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**APPENDIX**

**Franconia-Springfield Area Urban Design & Streetscape Guidance**

The following urban design and streetscape guidance is based upon the recommendations of the *Springfield Connectivity Study Transportation and Land Use Evaluation* (Part 1) and *Framework Plans and Street Typologies* (Part 2) report, published in August 2008. The guidance illustrates the conceptual-level framework plans for redevelopment, the streetscape cross-sections, the intersection improvements plans, and the wayfinding and signage recommendations.

**Framework Plans**

The proposed Framework Plans illustrate conceptual redevelopment plans for the Springfield Mall area, the General Services Administration Parr warehouse area, and the Springfield CBC area. The plans depict improvements to the urban realm that support improved connectivity relative to future redevelopment and development in each of the quadrants. The plans show the urban design concepts for the future vision and approved redevelopment proposals

The Framework Plans include recommendations for the creation of “pedestrian priority corridors” (streets that provide safe, convenient and attractive pedestrian access through the study area), as well “address streets,” (primary corridors on which major uses are fronted and encourage more activity than thru-movement), key pedestrian and vehicular intersections, gateways, and existing and planned pedestrian connections. Major pedestrian flows are shown with arrows. “Animated streets” are those on which pedestrian-oriented uses, such as ground-floor retail and cafés, are located. Plazas and focal points of placemaking also are identified, and the development pattern in core areas has been generalized to show building mass, and openings between buildings at the conceptual level.

A hierarchy of streets is identified for the Franconia-Springfield Area to support the Framework Plans. The streets are classified as major and minor arterials, collectors, and local streets. The only major arterial in the area is the Franconia-Springfield Parkway and is not planned to change. The minor arterials, collectors, and local streets are planned to accommodate a complete streets policy as described in the Areawide text. The streetscape cross-sections and intersections plans follow the Framework Plans.

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SPRINGFIELD MALL



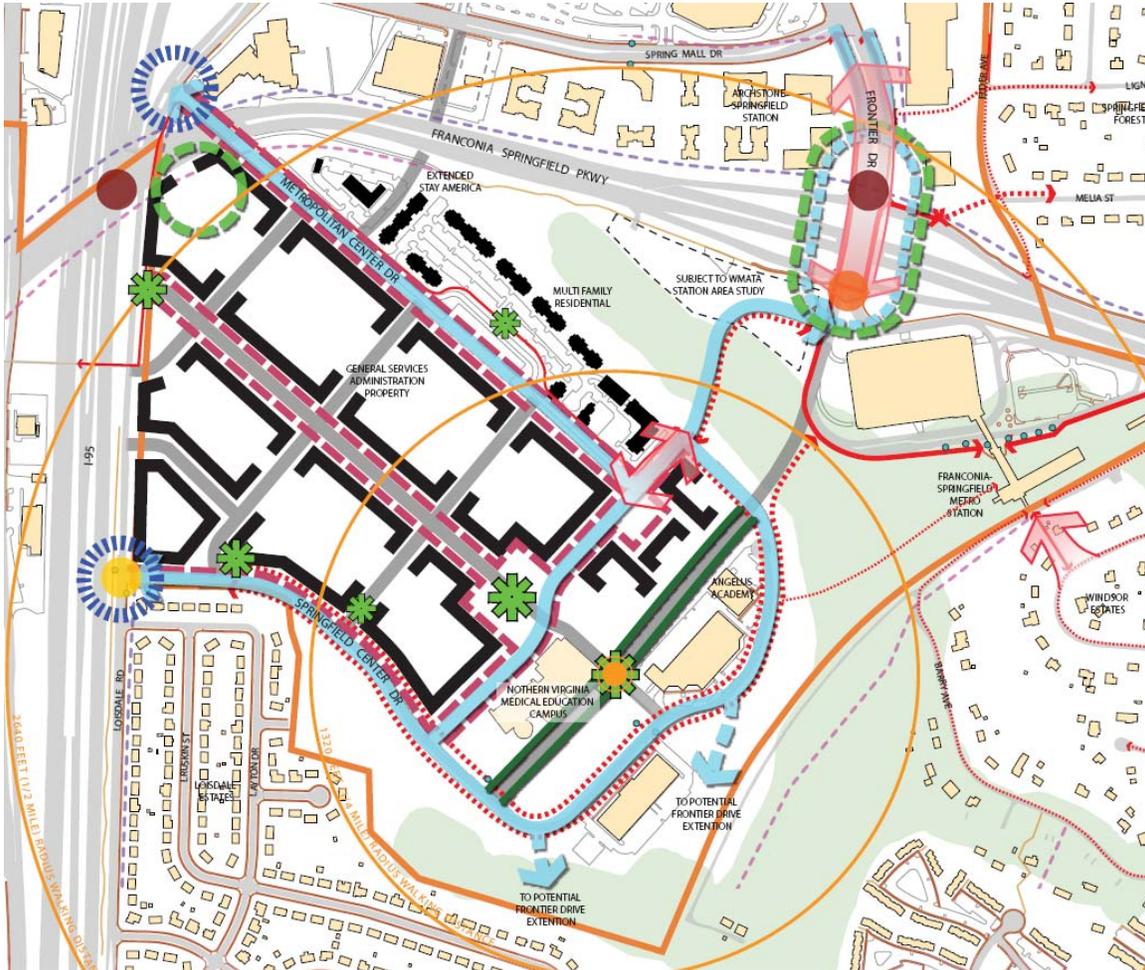
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|  | 1/4 MILE CENTER POINT   |  | FOCAL POINT OF PLACE MAKING     |
|  | HEAVY VOLUME TRAFFIC INTERSECTION   |  | EXISTING PEDESTRIAN CONNECTION  |
|  | MODERATE VOLUME TRAFFIC INTERSECTION  |  | POTENTIAL PEDESTRIAN CONNECTION |
|  | LOWER VOLUME TRAFFIC INTERSECTION   |  | MAJOR PEDESTRIAN FLOW           |
|  | GATEWAYS  |  | PROPOSED NEW ROADS              |
|  | PRIORITY PEDESTRIAN CORRIDOR<br><i>(Streets that provide safe, convenient and attractive pedestrian access)</i>       |  | EXISTING ROADS                  |
|  | ADDRESS STREETS<br><i>(Primary corridors with fronted major uses that encourage more activity than thru-movement)</i> |  | SIDEWALK                        |
|  | ANIMATED STREETS<br><i>(Streets that have pedestrian-oriented uses, such as ground-floor retail and cafés)</i>        |  | EXISTING TRAIL                  |
|  | PEDESTRIAN INTERSECTION<br><i>(Intersections that provide safe and convenient pedestrian access)</i>                  |  | PLANNED MINOR PAVED TRAIL       |
|  | VEHICULAR INTERSECTION<br><i>(Intersections that are more vehicular oriented)</i>                                     |  | PLANNED MAJOR PAVED TRAIL       |
|  |   |  | BUS STOPS                       |
|  |   |  | COMMUTER FACILITIES             |

\*Illustrations are conceptual in nature. Specific road alignments should be determined during implementation.

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GENERAL SERVICES ADMINISTRATION PARR WAREHOUSE AREA



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|  |   |  | BUS STOPS                       |
|  |   |  | COMMUTER FACILITIES             |

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SPRINGFIELD COMMUNITY BUSINESS CENTER



\*Illustrations are conceptual in nature. Specific road alignments should be determined during implementation.

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|---|---|---|---------------------------------|
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**General Streetscape and Intersection Guidance**

The following guidelines should create uniform application of streetscape and intersection amenities and reinforce the hierarchy of streets and places. The images in the following pages illustrate examples of treatment for different street elements.

STREETSCAPE ELEMENTS



STREET TREES WITH PLANTING BEDS



TREE GRATES



PLANTERS



MEDIAN



PARKING LOT

The design of new street elements should complement the existing features, in order to create a consistent theme and sense of the place. Size and scale form significant parts of the visual aspect of a street. Simple, well designed structures add character to a street. Signage, public information displays, and other wayfinding elements, such as banners, street maps, street signs, directional signs, etc., should be designed to coordinate with the guidelines.

Street trees, planter boxes, and planting strips should form barriers between vehicle and pedestrian traffic and provide shade to pedestrians. Street trees should be planted in the landscape and amenity zones on all streets where possible. Continuous planting strips will provide maximum soil area for roots to spread and water and air to penetrate. Species that are adaptable with urban street constraints should be used. Planting beds with perennials or groundcovers can be used where the sidewalk is wide. Tree grates should be used where there is heavy pedestrian traffic. Planters can be used at curb extensions. Street medians should be planted with trees and lawn or groundcovers. Surface parking lots should be avoided or located in the rear of buildings when necessary. In this case, surface parking lots should be landscaped and provide shade for parked cars.

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The style of street furnishings should be consistently applied to reflect the character of the Franconia-Springfield Area. Furnishings should be low-maintenance, vandal-resistant, and easily replaceable. Street elements like benches, trash receptacle, newspapers stands, light fixtures, etc., can add amenity to the user, but over-use can clutter a street. Benches, trash receptacles and bike racks could be best placed at curb extension areas, amenity zones along sidewalks or other areas where there is sufficient room for them without interfering with pedestrian traffic. These items should not conflict with the opening of doors for parallel parked cars.

Street lights should provide light, but not detract from the architecture and lights of the adjacent businesses. Pedestrian-scale lights should be used in more intimate applications on smaller streets, open spaces, etc. Bus shelters should complement the style of the other amenities and street furniture. Shelters should be located adjacent to paved sidewalks in locations that will not impede pedestrian circulation. Seating and signs with bus route maps and schedules should be provided. The paving should use materials and patterns, consistent with the style of other furnishings. Different materials and patterns may be used to define different zones and uses.

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**INTERSECTION DESIGN ELEMENTS**

Intersections are the location of vehicular and pedestrian interaction. Crosswalks serve as visual and physical connecting elements that reinforce the pedestrian system. Some intersections may be prioritized for vehicular movement and others to maximize pedestrian safety and connectivity. State of the art signalization, adequately marked crosswalks, and pedestrian refuges are just a few facilities to be considered. Variations of paving types can also aid in differentiating between pedestrian, bike, bus and other vehicles.

Specific design elements to consider when designing an intersection are listed below. The importance of one element over another element varies depending on the types of streets intersecting with one another and the modal priority of the intersection.

Design/Operations Element	Purpose / Benefit	Design Considerations
<p>Bike Box: A marked, designated area at a signalized intersection that places bicyclists at the front of the traffic queue when the signal is red.</p>	<ul style="list-style-type: none"> <li>• Puts bicyclists at the head of the queue, allowing them to enter and clear an intersection before motor vehicles.</li> <li>• Bicyclists are more visible to motorists at the front of the queue.</li> <li>• Provides a storage area for bikes at an intersection where there is heavy bicycle traffic and left turn movements.</li> <li>• Stores vehicles further back from the crosswalk, providing a better crossing environment for pedestrians.</li> </ul>	<ul style="list-style-type: none"> <li>• Should only be used at signalized intersections where there is no right turn on red.</li> <li>• May require additional signage to inform motorists and cyclists how to correctly use the bike box.</li> <li>• Must be accessed via a bike lane, which allows cyclists to safely move ahead of motor vehicles in the intersection.</li> </ul>

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Design/Operations Element	Purpose / Benefit	Design Considerations
<p>Bicycle Detector: A device at a signalized intersection used to detect bicycles for traffic actuated signals.</p>	<ul style="list-style-type: none"> <li>• Activates the traffic signal in the absence of motor vehicle traffic, thereby keeping the cyclist from having to wait for another vehicle to "trip" the signal or, after a prolonged wait, to run the signal..</li> </ul>	<ul style="list-style-type: none"> <li>• Detectors should be located in the bicyclists' expected path, whether the intersection includes bike lanes, a bike box, or a wide outside lane.</li> <li>• Bicycle detectors are most important on the less traveled leg of a signalized intersection, because the wait for another vehicle to "trip" the light will be longer. However, a strong case can be made for using detectors on all legs, as the time of day can make a difference even on the more traveled legs.</li> <li>• Markings on the roadway surface can be used to indicate the optimum location for bicycle detection.</li> </ul>
<p>Bicycle Lane: The portion of the street specifically designated for the use of bicyclists by pavement markings or other means of delineation on the street.</p>	<ul style="list-style-type: none"> <li>• Provides a clearly marked area of the street for bicycle travel and separates cyclists from motor vehicles.</li> <li>• Help reduce conflicts between motor vehicles and bicycles.</li> <li>• Provides an additional buffer between pedestrians and motor vehicles.</li> <li>• Gives motorists more confidence about passing cyclists, because they know where the cyclist's "space" is and they know that the cyclist knows where his/her space is, as well. The uncertainty about passing in the absence of bike lanes can create unnecessary backups or dangerous passing conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• Right-of-way width, traffic speed and volume, signalization, turn lanes and parking.</li> <li>• A marked bicycle lane should be a minimum of four feet wide (not including gutter), with 5' generally preferred.</li> <li>• Wider lanes are preferred next to on-street parking (to avoid opening car doors) and on steep hills (to allow room for weaving caused by pedaling uphill).</li> <li>• If there is a right turn lane at an intersection, the bicycle lane should be placed to the left of the right turn lane, to clearly separate the bicycle's through movement from the motor vehicles' turning movements.</li> </ul>

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Design/Operations Element	Purpose / Benefit	Design Considerations
<p>Corner Island: A raised triangular or semi-triangular island used to direct traffic in a particular direction, described herein to separate a right-turn lane from the through lanes at an intersection. Also referred to as a "Channelization Island".</p>	<ul style="list-style-type: none"> <li>• Helps to separate the turning traffic from the through traffic, potentially enhancing flow.</li> <li>• If properly designed, a corner island can be used for pedestrian refuge at large intersections.</li> </ul>	<ul style="list-style-type: none"> <li>• Consider the use of well-designed corner islands to "break up" the distance and conflicting turning movements that must be traversed by pedestrians at wide intersections.</li> <li>• The safest design for pedestrians is when the corner island is designed to bring the turn lane into the receiving lane at an angle, rather than as a sweeping curve. Otherwise, the turning driver is likely to be looking over his/her left shoulder at oncoming traffic, rather than at pedestrians trying to cross the turn lane.</li> <li>• The use of corner islands (and their design) should be based upon the intersection volume and the surrounding land use and design characteristics. The potential "pedestrian refuge" benefit should also be weighed against the additional right-of-way requirements and overall dimensions of the intersection.</li> </ul>
<p>Crosswalks: The crosswalk generally refers to the most direct pedestrian pathway across a given leg of an intersection, whether marked or unmarked.</p>	<ul style="list-style-type: none"> <li>• Crosswalks clearly define the pedestrian space, enhancing safety and comfort for all users.</li> <li>• Crosswalks are an important part of the pedestrian network - they form a continuation of the pedestrian's travel path and enhance pedestrian connectivity.</li> <li>• Crosswalks support the overall transportation system because other users, such as motorists, bicyclists and transit users will be pedestrians at some point during their trip and may need to cross the street.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be installed at intersections or designated mid-block crossing locations.</li> <li>• The crosswalk location should be highly visible, so the pedestrian can see and be seen by traffic while crossing.</li> <li>• Signalized intersections will typically have crosswalks on all approaches.</li> <li>• Installation at unsignalized intersections and mid-block locations may be affected by a number of factors, including: street classification, width of street, traffic speed and volume, use of traffic control devices such as stop signs, and surrounding land uses.</li> <li>• Pedestrian crossing distance should be minimized; on some streets this may require the use of other street design elements (see Curb Extension, Pedestrian Refuge).</li> </ul>

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Design/Operations Element	Purpose / Benefit	Design Considerations
<p>Curb Extension: A feature that extends from the sidewalk into the pavement at an intersection or at a mid-block crossing (also sometimes called a “curb bulb”, “neckdown” or “bulbout”). A curb extension can be hardscape, landscaped, or a mix of both.</p>	<ul style="list-style-type: none"> <li>• Reduces street width both physically and visually, thereby shortening pedestrian crossing distance at crosswalks and potentially helping to reduce traffic speeds.</li> <li>• Provides increased visibility for pedestrians and motorists.</li> <li>• Moves parked vehicles away from street corners, improving visibility.</li> </ul>	<ul style="list-style-type: none"> <li>• Should be used whenever possible in pedestrian-oriented areas.</li> <li>• Should also be used for transit stops, where full-time, on-street parking exists.</li> <li>• Should only be used where there is a permanent parking lane.</li> <li>• Should not encroach into the bike lane.</li> <li>• Street furniture or plants on the curb extension should not impede motorist or pedestrian sightlines.</li> <li>• Should be designed to accommodate both large and small vehicles; tight curb radii can accommodate low speed turning movements by large vehicles if the intersection is designed properly.</li> </ul>
<p>Curb Radius: The curved section of the curb connecting the curb lines of two intersecting streets. The curb radius measurement is taken from the back of the curb.</p>	<ul style="list-style-type: none"> <li>• Defines the space for (and helps direct) vehicle turning movements at intersections.</li> <li>• The curb radius dimension can affect ease and speeds of vehicular turning movements.</li> </ul>	<ul style="list-style-type: none"> <li>• Radii should be minimized, to allow the necessary dimension for traffic, while minimizing impacts on pedestrians, cyclists, and the adjacent land uses.</li> <li>• Smaller curb radii narrow the overall dimensions of the intersection, shortening pedestrian crossing distance and reducing right-of-way requirements.</li> <li>• A smaller curb radius provides a more visible pedestrian waiting space at the intersection.</li> <li>• Smaller radii help reduce the turning speeds of vehicles.</li> <li>• A smaller radius allows for more flexibility in placement of curb ramps. With a larger radius, the ramp(s) may need to be located in the radius or will be too far from the corner for good visibility.</li> <li>• Larger radii may be required on streets that carry a high percentage of truck traffic, because they allow easier turning movements for large vehicles.</li> <li>• The presence of a bike lane or parking lane creates an “effective radius” that allows a smaller curb radius than might otherwise be required for some motor vehicles, because they provide extra maneuvering space for the turning vehicles.</li> </ul>

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Design/Operations Element	Purpose / Benefit	Design Considerations
<p>Leading Pedestrian Interval: Used at signalized intersections, the Leading Pedestrian Interval (LPI) is a signal phase that provides a pedestrian crossing signal a few seconds before the green signal for vehicles.</p>	<ul style="list-style-type: none"> <li>• Allows pedestrians to enter the crosswalk ahead of turning vehicles, thereby establishing their right-of-way.</li> <li>• Improves visibility of pedestrians by providing them with a “head start” before vehicles are allowed to move.</li> <li>• Reduces potential conflicts with turning vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>• LPI should typically have an equivalent audible signal for vision-impaired pedestrians.</li> <li>• They are often included where there are large numbers of pedestrians crossing the street, for example, but are also important where there are fewer pedestrians. This is because it is sometimes easier for large groups of pedestrians to “take” their right-of-way, than for a lone pedestrian to do so. Lone pedestrians are also less visible to motorists.</li> </ul>
<p>Median: A raised barrier that separates traffic flows. Generally used to control access and reduce vehicular turning movements.</p>	<ul style="list-style-type: none"> <li>• Separates opposing traffic flows, reducing or eliminating vehicular conflicts.</li> <li>• Can be used for access management, by restricting turning movements into driveways or side streets.</li> <li>• If properly designed, can provide a pedestrian and bicycle refuge on wider streets.</li> <li>• If properly designed, can provide a landscaped element to the streetscape.</li> </ul>	<ul style="list-style-type: none"> <li>• Design and installation of a median will vary according to street type and right-of-way width.</li> <li>• Generally, if a median is used, it should be wide enough for landscaping and pedestrian refuge.</li> <li>• In the absence of other design elements such as landscaping, street trees, and onstreet parking, a median may encourage higher traffic speeds. This unintended consequence should be carefully considered when designing streets in residential areas or where there are likely to be many pedestrians.</li> <li>• Spacing between median openings depends on the street type and land use context. In general, spacing should be longer in areas with higher speeds, fewer driveways, and larger setbacks. Spacing should be more frequent in areas where smaller block lengths and more access are desired.</li> </ul>

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Design/Operations Element	Purpose / Benefit	Design Considerations
<p><b>Pedestrian Refuge:</b> A protected area between traffic lanes that separates a pedestrian crossing into segments and allows pedestrians to wait safely for gaps in traffic (also called a "median refuge", "refuge island" or "pedestrian refuge island").</p>	<ul style="list-style-type: none"> <li>• Reduces pedestrian/vehicular conflict.</li> <li>• Shortens the distance a pedestrian must cross at one time.</li> <li>• Allows the pedestrian to consider traffic coming from only one direction at a time, potentially reducing confusion and increasing crossing opportunities.</li> <li>• Can reduce the time a pedestrian must wait to cross by increasing the number of gaps in traffic, since the</li> </ul>	<ul style="list-style-type: none"> <li>• Typically, would be provided on wider, multi-lane roads, to reduce the effective crossing width.</li> <li>• Should be signed and illuminated to identify purpose.</li> <li>• Should be a minimum of 6' wide to provide sufficient space for refuge. Wider is preferable, particularly on higher-speed streets or in areas where there may be many pedestrians crossing at one time.</li> <li>• Might be used at signalized or unsignalized crosswalks, intersections, and midblock crossings.</li> <li>• Landscaping on pedestrian refuges should not impede visibility of pedestrians or drivers.</li> </ul>
	<p>pedestrian need only cross traffic coming from one direction.</p>	<ul style="list-style-type: none"> <li>• The crosswalk should pass through the refuge at grade, for accessibility by all travelers.</li> <li>• Should typically include some sort of vertical element, such as landscaping or signs, so that drivers can clearly see and avoid running into the refuge.</li> <li>• A key trade-off when providing pedestrian refuge islands is the additional width required. The design team should carefully consider whether the pedestrian and the adjacent land uses are better served by a narrower crossing or by the addition of the refuge. For intersections that are already very wide, with multiple turning movements, the addition of pedestrian refuges may be the only way to improve the pedestrian crossing environment.</li> </ul>

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Design/Operations Element	Purpose / Benefit	Design Considerations
<p>Sight Distance: The length of roadway that is visible to the driver traveling on a street or approaching (or waiting to enter) an intersection. More generally, sight distance refers to the ability of motorists to see one another as they approach an intersection or enter a street.</p>	<ul style="list-style-type: none"> <li>• Increased sight distance improves safety for motorists, by providing visibility and increasing the amount of time to respond to other vehicles on or entering the street.</li> <li>• Increased sight distance for motorists entering the street allows the motorist to feel more comfortable and better judge “gaps” in the stream of approaching vehicles.</li> <li>• Adequate sight distance improves safety for pedestrians and cyclists by making them more visible to drivers and by allowing them to see approaching vehicles, as well.</li> </ul>	<ul style="list-style-type: none"> <li>• Sight distance regulations for motor vehicles may conflict with pedestrian friendly objectives such as the desire to have buildings close to the street, especially on Main Streets.</li> <li>• Sight distance does not need to be as great for motorists approaching a stop sign as it does for motorists approaching an uncontrolled intersection.</li> <li>• Motorists tend to feel more comfortable traveling at higher speeds when sight distances are very long. Increased safety related to provision of sight distance might, in some circumstances, actually increase speeds. This needs to be considered when designing for streets in different contexts, particularly where there are many pedestrians.</li> </ul>
<p>Street Lighting: Refers to the illumination of a street’s travel lanes. Other portions of the street right-of-way may also be illuminated by the street lighting and/or by pedestrian-scale lighting, which</p>	<ul style="list-style-type: none"> <li>• Street lighting enhances safety for all travelers, by illuminating hazards, curves, and other travelers in the street.</li> <li>• Lighting can also improve safety and security around buildings and in parking areas.</li> </ul>	<ul style="list-style-type: none"> <li>• The optimal type and number of streetlights depends on street classification, configuration, and adjacent land uses.</li> <li>• Street lighting that reduces glare or unnecessary uplighting should be considered, to ease localized light pollution. Cobraheads should be avoided.</li> </ul>

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Design/Operations Element	Purpose / Benefit	Design Considerations
<p>specifically illuminates the sidewalk or other pedestrian areas.</p>	<p>This may best be accomplished by a mix of street and pedestrian-scale lighting, depending on the context.</p>	<ul style="list-style-type: none"> <li>• Consider whether pedestrian-scale lighting can be used to illuminate or define a curve or other feature and, therefore, reduce the need for streetlights in some spots.</li> <li>• Areas of high pedestrian activity or primary pedestrian routes should have pedestrian-scale lighting, which is specifically intended to illuminate the sidewalk, as opposed to the travelway. For proper illumination and to avoid glare, pedestrian-scale lighting should typically be no more than 12' in height. Even in parking areas, which may need street lighting, pedestrian-scale lighting can better define and enhance the pedestrian "space".</li> </ul>
<p>Wide Outside Lane: An extra wide traffic lane that provides enough space for motor vehicles and bicycles to use the same lane (also called a shared lane). Typically used where there is not enough space for a separate, marked bicycle lane.</p>	<ul style="list-style-type: none"> <li>• Provides some increase in safety and comfort for both cyclists and motorists, in the absence of a bicycle lane (which is the preferred treatment for bicycle safety).</li> </ul>	<ul style="list-style-type: none"> <li>• Should be wide enough to allow a motor vehicle to pass a cyclist without crossing into the next lane (minimum 14' width).</li> <li>• Extra width is required if the wide-outside-lane is to be used with on-street parking (to reduce the risk to cyclists from opening car doors).</li> <li>• Wide outside lanes can also make motorists feel more comfortable speeding, so they should be used carefully. Marked bicycle lanes are the preferred option.</li> </ul>

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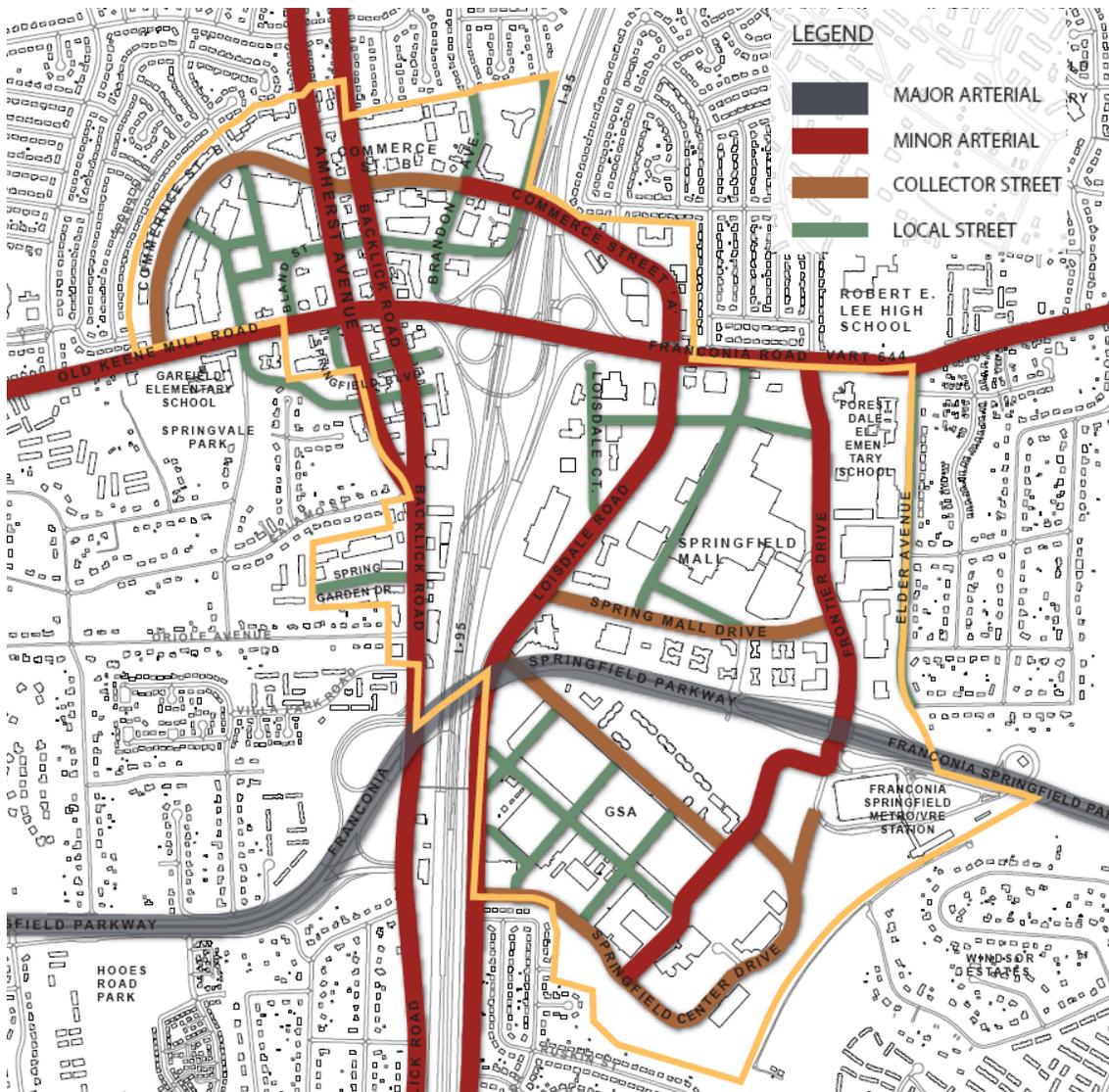
**Streetscape Cross-Sections and Intersection Improvement Plans**

A typology of streets was developed to create a pattern of context sensitive road designs for the Franconia-Springfield Area, based on the need of the surrounding land use. The roadway cross sections establish guidance to improve roads and facilitate active streetscapes. Each street type has particular characteristics in terms of traffic capacity, lane width, sidewalks, setbacks, building zone, landscape buffers and other elements.

Four different street types are identified:

- Major Arterial
- Minor Arterial
- Collector Street
- Local Street

*Roadway Classification Map*



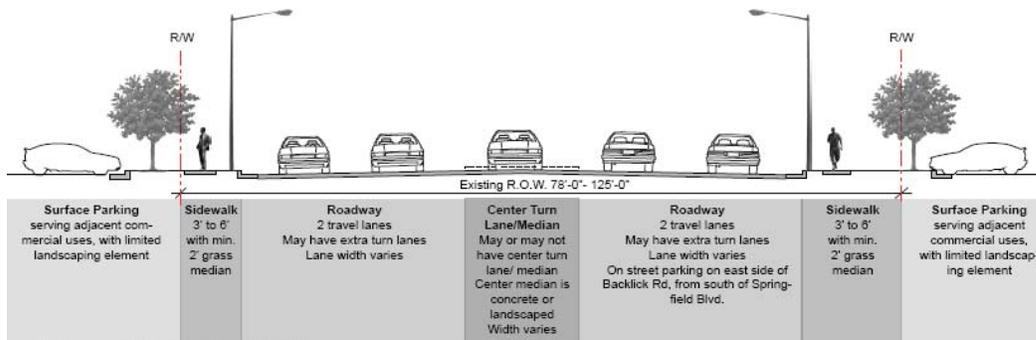
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**MAJOR ARTERIAL STREETS**

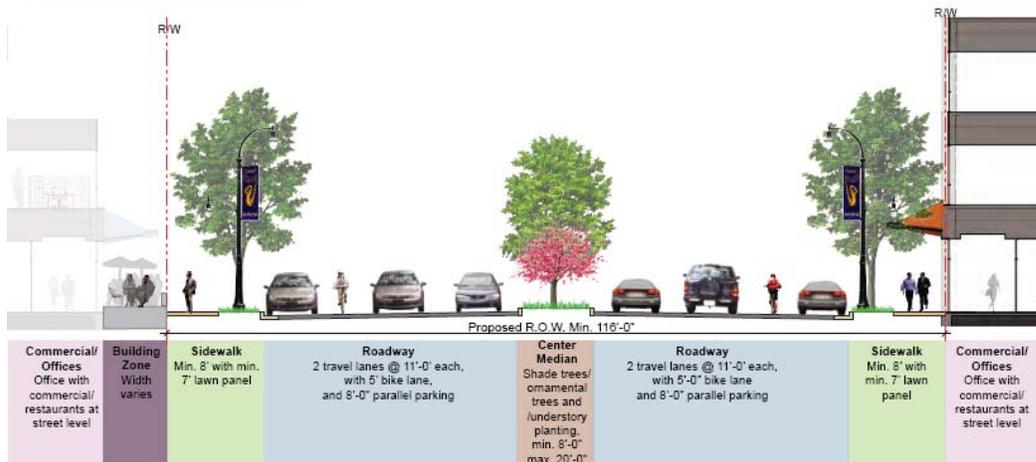
Major arterial streets primarily carry traffic passing through the area. The primary function of these roadways is traffic carrying capacity, with provision of access to adjacent land a secondary function. The Franconia-Springfield Parkway is the only major arterial street in the Franconia-Springfield Area. Streetscape guidance is not provided for major arterial facilities.

**MINOR ARTERIAL STREETS**

Minor arterial streets act as local distributors and through streets, and carry significant volumes of vehicular traffic, as well as bicycle and pedestrian traffic. Minor arterials should have special purpose lighting that would serve to enhance the vehicular and pedestrian experience. Since minor arterials have high traffic volumes, safety measures such as traffic medians should be employed to serve as a pedestrian refuge. Minor arterials serve as front doors to retail and offices. Their status in Franconia-Springfield’s road hierarchy should be reflected in the design of detail and use of materials. The minor arterial streets that identified in the Franconia-Springfield Area include Old Keene Mill Road, Amherst Avenue, Backlick Road, Loisdale Road, Commerce Street (east of Brandon Avenue), and Frontier Drive.



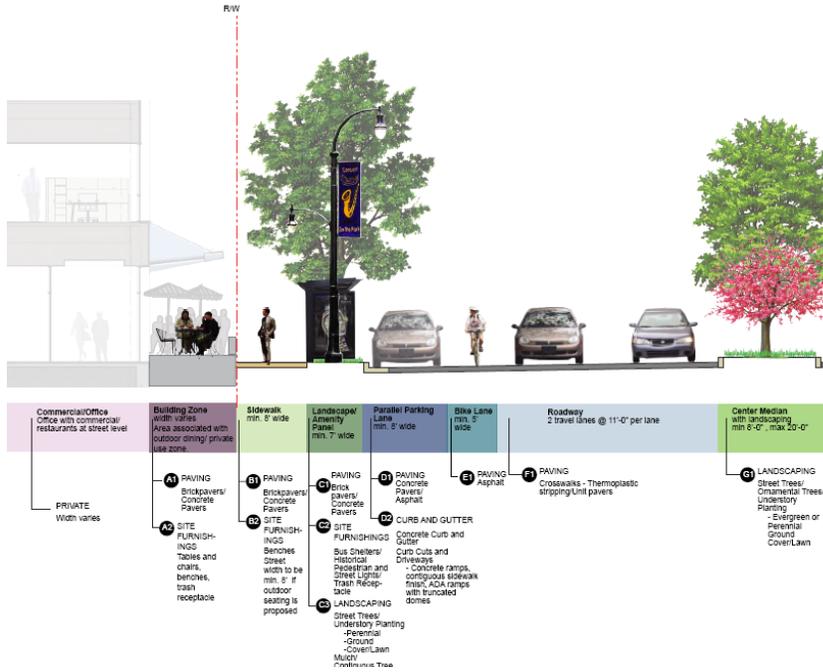
TYPICAL EXISTING CONDITION



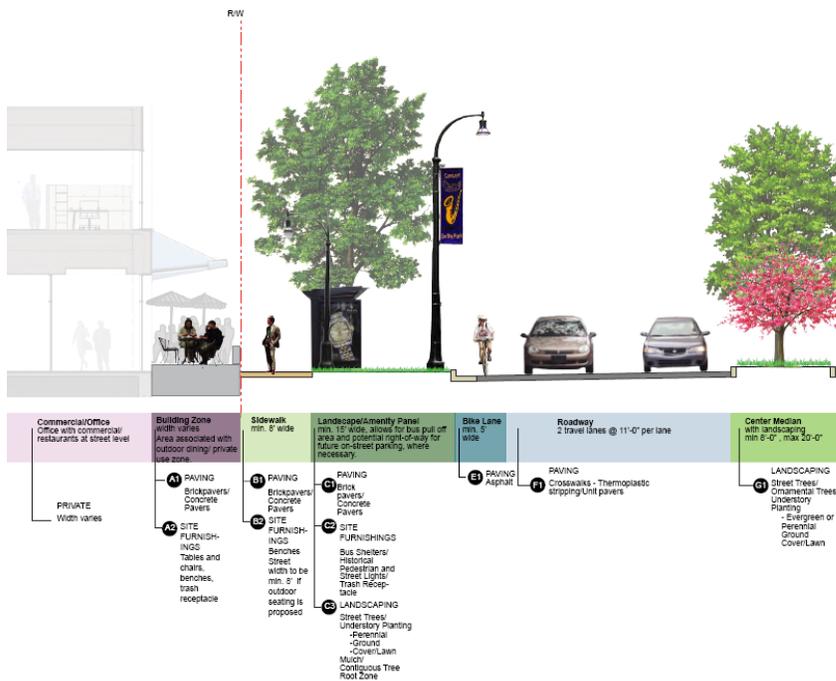
PROPOSED ROADWAY SECTION - TYPICAL

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Minor Arterial cross-section with on-street parking:

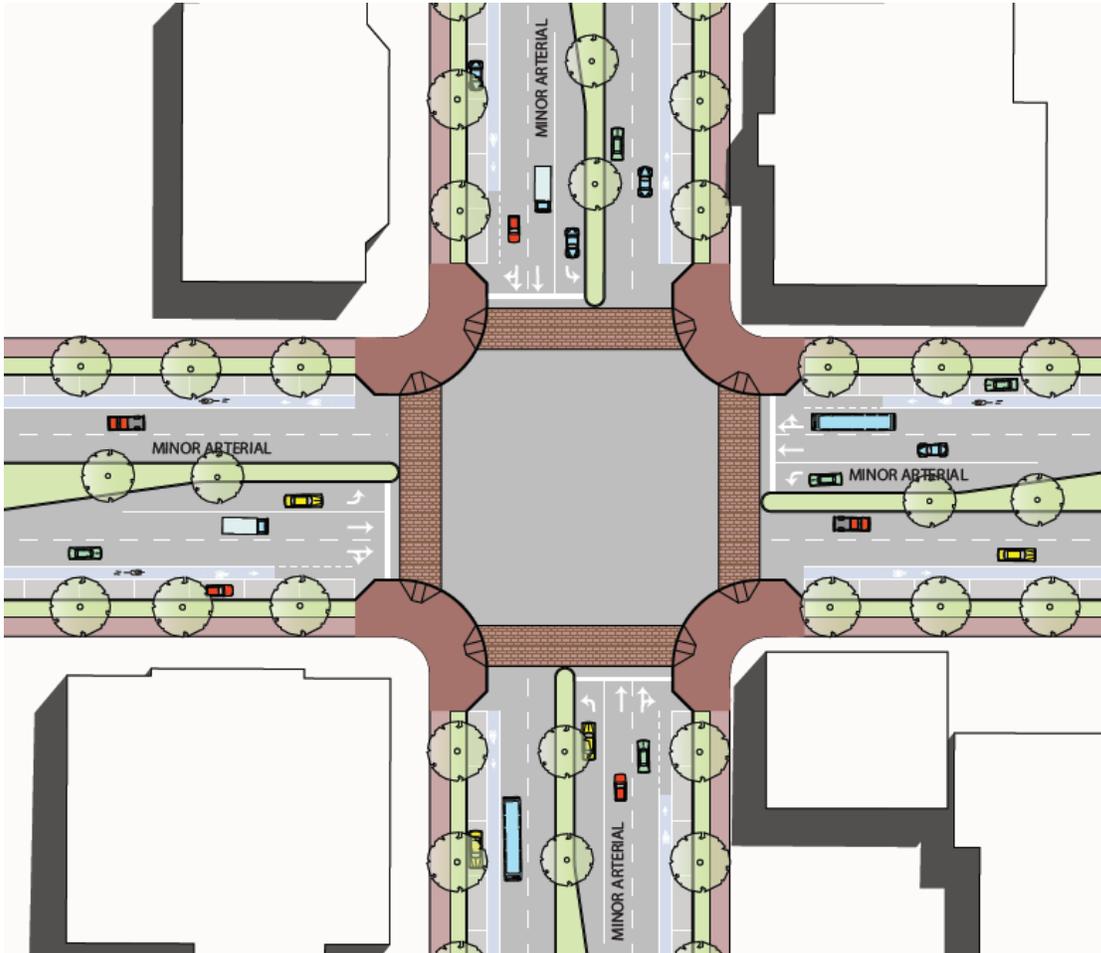


Minor Arterial cross-section without on-street parking:



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*Typical Intersection Improvement Plan- Minor Arterial to Minor Arterial*



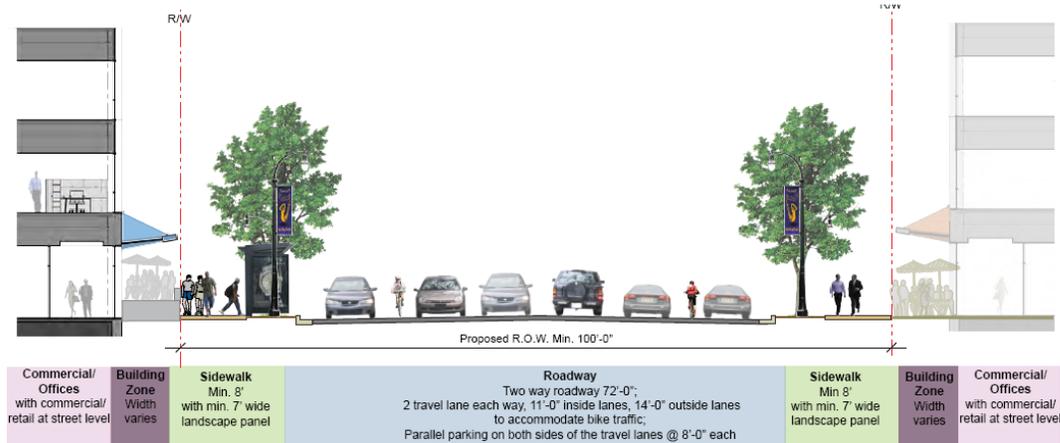
Design Elements	Minor Arterial
Median	Yes, except on one way streets. 8' at intersection with left turn lane, 20' without left turn lane.
Pedestrian Refuges	In median
Turn Lanes	Left turn lane; Right turn lane combined with through lanes.
Through Lanes	2 to 3 lanes in each direction
Bike Facility	5' wide bike lanes
Parking	8' wide parking lanes
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.

Design Elements	Minor Arterial
Curb Extensions	Yes, same width as parking lanes.
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.
Landscaping	Continuous landscaped strip

APPENDIX

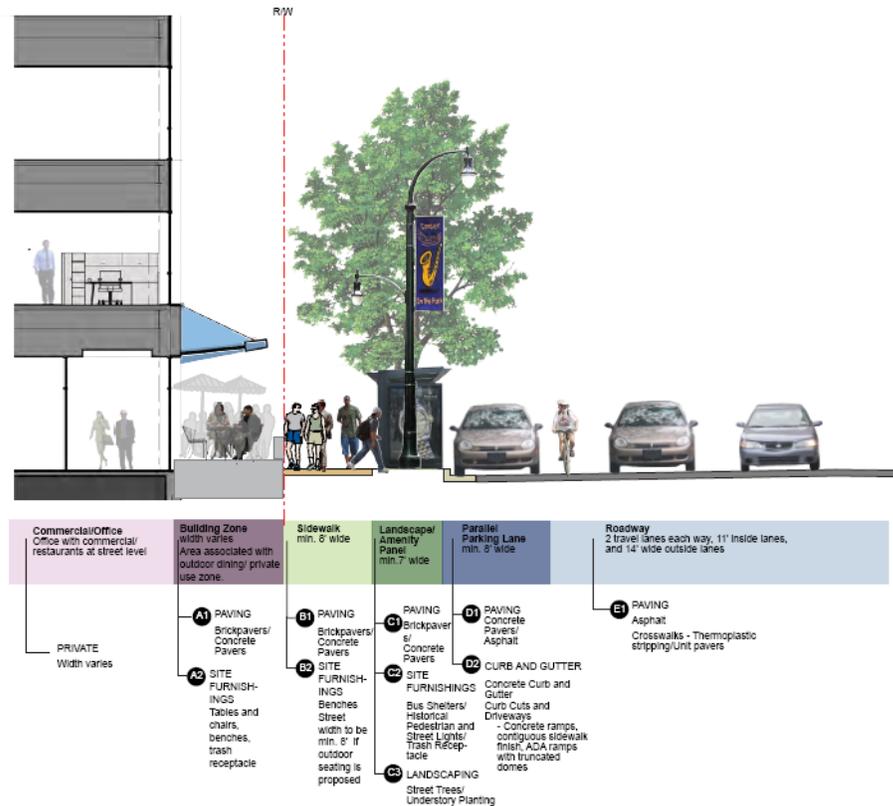
COLLECTOR STREETS

Collector streets carry less vehicular traffic than minor arterials and act as local distributors from/to residential and commercial areas. They have to balance the scale between pedestrian and vehicular priority. The character of the collector streets can vary using different types of street trees, paving, lighting, and street furniture. Traffic calming measures may be employed in a collector street. Parallel parking is usually provided.



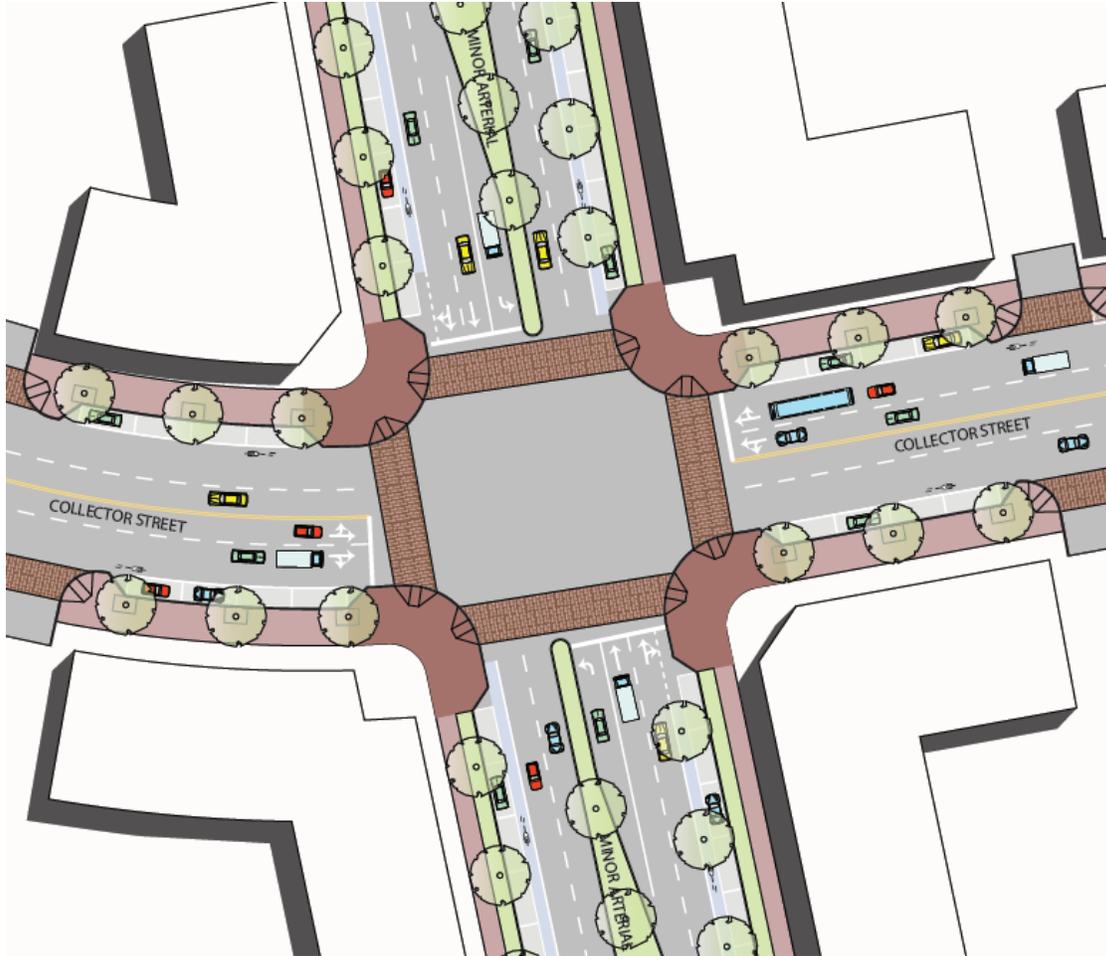
The collector streets that are identified in the Franconia-Springfield Area include Commerce Street from Old Keene Mill Road to Brandon Avenue, Spring Mall Road, Metropolitan Center Drive, and Springfield Center Drive.

Collector Street Half-section



APPENDIX

*Typical Intersection Improvement Plan- Collector Street to Minor Arterial*



Design Elements	Collector Street	Minor Arterial
Median	None	Yes, except on one way streets. 8' at intersection with left turn lane, 20' without left turn lane.
Pedestrian Refuges	None	In median
Turn Lanes	Left and right turn lanes combined with through lanes.	Left turn lane; Right turn lane combined with through lanes, and cut out from median.
Through Lanes	2 lanes in each direction	2 to 3 lanes in each direction
Bike Facility	14' wide outside lanes to accommodate bike.	5' wide bike lanes
Parking	8' wide parking lanes	8' wide parking lanes

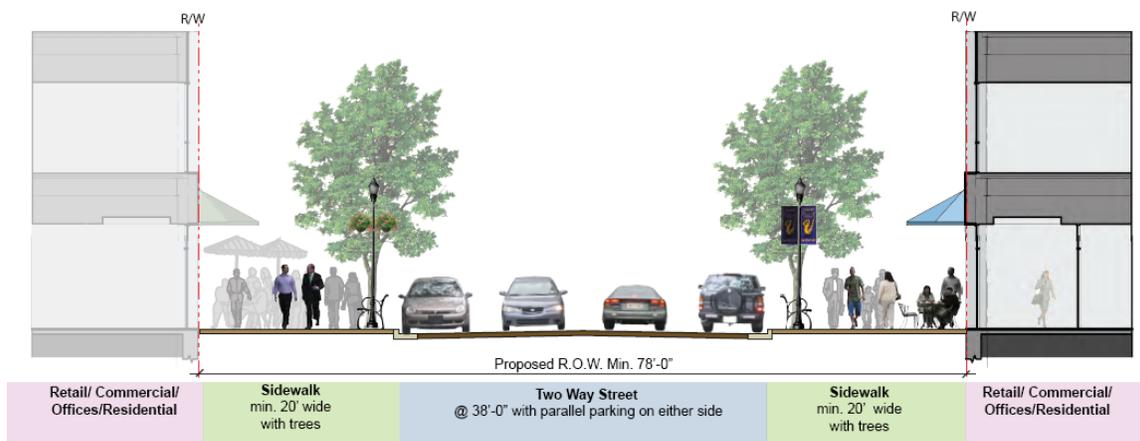
Design Elements	Collector Street	Minor Arterial
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.	
Curb Extensions	Yes, same width as parking lane.	Yes, same width as parking lane.
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.	
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.	
Landscaping	Use tree grates on streets with more pedestrian traffic, use continuous landscape strip on streets with less pedestrian traffic.	Continuous landscaped strip

APPENDIX

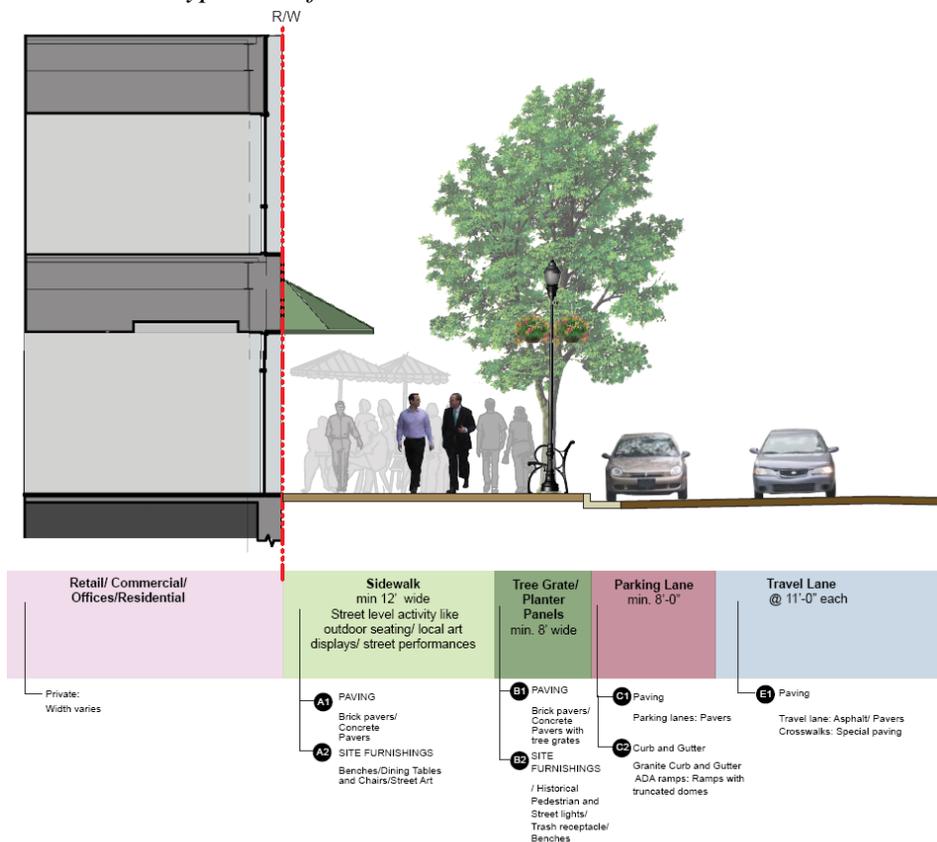
LOCAL STREETS

*Local Street Type 1 (Local commercial street):*

A local commercial street is a typical retail/ destination street with both pedestrian and vehicular traffic. The sidewalks should be wide enough to accommodate pedestrian volumes and the overflow of activity from the surrounding retail. Pedestrian circulation takes precedence over vehicle traffic. Cafe tables, chairs and other street furniture, street art are an integral part of this landscape.



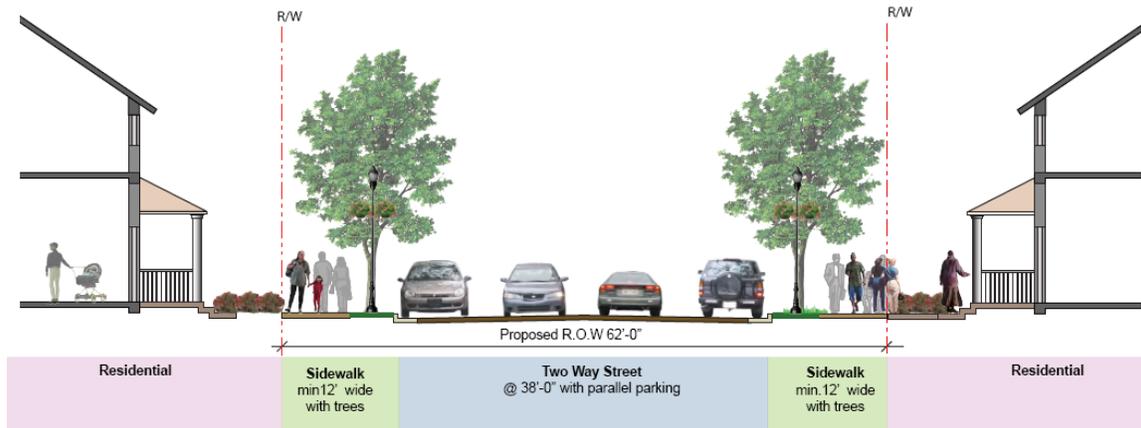
*Local Street Type 1 Half-section*



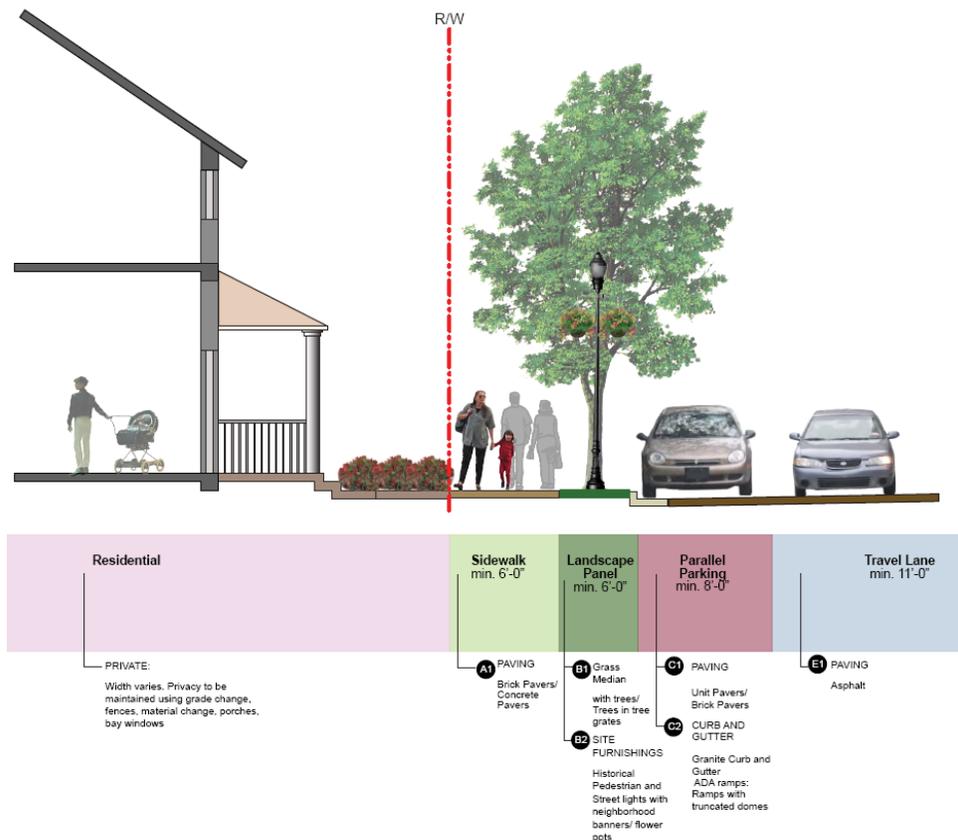
APPENDIX

*Local Street Type 2 (Local residential street)*

A local residential street is a residential street that carries mostly local traffic. Traffic calming measures can be achieved by providing on-street parking and narrow travel lanes. A strong local character and a sense of place help maintain a considerable amount of social equity in the area served by this type of street.

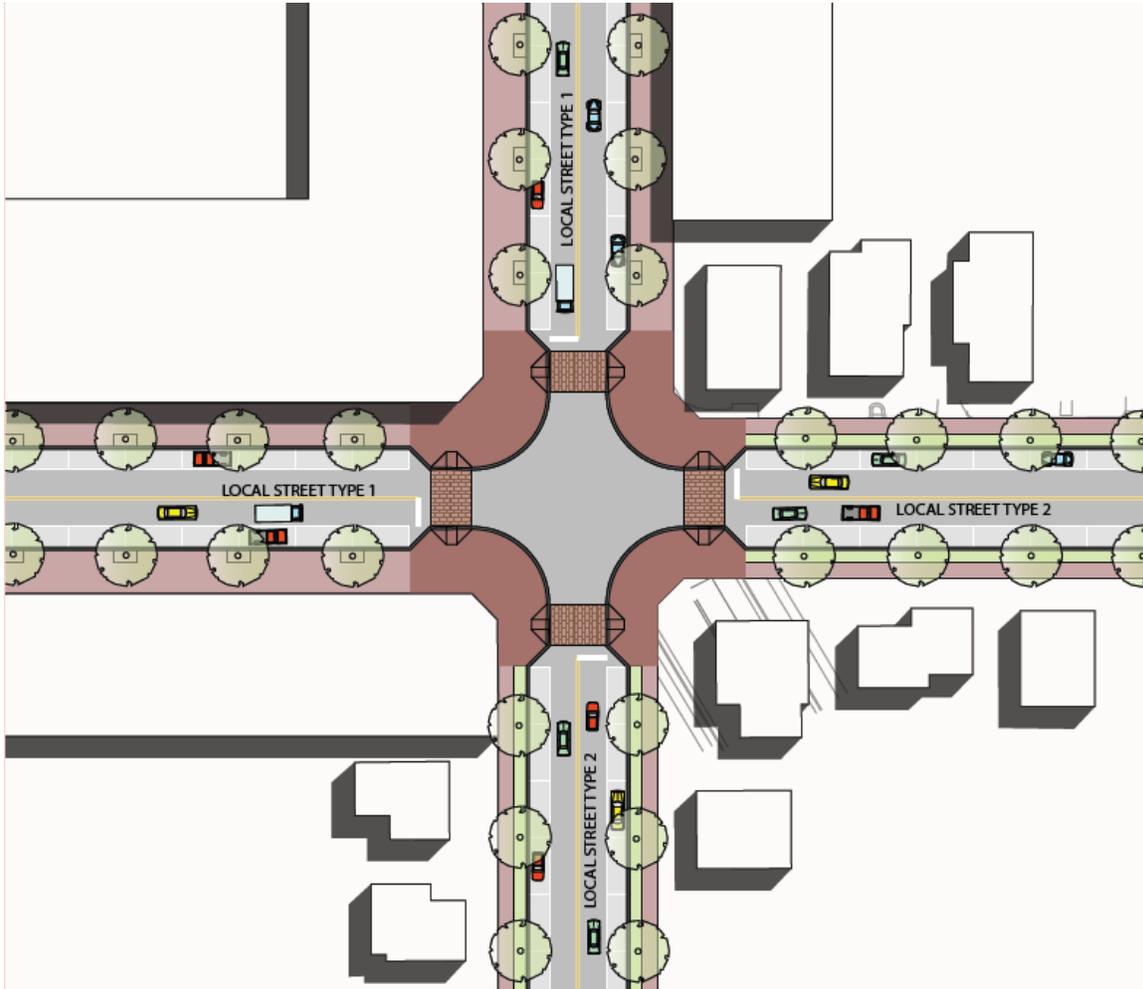


*Local Street Type 2 Half-section*



APPENDIX

*Typical Intersection Improvement Plan- Local Street to Local Street*



Design Elements	Local Street
Median	None
Pedestrian Refuge	None
Turn Lanes	None
Through Lanes	1 lane in each direction
Bike Facility	None
Parking	8' wide parking lanes
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.
Curb Extensions	It should has the same width as parking lane.

Design Elements	Local Street
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.
Landscaping	Use tree grates on local commercial streets. Use continuous landscaped strip on local residential streets.

APPENDIX

*Typical Intersection Improvement Plan- Local Street to Collector Street*

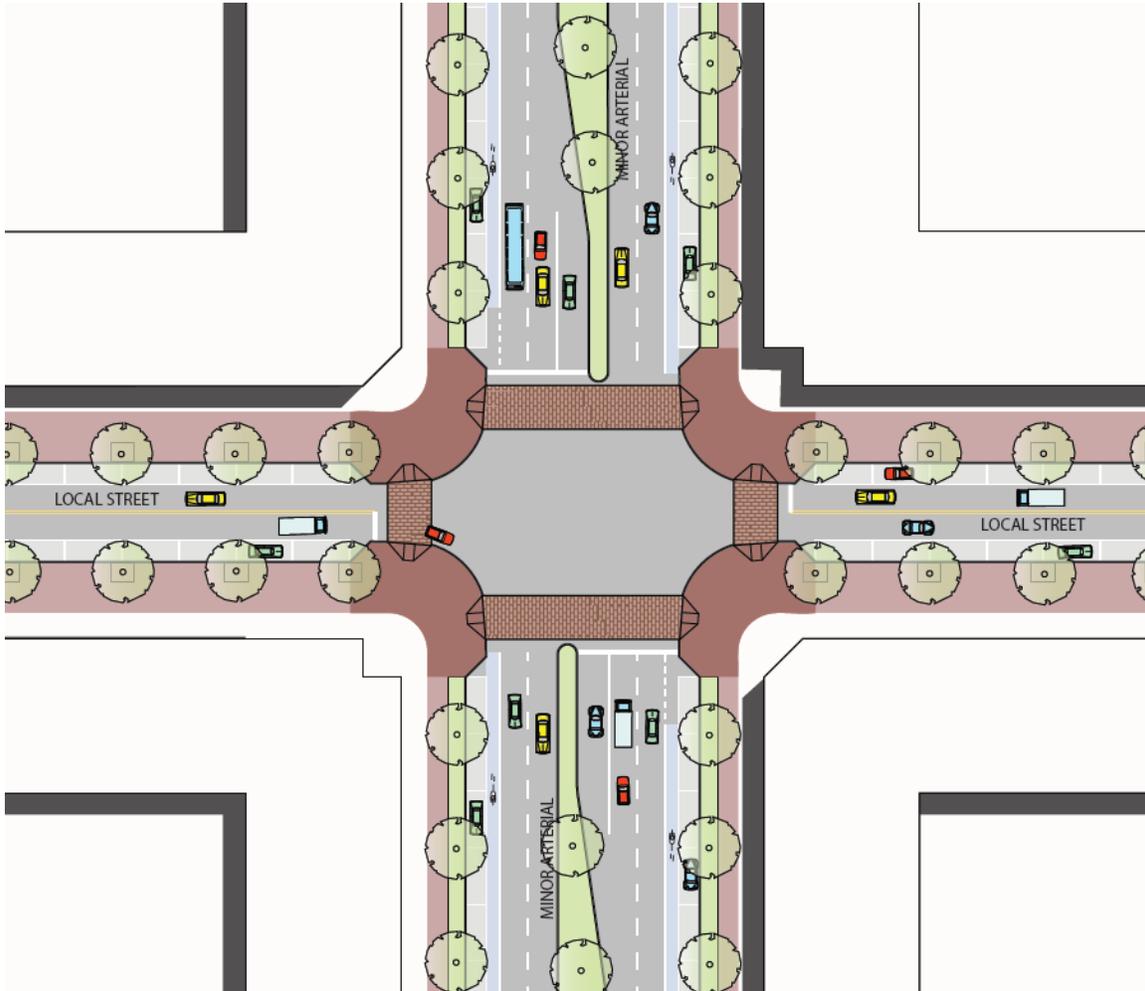


Design Elements	Collector Street	Local Street
Median	None	None
Pedestrian Refuges	None	None
Turn Lanes	Left and right turn lanes combined with through lanes.	None
Through Lanes	2 lanes in each direction	1 lane in each direction
Bike Facility	14' wide outside lanes to accommodate bike.	None
Parking	8' wide parking lanes	None
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.	
Curb Extensions	Same width as parking lane	

Design Elements	Collector Street	Local Street
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.	
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.	
Landscaping	Use tree grates on streets with more pedestrian traffic, use continuous landscape strip on streets with less pedestrian traffic.	Use tree grates on local commercial streets. Use continuous landscaped strip on local residential streets.

APPENDIX

*Typical Intersection Improvement Plan- Local Street to Minor Arterial*



Design Elements	Local Street	Minor Arterial
Median	None	Yes, except on one way streets. 8' at intersection with left turn lane, 20' without left turn lane.
Pedestrian Refuges	None	In median
Turn Lanes	None	Left turn lane; Right turn lane combined with through lanes.
Through Lanes	1 lane in each direction	2 to 3 lanes in each direction
Bike Facility	None	5' wide bike lanes
Parking	8' wide parking lanes	8' wide parking lanes
Curb Radii	Keep the curb radii as small as possible to minimize the distance of pedestrian crossing and reduce speed of turning vehicles.	

Design Elements	Local Street	Minor Arterial
Curb Extensions	Yes, same width as parking lane.	
Handicap Ramps	Follow VDOT's Guidelines for the design and location of handicap ramps.	
Crosswalk	Crosswalk should be on all legs unless physical restriction or safety-related reasons limit the use of it. Use enhanced marking or paving.	
Landscaping	Use tree grates on local commercial streets. Use continuous landscaped strip on local residential streets.	Continuous landscaped strip

APPENDIX

**Wayfinding and Signage**

The wayfinding and signage guidance illustrates a series of signs that are designed with uniform elements, consistent in appearance and nomenclature, regardless of their function, location or message. The signage will create a “visitor friendly” environment and provides directional information. “Visitor friendly” means that the signs are close to visitor attractions and venues, highly visible with easy vehicular access, well-lighted and safe, and use consistent graphics. Elements in the signage that should be consistently applied include color, shape, typography, logo, and assembly.

The following examples provide a visual depiction of a typology of signs:

*Gateway Signs*

These are “Identity” signs signifying the community entrance points. They are located at key entry and key decision points, have a monumental scale, and contribute to the theme and “brand” for Springfield.



*Identity Banners and Banner-Like Signs*

Banners displaying a site-specific logotype and thematic icons, such as the Springfield Town Center, identify “visitor friendly” areas to motorists and pedestrians. Repetitions of banners, singularly or in pairs create a sense of entry and welcome.



APPENDIX

*Directional and Trailblazer Signs*

Trailblazer signs function in concert with district signs and point in key directions to lead visitors down the main visitor corridors



*Pedestrian Kiosks*

Information kiosks provide orientation information about nearby attractions and amenities such as restaurants, theaters, shops and assist visitors to connect via public transportation. The additional visibility and connectivity is especially important for transit schedules, routes and stops that can be displayed. To inspire confidence of visitors, the information display must be accurate, well maintained and current.



*Parking Signs*

Parking signs should be visible and accessible and should be displayed on and to public and private parking lots and structures. Parking signs include: identity signs for structured parking, identity banners or banner-type signs for lightposts in surface parking lots, identity graphics on pay stations, and "disk" parking directional panels, either on posts with trailblazer signs or dedicated posts.

