

Transportation Element (2007)

Purpose

Overland Park strives to create an ideal street and highway network that balances the need for a safe, efficient, well-maintained street network with the desire for environmentally compatible and visually pleasing design. The Transportation Element highlights the principal means used by the city to achieve this optimal street network.

Street Network

- Two purposes:
 - Provide access to property
 - Movement of traffic
- Hierarchy of streets from local to thoroughfare as shown in Figure 1 on page TE-17:
 - Local:
 - ◆ Mainly two-lane streets
 - ◆ Primary function is access
 - Thoroughfare streets:
 - ◆ For example, Metcalf Avenue and 119th Street
 - ◆ Movement of traffic

- Elements of a street:
 - Pavement – driving surface which varies in width and types of materials used
 - Right-of-way – all of the pavement area plus unpaved areas on both sides that are reserved for sidewalks, landscaping, bike trails and utilities
 - ◆ Sometimes used for expansion of pavement
 - ◆ In public ownership rather than private ownership
- General rules:
 - The fewer the drives and intersections on a roadway the greater amount of traffic it can handle.
 - Locations near high traffic areas are more appropriate for nonresidential land uses.
 - ◆ Easier access
 - ◆ Higher visibility
 - Locations where the traffic volume and speed are lower are more suitable for residential uses.

City Street Classifications and Standards

- Five major categories of streets (see Figure 2 on page TE-18):
 - Local residential streets
 - Collector/apartment streets
 - Commercial and industrial streets
 - Super-Collector streets

- Thoroughfare streets
- Freeways

Local Residential Streets (see Figure 3 on page TE-19)

- **Primary function** - access to abutting property
 - Limited on-street parking
 - The design of local streets is meant to discourage traffic cutting through residential areas.
 - T-intersections are encouraged to reduce the number of potential conflicts when turns are made.
- **Street standards:**
 - A 28-foot street (back-of-curb to back-of-curb) within a 50-foot wide right-of-way
 - Where existing uncurbed streets are being rebuilt, through the Residential Street Program, to provide curbs, standard street widths typically are reduced and right-of-way may be less than 50-feet.
- **Traffic handling capacity:**
 - Up to 2,000 to 3,000 vehicles per day

Collector and Apartment Streets (see Figure 4 on page TE-20)

- **Primary function (collector street)** - collect and move traffic generated by a neighborhood to a thoroughfare street
 - Generally spaced one mile apart and offset one-half mile from thoroughfares

- ◆ Allows for an efficient level of service without causing disruptions by excessive amounts of traffic traveling through neighborhoods
- On-street parking on a collector is discouraged.
- Collector/Collector Intersections
 - ◆ T-type intersections can be used to:
 - Promote safety by reducing the number of conflicting turn movements at intersections
 - Reduce the amount of non-local traffic
 - ◆ Four-legged intersections are acceptable when a roundabout is used.
- **Primary function (apartment streets)** - serve multifamily residential areas.
 - Apartment streets are located at irregular intervals as multifamily developments are dispersed throughout the city.
- **Street standards (collector and apartment streets):**
 - A 36-foot street within a 60-foot wide right-of-way
- **Traffic handling capacity (collector and apartment streets):**
 - Up to 10,000 vehicles per day

Commercial and Industrial Streets (see Figure 5 on page TE-21)

- **Primary function** - ability to carry high amounts of car and truck traffic
 - Traffic from commercial or industrial areas is to be diverted away from residential neighborhoods.

- **Street standards:**
 - A 36- to 52-foot roadway within a 60- to 80-foot wide right-of-way, depending on the size of the development being served
 - ◆ Greater pavement thickness requirements than for collector streets
- **Traffic handling capacity:**
 - 10,000 to 25,000 vehicles per day

In effect, the classification of a street as either an Industrial, Commercial or Apartment street is determined by the zoning of abutting parcels of land. For any section of street with multiple abutting zoning classifications, the most restrictive classification shall apply.

Super-Collector Streets (see Figure 6 on page TE-22)

- **Primary function** - collect and move traffic generated by a residential neighborhood and/or apartment, commercial, industrial or office developments to a thoroughfare street
 - Traffic volumes generally are higher than many Collector streets and speed limits may be higher than on typical Collector streets
- **Street standards:**
 - A 36- to 52-foot roadway within a minimum 80-foot wide right-of-way, depending on the expected traffic volumes and usage of the street
 - ◆ Greater pavement thickness requirements than for collector streets
- **Traffic handling capacity:**
 - 10,000 to 25,000 vehicles per day

Thoroughfares (see Figure 7 on page TE-23)

- **Primary function** - move large amounts of traffic through areas of the city
 - Located at one-mile intervals
- **Thoroughfare standards:**
 - 80 to 200 feet of right-of-way to provide for medians, exclusive turn lanes, and four to six through-traffic lanes
 - Direct driveway access is undesirable.
 - New residential lots are restricted from fronting on, or having direct access to, thoroughfares.
 - Median breaks are restricted to quarter-mile intervals along thoroughfares.
 - On-street parking is prohibited.
- **Traffic handling capacity:**
 - Up to 50,000 vehicles per day on six-lane thoroughfares

Freeways (See Figure 8 on page TE-24)

- **Primary function** - carry high volumes of traffic to different sections of the metropolitan area with uninterrupted, high-speed movement of traffic
 - Access is restricted to grade-separated interchanges.
- **Freeway standards:**
 - Up to 300 feet of right-of-way to provide for exclusive turnoff and merge lanes, and four to eight through-traffic lanes

- **Traffic handling capacity:**
 - Up to 120,000 vehicles per day on six-lane freeways
 - Up to 150,000 vehicles per day on eight-lane freeways
- The developers of some land uses consider the freeway an asset while others take measures to screen the sight of the freeway and the traffic noise.
- Locations near interchanges are highly desired by businesses because of the high visibility and ready access to such sites.
- Adjacent residential landowners often lobby government officials to build visual and sound barriers to lessen the noise and screen the sight of the freeway.
 - Sound barriers are expensive and do not always meet residents' expectations, but are a way to lessen excessive freeway noise.

The Street Network

Traffic Components

- The Traffic Volumes Map displays the amount of traffic using the street network of collector streets, thoroughfare streets and freeways located within the city.
 - The traffic counts shown are averages taken over a 24-hour period.
 - Not all street segments and intersections are counted each year.
 - The segments of I-435 and I-35 that traverse Overland Park have some of the highest traffic volumes in the Kansas City metropolitan area.

Existing and Proposed Transportation System

Existing Street Network

- The street network is shown on the Street Network/Official Street Map.
- Overland Park has more than 889 miles of public and private streets and highways.
 - Local streets have the greatest amount with 546 miles (61.4 percent of the total).
 - ◆ 83.3% of all local streets are public
 - ◆ 16.7% of all local streets are private
 - Collector streets account for 119 miles of streets (13.4 percent).
 - Thoroughfares total 160 miles (18 percent).
 - Freeways comprise the remaining 64 miles (7.2 percent).

Proposed Street Network

- The Street Network/Official Street Map also displays the approximate location of future collectors and thoroughfares.
- Overland Park has adopted as policy the spacing of thoroughfares at one-mile intervals.
 - City policy is that thoroughfares are centered on section lines.
- Collectors are located approximately half way between the thoroughfares.
- Interruptions to this spacing occur where freeways or major public uses appear such as I-435 and Johnson County Community College.

- The location of thoroughfare and collector streets is intended to promote the concept of a neighborhood.
 - A neighborhood is roughly one-square mile in size.
 - A neighborhood has well defined boundaries.
 - A thoroughfare is located on each of the neighborhood's four sides.
 - Two collector streets intersect in the middle, dividing the neighborhood into approximately four equal parts.

Maintenance of the Street Network

- Overland Park continues to have an extensive program for maintaining the existing public street network.
- Each street is evaluated every two years using the PAVER pavement management system.
 - The results from the street evaluations are used to determine the appropriate maintenance schedule for each street type.
- Thoroughfares are generally resurfaced every seven to ten years.
 - Curbs and gutters are replaced as needed.
- Collector and residential streets are generally sealed every seven years and resurfaced every 25 to 30 years.
- The construction, maintenance (including snow removal), and repair of private streets are the responsibility of the property owner(s).

Aesthetic Design

- Extensive landscaping has been installed and maintained along a number of major streets.

- The intersection of Metcalf Avenue and Shawnee Mission Parkway
 - 103rd Street between Lowell and Quivira Road
 - Metcalf Avenue between 103rd Street and College Boulevard
 - Metcalf from 135th Street to 151st Street
 - 127th Street from Switzer to Pflumm
 - Santa Fe from Conser to 79th Street
 - 80th Street from Santa Fe to Metcalf
 - 69 Highway and 103rd
 - 69 Highway and 95th
 - 69 Highway/169 Highway split
 - I-435 and Metcalf Avenue
 - 119th Street and Blue Valley Parkway
- Landscaping design guidelines have also been approved for various street corridors.
 - In 1992, design guidelines were approved for use within and adjacent to the right-of-way of 135th Street.
 - ◆ The guidelines are for use by both the private and public sectors.
- Design guidelines are also part of the adopted Greenway Linkages Guidelines and Plan.

Commuting Choices

The 2000 Census found that the vast majority of residents rely solely on their personal vehicle for commuting to their jobs. Alternative methods of transportation are, as a whole, very limited in the city and county.

- Most employed city (86.8 percent) and county (86.7 percent) residents, 16 years or older, drive to work alone.
- Only 6.5 percent of city residents carpool, compared to 6.9 percent of county residents.
- More city (0.7 percent) and county (0.8 percent) residents walked to work than used public transit (.5 percent of city residents and .3 percent of county residents).
- The average commuting time for city residents was 19.5 minutes and 20.2 minutes for county residents, compared to the U.S. average of 25.5 minutes.
 - The commuting times are only slightly changed from 1990 when the average was 19.1 minutes for city residents and 19.5 minutes for county residents.

Public Transportation

- The JO (Johnson County Transit) has been providing public transportation services to much of Johnson County, downtown Kansas City, Missouri, and Kansas City, Kansas since 1980.
 - Nine routes weekdays between Johnson County and downtown Kansas City, MO
 - ◆ Seven of the nine routes go through Overland Park.
 - Weekdays the Metcalf Plaza Connection offers a reverse commute from Kansas City, MO to several major destinations in Overland Park.

- Late weekdays a reverse commute route from downtown Kansas City, MO to southern Overland Park and Johnson County
- Weekdays reverse commute routes to Olathe from both downtown Kansas City, KS and Kansas City, MO
- One mid-day route from Johnson County to downtown Kansas City, MO
- Other routes run weekdays within Johnson County.
- Senior citizens, disabled, Medicare cardholders, youth, and college students are eligible for special reduced fares.
- The JO - Special Edition is a program administered by Johnson County Transit.
 - ◆ Provides weekday curb-to-curb service for disabled, elderly, and low-income residents of Johnson County.
 - ◆ Offers a reduced fare program which is based on an individual's monthly income
- I-35 Corridor Study
 - Participants:
 - ◆ Study Team - consisting of Johnson County Transit Staff, Agency Representatives and Consultants
 - ◆ Advisory Committee - consisting of community leaders who provide input and advice on decisions
 - ◆ Board of County Commissioners - the final decision makers
 - The purpose of the study is to evaluate a range of transit options for dealing with the traffic volumes and growing congestion on I-35.

- I-35 Corridor is defined as I-35 through Johnson County to downtown Kansas City, MO.
- A “Locally Preferred Alternative” for public transportation is to be recommended by the end of 2007.
- Initial transit alternatives identified by the study team include:
 - ◆ No Build
 - ◆ Transportation System Management
 - ◆ Bus Rapid Transit on I-35
 - ◆ Bus Rapid Transit on Arterial Roadways
 - ◆ Commuter Rail
 - ◆ Light Rail Transit

Traffic Management Measures

Traffic Studies and Traffic Model

- The city of Overland Park monitors the existing street network and makes considerable use of traffic studies to project future transportation improvement needs.
- A traffic model is used to evaluate the effects of future land use changes.
 - Projections of traffic volumes and circulation can be used to help determine the future road improvement needs to serve the proposed land uses and intensities of development.

Capital Improvements Program

- The Capital Improvements Program (CIP) is used to schedule and finance the development of major physical improvements. The transportation-related components of the CIP include:

- Streets
 - Bridges
 - Traffic signals
 - Street lighting
 - Sidewalks
- The CIP forecasts the major physical improvement needs of the city over a five-year period.
- The CIP is reviewed annually.
 - To keep the CIP timely in serving areas currently developing and in anticipation of areas likely to develop in the near future
- The transportation-related portion of the CIP focuses on:
 - Meeting needs for roadway improvements in the higher-growth areas south of I-435
 - Upgrading existing residential streets in older neighborhoods to current city standards
 - Widening existing thoroughfares from four to six lanes where traffic needs dictate the improvement.

Residential Street Program

- Initiated in 1988 to upgrade over 40 miles of ditched streets to modern standards found throughout the rest of the city, including storm sewer systems, streetlights, sidewalks and similar pavement
- A five-year, 1/8 cent sales tax increase to provide funding for the Residential Street Program was passed in November 1998 and renewed in April 2003.
- The residential street program is projected to be completed by 2008.

- All remaining projects are either under construction or in design at this time.
- The city's investment in high-quality public infrastructure has been matched by investment of property owners to upgrade their properties.

OPTCS

- Another traffic management tool used by the city is the Overland Park Traffic Control System (OPTCS).
 - A computer system which coordinates approximately 64 percent of the city's 245 intersection signals
 - Compiles traffic information for use in managing the flow of traffic
 - 45 closed-circuit television cameras monitor OPTCS intersection signals

South Metro Connection Study

- Currently a Study is underway, administered by the Mid America Regional Council (MARC), to evaluate the need, potential alignment, and facility type for a roadway connection between U.S. 69 and U.S. 71 near the southern boundary of Overland Park
 - The approximate study area extends from U.S. 69 on the west, 175th Street on the north, Holmes Road on the east and 199th Street on the south.
 - If a road connection is determined to be appropriate, it will connect with the west end of the Cass Parkway, a planned roadway connection to U.S. 71 previously approved by Cass County and the City of Belton.

- The Existing Conditions and Purpose and Needs Sections of the Study have been completed. The results show that east-west circulation is poor in that area and future traffic volumes will not be adequately accommodated by the existing street network.
- Alternative alignments and roadway types are being studied and a recommended roadway type and alignment will be reviewed in mid 2007.
 - The main goal of the Study is to identify a roadway corridor so that the required right-of-way can be preserved for construction at some time in the future. No timetable or funding sources have been identified for the construction of the project.

Transportation Planning Goals and Policies

- The transportation planning goals and policies as identified by the Governing Body, Planning Commission, and staff are addressed in the Goals section of the Master Plan's Plan Implementation text.

Summary

Significant dependence upon personal vehicles will likely continue at or near current levels into the foreseeable future. This dependence will require the city to continue to build and maintain an extensive street network. As the principal means of funding the construction of street improvements, the city's CIP will need to keep pace with increased land development, redevelopment, and the corresponding rise in traffic. The increased development of high traffic producing land uses such as shopping centers and office buildings will require greater emphasis on traffic management tools by both the public and private sectors.

The goals and policies that are an integral part of the Master Plan are essential for achieving the ideal of an efficient street network. The continued evaluation of the transportation standards and traffic management measures discussed above are also important for achieving that ideal.

Proportion of Service

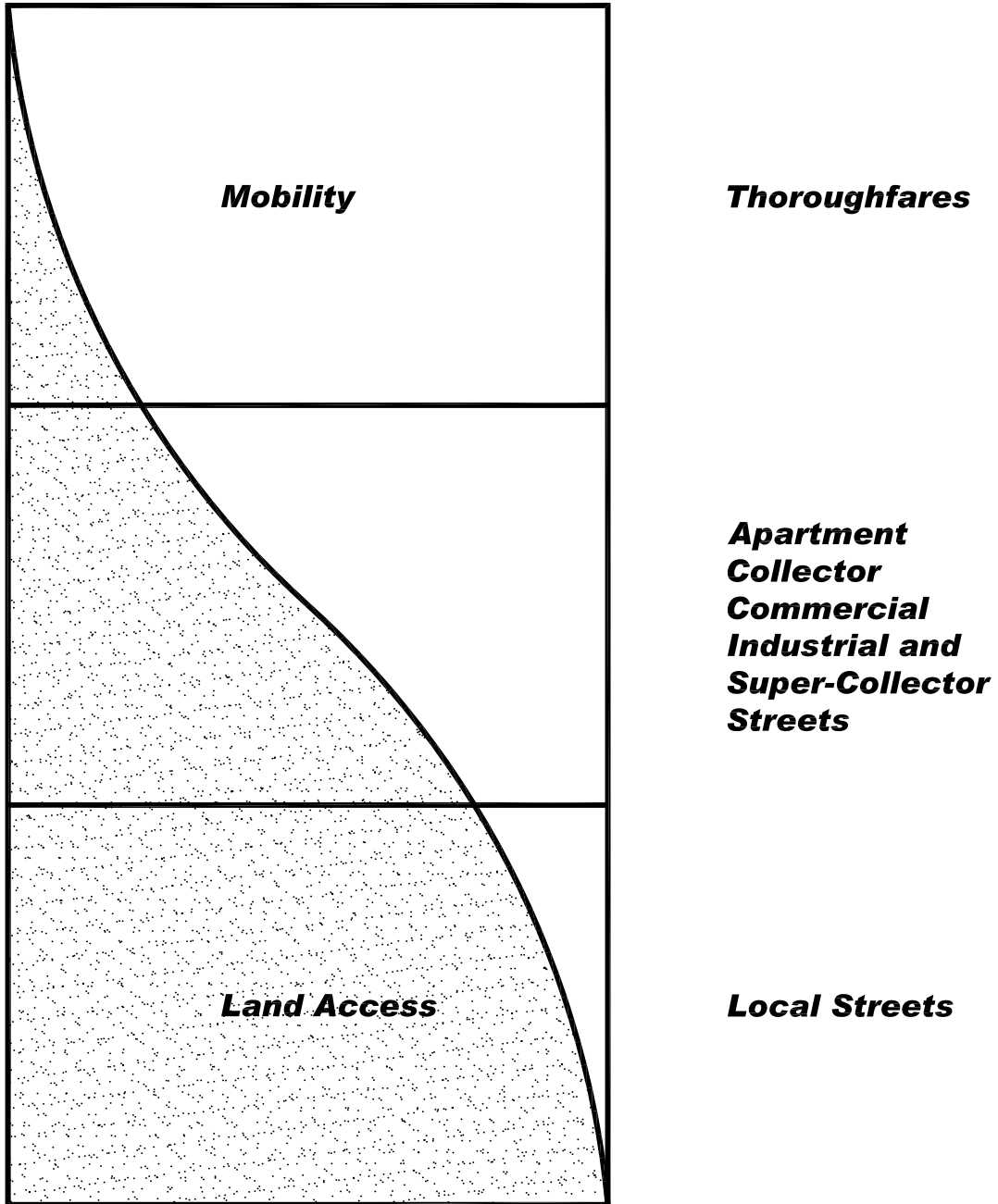


Figure 1
Objectives of the Transportation System

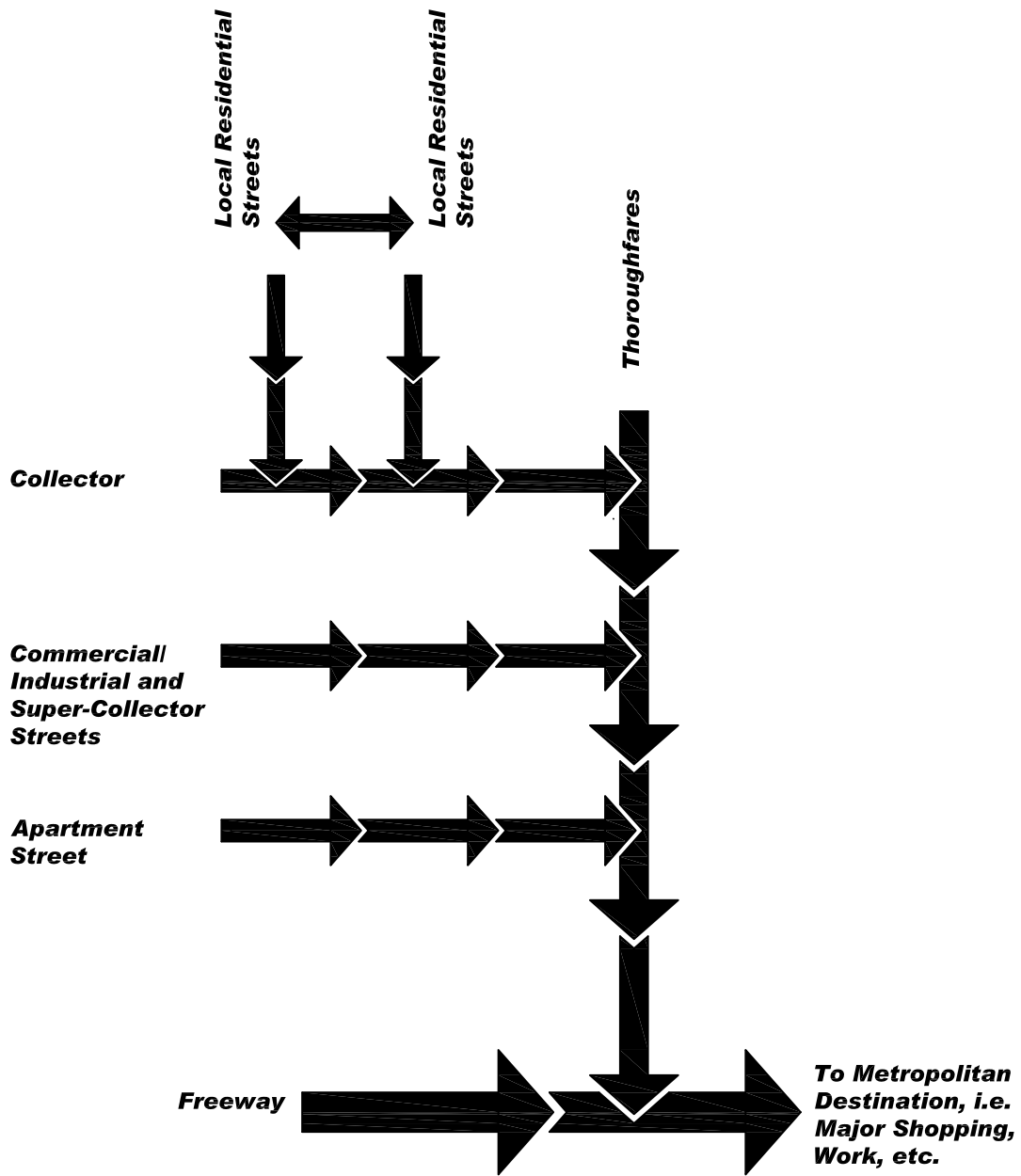


Figure 2
Street Functions

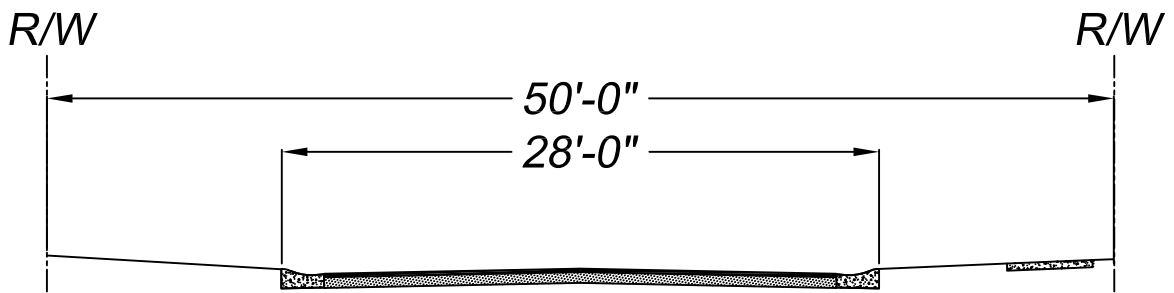


Figure 3
Typical Roadway Section - Residential Street

(2008 Edition)

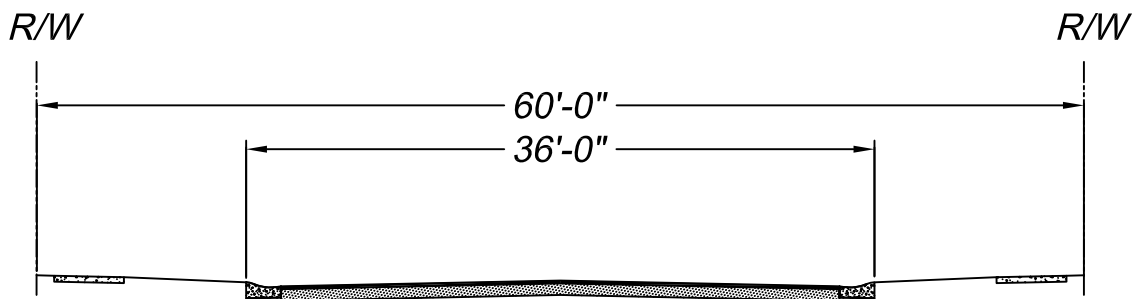
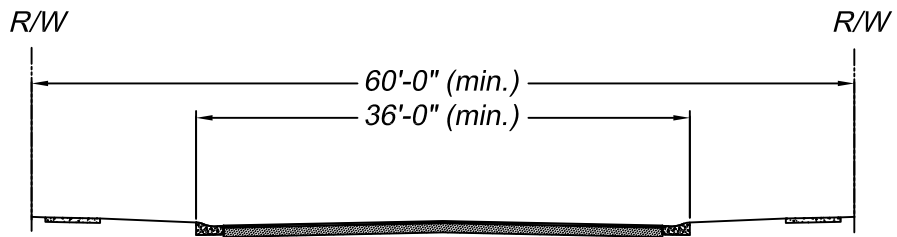


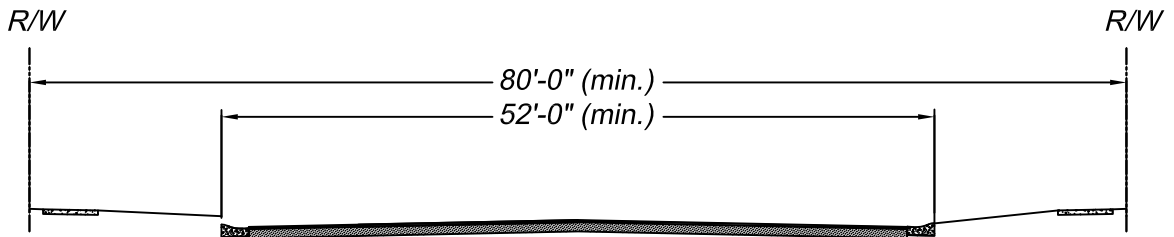
Figure 4
COLLECTOR & APARTMENT STREETS (2-LANE SECTION)

(2008 Edition)



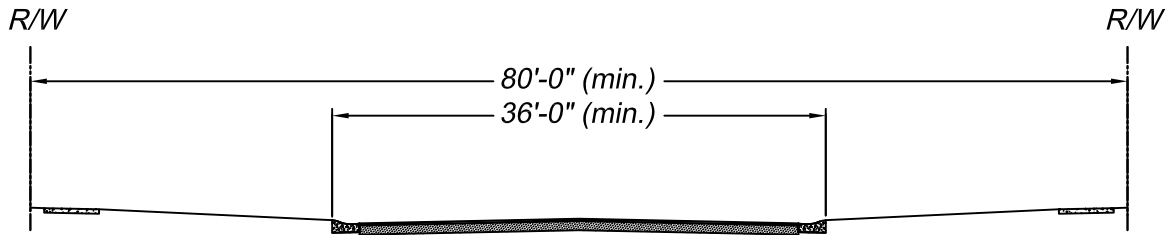
COMMERCIAL & INDUSTRIAL STREETS (2-LANE SECTION)

(2008 Edition)



COMMERCIAL & INDUSTRIAL STREETS (4-LANE SECTION)

(2008 Edition)



SUPER-COLLECTOR STREET (2-LANE SECTION)

(2008 Edition)

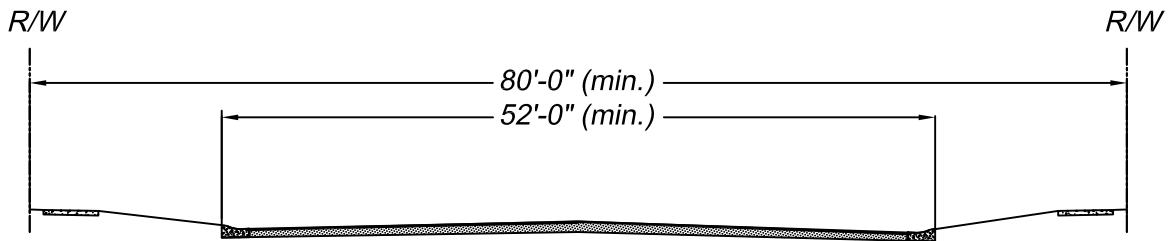
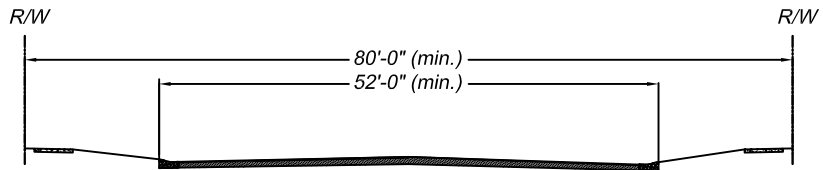
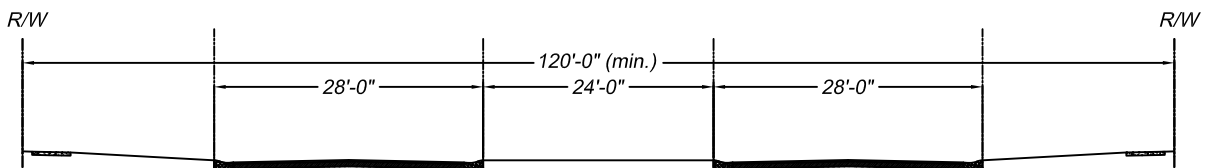


Figure 6
SUPER-COLLECTOR STREET (4-LANE SECTION)

(2008 Edition)



Thoroughfare (4 Lane Undivided Section)
(2008 Edition)



Thoroughfare (4-Lane Divided Section)
(2008 Edition)

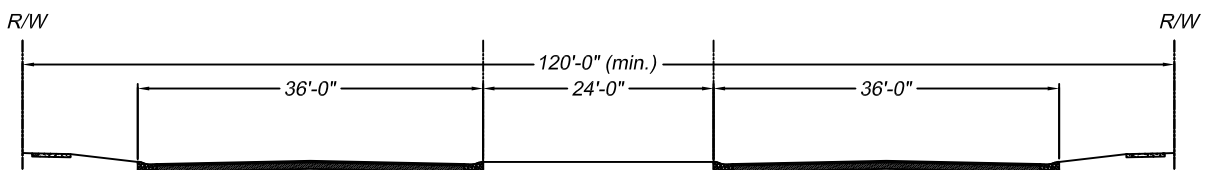


Figure 7
Thoroughfare (6-Lane Divided Section)
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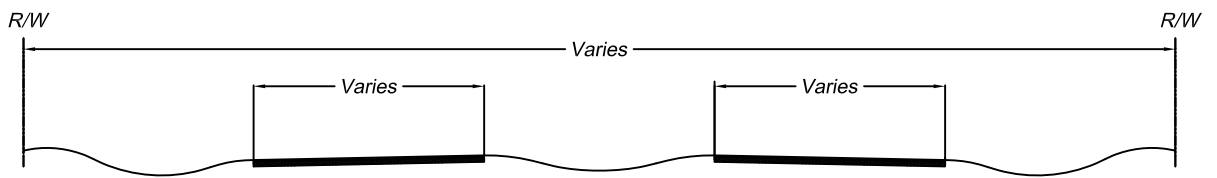


Figure 8
Freeway
(2008 Edition)