

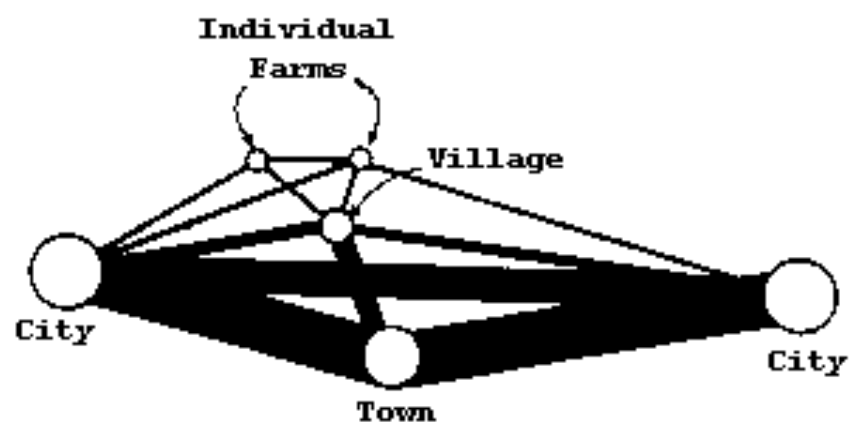
Functional Classification Guidelines

THE CONCEPT OF FUNCTIONAL CLASSIFICATION

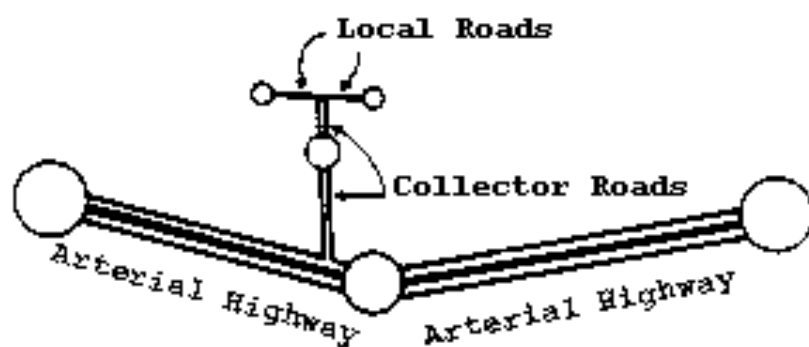
Functional classification is the process by which streets and highways are grouped into classes, or systems, **according to the character of service** they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.

Relative sizes of circles indicate **relative trip generating** or attracting power of the places shown. Since it is **impractical to provide direct-line connections** for every **desire line**, trips must be channelized on a limited road network in a logical and efficient manner. This can be done as shown in the lower diagram of Figure II-1. Note that the heavy travel movements are directly served or nearly so; and that the lesser ones are channeled into somewhat indirect paths. The facilities shown in the diagram have been labeled local, collector and arterial; terms which are descriptive of their functional relationships. Note particularly that this hierarchy of functional types relates directly to the hierarchy of travel distances which they serve

Figure II-1
Channelization of Trips



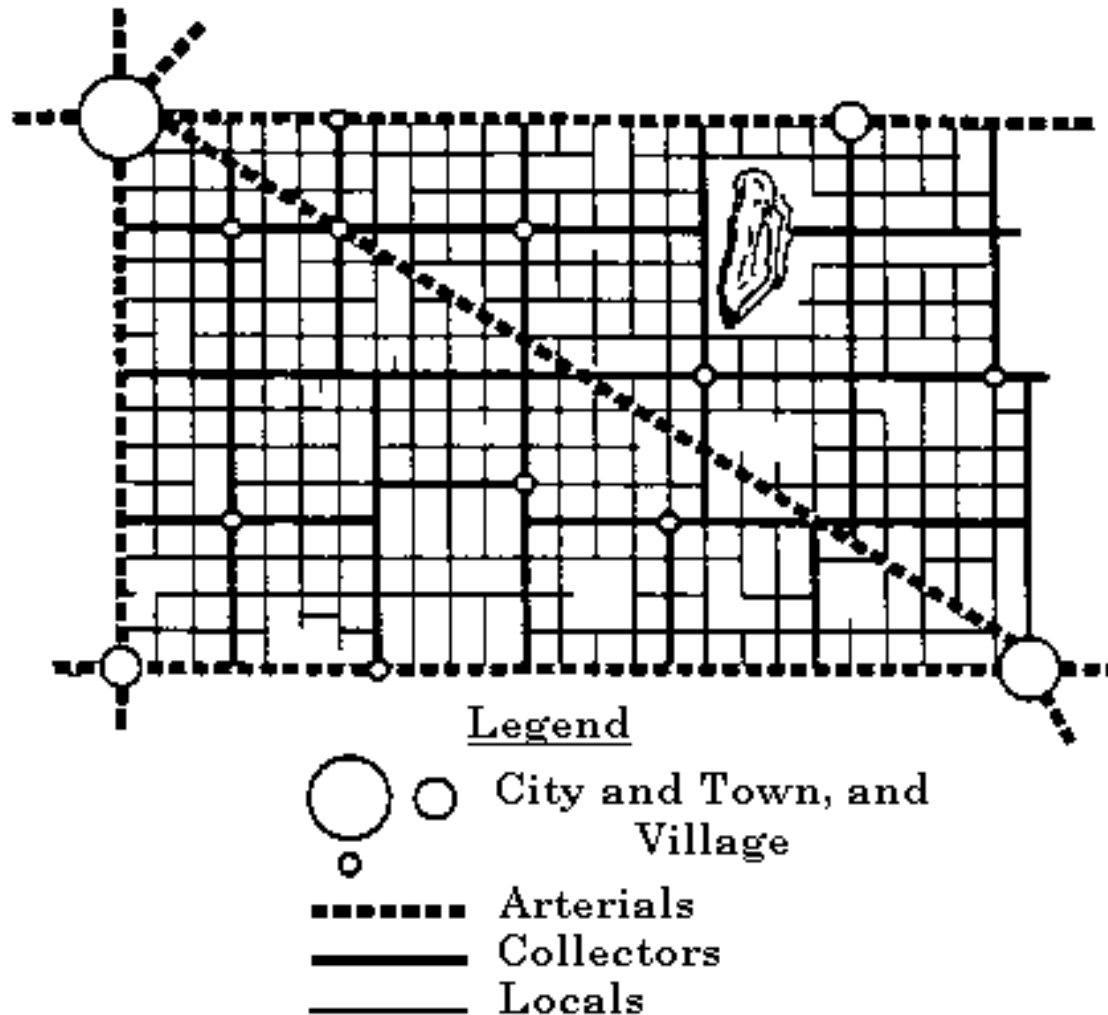
(A) Desire Lines of Travel



(B) Road Network provided

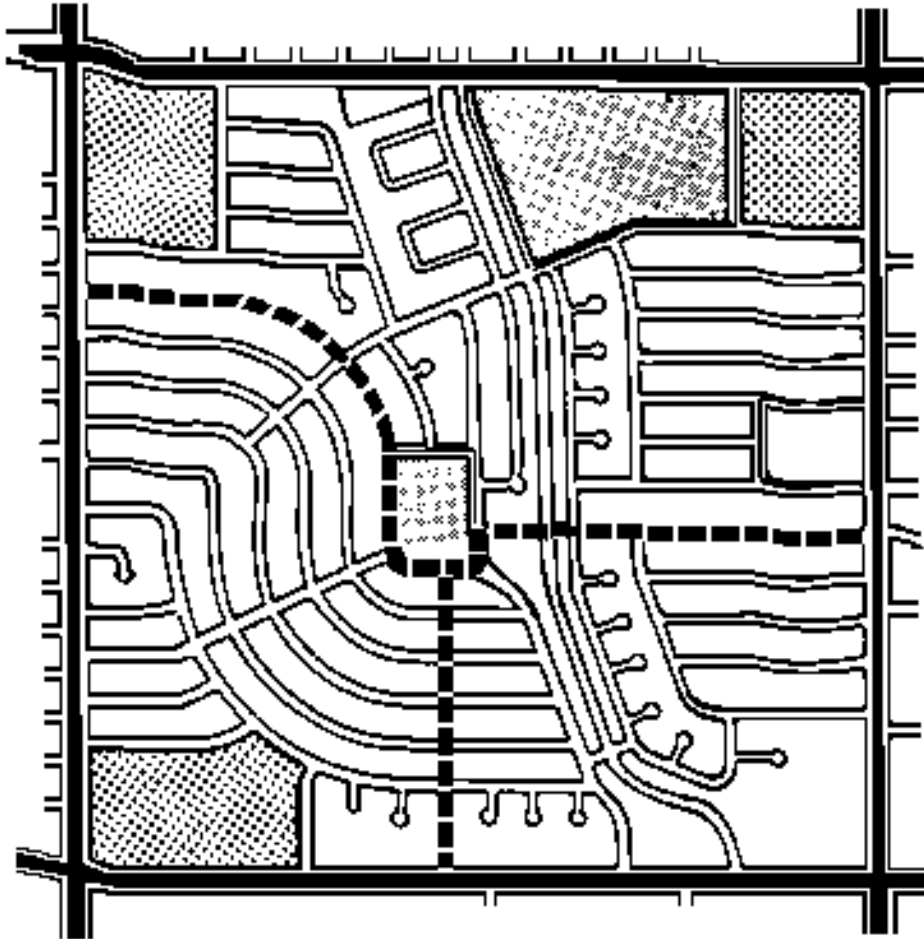
Figure II-2

Schematic Illustration of a Functionally Classified Rural Highway Network



chematic) illustration
network is shown in
rger towns generate
the relatively longer
ally provide direct
mediate functional
nall towns directly,
work, and **collects**
tem of local roads,
d other rural land

Figure II-3
Schematic of a Portion
of an
Urban Street Network



Legend

 Arterial street	 Collector street
 Commercial	 Public

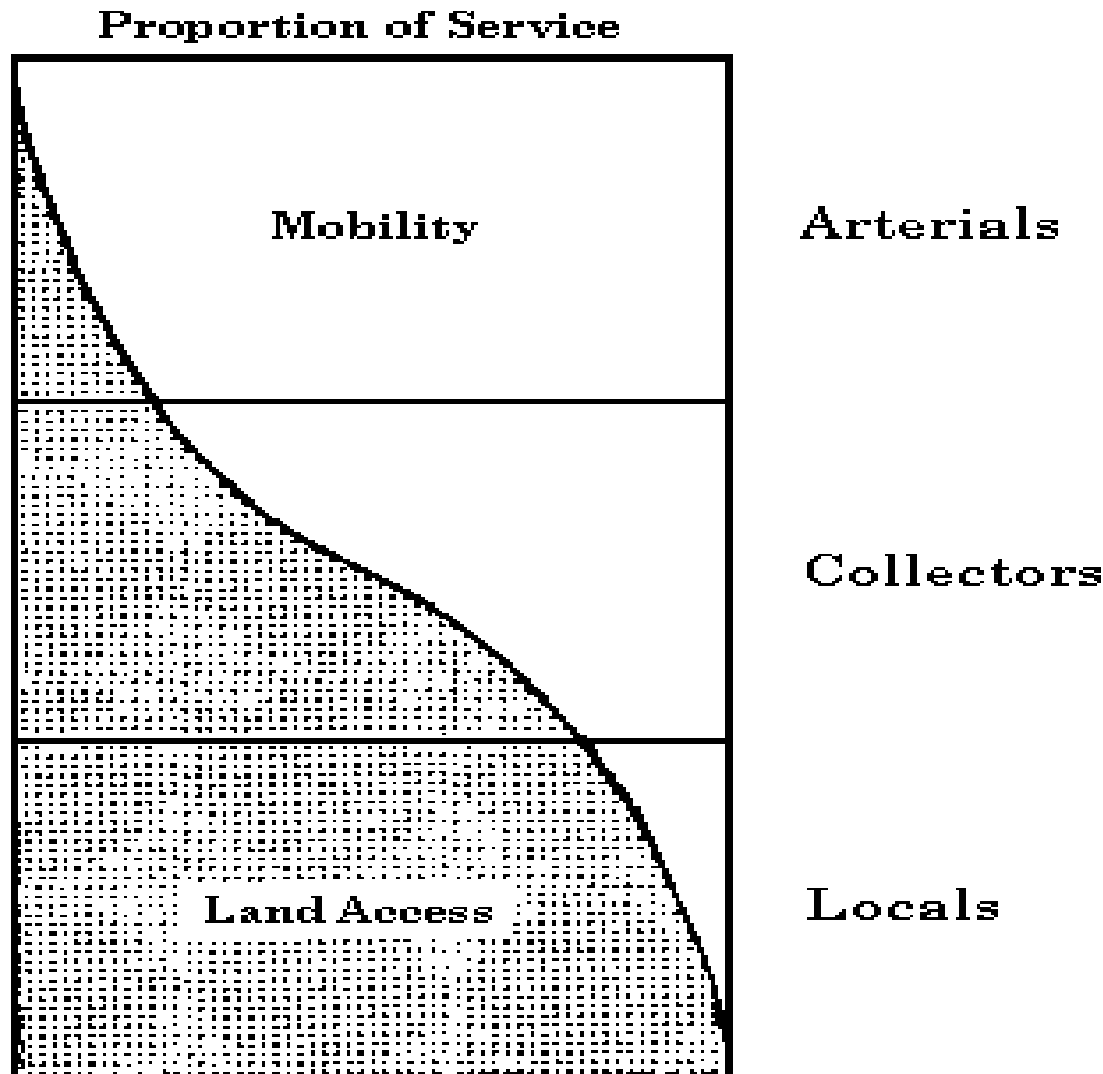
has a rural setting, the urban areas as well. A can be defined; however, of land use and travel ecific travel generation identify. In urban areas ch as spacing, become logical and efficient ion of a functionally k is shown in Figure II-3

Allied to the idea of traffic channelization is the dual role the highway network plays in providing

(1) access to property, and (2) travel mobility. Access is a fixed requirement, necessary at both ends of any trip. **Mobility**, along the path of such trips, can be provided at varying levels, usually referred to as "**level of service**." It can incorporate a wide range of elements (e.g., **riding comfort and freedom from speed changes**) but the most basic is **operating speed** or trip travel time.

Figure II-4

Relationship of functionally Classified Systems
in Serving Traffic Mobility and Land Access



f Figure II-1 that
eads logically
ystems, but also
el distances
chy of travel
desirable
he access and
s emphasize the
size a high level
ollectors offer a
s. This is

AREA DEFINITIONS

Urban and rural areas have fundamentally **different characteristics as to density and types of land use,** density of street and highway networks, nature of travel patterns, and the way in which all these elements are related in the definitions of highway function. Consequently, this manual provides for separate classification of urban and rural functional systems.

AREA DEFINITIONS

Experience has shown that extensions of rural arterial and collector routes provide an adequate arterial street network in places of less than 5,000 population. Hence urban classifications as discussed herein are considered in the **context of places of 5,000 population or more.**

FUNCTIONAL SYSTEM CHARACTERISTICS

The following pages are devoted to separate descriptions of the characteristics of the basic functional systems and their subsystems for (1) rural areas, (2) urbanized areas, and (3) small urban areas.

Rural areas

Principal arterials
Minor arterial roads
Collector roads
Local roads

Urbanized areas and Small Urban areas

Principal arterials
Minor arterial streets
Collector streets
Local streets

Rural principal arterial system

The rural principal arterial system consists of a connected rural network of continuous routes having the following characteristics:

- **Serve corridor movements having trip length** and travel density characteristics indicative of substantial statewide or interstate travel.
- **Serve ² all, or virtually all, urban areas of 50,000 and over population and a large majority of those with population of 25,000 and over.**
- **Provide an integrated network** without stub(end) connections except where unusual geographic or traffic flow conditions dictate otherwise (e.g., international boundary connections and connections to coastal cities).

Rural minor arterial road system

The rural minor arterial road system should, in **conjunction with the principal arterial** system, form a rural network having the following characteristics:

- **Link cities and larger towns**³ (and other traffic generators, such as major resort areas, that are capable of attracting travel over similarly long distances) and
- **form an integrated network** providing interstate and intercounty service.

Be spaced at such intervals, consistent with population density, so that all developed areas of the State are within a reasonable distance of an arterial highway.

Provide (because of the two characteristics defined immediately above) service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems. Minor arterials therefore

Rural minor arterial road system

Provide (because of the two characteristics defined immediately above) service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems.

Minor arterials therefore constitute routes whose design should be expected to provide for relatively high overall travel speeds, with minimum interference to-through movement.

Major collector roads.--These routes should:

- (1) 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 intracounty importance, such as consolidated schools, shipping points, county parks, important mining and agricultural areas, etc. ;
- (2) link these places with nearby larger towns or cities**, or with routes of higher classification; and
- (3) serve the more important intracounty travel corridors.**

Minor collector roads.--These routes should: (1) Be spaced at intervals, consistent with population density, to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road; (2) provide service to the remaining smaller communities; and (3) link the locally important traffic generators with their rural hinterland.

Minor collector roads.--These routes should:

- (1) Be spaced at **intervals, consistent with population density**, to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road;
- (2) provide **service to the remaining smaller communities**; and
- (3) **link the locally important traffic generators** with their rural hinterland.

Rural local road system

The rural local road system should have the following characteristics:

- (1) Serve primarily to provide **access to adjacent land**;
- (2) provide service to **travel over relatively short distances** as compared to collectors or other higher systems. Local roads will, of course, constitute the rural mileage not classified as part of the principal arterial, minor arterial, or collector systems

Rural local road system

The rural local road system should have the following characteristics:

- (1) Serve primarily to provide **access to adjacent land**;
- (2) provide service to **travel over relatively short distances** as compared to collectors or other higher systems. Local roads will, of course, constitute the rural mileage not classified as part of the principal arterial, minor arterial, or collector systems