should have current average daily traffic volumes greater than 500 vehicles. Similarly, major collectors in counties of rural population density less than 43 persons per square mile should have a current average daily traffic volume greater than 200 vehicles.

5. Using the traffic volumes shown in parentheses in chart B as the sole justification, a route segment may be classified a major collector in counties of rural population equal to 43 or more persons per square mile if the current average daily traffic volume exceeds 2,000 vehicles. Similarly, a route segment may be classified a major collector in counties of rural population density less than 43 persons per square mile if the average daily traffic volume exceeds 800 vehicles.

6. Additional route segments may be classified major collectors if justified under 2 of the supplemental criteria and 90% of the appropriate current traffic volume shown in chart B.

7. Using the route continuity criteria, additional route segments may be classified major collectors.

8. Loop routes and stub-ended routes less than 5 miles long and meeting the criteria for a major collector shall be limited to a minor collector classification because of the trip characteristics normally associated with these routes.

9. Under the mileage percent of system criteria, major collectors should comprise 5.0 to 18.0% of the total certified rural mileage on a countywide basis, with most counties falling in the 7.0 to 14.0% range.

(d) *Minor collectors:* Minor collectors provide intra-area travel and mobility within a localized area but with more emphasis on land access. A minor collector may be stub-ended but not isolated from the rest of the system.

1. Under the basic population service criteria shown in chart B, minor collectors should connect places greater than 100 with other places greater than 100, and connect all places greater than 50 with places greater than 100 or higher function routes. A place is considered served by a minor collector if the minor collector comes within one-half mile of the center of the place.

2. Under the basic land use service criteria shown in chart B, a route segment may be classified a minor collector in counties of rural population density equal to 43 or more persons per square mile if it serves concentrations or strip development of facilities along the route segment having a cumulative point value equal to 8 or more. Similarly, a route segment may be classified a minor collector in counties of rural population density less than 43 persons per square mile if it serves concentrations or strip development of facilities along the route segment having a cumulative point value equal to 5 or more.

3. Under the basic spacing criteria shown in chart B, the distance between collectors, or collectors and arterials, should not exceed 10 miles.

4. Under the basic traffic volume criteria shown in chart B, minor collectors in counties of rural population density equal to 43 or more persons per square mile should have a current average daily traffic volume greater than 200 vehicles. Similarly, minor collectors in counties of rural population density less than 43 persons per square mile should have a current average daily traffic volume greater than 100 vehicles.

5. Using the traffic volume shown in parentheses in chart B as the sole justification, a route segment may be classified a minor collector in counties of rural population density equal to 43 or more persons per square mile if the current average daily traffic volume exceeds 800 vehicles. Similarly, a route segment may be

classified a minor collector in counties of rural population less than 43 persons per square mile if the average daily traffic volume exceeds 400 vehicles.

6. Additional route segments may be classified minor collectors if justified under 2 of the supplemental criteria and 90% of the appropriate current traffic volume shown in chart B.

7. Using the route continuity criteria, additional route segments may be classified minor collectors.

8. Under the mileage percent of system criteria, the minor collectors should comprise 5.0 to 10.0% of the total certified rural mileage on a countywide basis.

(e) *Locals:* Local routes provide land access. They may be stub-ended but not isolated from the rest of the system. All public roads not classified as arterials or collectors are locals.

1. Under the mileage percent of system criteria, locals shall comprise 65.0 to 75.0% of the total rural mileage on a countywide basis. Most counties should fall within the 68.0 to 72.0% range.

2. To ensure that each county does not exceed the maximum for locals, those route segments which come the closest to meeting the major collector or minor collector criteria shall be added, as appropriate, to fall within the individual collector percents of system ranges.

3. Conversely, to ensure that each county has at least the minimum percentage of locals, those collector route segments which are the least supportable under the criteria shall be removed, as appropriate, to fall within the local mileage percentage. Generally, route segments meeting the supplemental criteria are considered less supportable than route segments meeting the basic criteria.

(4) **SPECIAL CRITERIA FOR COMMUNITIES OUTSIDE FEDERAL URBAN AREAS.** (a) Under the other rural criteria, many of the streets in rural communities outside federal urban areas are classified as arterials or collectors. However, there are additional routes internal to the communities which are functionally more important to these communities than locals. Therefore, these additional routes may be classified as minor collectors under the following criteria. As shown in chart C, there are 3 basic criteria—land use service, system continuity, and current traffic volume. To be classified a minor collector, a route segment must meet the current traffic volume and either the land use service or the system continuity criteria.

1. Land use service criterion: Under this criterion, a route segment must serve one of the following land uses. A land use is considered served if the main access point is within one-eighth mile of an arterial or collector.

- a. Type 1, 2, 3, 4, or 5 airport
- b. Regional, community, or neighborhood shopping center
- c. College, high school, middle school, or elementary school
- d. Community/regional, sub-community, or neighborhood park
- e. Industrial plant
- f. Office buildings
- g. Hospital or clinic
- h. Golf course
- i. Warehouse
- j. Marina
- k. Arena or stadium

2. System continuity criterion: Under this criterion, a route segment must form part of the logical street system for traffic circulation in the central business district.

3. Current traffic volume criteria: To be eligible for a minor collector classification, a route segment should have a current traffic volume greater than 350 vehicles per day. Using the traffic volume shown in parentheses in chart C as the sole justification, a route segment may be classified a minor collector if its current traffic volume exceeds 1,400 vehicles per day.

CHART C—COMMUNITIES OUTSIDE OF FEDERAL URBAN AREAS			
Function System	Must Meet <u>ONE</u> of These Plus Traffic Volume <u>OR</u> the Parenthetical Traffic Volume Alone		Traffic Volume
	Land Use Service	System Continuity	
Minor Collector	The following land uses should be within one-eighth mile: a. Type 1, 2, 3, 4, or 5 airport b. Regional, community, or neighborhood shopping center c. College, high school, middle school, or elementary school d. Community/regional, sub-community, or neighborhood park e. Industrial plant f. Office buildings g. Hospital or clinic h. Golf course i. Warehouse j. Marina k. Arena or stadium	May include the logical street system for traffic circulation in the CBD.	>350 (>1,400)

4. System mileage percentage criteria: The mileage of these additional minor collectors should be included as part of the total minor collector mileage for the affected county.

History: Cr. Register, May, 1978, No. 269, eff. 6-1-78; renum. from Hy 76.05 and am. (2) (a) 1. c., 2., 4., (3) (a) 1., 4., (3) (b) 1., 2., 4., (3) (c) 2., 4., 5., (3) (d) 2., 4., 5., r. (3) (a) 5., 6. and (3) (b) 5., renum. (3) (a) 7. and 8. to be (3) (a) 5. and 6., (3) (c) 8. to be (3) (c) 9. (3) (b) 6. to be (3) (b) 5. and am., (3) (b) 7. and 8. to be (3) (b) 6. and 7., cr. (3) (c) 8., r. and recr. map, charts A and B, Register, December, 1983, No. 336, eff. 1-1-84.

Trans 76.10 Criteria for urban highway functional classification. (1) INTRODUCTION. (a) Functional classification of urban streets and highways is the process by which streets and highways are categorized according to the character of service they provide, ranging from travel mobility to land access. Urban streets and highways are classified into the following functional types:

1. Principal arterials. a. Principal arterials serve the major economic activity centers of the urban area, the highest traffic volume corridors, and regional and intra-urban trip length desires. In every urban area, the longest trip lengths and highest traffic volumes are characteristic of the main entrance and exit routes of the urban area. They connect the urban area to other urban areas and a rural hinterland on a regional or statewide basis. Thus, because they have the longest trip lengths, highest volumes, and are generally extensions of the highest rural functional routes, such routes should be principal arterials. Principal arterial trip lengths are indicative of the rural-oriented traffic entering and exiting the urban area on the rural arterial system, as well as the longest trans-urban area travel demands.

b. Travel mobility is the predominant function of principal arterials. As such, they are generally not stub-ended except at major intermodal regional transportation terminals.

c. Since freeways allow no access to abutting property, the trips on these facilities are generally longer, higher speed movements, typical of principal arterials. Therefore, freeways generally should be classified as principal arterials.

d. The functional classification system sub-classifies principal arterials by facility type (freeways and expressways) and by their rural relationship (connecting links of rural arterials). While such a fine breakdown of functional classification may not be needed for all state purposes, all functional classification breakdowns needed for various state uses can be obtained by combining the finer categories. In this way, only one multi-purpose functional classification needs to be developed for any one target year.

2. Minor arterials. a. Minor arterials serve other economic activity centers important within the urban area, have moderate traffic volumes, and serve intercommunity trip length desires. Minor arterials interconnect and augment the principal arterial system. Minor arterial trip lengths are characteristic of the rural-oriented traffic entering and exiting the urban area on the rural

collector system. Therefore, in conjunction with the principal arterials, minor arterials should provide the urban extensions of the rural collector system to the urban area central business district (CBD) and connect these satellite community CBD's with the main CBD.

b. Although the predominant function of minor arterials is traffic mobility, these routes serve some local traffic and provide more land access than principal arterials. As such, minor arterials may, on occasion, be stub-ended at major traffic generators.

3. Collectors. a. Collectors provide direct access to residential neighborhoods and commercial/industrial areas, and serve moderate to low traffic volumes and interneighborhood trip desires. As the name implies, these routes collect and distribute traffic between locals and arterials.

b. In the central business district (CBD), and other areas of similar development and traffic density, the collector system may include the street grid which forms the logical entity for traffic circulation.

c. Collectors may stub-end in penetrating residential neighborhoods and serving isolated traffic generators, but should be linked to other collectors and arterials for traffic circulation. Collectors should not be continuous through several neighborhoods to discourage their use for through trips.

d. Generally, the travel mobility and land access functions of collectors are equal in nature.

4. Locals. Local streets serve the predominant function of direct access to adjacent land uses. They serve the ends of most trips within the urban area. All streets not classified as arterials or collectors are locals.

(2) CRITERIA FOR DEVELOPING URBAN FUNCTIONAL SYSTEMS: Since all streets and highways, with the exception of full access controlled facilities (freeways), provide some degree of both travel mobility and land access functions, it becomes the goal of functional classification to determine the predominant function of each street or highway. With the exception of urban principal arterials, the criteria for determining the appropriate functional classification of an urban street or highway are divided into 2 classes, basic and supplemental. The basic criteria should provide an initial system, to be refined by the supplemental criteria, to achieve a system within the system mileage percentages. No supplemental criteria are used for principal arterials.

(a) Basic criteria: As shown in charts D, E and F, there are 4 basic determinants of functional classification: system continuity, land use service, spacing and current traffic volume. For an arterial route to be justified as a particular functional classification under the basic criteria, it must meet the system continuity criteria or the appropriate traffic volume criterion and either the land use service or spacing criteria. Meeting the system continuity criterion assures that there is sufficient interchange between the rural

area and the CBD on that route, and meeting the traffic volume criteria assures that there is sufficient traffic generation by the various land uses. For a collector route to be justified under the basic

criteria, the route shall meet the appropriate traffic volume criteria and either the system continuity or the land use service or spacing criteria.

CHART D—URBAN PRINCIPAL ARTERIALS

Functional System	Urban Area Population	Basic Criteria					Mileage Percent of System Range
		System Continuity (Rural-Urban Interface)		Must Meet Land Use Service or Spacing plus Traffic Volume OR the Parenthetical Traffic Volume Alone			
		A rural minor arterial remains an urban minor arterial until it meets one of the following:		LAND USE SERVICE	SPACING	TRAFFIC VOLUME	
Traffic Volume Alone	Intersects with an urban arterial plus traffic volume						
Principal Arterial	5,000 to 25,000	>4,000	>2,500	A principal arterial should be within one mile of the following land uses: a. Main CBD of the urban area b. Type 1 & 2 airports c. Regional shopping centers d. Major colleges and universities e. Community/regional parks f. Industrial parks g. Large stadia, arenas, or civic centers	MAXIMUM CBD=1 Mile Other=3-5 Miles	>2,500 (>10,000)	5.0 % to 10.0%
	25,000 to 50,000	>7,000	>4,000			>4,000 (>15,000)	
	Over 50,000	>10,000	>6,000			6,000 (>20,000)	

1. System continuity criteria. a. System continuity ensures the proper continuity and connectivity of routes within the urban area, and between the rural and urban routes. In every urban area, the longest trip lengths and highest traffic volumes are characteristic of the main entrance and exit routes of the urban area. These routes are generally the extensions of the rural arterials. They connect the urban area to other urban areas and a rural hinterland on a regional or statewide basis. Thus, because they have the longest trip lengths, highest volumes, and are extensions of the highest rural functional routes, these routes shall be classified as principal arterials in accordance with the criteria set forth in chart D. One alternate connection of a rural arterial to the CBD may be classified a minor arterial or collector, provided it meets the current traffic volume criteria. The alternate connection must be shorter than the main connection.

b. Similarly, the next longest trip lengths and the next lowest traffic volumes are characteristic of the urban extensions of the rural collectors. These extensions are justified as minor arterials in accordance with chart E. In this way, the urban and rural functional systems are integrated into one continuous system.

2. Land use service criteria. The functional classification of a street or highway is highly dependent on the land uses served by that street or highway. In rural areas, the basic criteria relate place classification by population to each functional class. This is a generalized representation of the traffic interchange between certain size communities. In urban areas, the travel interchange is on a smaller scale, resulting in a need to identify the traffic interaction relationship between specific land uses and functional classification. The land use service criterion is predicated on the following ground rules:

a. Every principal arterial land use is considered served if the main access point to that land use is within one mile of a principal arterial.

b. Every minor arterial land use is considered served if the

main access point to that land use is within one-half mile of a minor arterial.

c. Every collector land use is considered served if the main access point to the land use is within one-quarter mile of a collector.

d. All distances are "over-the-road" distances.

3. Spacing criteria. a. Maximum spacing criteria for principal arterials are shown in chart D. If the distance between 2 principal arterials exceeds one mile in the central business district, or 3-5 miles outside the central business district, an intermediate route segment meets one basic criterion.

b. Maximum spacing criteria for minor arterials are shown in chart E. If the distance between 2 minor arterials, or a combination with principal arterials, exceeds one-half mile in the central business district, or 2 miles outside the central business district, an intermediate route segment meets one basic criterion.

c. Maximum spacing criteria for collectors are shown in chart F. If the distance between 2 collectors, or a combination with arterials, exceeds one-quarter mile in the central business district, or one mile outside the central business district, an intermediate route segment meets one basic criterion.

4. Current traffic volume. a. The fourth basic criterion in urban functional classification is the current traffic volume. The current traffic volume criterion is used to measure the relative importance of routes meeting the system continuity, land use, or spacing criteria. Because of the availability of such data, the traffic volumes in urban areas will be current average weekday volumes. For a route segment to qualify as a particular functional classification under the basic criterion of traffic volume, the route segment should meet the current traffic volume stated in charts D, E, and F when averaged over the length-of-the-route segment.

b. A route segment may also be classified solely on traffic volume. The parenthetical values in charts D, E, and F show the traffic volumes necessary to qualify a route segment for a particular functional classification based on traffic volume alone.

CHART E—URBAN MINOR ARTERIALS									
Functional System	Urban Area Population	Basic Criteria				Supplemental Criteria		Mileage Percent of System Range	
		System Continuity (Rural-Urban Interface)		Must Meet Land Use Service or Spacing plus Traffic Volume OR the Parenthetical Traffic Volume Alone			Must Meet 2 of These Plus 90% of Traffic Volume		
		A rural collector remains an urban collector until it meets one of the following:	LAND USE SERVICE	SPACING	TRAFFIC VOLUME				
Traffic Volume Alone	Intersects with an urban collector or arterial + traffic								
Minor Arterial	5,000 to 25,000	>2,000	>1,000	A minor arterial should be within 1/2 mile of the following land uses: a. CBD's of each satellite community b. Type 3, 4, & 5 airports c. Community shopping centers d. Junior or community colleges e. Large industrial plants f. High schools g. Large office buildings h. Community hospitals i. Clinics j. Sub-community parks k. Golf courses	MAXIMUM CBD=1/2 Mile Other=2 Miles	>1,000 (>4,000)	1. Bus route 2. Official truck routes 3. Signalization 4. Interchange w/a freeway 5. Major river crossing/restrictive topography	10.0% to 15.0%	
	25,000 to 50,000	>4,000	>2,000						>2,000 (>7,000)
	Over 50,000	>6,000	>3,000						>3,000 (>10,000)

c. Because of the vast differences in traffic volumes among the various sized urban areas in Wisconsin, the traffic volume criteria have been stratified by urban area population size. The three population categories, as shown in charts D, E, and F, are urban areas 5,000–25,000, urban areas 25,000–50,000, and urban areas over 50,000. In satellite municipalities (including townships) within an urban area greater than 25,000 population, the traffic volume criteria for the category corresponding to the actual population of the satellite municipality or those warrants for the 5,000–25,000 population category may be used for minor arterials and collectors, whichever is greater.

(b) *Supplemental criteria.* Supplemental criteria may be used to classify minor arterials or collectors to yield a functional system in the appropriate percent of system ranges. Two of the following supplemental criteria, plus 90% of the current traffic volume,

must be met to justify a route. The traffic volume will determine the appropriate arterial or collector classification when 2 supplemental criteria are met.

1. Bus route: A route segment which is part of an official urban transit system routing meets one supplemental criterion.
2. Truck route: A route segment which is part of an officially designated and signed truck route meets one supplemental criterion. In those areas where no specific truck routes are designated, but trucks are specifically prohibited on certain signed routes, a route segment which is not specifically signed as prohibiting trucks meets one supplemental criterion. Cities which neither sign truck routes nor prohibit trucks on certain routes have no routes which meet this criterion.
3. Signalization: A route segment which is signalized at either end meets one supplemental criterion.

CHART F—URBAN COLLECTORS AND LOCALS							
Functional System	Urban Area Population	Basic Criteria				Supplemental Criteria	Mileage Percent of System Range
		Must Meet ONE of these Plus Traffic Volume OR the Parenthetical Traffic Volume Alone					
		System Continuity	Land Use Service	Spacing	Traffic Volume*		
Collector	5,000 – 25,000	May penetrate each residential neighborhood and connect to nearby arterial.	A collector should be within ¼ mile of one of the following land uses: a. Elementary and middle schools b. Small industrial plants c. Large warehousing d. Neighborhood shopping centers e. Small office buildings f. Neighborhood parks g. Marinas	MAXIMUM CBD=¼ Mile Other=1 Mile	>500 (>2,000)	1. Bus route 2. Official truck routes 3. Signalization 4. Interchange w/a freeway 5. Major river crossing/restrictive topography	5.0–10.0% With Most Counties
	25,000 – 50,000	May include the logical street system for traffic circulation in the CBD.			>1,000 (>4,000)		7.0–14.0%
	Over 50,000				>1,500 (>6,000)		
Local		All public streets not classified as arterials or collectors.					65.0–80.0% With Most Urban Areas 68.0–73.0%

* See text for special satellite municipality traffic volume provisions.

4. Interchange with a freeway: A route that interchanges with a freeway meets one supplemental criterion.

5. Major river crossing or restrictive topography: A river crossing or a route that avoids travel indirection due to a topographic barrier meets one supplemental criterion. When both a major river crossing and a restrictive topographic barrier are present, they in combination shall meet only one criterion. The bridge providing the crossing shall have a design rating of H15 or greater and may not be posted for weight restrictions.

(c) *Route continuity criteria.* Minor route segments totaling less than 25% of the length of a longer, continuous route may be functionally classified the same as the longer route if deemed necessary by the department of transportation.

(d) *Mileage percent of system criteria.* 1. The principal arterial mileage percent of system should fall between 5.0 and 10.0% of the total certified mileage within each urban area.

2. The minor arterial mileage percent of system should fall between 10.0 and 15.0% of the total certified mileage within each urban area.

3. The collector mileage percent of system should fall between 5.0 and 10.0% of the total certified mileage within each urban area.

4. With only one exception, the local mileage percent of system shall fall between 65.0 and 80.0% of the total certified mileage within each urban area, with most urban areas falling between 68.0 and 73.0%. The one exception allows for the total of arterials and collectors for a particular urban area to exceed 35.0% by the amount the rural-dependent arterials exceed 25.0% for that urban area.

(3) **SPECIFIC APPLICATION FOR EACH FUNCTIONAL SYSTEM.** (a) *Principal arterials.* 1. One of the most important aspects of system continuity is integration of the rural and urban functional systems. Most principal arterials carry the major portion of trips en-

tering and exiting the urban area, as well as those wishing to bypass the central city. These traits are similar to the rural arterials. Therefore, urban extensions of the rural arterials shall be classified as urban principal arterials in accordance with the criteria set forth in chart D. These routes should connect the rural system together in such a manner as to serve those trips destined for the central business district, as well as those desiring to pass entirely through the urban area.

1m. By the mere nature of their size, urban areas in the 5,000–25,000 population category usually have all principal arterial land uses located in the central business district or within one mile of an urban extension of a rural arterial. Therefore, those routes which connect the rural arterials to the central business district or through the urban area are generally the only principal arterials necessary in the smaller urban areas. However, as the urban area approaches the 25,000 population size, disbursement of economic activity may cause additional principal arterials to develop which are wholly internal to the urban area. To ensure that the principal arterial land uses are within the defined service distance (one mile), principal arterials in addition to those serving as urban extensions of the rural arterials may be necessary. System continuity also requires that principal arterials be integrated into a logical and continuous system. Principal arterials are generally not stub-ended except at terminals with other modes of transportation, such as ferries and type 1 and 2 airports.

2. Under the basic land use service criteria shown in chart D, the following land uses should be served by a principal arterial:

- Main CBD of the urban area
- Type 1 and 2 airports (existing system classification)
- Regional shopping centers
- Major colleges and universities
- Community parks

Industrial parks

Large stadia, arenas, or civic centers

2m. To be considered served by a principal arterial, the particular land use must be accessible within one mile of that principal arterial. In addition, the route serving the land use must be linked to other similarly classified routes to provide service in a reasonable manner in all directions for which the appropriate travel demand exists.

3. Under the basic spacing criteria shown in chart D, the distance between principal arterials should not exceed one mile in the central business district, or 3–5 miles outside the central business district.

4. While principal arterials carry the highest volumes of traffic in any particular urban area, the actual magnitude of volume can vary considerably from one urban area to another, depending on the population. Therefore, current traffic volume criteria have been established for the 3 population categories. As indicated in Chart D, the minimum current traffic volumes for principal arterials meeting the land use or spacing criteria range from 2,500 to 6,000 vehicles per weekday.

4g. The values in parentheses in chart D indicate minimum traffic volumes sufficient to justify a principal arterial solely on the basis of traffic volume. The minimum values range from 10,000 to 20,000 vehicles per weekday, depending on the population size of the urban area.

4s. To meet any of the traffic volume warrants for principal arterials, the volumes may be combined on one-way streets acting as pairs.

5. Using the route continuity criteria, additional route segments may be classified as principal arterials.

6. Under the mileage percent of system criteria, principal arterials should comprise 5.0 to 10.0% of the total certified urban mileage in each urban area.

7. **Freeway–Expressway Identification:** Under the national functional classification system, principal arterials are split into sub-classes of Interstate, Other Freeways and Expressways, and Other Principal Arterials. While these sub-classifications digress from true functional classification, it is necessary to comply in order to achieve the goal of developing multi-purpose functional plans. The Interstate sub-class identifies all urban routes officially included in the National System of Interstate and Defense Highways. Since these routes are easily discernible by their highway number and are of the same facility type, Wisconsin has chosen to combine them with the Other Freeways and Expressways. In Wisconsin, all highways which have full access control are considered freeways. These urban highways are identified under the national sub-classification of Other Freeways and Expressways.

8. **Connecting Link Identification:** Under the national functional classification system any principal arterial which serves as an urban extension of a rural arterial shall be identified as a “connecting link of a rural principal arterial” or a “connecting link of a rural minor arterial,” whichever is appropriate. The connecting links provide an integrated and continuous system which allows for regional and statewide traffic movements destined for the CBD or to points through and beyond that particular urban area. All other principal arterials are important primarily for internal movements within the urban area and are identified as non-connecting links.

(b) **Minor arterials.** 1. Minor arterial system continuity involves integration with the urban extensions of the rural collector systems. Therefore, urban extensions of the rural collectors shall be classified as urban minor arterials in accordance with the criteria set forth in chart E. These urban extensions should serve to connect the rural routes to the CBD of the urban area in the most direct manner representative of traffic movements. In many instances, the CBD connection will be provided by connecting the urban extensions of the rural collectors to an urban principal arte-

rial. In urban areas in the 5,000–25,000 population category, most minor arterial land uses will generally be in the CBD or within one-half mile of a principal arterial, or an urban extension of a rural collector. However, some urban areas in the 5,000–25,000 category may require other minor arterials in addition to the urban extensions of the rural collectors to ensure all minor arterial land uses are within the defined service distance (one-half mile). The areal disbursement of minor arterial land uses in urban areas greater than 25,000 population will usually require additional minor arterials over and above those providing the urban extensions of the rural collectors.

2. a. Under the basic land use service criteria shown in chart E, the following land uses should be served by a minor arterial, if not already served by a principal arterial: CBD’s of all satellite communities in the urban area, type 3, 4, and 5 airports (existing system classification), community shopping centers, junior or community colleges, large individual industrial plants, high schools, large office complexes, community hospitals, clinics, sub-community parks, golf courses and fire stations.

b. A particular land use is considered served by a minor arterial if that land use is accessible within one-half mile of the minor arterial. Further, the route serving the land use must be linked to other minor arterials or principal arterials to provide service in a reasonable manner in all directions for which the appropriate travel demand exists. In addition, all non-principal arterial streets with continuous commercial retail strip development over one-quarter mile in length shall be classified as minor arterials. Furthermore, routes connecting a main urban area CBD with a satellite community CBD shall be classified as minor arterials.

3. Under the basic spacing criteria shown in chart E, the distance between minor arterials, or a combination with principal arterials, should not exceed one-half mile in the central business district, or 2 miles outside the central business district.

4. a. As with principal arterials, the actual magnitude of traffic volumes on minor arterials can vary considerably due to the population of the urban area. Therefore, this criterion has been stratified by population size of the urban area. As indicated in chart E, the current traffic volumes for minor arterials meeting the land use or spacing criteria range from 1,000 to 3,000 vehicles per weekday.

b. The values in parentheses in chart E indicate minimum volumes sufficient to justify a minor arterial solely on the basis of traffic volume. These minimum values range from 4,000 to 10,000 vehicles per weekday, depending on the population category of the urban area. To meet any of the traffic volume warrants for minor arterials, the volumes may be combined on one-way streets acting as pairs.

5. Additional minor arterials may be classified if justified under two of the supplemental criteria plus 90% of the current traffic volume as shown in chart E.

6. Using the route continuity criteria, additional route segments may be classified as minor arterials.

7. Under the mileage percent of system criteria, minor arterials should comprise 10.0 to 15.0% of the total certified mileage in each urban area.

(c) **Collectors.** 1. Urban collectors have no special continuity with the rural routes. However, within the urban area, collectors may penetrate each neighborhood to distribute and collect traffic between the locals and the arterials. Thus, the collectors should be integrated with the urban arterials. Long, continuous routings of collectors between several neighborhoods should be avoided to discourage through trips from being made on collectors. Thus, stub-ended collectors are permissible to the extent needed to penetrate every neighborhood and direct traffic to the arterial system for the longer through trips. In densely developed areas such as the central business district, the collector system should include

those streets not classified as arterials that are necessary for logical traffic circulation.

2. Under the basic land use service criteria shown in chart F, the following land use types should be served by an urban collector:

- Elementary schools
- Small, freestanding industries
- Large warehouse facilities
- Neighborhood shopping centers
- Small office buildings
- Neighborhood parks
- Marinas
- Village or town halls

2m. A collector land use is considered served if that land use is accessible within one-quarter mile of a collector, minor arterial, or principal arterial.

3. Under the basic spacing criteria shown in chart F, the distance between collectors or a combination with arterials should not exceed one-quarter mile in the central business district, or one mile outside the central business district.

4. As with the urban arterials, the collector traffic volume criterion has been stratified by population size category of the urban area. Chart F shows the minimum values for routes meeting the system continuity, land use, or spacing criteria. These values range from 500 to 1,500 vehicles per weekday. The values in parentheses indicate the minimum values which justify a collector solely on the basis of traffic volumes. These values range from 2,000 to 6,000 vehicles per weekday, depending on the population of the urban area.

5. Additional collectors may be classified if justified under 2 of the supplemental criteria plus 90% of the current traffic volume, as shown in chart F.

6. Using the route continuity criteria, additional route segments may be classified as collectors.

7. Under the mileage percent of system criteria, collectors should comprise 5.0 to 10.0% of the total certified mileage in each urban area.

(d) *Locals.* 1. Under the mileage percent of system criteria, locals shall comprise 65.0 to 80.0% of the total certified mileage in each urban area. Most urban areas should fall within the 68.0 to 73.0% range.

2. To ensure that each urban area does not exceed the maximum for Locals (80.0%), those routes which come the closest to meeting the minor arterial or collector criteria shall be added, as appropriate, to fall within the individual minor arterial and collector percents of system ranges.

3. Conversely, to ensure that each urban area has at least the minimum percentage of locals, those route segments which are the least supportable as collectors under the criteria shall be removed, as appropriate, to fall within the local mileage percentage. Generally, route segments meeting the supplemental criteria are considered less supportable than route segments meeting the basic criteria.

History: Cr. Register, May, 1978, No. 269, eff. 6-1-78; am. (1) (a) 1. a., (2) (a) (intro.), 1., (2) (b) (intro.), (3) (a) 1., 4., 8., (3) (b), cr. (2) (b) 4. and 5., r. and recr. charts D, B and F, Register, December, 1983, No. 336, eff. 1-1-84; corrections made under s. 13.93 (2m) (b) 1., Stats., Register, August, 1996, No. 488.

Subchapter II—Cost Reporting

Trans 76.25 Expenditures in other jurisdictions. For the purpose of reporting costs under s. 86.303, Stats., expenditures made by a county or municipality for a highway not under its jurisdiction may be reported by the county or municipality as if it had made the expenditures for a highway under its jurisdiction if:

- (1) The expenditures are made in compliance with state and local law,
- (2) The expenditures are eligible for reporting under s. 86.303 (5) and (6), Stats., and
- (3) The county or municipality is not reimbursed for the expenditures.

History: Cr. Register, May, 1978, No. 269, eff. 6-1-78; corrections made under s. 13.93 (2m) (b) 1., Stats., Register, August, 1996, No. 488.

Trans 76.26 Expenditures for new roads. Expenditures made by a county or municipality for a new road that is not yet open for travel are reportable under s. 86.303, Stats., if the road is in a subdivision or other development, or if the road is included in a local or regional transportation or highway plan, and if:

- (1) The expenditures are made in compliance with state and local law,
- (2) The expenditures are eligible for reporting under s. 86.303 (5) and (6), Stats., and
- (3) The county or municipality is not reimbursed for such expenditures either directly or by assessment.

History: Cr. Register, May, 1978, No. 269, eff. 6-1-78; corrections made under s. 13.93 (2m) (b) 1., Stats., Register, August, 1996, No. 488.