



New Mexico DEPARTMENT OF  
**TRANSPORTATION**  
MOBILITY FOR EVERYONE

# NEW MEXICO DEPARTMENT OF TRANSPORTATION FUNCTIONAL CLASSIFICATION SYSTEM GUIDE

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## 1. INTRODUCTION

The *New Mexico Department of Transportation Functional Classification System Manual, 2021* serves as a supplemental guide to the Federal Highway Administration’s (FHWA) [Highway Functional Classification Concepts, Criteria and Procedures, 2013 Edition](#) in accordance with Title 23 Code of Federal Regulations (CFR) § 470. This document covers the fundamentals of the functional classification system by addressing the five W’s: Who, What, When, Where, and Why, as well as How.

The purpose of this document is to serve as a quick reference guide to understanding and navigating the New Mexico functional classification system and provide the resources necessary to make a request for changes of roadway segment classifications outside of the periodic statewide reviews. During a statewide review, NMDOT will initiate the procedural steps as outlined in the FHWA manual.

The FHWA manual provides detailed information about the functional classification system’s theory and practice. **Appendix A – References & Additional Resources** lists additional publications with a variety of focuses related to the functional classification system and its applications.

## 2. WHAT are the Functional Classifications?

All public roads, those which are open to public use and access, are assigned a classification in the functional classification system. The classification scheme, seen in Table 1, is a hierarchal list that relates to how roads function, as determined by a number of factors. The respective classification system for these factors rank roads from Interstates, code 1, to Locals, code 7. Roadway classifications may also change at different points along a numbered or named route, depending on the characteristics listed in the following section.

Assigned Code	Classification
1	Interstate
2	Other Freeways and Expressways
3	Other Principal Arterial
4	Minor Arterial
5	Major Collector
6	Minor Collector
7	Local

Table 1: Assigned Codes of the Functional Classification System

### 2.1 WHAT are the Different Classes?

Each class within the functional system has distinct characteristics to help define its function, including:

- Lane width
- Inner and outer shoulder width
- Average annual daily traffic (AADT)
- Directional separation
- Access
- Mileage
- Vehicle miles traveled (VMT)
- Other qualitative and quantitative attributes

Each class also has distinctive qualities in reference to whether the roadway segment is within an urban or rural area, as defined by the U.S. Census. No single quality determines the classification of a roadway segment, but rather all characteristics are into consideration, in addition to the hierarchy of the surrounding network. **Appendix B – VMT and Mileage Guidelines by Functional Classification** contains

a useful chart listing the characteristics and descriptions for each classification and their ranges of road miles and VMT for the system.

### 2.1.1 Arterials

The Arterial category consists of four types of classes – Interstates, Other Freeways and Expressways, Other Principal Arterials (or simply Principal Arterials), and Minor Arterials. These classes provide the greatest mobility options, carry high traffic volumes, and have fewer access points, while at the same time accounting for the least amount of total miles within the system. These roads generally have more travel lanes, higher speeds, and wider lanes and shoulders. These roadways are considered more significant at the state and regional level in comparison to the lower ranked classes. Interstates, Other Freeways and Expressways, and a portion of the Principal Arterials are also part of the National Highway System (NHS).

#### 2.1.1.1 Interstates

Interstates, by definition, are roads that travel between states. The Interstates within New Mexico are I-10, I-25, and I-40. These roads support long distance travel, including national freight movement. Some of the physical characteristics of Interstates include divided directional lanes, high speeds, grade separated intersections, access control barriers, and the absence of traffic control signals. Usage of barriers and grade separation maximizes the flow of traffic, and therefore allows for the greatest mobility. As a result, interstates do not directly serve the adjacent land uses, and instead rely on connecting lower classifications roadways to provide access to adjacent land uses.

#### 2.1.1.2 Other Freeways & Expressways

The characteristics of this class are nearly the same as an Interstate, with some additional flexibility in the physical characteristics of the roadway. Like Interstates, these roadways do not serve adjacent land uses directly. The primary difference is that Other Freeways & Expressways serve a regional area such as a metropolitan. These routes make up the least mileage extent and VMT within the system and, as of publishing this guide, the only Other Freeway in New Mexico is a portion of US-70 in Las Cruces.

#### 2.1.1.3 Other Principal Arterial

These roadways are typically referred to as Principal Arterials and serve a high degree of mobility, although they do provide direct access to abutting land uses and typically do not have grade separated intersections. In the urban setting, there may be a handful of roads classified as a Principal Arterials spaced apart from each other and in a rural setting, there may be only one per county connecting many of the larger urban areas. In both instances, these roads typically serve the highest volumes of traffic and longest distances, after the two higher classes.

#### 2.1.1.4 Minor Arterial

The Minor Arterial class of roads provide connections to higher-class roads and typically have route segments shorter in length. In this class, speeds are relatively high and, as a result, mobility is still a primary quality. Still, adjacent land uses are served directly and many of the factors allowing the free flow of traffic do not have as much of a presence, if at all. Minor Arterials occur more frequently than the other arterials. In an urban setting, they may be spaced at an average of one-mile intervals and in rural areas are evenly distributed.

### 2.1.2 Collectors

There are two types of Collectors in the functional system: Major and Minor. As the name implies, they collect traffic from lower classifications and connect them to higher classifications. The general function of Collector classes shifts towards accessibility, whereas arterials focus on mobility. Other characteristics of Collectors include a higher density of driveways, fewer lanes, and more moderate speeds compared to higher classifications. The differences between Major Collectors and Minor Collectors include distance, lane width, AADT, and shoulder width.

### 2.1.3 Local Roads

Local roads make up the largest percentage of the system in mileage, are the least traveled, and are generally assigned by default after all other roads have been assigned a classification. Local roads primary function is accessibility and therefore they have low speeds, serve numerous land uses directly, do not support through traffic, and their physical characteristics are conservative in comparison. Please note that this classification does not relate to ownership or maintenance of a given roadway segment, but how it operates.

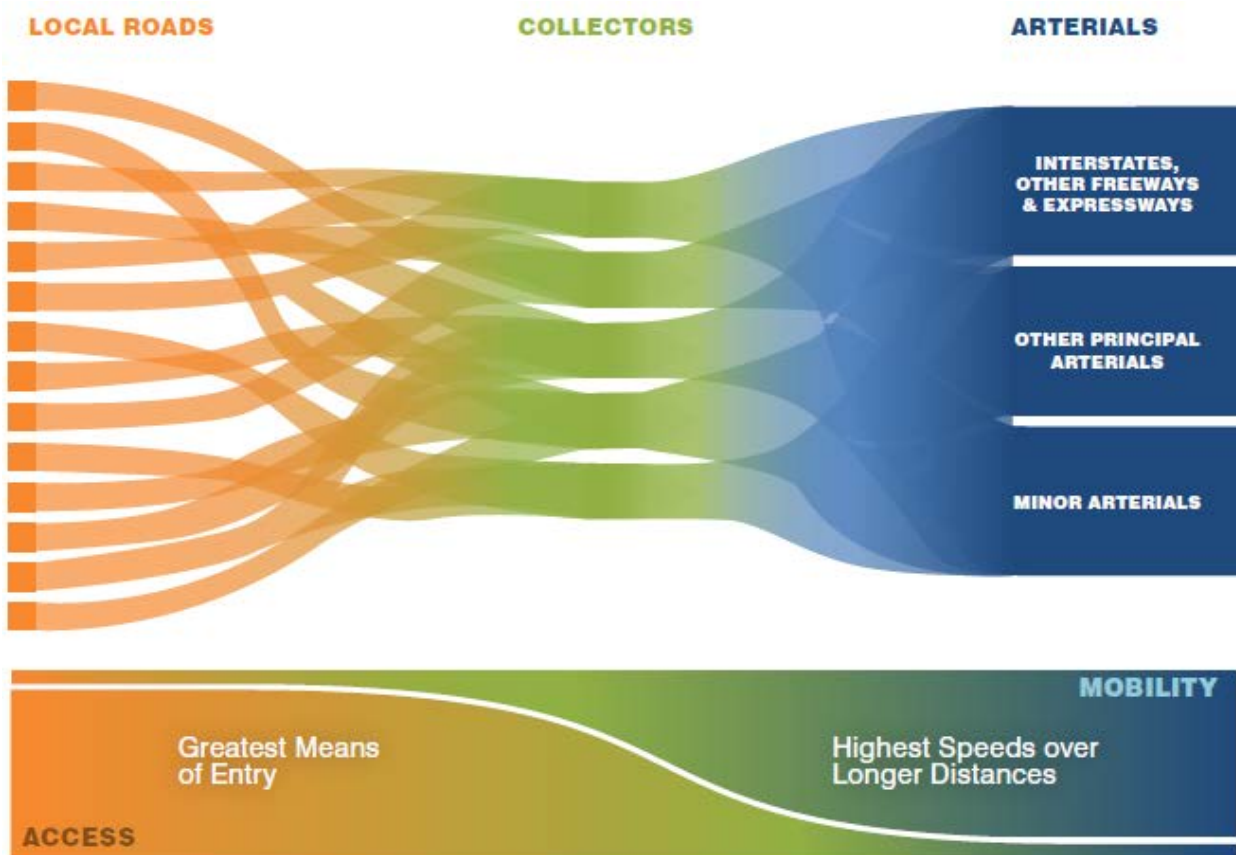


Figure 1: Diagram of the functional classes and their relationship to access and mobility, Source: FHWA

## 2.2 WHAT Other Considerations Exist?

The system is largely viewed through the lens of urban versus rural, which is covered more in *Section 4. Where are the Lines Drawn?* Regardless of where boundaries exist for urban and rural areas, the system

does not change, but the criteria of the factors used to determine a roads classification are adjusted in order to maintain continuity. This prevents the change of a road’s Functional Classification in an urban area when it enters rural territory and vice versa. The objective is to focus on the roads function as opposed to its location when considering its classification. Designation of urban and rural routes become more relevant when considering sources of funding.

A similar subject to continuity is connectivity. Consider the Functional Classification System in comparison to the anatomy of a tree where the trunk is comparable to interstate, limbs to the other types of arterials, branches to collectors, and the twigs are local roads. The larger parts of a tree connect only to smaller parts of the tree. Twigs typically can be found throughout all parts of the tree, although are primarily found at the ends of branches. Leaves of the tree could be considered as traffic generators and are found throughout the branches, and twigs. This hierarchal system reflects the same type of order of connectivity that is desired in the Functional Classification System. Arterials connect only with other types of arterials, collectors with arterials and other collectors, and locals connect with arterials, collectors, and other locals as illustrated in Figure 2.

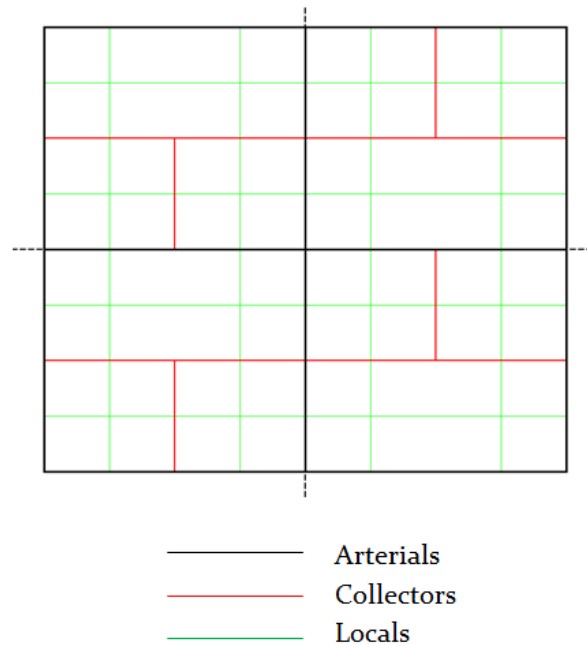


Figure 2: Visual of desired continuity and connectivity, Source: CDM Smith

### 3 WHY is it Important?

Classifying roads into distinct categories has several benefits. The system conveniently provides a break down roads by their individual classes, which can be used as a way of organizing reports for topics such as system performance and asset management. One of the more notable benefits is that it “carries with it expectations about roadway design,” (*Highway Functional Classification Concepts, Criteria and Procedures, 2013 Edition*). This is not to say design or classification dictate one another, but rather that they influence one another.

A roads classification can also determine its eligibility for funding sources. There is generally more funding directed towards the higher classifications, while Local and Rural Minor Arterials are not eligible for most federal funds (*HPMS Field Manual, March 2020*). A roads classification can be used as a ranking factor in project prioritization and where state and local funding is directed. Budgetary operations and projects can be prioritized by road’s functional system. These are only some examples of how the functional system plays a role in management of roads.

### 4 WHERE are the Lines Drawn?

As previously mentioned, the Functional Classification System is further broken down into two types: urban and rural. The characteristics for most of the classifications look different depending on whether a road falls within urban or rural boundaries, excluding interstates and freeways/expressways. It is also



significant in determining who is responsible for a roadway since different pots of funding are available for urban and rural areas.

Designations of urban and rural areas originate from the US Census Bureau, which is determined by the population of an area. FHWA allows fixing, or expansion, of the boundaries of urban areas with a population greater than 5,000 for transportation planning purposes, per Title 23, USC § 101 (a). This process is also sometimes referred to as smoothing or adjusting. Fixing of these areas occurs following the release of the decennial census and remain until the following decennial census. The process of fixing urban boundaries is collaborative between local officials, NMDOT, and the FHWA Division office, much like the process of changes to the functional system, and is described in more detail in *Section 6. Who is Involved?* More detailed information can be found in the [NMDOT Planning Procedures Manual](#) as well as the *Highway Functional Classification: Concepts, Criteria and Procedures, 2013 Edition* in Chapter 6.

## 5 WHEN does it Change?

The functional classification system change with time, to reflect changes in population and traffic generators. A statewide system review is performed approximately every ten years, following the approval of urban boundary adjustments. The urban boundary adjustment is to be completed within two years of the release of the census, and the statewide functional system review is to be completed within the following three years. In New Mexico, submittals for a change of a roads classification between the statewide system reviews may be submitted once per year during the first quarter of the calendar year, as described later in this guide.

Newly constructed or reconstructed roads can trigger a change in the functional classification system. Some roads are reconstructed to increase capacity by the addition of lanes or by decreasing speed or capacity by reducing lanes such as implementing a road diet. Detailed information about road diets can be found in the [NMDOT Design Manual](#). In both cases, a new classification is assigned following the completion of construction and follows the same submittal procedure as all others with the exception of new roads included in the Statewide Transportation Improvement Program (STIP). In this particular case, the roadway may be classified with the existing system for its intended function if construction is expected to be completed within the STIP timeframe.

## 6 WHO is Involved?

State DOTs have the authority of performing reviews and submitting a change request of the functional classification system, which are submitted to their respective the FHWA Division office. In New Mexico, the system is maintained and managed by the NMDOT Planning Division Roadway Classification Manager. Changes can be proposed by a Metropolitan Planning Organization (MPO) or Regional Transportation Planning Organization (RTPO) on their behalf or on behalf of their local planning partners including, but not limited to, tribal entities, cities, counties, economic development commissions, and councils of governments. NMDOT district offices shall coordinate with their respective MPO and RTPO areas for change request submittals and any public involvement found necessary shall be conducted by MPOs and RTPOs. The NMDOT Roadway Classification Manager will work with the neighboring state DOTs of Arizona, Colorado, Oklahoma, and Texas, as well as the Navajo Nation, for the purposes of maintaining continuity of the system at jurisdictional boundaries, and ensuring coordination with planning partners. The NMDOT Roadway Classification Manager also works collaboratively with the local

planning partners involved and assumes responsibility for reviewing localities that do not participate in statewide reviews. Changes that affect NHS designation must be coordinated with the state DOT to the FHWA HQ Office of Planning, Environment and Realty as detailed in 23 CFR § 470.

## 7 HOW to Propose Changes?

This portion of the guide provides detailed instructions for submitting requests outside of a statewide review. The NMDOT Functional Classification [Change Request Form](#) is provided on NMDOTs website in digital form and should be filled out in its entirety prior to requesting a change to the functional system. The form should be accompanied with supporting documents including:

- A cover letter,
- Supporting documentation (such as letters of support from local officials, additional traffic count reports, site plans, etc.), and
- A map/s of the roadway segment.

In the event that multiple roads are requested to be changed, the request can be packaged together as one submittal with one cover letter, although each route must have its own form, supporting documentation, and map/s. All requests are to be submitted to the NMDOT Roadway Classification Manager electronically via email as one PDF document. Additional files used for location referencing, such as GIS shapefiles and Google Earth KMLs, will be accepted though not in lieu of static maps. Current contact information for the NMDOT Roadway Classification Manager can also be found on the NMDOT website, linked above.



## Appendix A: References & Additional Resources

### References:

[\*FHWA Highway Functional Classification Concepts, Criteria and Procedures Manual \(2013 Edition\)\*](#)

[\*HPMS Field Manual \(December 2016\)\*](#)

[\*NMDOT Design Manual \(March 2020\)\*](#)

[\*NMDOT Planning Procedures Manual \(May 2020\)\*](#)

### Additional Resources:

AASHTO's [\*A Policy on Geometric Design of Highways and Streets \(7<sup>th</sup> edition\)\*](#) (a.k.a. Green Book)

[\*FHWA Flexibility in Highway Design Manual\*](#)

[NMDOT Roadway Functional Class web map viewer](#)

## Appendix B – VMT and Mileage Guidelines by Functional Classification

	Arterials			
	Interstate	Other Freeways & Expressway	Other Principal Arterial	Minor Arterial
<b>Typical Characteristics</b>				
Lane Width	12 feet	11 - 12 feet	11 - 12 feet	10 feet - 12 feet
Inside Shoulder Width	4 feet - 12 feet	0 feet - 6 feet	0 feet	0 feet
Outside Shoulder Width	10 feet - 12 feet	8 feet - 12 feet	8 feet - 12 feet	4 feet - 8 feet
AA DT <sup>1</sup> (Rural)	12,000 - 34,000	4,000 - 18,500 <sup>2</sup>	2,000 - 8,500 <sup>2</sup>	1,500 - 6,000
AA DT <sup>1</sup> (Urban)	35,000 - 129,000	13,000 - 55,000 <sup>2</sup>	7,000 - 27,000 <sup>2</sup>	3,000 - 14,000
Divided/Undivided	Divided	Undivided/Divided	Undivided/Divided	Undivided
Access	Fully Controlled	Partially/Fully Controlled	Partially/Uncontrolled	Uncontrolled
<b>Mileage/VMT Extent (Percentage Ranges)<sup>1</sup></b>				
<b>Rural System</b>				
Mileage Extent for Rural States <sup>2</sup>	1% - 3%	0% - 2%	2% - 6%	2% - 6%
Mileage Extent for Urban States	1% - 2%	0% - 2%	2% - 5%	3% - 7%
Mileage Extent for All States	1% - 2%	0% - 2%	2% - 6%	3% - 7%
VMT Extent for Rural States <sup>2</sup>	18% - 38%	0% - 7%	15% - 31%	9% - 20%
VMT Extent for Urban States	18% - 34%	0% - 8%	12% - 29%	12% - 19%
VMT Extent for All States	20% - 38%	0% - 8%	14% - 30%	11% - 20%
<b>Urban System</b>				
Mileage Extent for Rural States <sup>2</sup>	1% - 3%	0% - 2%	4% - 9%	7% - 14%
Mileage Extent for Urban States	1% - 2%	0% - 2%	4% - 5%	7% - 12%
Mileage Extent for All States	1% - 3%	0% - 2%	4% - 5%	7% - 14%
VMT Extent for Rural States <sup>2</sup>	17% - 31%	0% - 12%	16% - 33%	14% - 27%
VMT Extent for Urban States	17% - 30%	3% - 18%	17% - 29%	15% - 22%
VMT Extent for All States	17% - 31%	0% - 17%	16% - 31%	14% - 25%
<b>Qualitative Description (Urban)</b>	<ul style="list-style-type: none"> <li>• Serve major activity centers, highest traffic volume corridors, and longest trip demands</li> <li>• Carry high proportion of total urban travel on minimum of mileage</li> <li>• Interconnect and provide continuity for major rural corridors to accommodate trips entering and leaving urban area and movements through the urban area</li> <li>• Serve demand for intra-area travel between the central business district and outlying residential areas</li> </ul>		<ul style="list-style-type: none"> <li>• Interconnect with and augment the principal arterials</li> <li>• Serve trips of moderate length at a somewhat lower level of travel mobility than principal arterials</li> <li>• Distribute traffic to smaller geographic areas than those served by principal arterials</li> <li>• Provide more land access than principal arterials without penetrating identifiable neighborhoods</li> <li>• Provide urban connections for rural collectors</li> </ul>	
<b>Qualitative Description (Rural)</b>	<ul style="list-style-type: none"> <li>• Serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel</li> <li>• Serve all or nearly all urbanized areas and a large majority of urban clusters areas with 25,000 and over population</li> <li>• Provide an integrated network of continuous routes without stub connections (dead ends)</li> </ul>		<ul style="list-style-type: none"> <li>• Link cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distances) and form an integrated network providing interstate and inter-county service</li> <li>• Spaced at intervals, consistent with population density, so that all developed areas within the State are within a reasonable distance of an arterial roadway</li> </ul> <p>Provide service to corridors with trip lengths and travel density greater than those served by rural collectors and local roads and with relatively high travel speeds and minimum interference to through movement</p>	

Source: FHWA *Highway Functional Classification Concepts, Criteria and Procedures Manual (2013 Edition)*

	Collectors		Local
	Major Collector <sup>2</sup>	Minor Collector <sup>2</sup>	
<b>Typical Characteristics</b>			
Lane Width	10 feet - 12 feet	10 - 11 feet	8 feet - 10 feet
Inside Shoulder Width	0 feet	0 feet	0 feet
Outside Shoulder Width	1 feet - 6 feet	1 feet - 4 feet	0 feet - 2 feet
AADT <sup>1</sup> (Rural)	300 - 2,600	150 - 1,110	15 - 400
AADT <sup>1</sup> (Urban)	1,100 - 6,300 <sup>2</sup>		80 - 700
Divided/Undivided	Undivided	Undivided	Undivided
Access	Uncontrolled	Uncontrolled	Uncontrolled
<b>Mileage/VMT Extent (Percentage Ranges)<sup>1</sup></b>			
<b>Rural System</b>			
Mileage Extent for Rural States <sup>3</sup>	8% - 19%	3% - 15%	62% - 74%
Mileage Extent for Urban States	10% - 17%	5% - 13%	66% - 74%
Mileage Extent for All States	9% - 19%	4% - 15%	64% - 75%
VMT Extent for Rural States <sup>3</sup>	10% - 23%	1% - 8%	8% - 23%
VMT Extent for Urban States	12% - 24%	3% - 10%	7% - 20%
VMT Extent for All States	12% - 23%	2% - 9%	8% - 23%
<b>Urban System</b>			
Mileage Extent for Rural States <sup>3</sup>	3% - 16%	3% - 16% <sup>2</sup>	62% - 74%
Mileage Extent for Urban States	7% - 13%	7% - 13% <sup>2</sup>	67% - 76%
Mileage Extent for All States	7% - 15%	7% - 15% <sup>2</sup>	63% - 75%
VMT Extent for Rural States <sup>3</sup>	2% - 13%	2% - 12% <sup>2</sup>	9% - 25%
VMT Extent for Urban States	7% - 13%	7% - 13% <sup>2</sup>	6% - 24%
VMT Extent for All States	5% - 13%	5% - 13% <sup>2</sup>	6% - 25%
<b>Qualitative Description (Urban)</b>	<ul style="list-style-type: none"> <li>• Serve both land access and traffic circulation in higher density residential, and commercial/industrial areas</li> <li>• Penetrate residential neighborhoods, often for significant distances</li> <li>• Distribute and channel trips between local streets and arterials, usually over a distance of greater than three-quarters of a mile</li> </ul>	<ul style="list-style-type: none"> <li>• Serve both land access and traffic circulation in lower density residential, and commercial/industrial areas</li> <li>• Penetrate residential neighborhoods, often only for a short distance</li> <li>• Distribute and channel trips between local streets and arterials, usually over a distance of less than three-quarters of a mile</li> </ul>	<ul style="list-style-type: none"> <li>• Provide direct access to adjacent land</li> <li>• Provide access to higher systems</li> <li>• Carry no through traffic movement</li> </ul>
<b>Qualitative Description (Rural)</b>	<ul style="list-style-type: none"> <li>• Provide service to any county seat not on an arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance such as consolidated schools, shipping points, county parks, important mining and agricultural areas</li> <li>• Link these places with nearby larger towns and cities or with arterial routes</li> <li>• Serve the most important intra-county travel corridors</li> </ul>	<ul style="list-style-type: none"> <li>• Be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within reasonable distance of a minor collector</li> <li>• Provide service to smaller communities not served by a higher class facility</li> <li>• Link locally important traffic generators with their rural hinterlands</li> </ul>	<ul style="list-style-type: none"> <li>• Serve primarily to provide access to adjacent land</li> <li>• Provide service to travel over short distances as compared to higher classification categories</li> <li>• Constitute the mileage not classified as part of the arterial and collectors systems</li> </ul>

Source: FHWA Highway Functional Classification Concepts, Criteria and Procedures Manual (2013 Edition)

Notes: <sup>1</sup>Ranges in this table are derived from 2011 HPMS data.

<sup>2</sup>Information for Urban Major and Minor Collectors is approximate, based on a small number of States reporting.

<sup>3</sup>For this table, Rural States are defined as those with a maximum of 75 percent of their population in urban centers. New Mexico is classified as an Urban State.