Multimodal Through Corridors and Placemaking Corridors

Corridors have different functions in a region. Some corridors are used to get smoothly and rapidly through a region or to get quickly to major destinations in the region. For the purpose of these Guidelines, these kinds of corridors are called Multimodal Through Corridors. Other corridors are more slow speed and used to access local businesses, residences and activities within a destination. Usually these types of corridors are found in Multimodal Districts and Multimodal Centers, and they are called Placemaking Corridors in these Guidelines.

This fundamental distinction – between Multimodal Through Corridors and Placemaking Corridors is a key concept in these Guidelines. All Multimodal Corridors within a Multimodal Center, and often many of the corridors in a Multimodal District are considered to be Placemaking Corridors; these corridors facilitate movement to destinations within a Multimodal Center or Distrcit. The higher speed Multimodal Corridors that travel between and connect Multimodal Centers within a Multimodal District, or connect between Districts, are considered to be Multimodal Through Corridors. Multimodal Through Corridors and Placemaking Corridors work together in a region by getting people quickly from one Multimodal District or Multimodal Center to another and ultimately to activities within a Multimodal District or Multimodal Center. Multimodal Through Corridors will typically transition to Placemaking Corridors as they enter a Multimodal Center. Ideally, though, they are located at the edge of Multimodal Centers, remaining as higher-speed facilities to which Placemaking Corridors provide access from the core of the Multimodal Center.

Placemaking Corridors are usually located within Multimodal Centers, but can extend outward beyond the Multimodal Center boundaries into a Multimodal District. Any street that communities desire to make into a lively, pedestrian-oriented street may be designated as a Placemaking Corridor, regardless of location. Because of the concentration and diversity of land uses within Multimodal Centers, the streets within Multimodal Centers should be designated as Placemaking Corridors.

Multimodal Through Corridors are located exclusively outside of Multimodal Centers, but may traverse Multimodal Districts. If possible, Multimodal Centers should be located such that Multimodal Through Corridors skirt the edges of a Multimodal Center. Alternatively, Multimodal Through Corridors should transition to Placemaking Corridors if they go through a Multimodal Center. Once they have passed through the Multimodal Center, they may transition back to Multimodal Through Corridors.

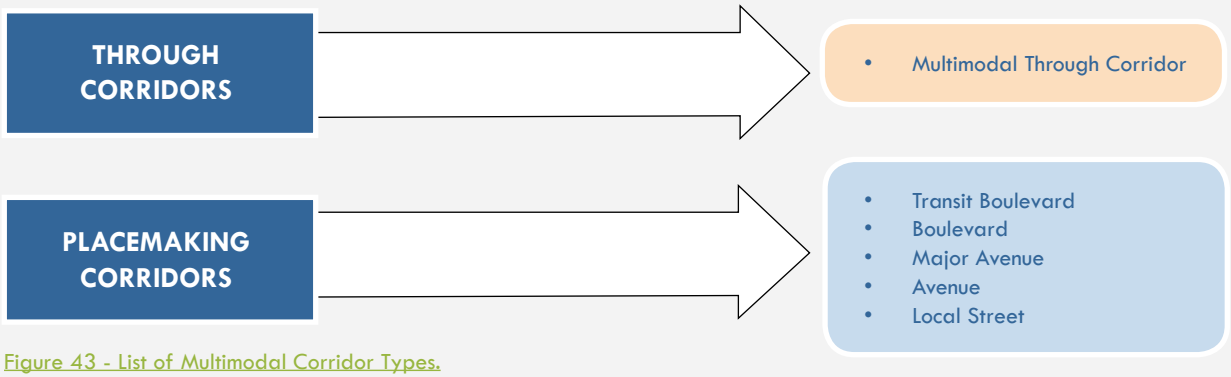

Figure 43 - List of Multimodal Corridor Types.

The basic relationship between Multimodal Through and Placemaking Corridors is described in Figure 44.

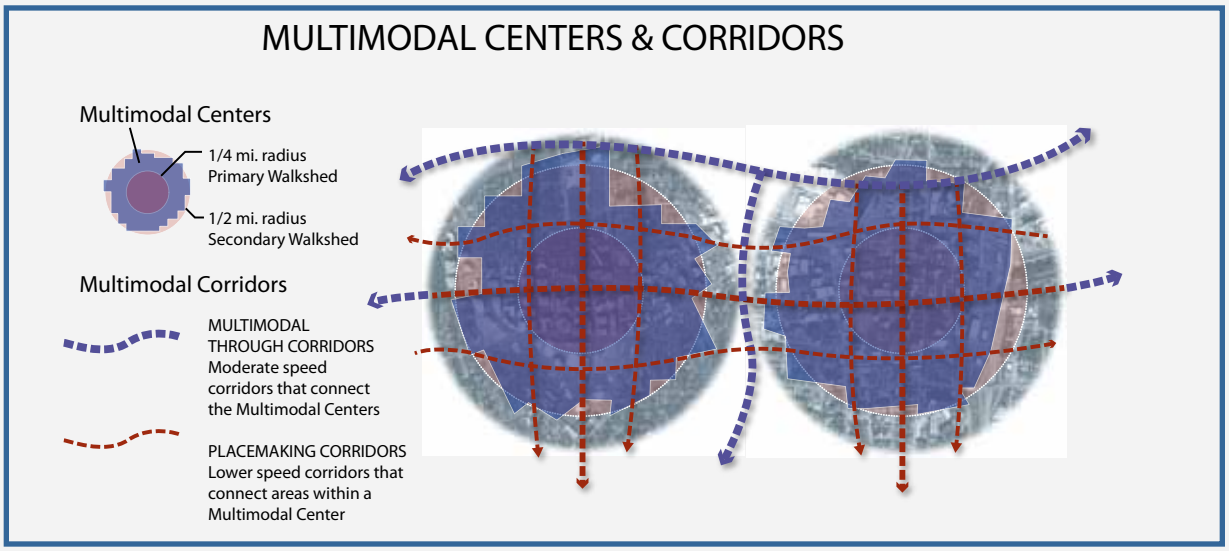

Figure 44 - Multimodal Through and Placemaking Corridors. The diagram distinguishes Placemaking Corridors from Multimodal Through Corridors – the two general categories of Multimodal Corridors that together comprise a true multimodal transportation system in a region.

Through Corridors

Multimodal Through Corridor

The Multimodal Through Corridor is a higher speed corridor that connects multiple activity centers. It is intended for longer distance, higher speed automobile, bus, or rail travel and ideally has limited at-grade intersections with other roadway types. Multimodal Through Corridors are good candidates for high speed commuter transit having few impediments to traffic flow. High speeds limit pedestrian and bicycle modes and hence the corridor design should provide separated facilities for these modes if they are needed. The design of the adjacent buildings should be oriented away from Multimodal Through Corridors and towards Placemaking Corridors on the other side of the buildings, providing more desirable pedestrian facilities and pedestrian-oriented land uses on the Placemaking Corridors, while still accommodating pedestrian travel along the Multimodal Through Corridors. Design speeds for Multimodal Through Corridors range from 35 to 55 mph.

Figure 45 – Fairfax County Parkway. An example of a Multimodal Through Corridor.

Placemaking Corridors

Within Multimodal Centers, the street network consists of different types of corridors with different functions relative to access, mobility, and multimodal features. Placemaking corridors are thus further divided into five types, each of which has a unique function and interface with the surrounding land uses. The following five Placemaking Corridor types were derived from the basic typology of Boulevard, Avenue and Street used in the ITE/CNU Guidebook, but with two additional Multimodal Corridor types added (Transit Boulevards and Major Avenues) for additional flexibility in designing Multimodal Corridors and Multimodal Centers. Thus the five Placemaking Corridor types used in these Guidelines are described in the following sections:

Transit Boulevard

The Transit Boulevard is the highest capacity and most transit supportive Multimodal Corridor in the typology. It would typically only be found in dense urban centers that have sufficient density and market for premium transit. A Transit Boulevard is a multi-lane and multimodal boulevard with a dedicated lane or right-of-way for transit. Transit technologies could be bus service with a bus only lane (BRT or express bus), light rail, or other transit technologies with a separate right-of-way. Other transit types that share lanes with general traffic, such as streetcar or local bus service, could be accommodated on a Boulevard, Major Avenue, or Avenue, but the dedicated transit-only right-of-way defines the Transit Boulevard corridor type. Design speeds for Transit Boulevards range from 30 to 35 mph.

Figure 46 – Plume Street in Norfolk. An example of a Transit Boulevard.

Boulevard

Figure 47 - Glebe Road in Arlington County. An example of a Boulevard.

A Boulevard is the corridor type of highest multimodal capacity that accommodates multiple motorized and non-motorized modes. Boulevards allow for higher traffic volumes and greater efficiency of vehicular movements than Major Avenues, Avenues, and Local Streets, and typically have four to six lanes of traffic but may grow to eight in particularly dense centers such as Tysons Corner. Boulevards provide safe and convenient pedestrian and bicycle access to adjacent land uses. Boulevards feature a median, landscaped amenity elements, street trees, and wider sidewalks. Design speeds for Boulevards range from 30 to 35 mph.

Major Avenue

Figure 48 - Crawford Street in Portsmouth. An example of a Major Avenue.

Major Avenues contain the highest density of destinations, intensity of activity, and mix of modes. Because of the close proximity of destinations, pedestrians and street activity are common on Major Avenues. Major Avenues have wide sidewalks to accommodate high numbers of pedestrians and a variety of outdoor activities, including sidewalk cafes, kiosks, vendors, and other street activities. Major Avenues can be areas of high transit ridership for local bus routes. Traffic is low speed and localized. Due to the intensity of destinations, longer regional trips do not use Major Avenues; rather they would typically be on Boulevards or Multimodal Through Corridors. Autos and buses on Major Avenues travel at slow speeds because pedestrian crossings and on-road bicyclists are frequent. Major Avenues typically have four or fewer lanes for motor vehicle travel while providing adequate facilities for bicycling and typically providing roadway space dedicated to on-street parking. Design speeds for Major Avenues range from 30 to 35 mph.

Avenue

Avenues provide a balance between access to the businesses and residences that front upon them and the collection of vehicular and pedestrian traffic. While having fewer destinations than Major Avenues, pedestrian and bicycle activity is very common, as Avenues serve as critical links in the non-motorized network. Avenues are low speed roadways that facilitate shorter trips, but still contain a fair amount of destinations. Avenues typically have three travel lanes or fewer, and do not exceed four lanes. Avenues may have roadway space dedicated for on-street parking and provide adequate bicycle facilities. Avenues have a 25-30 mph design speed.

Figure 49 - Henley Avenue in Winchester. An example of an Avenue.

Local Street

Local Streets see the lowest amount of activity and have the slowest speeds and the highest access. Bicyclists typically can share the road with autos, because speeds are slow and auto traffic is sparse, although they have separate sidewalks and trails for pedestrian accommodation. Local Streets are primarily in more residential areas and are intended to serve only trips that originate or end along them. They connect to Avenues, Boulevards or Major Avenues, funneling longer trips to these higher capacity corridor types. Local Streets are characterized by slow design speeds, wider setbacks; they may not have lane striping, and they emphasize on-street parking. Local Streets have a 25 mph design speed.

Figure 50 - Page Street in Charlottesville. An example of a Local Street.

Transitions Between Through Corridors and Placemaking Corridors

When Multimodal Through Corridors enter a Multimodal Center, the surrounding context signals a change in corridor character and function, and they transition to Placemaking Corridors. This transition is marked by slower traffic speeds, more frequent pedestrian crossings, and pedestrian-oriented buildings. Multimodal Through Corridors that transition to Placemaking Corridors can maintain vehicular throughput by access management (consolidating driveways and unsignalized intersections to minimize the number of entrances onto a road) and traffic signal coordination and optimization. These techniques are particularly relevant for Corridors of Statewide Significance, National Highway System (NHS) Routes, and emergency evacuation routes.

Relationship to Functional Class

The Multimodal Corridor typology within these Guidelines is related, but not identical, to the functional classification of roads. Functional classification is a concept within roadway design and engineering circles that recognizes that roads have different functions for motorized vehicles. Streets that provide direct access to destinations for cars via driveways, curb cuts, and frequent intersections often cannot retain high speeds and serve high volumes of traffic. Conversely, high capacity roads with heavy volumes and higher speeds have less frequent access points to keep traffic moving.

Roads are designated into functional classes mainly for federal and state funding purposes. The Federal Highway Administration (FHWA) provides guidelines on how to classify roads, and these are based on having a certain percentage of total road miles for each classification. For example, urban principal arterials should only account for 5 to 10 percent of an area's total road centerline miles, but should carry 40 to 65 percent of the area's total vehicle-miles traveled (VMT).

Functional classification is also a relevant concept for Multimodal Corridor design, but must be broadened to include other travel modes. The five types of Placemaking Corridors are different in nomenclature from the functional classification systems used by VDOT and the FHWA. However, the concept of functional classification is similar. The Corridor Matrix Annotation Document in Appendix B has a more detailed discussion on VDOT functional classification. Table 9 shows the general translation of Multimodal Corridor types to the functional classes of roadways:

	VDOT Functional Classification (Design Speed)				
	Interstate, Freeway, or Expressway (30 – 70 mph)	Urban Other Principal Arterial (30 – 60 mph)	Urban Minor Arterial (30 – 60 mph)	Urban Collector (30 – 50 mph)	Local Street (20 – 30 mph)
Multimodal Corridor Types (Design Speed)	Multimodal Through Corridor (35-55 mph)				
		Transit Boulevard (30-35 mph)			
		Boulevard (30-35 mph)			
			Major Avenue (30-35 mph)		
			Avenue (25-30 mph)		
					Local Street (25 mph)

Table 9 – Comparison of VDOT Functional Classes to Multimodal Corridor Types.

The Multimodal Corridor types do not have a one-to-one correlation to the VDOT functional classes. The Multimodal Corridor types are purposely elastic to allow localities flexibility in designating roads into Multimodal Corridor types. A road may be classified into one particular functional class to meet the percentage criteria, but may serve a very different function for non-motorized modes. For example, Water Street in Charlottesville is designated as an Urban Collector, but with multi-story buildings on either side of the street and ground-floor pedestrian-oriented retail, it serves a higher function for pedestrians and transit, and would likely be classified as a Major Avenue.

Figure 51 – Water Street in Charlottesville. Although classified as an Urban Collector in VDOT's Functional Classification system, Water Street functions more like a Major Avenue for pedestrians, bicyclists, and transit. Image source: Google Streetview.

Planners should consider the functional classification of a road as one factor when designating roads into the various Placemaking Corridor types. Other factors to consider would be the amount of pedestrian-generating land uses that line the street, the number of transit routes that serve the corridor, and the length and frequency of connections to other roads.

CORRIDOR MATRIX

Corridor Element Key		Transit Boulevard									
	Corridor Type ⇨										
	Intensity ⇨	T-6		T-5		T-4		T-3		T-2	
⇩	**Context Zones & Corridor Elements** ⇩	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM
	Building Context Zone										
A	BUILDING FRONTAGE ELEMENT	5 ft	3 ft	5 ft	3 ft	5 ft	2.5 ft	7 ft	1.5 ft	12 ft	1.5 ft
	Location of off street parking	rear	rear	rear	rear	rear	rear	rear	rear	rear	rear
	Typical building entry locations	front	front	front	front	front	front	front	front	front	front
	Roadway Edge Zone										
B	SIDEWALK THROUGH ELEMENT	10 ft	6 ft	10 ft	6 ft	8 ft	6 ft	6 ft	6 ft	6 ft	6 ft
C	AMENITY ELEMENT	8 ft	6 ft	8 ft	6 ft	8 ft	6 ft	8 ft	6 ft	9 ft	6 ft
	Surface Treatment for Amenity Element	Paved with tree wells		Paved with tree wells		Paved with tree wells		Paved with tree wells		Grassy strip with trees	
	Roadway Zone										
D	PARKING ELEMENT	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None
E	BICYCLE ELEMENT	5 ft bike lane[1]	14 ft wide curb lane with shared lane markings	5 ft bike lane[1]	14 ft wide curb lane with shared lane markings	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width
F	TRAVEL LANE ELEMENT	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]
	Design Speed	30 - 35 mph		30 - 35 mph		30 - 35 mph		30 - 35 mph		30 - 35 mph	
	Number of Through Lanes	4 to 6		4 to 6		4 to 6		4 to 6		2 to 6	
	Typical Traffic Volume Range (vehicles per day)	15,000 to 40,000		15,000 to 40,000		10,000 to 50,000		8,000 to 40,000		5,000 to 30,000	
G	MEDIAN ELEMENT	Transit provided in median	6 ft[3]	Transit provided in median	6 ft[3]	Transit provided in median	6 ft[3]	Transit provided in median	6 ft[3]	Transit provided in median	6 ft[3]

[1]Bike lane widths assume there is no on-street parking. Bike lane widths do not include the width of the gutter pan and assume a gutter pan is provided. On roadways with curb but no gutter (no on-street parking), add one foot of width. If 8-ft wide on-street parking is provided, add one foot of width. If 7-ft wide on-street parking is provided, add two feet of width. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.) Additionally, more innovative bicycle facilities like buffered bike lanes, bicycle boulevard features, contra-flow bike lanes, and shared bike and bus facilities may be desirable. Please refer to the latest AASHTO Guide for the Development of Bicycle Facilities and the latest NACTO Urban Bikeway Design Guide for more detailed guidance on these more innovative facilities.

[2]Travel lane width does not include the shy distance and curb or curb and gutter pan. Note: 12 ft is the optimum **only** for transit modal emphasis. For all other modal emphases, travel lane width should be minimized. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.)

[3]Median element widths are measured from back of curb to back of curb. Median element widths do not include the width of the curb and shy distance.

CORRIDOR MATRIX

Corridor Element Key		Boulevard									
	Corridor Type ⇨										
	Intensity ⇨	**T-6**		**T-5**		**T-4**		**T-3**		**T-2**	
⇩	**Context Zones & Corridor Elements ⇩**	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM
	Building Context Zone										
A	BUILDING FRONTAGE ELEMENT	5 ft	3 ft	5 ft	3 ft	5 ft	2.5 ft	7 ft	1.5 ft	12 ft	1.5 ft
	Location of off street parking	rear	rear	rear	rear	rear	rear	rear	rear	rear	rear
	Typical building entry locations	front	front	front	front	front	front	front	front	front	front
	Roadway Edge Zone										
B	SIDEWALK THROUGH ELEMENT	10 ft	6 ft	10 ft	6 ft	8 ft	6 ft	6 ft	6 ft	6 ft	6 ft
C	AMENITY ELEMENT	8 ft	6 ft	8 ft	6 ft	8 ft	6 ft	8 ft	6 ft	9 ft	6 ft
	Surface Treatment for Amenity Element	Paved with tree wells		Paved with tree wells		Paved with tree wells		Paved with tree wells		Grassy strip with trees	
	Roadway Zone										
D	PARKING ELEMENT	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None
E	BICYCLE ELEMENT	5 ft bike lane[1]	14 ft wide curb lane with shared lane markings	5 ft bike lane[1]	14 ft wide curb lane with shared lane markings	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width
F	TRAVEL LANE ELEMENT	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]
	Design Speed	30 - 35 mph		30 - 35 mph		30 - 35 mph		30 - 35 mph		30 - 35 mph	
	Number of Through Lanes	4 to 6		4 to 6		4 to 6		4 to 6		2 to 6	
	Typical Traffic Volume Range (vehicles per day)	15,000 to 40,000		15,000 to 40,000		10,000 to 50,000		8,000 to 40,000		5,000 to 30,000	
G	MEDIAN ELEMENT	18 ft[3]	6 ft[3]	18 ft[3]	6 ft[3]	18 ft[3]	6 ft[3]	18 ft[3]	6 ft[3]	18 ft[3]	6 ft[3]

[1]Bike lane widths assume there is no on-street parking. Bike lane widths do not include the width of the gutter pan and assume a gutter pan is provided. On roadways with curb but no gutter (no on-street parking), add one foot of width. If 8-ft wide on-street parking is provided, add one foot of width. If 7-ft wide on-street parking is provided, add two feet of width. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.) Additionally, more innovative bicycle facilities like buffered bike lanes, bicycle boulevard features, contra-flow bike lanes, and shared bike and bus facilities may be desirable. Please refer to the latest AASHTO Guide for the Development of Bicycle Facilities and the latest NACTO Urban Bikeway Design Guide for more detailed guidance on these more innovative facilities.

[2]Travel lane width does not include the shy distance and curb or curb and gutter pan. Note: 12 ft is the optimum **only** for transit modal emphasis. For all other modal emphases, travel lane width should be minimized. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.)

[3]Median element widths are measured from back of curb to back of curb. Median element widths do not include the width of the curb and shy distance.

CORRIDOR MATRIX

Corridor Element Key		Major Avenue											
	Corridor Type ⇨												
	Intensity ⇨	T-6		T-5		T-4		T-3		T-2		T-1	
⇩	Context Zones & Corridor Elements ⇩	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM
	Building Context Zone												
A	BUILDING FRONTAGE ELEMENT	7 ft	3 ft	7 ft	3 ft	7 ft	2.5 ft	7 ft	2.5 ft	12 ft	2 ft	12 ft	2 ft
	Location of off street parking	rear	rear	rear	rear	rear	side	rear	side	rear	side	rear	side
	Typical building entry locations	front	front	front	front	front	front	front	side	front	side	front	side
	Roadway Edge Zone												
B	SIDEWALK THROUGH ELEMENT	9 ft	6 ft	9 ft	6 ft	6 ft	6 ft	6 ft	6 ft	6 ft	5 ft	6 ft	5 ft
C	AMENITY ELEMENT	7 ft	6 ft	7 ft	6 ft	7 ft	6 ft	7 ft	6 ft	9 ft	6 ft	9 ft	6 ft
	Surface Treatment for Amenity Element	Paved with tree wells		Paved with tree wells		Paved with tree wells		Paved with tree wells		Grassy strip with trees		Grassy strip with trees	
	Roadway Zone												
D	PARKING ELEMENT	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None
E	BICYCLE ELEMENT	5 ft bike lane[1]	14 ft wide curb lane with shared lane markings	5 ft bike lane[1]	14 ft wide curb lane with shared lane markings	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width
F	TRAVEL LANE ELEMENT	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]
	Design Speed	30 - 35 mph		30 - 35 mph		30 - 35 mph		30 - 35 mph		30 - 35 mph		30 - 35 mph	
	Number of Through Lanes	2 to 4		2 to 4		2 to 4		2 to 4		2 to 4		2 to 4	
	Typical Traffic Volume Range (vehicles per day)	10,000 to 30,000		8,000 to 25,000		5,000 to 25,000		5,000 to 20,000		2,000 to 10,000		2,000 to 10,000	
G	MEDIAN ELEMENT	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None

[1]Bike lane widths assume there is no on-street parking. Bike lane widths do not include the width of the gutter pan and assume a gutter pan is provided. On roadways with curb but no gutter (no on-street parking), add one foot of width. If 8-ft wide on-street parking is provided, add one foot of width. If 7-ft wide on-street parking is provided, add two feet of width. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.) Additionally, more innovative bicycle facilities like buffered bike lanes, bicycle boulevard features, contra-flow bike lanes, and shared bike and bus facilities may be desirable. Please refer to the latest AASHTO Guide for the Development of Bicycle Facilities and the latest NACTO Urban Bikeway Design Guide for more detailed guidance on these more innovative facilities.

[2]Travel lane width does not include the shy distance and curb or curb and gutter pan. Note: 12 ft is the optimum only for transit modal emphasis. For all other modal emphases, travel lane width should be minimized. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.)

[3]Median element widths are measured from back of curb to back of curb. Median element widths do not include the width of the curb and shy distance.

CORRIDOR MATRIX

Corridor Element Key		Avenue											
	Corridor Type ⇨												
	Intensity ⇨	**T-6**		**T-5**		**T-4**		**T-3**		**T-2**		**T-1**	
⇩	**Context Zones & Corridor Elements ⇩**	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM
	Building Context Zone												
A	BUILDING FRONTAGE ELEMENT	8 ft	2.5 ft	8 ft	2.5 ft	8 ft	2.5 ft	10 ft	1.5 ft	15 ft	1.5 ft	15 ft	1.5 ft
	Location of off street parking	rear	rear	rear	rear	rear	side	rear	side	rear	side	rear	side
	Typical building entry locations	front	front	front	front	front	front	front	side	front	side	front	side
	Roadway Edge Zone												
B	SIDEWALK THROUGH ELEMENT	8 ft	5 ft	7 ft	5 ft	6 ft	5 ft	6 ft	5 ft	6 ft	5 ft	6 ft	5 ft
C	AMENITY ELEMENT	7 ft	6 ft	7 ft	6 ft	7 ft	6 ft	7 ft	6 ft	8 ft	6 ft	7 ft	6 ft
	Surface Treatment for Amenity Element	Paved with tree wells		Paved with tree wells		Paved with tree wells		Paved with tree wells		Grassy strip with trees		Grassy strip with trees	
	Roadway Zone												
D	PARKING ELEMENT	8 ft both sides	None	8 ft both sides	None	8 ft both sides	None	7 ft both sides	None	7 ft both sides	None	7 ft both sides	None
E	BICYCLE ELEMENT	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width	4 ft bike lane[1]	Shared lane markings with no additional lane width
F	TRAVEL LANE ELEMENT	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]	12 ft[2]	11 ft[2]
	Design Speed	25-30 mph		25-30 mph		25-30 mph		25-30 mph		25-30 mph		25-30 mph	
	Number of Through Lanes	2 to 4		2 to 4		2 to 4		2 to 4		2 to 4		2 to 4	
	Typical Traffic Volume Range (vehicles per day)	2,000 to 20,000		2,000 to 15,000		1,500 to 10,000		1,000 to 10,000		1,000 to 5,000		1,000 to 5,000	
G	MEDIAN ELEMENT	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None	18 ft[3]	None

[1]Bike lane widths assume there is no on-street parking. Bike lane widths do not include the width of the gutter pan and assume a gutter pan is provided. On roadways with curb but no gutter (no on-street parking), add one foot of width. If 8-ft wide on-street parking is provided, add one foot of width. If 7-ft wide on-street parking is provided, add two feet of width. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.) Additionally, more innovative bicycle facilities like buffered bike lanes, bicycle boulevard features, contra-flow bike lanes, and shared bike and bus facilities may be desirable. Please refer to the latest AASHTO Guide for the Development of Bicycle Facilities and the latest NACTO Urban Bikeway Design Guide for more detailed guidance on these more innovative facilities.

[2]Travel lane width does not include the shy distance and curb or curb and gutter pan. Note: 12 ft is the optimum only for transit modal emphasis. For all other modal emphases, travel lane width should be minimized. (Refer to Appendix B Corridor Matrix Annotation Document for discussion.)

[3]Median element widths are measured from back of curb to back of curb. Median element widths do not include the width of the curb and shy distance.

CORRIDOR MATRIX

Corridor Element Key		Local Street											
	Corridor Type ⇨												
	Intensity ⇨	**T-6**		**T-5**		**T-4**		**T-3**		**T-2**		**T-1**	
⇩	**Context Zones & Corridor Elements ⇩**	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM
	Building Context Zone												
A	BUILDING FRONTAGE ELEMENT	8 ft	2.5 ft	8 ft	2.5 ft	8 ft	2.5 ft	15 ft	1.5 ft	20 ft	1.5 ft	30 ft	1.5 ft
	Location of off street parking	rear	rear	rear	rear	rear	rear	rear	side	rear	side	rear	side
	Typical building entry locations	front	front	front	front	front	front	front	side	front	side	front	side
	Roadway Edge Zone												
B	SIDEWALK THROUGH ELEMENT	6 ft	5 ft	6 ft	5 ft	6 ft	5 ft	6 ft	5 ft	5 ft	5 ft	5 ft	5 ft
C	AMENITY ELEMENT	7 ft	6 ft	7 ft	6 ft	7 ft	6 ft	7 ft	6 ft	6 ft	6 ft	6 ft	6 ft
	Surface Treatment for Amenity Element	Paved with tree wells		Paved with tree wells		Paved with tree wells		Paved with tree wells		Grassy strip with trees		Grassy strip with trees	
	Roadway Zone												
D	PARKING ELEMENT	7 ft both sides	None	7 ft both sides	None	7 ft both sides	None	7 ft both sides	None	7 ft both sides	None	7 ft both sides	None
E	BICYCLE ELEMENT	Shared lane markings or bicycle boulevard features	Unmarked shared lane (no additional lane width)	Shared lane markings or bicycle boulevard features	Unmarked shared lane (no additional lane width)	Shared lane markings or bicycle boulevard features	Unmarked shared lane (no additional lane width)	Bicycle Boulevard features (see AASHTO & NACTO)	Unmarked shared lane (no additional lane width)	Bicycle Boulevard features (see AASHTO & NACTO)	Unmarked shared lane (no additional lane width)	Bicycle Boulevard features (see AASHTO & NACTO)	Unmarked shared lane (no additional lane width)
F	TRAVEL LANE ELEMENT	11 ft[1]	10 ft[1]	11 ft[1]	10 ft[1]	11 ft[1]	10 ft[1]	11 ft[1]	10 ft[1]	11 ft[1]	10 ft[1]	11 ft[1]	10 ft[1]
	Design Speed	25 mph		25 mph		25 mph		25 mph		25 mph		25 mph	
	Number of Through Lanes	2 to 4		2 to 4		2		2		2		2	
	Typical Traffic Volume Range (vehicles per day)	less than 10,000		less than 10,000		less than 8,000		less than 5,000		less than 2,000		less than 2,000	
G	MEDIAN ELEMENT	None	None	None	None	None	None	None	None	None	None	None	None

[1]Travel lane width does not include the shy distance and curb or curb and gutter pan.

CORRIDOR MATRIX

Corridor Element Key													
	Corridor Type ⇨	**Multimodal Through Corridor**											
	Intensity ⇨	**T-6**		**T-5**		**T-4**		**T-3**		**T-2**		**T-1**	
⇩	**Context Zones & Corridor Elements ⇩**	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM
	Building Context Zone												
A	BUILDING FRONTAGE ELEMENT	15 to 25 ft	10 ft	15 to 25 ft	10 ft	20 to 35 ft	15 ft	25 to 35 ft	15 ft	30 to 45 ft	20 ft	30 to 45 ft	20 ft
	Location of off street parking	rear	front	rear	front	rear	front	rear	front	rear	front	rear	front
	Typical building entry locations	front/side	rear	front/side	rear	front/side	rear	front/side	rear	front/side	rear	front/side	rear
	Roadway Edge Zone												
B	SIDEWALK THROUGH ELEMENT	14 ft shared use path	5 ft sidewalk	14 ft shared use path	5 ft sidewalk	12 ft shared use path	5 ft sidewalk	12 ft shared use path	5 ft sidewalk	10 ft shared use path	5 ft sidewalk	10 ft shared use path	5 ft sidewalk
C	AMENITY ELEMENT	A minimum of 8 feet width is necessary between the face of the curb and the edge of the shared use path. Physical barriers, such as dense shrubbery, railings, or fencing may be placed between travel lanes and shared use path.								Shoulder and drainage ditch recommended instead of curb and gutter. Width between travel lanes and shared use path varies depending on speed. 20 to 28 ft for 60 mph design speed. 14 to 22 ft for 50 mph design speed.			
	Surface Treatment for Amenity Element												
	Roadway Zone												
D	PARKING ELEMENT	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited	On Street Parking Prohibited
E	BICYCLE ELEMENT	14 ft shared use path	14 ft wide curb lane with shared lane markings	14 ft shared use path	14 ft wide curb lane with shared lane markings	12 ft shared use path	14 ft wide curb lane with shared lane markings	12 ft shared use path	14 ft wide curb lane with shared lane markings	10 ft shared use path	6 ft paved shoulder or 15 ft wide curb lane with shared lane markings	10 ft shared use path	6 ft paved shoulder or 15 ft wide curb lane with shared lane markings
F	TRAVEL LANE ELEMENT	12 ft[(1)]	11 ft[(1)]	12 ft[(1)]	11 ft[(1)]	12 ft[(1)]	11 ft[(1)]	12 ft[(1)]	11 ft[(1)]	12 ft[(1)]	12 ft[(1)]	12 ft[(1)]	12 ft[(1)]
	Design Speed	35 - 45 mph		35 - 45 mph		35 - 45 mph		35 - 55 mph		45 - 55 mph		45 - 55 mph	
	Number of Through Lanes	4 to 6		4 to 6		4 to 6		2 to 4		2 to 4		2 to 4	
	Typical Traffic Volume Range (vehicles per day)	20,000 to 60,000		20,000 to 50,000		15,000 to 40,000		10,000 to 30,000		5,000 to 20,000		2,000 to 20,000	
G	MEDIAN ELEMENT	18 ft[(2),(3)]	17 Ft[(2),(3)]	18 ft[(2),(3)]	17 Ft[(2),(3)]	18 ft[(2),(3)]	17 Ft[(2),(3)]	18 ft[(2),(3)]	None	40 ft[(3)]	None	40 ft[(3)]	None

[(1)]Travel lane width does not include the shy distance and curb or curb and gutter pan.

[(2)]Median element widths are measured from back of curb to back of curb. Median element widths do not include the width of the curb and shy distance.

[(3)]Median width does not include accommodation for transit in the median. If transit runs in the median, the width will vary based upon detailed design.