

## ARTICLE 13

### STREETS

#### 13.1 General

Streets shall be designed to suit their functions. Many streets have purposes other than vehicular traffic. As an alternative to current N.C. Department of Transportation road standards, the following street standards are provided for non-state-maintained streets within the City of Lowell and for streets proposed to be maintained by the City upon annexation. Streets built to the standards identified in this section are eligible for consideration by the City Council for acceptance into City maintenance.

Streets in Lowell are public spaces and integral components of community design. A hierarchical street network accommodates a variety of uses, including bicycle, pedestrian, motor-vehicle and transit routes. All streets shall connect to help create a comprehensive network that enables the efficient movement of automobiles, bicycles, and pedestrians. In order for this street network to be safe for motorists, bicyclists and pedestrians, design elements must consistently be applied to calm vehicular traffic throughout the City.

Where discrepancies occur between the text of this Ordinance and the City of Lowell *Technical Standards & Specifications Manual*, the *Technical Standards & Specifications Manual* shall prevail.

#### 13.2 Street and Associated Infrastructure Standards

Streets in the City of Lowell shall:

13.2-1 Interconnect. Interconnect within a development and with adjoining development. Cul-de-sacs shall be allowed only where topographical configurations offer no practical alternatives for future connections or through traffic. The location of streets as may be shown in the *City Plan 2040* and adopted area plans, per Section 1.5 of this Ordinance, shall govern connectivity designs. Street stubs shall be provided within developments adjacent to open land to provide for future connections except where deemed impracticable or impactful of environmentally sensitive areas such as wetlands, creeks, steep slopes and conservation areas vulnerable to harmful impacts by the extension of the street by the *Planning, Zoning & Subdivision Administrator*. Barricades and end of street signage shall be installed in accordance with the *Technical Standards & Specifications Manual*.

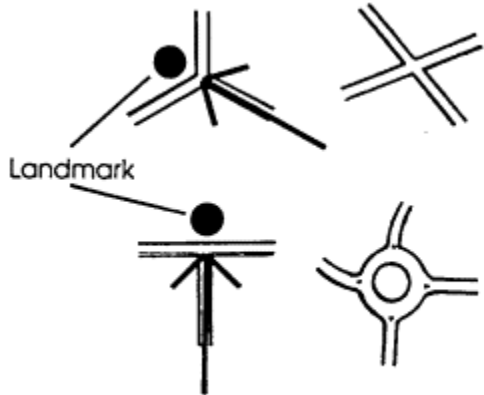
13.2-2 Pedestrian Scaled. Be designed as the most prevalent public space of the City and, thus, scaled to the pedestrian harmonious with bicycles and motor vehicles.

- 13.2-3 Bordered by Sidewalks. Be bordered by sidewalks with a minimum width of five (5) feet on both sides of the street, with the exception of rural roads, lanes, alleys, and the undeveloped edge of neighborhood parkways. Sidewalks in the Main Street District (MS) shall be as designated for the specific location in the *City Plan 2040* and adopted area plans, per Section 1.5 of this Ordinance. Sidewalks are not required in the Agricultural District (AG) to protect water quality, except as provided in Section 13.6-1. Sidewalks may be located in the street right-of-way, on private or public property, or in common areas. All sidewalks not located within the public right-of-way shall have a public access easement permitting public use of the sidewalk.
- 13.2-4 Street Trees. Be lined with street trees located on both sides, with the exception of rural roads, lanes, alleys, and the undeveloped edge of neighborhood parkways. Street trees along streets shall be located in a planting strip as per the standards set forth in Subsection 11.6-3 and the City of Lowell *Technical Standards & Specifications Manual*.
- 13.2-5 Streets, Alleys and Lanes. New streets shall be publicly dedicated except in limited circumstances. Private streets are permitted on a limited basis only in accordance with standards set forth in Subsection 2.2(C) of this Ordinance and when constructed in accordance with the standards set forth in the City of Lowell *Technical Standards & Specifications Manual*. Alleys and lanes will be classified as privately maintained public access and utility easements depending on function.
- 13.2-6 Orientation of Buildings. Provide access to principal buildings. The principal building shall front on public streets as specified by the lot and building type standards of Article 9 of this Ordinance.
- 13.2-7 Street Lights. Be illuminated by street lights located on at least one side and at all intersections, with exception of rural roads, lanes, alleys, and the undeveloped edge of neighborhood parkways. Streetlights along streets shall be located in a planting strip as per standards set forth in the City of Lowell *Technical Standards & Specifications Manual*. Maximum spacing of street light fixtures shall be 180 linear feet measured along the street centerline. The height of street light fixtures shall be 14 vertical feet in residential areas. Street light fixtures shall not produce direct light into adjacent properties at a height above four (4) vertical feet at the building setback line of residential districts. Street lights within mixed use districts shall not produce a direct light into adjacent properties at a height above 16 vertical feet at the building setback line. Street lights within non-residential districts shall not produce a direct light into adjacent residential properties at a height above six (6) vertical feet at the property line. Residential streets shall utilize the “Open Traditional” design on a black finished type “A” fiberglass pole as provided locally by Duke Energy or equivalent.

### 13.3 Intersections

Segments of straight streets shall be interrupted by intersections designed to:

- 13.3-1 Reduce Speed. Disperse traffic flow and reduce speeds, thereby eliminating the creation of de facto collector streets with high speed, high volume traffic; and
- 13.3-2 Terminate Vistas. Terminate vistas with a landmark such as a significant natural feature, a building, a park, or other public space.



Other traffic calming measures such as neck-downs, chicanes, mid-block diverters, intersection diverters, curb bulbs, serial hill crests, and related devices may be specified on a case by case basis, based on improving traffic safety and functional appropriateness in the proposed location.

### **13.4 Blocks**

Street blocks defined by public streets are the fundamental design elements of neighborhoods. The location of streets as may be shown in the *City Plan 2040* and adopted area plans, per Section 1.5 of this Ordinance, shall govern block size design. Block size and configuration shall be in accordance with the provisions of Section 16.2-3(I) of this Ordinance. The block pattern should continue to establish the development pattern at the project edge. Where a longer block will reduce the number of railroad grade crossings, major stream crossings, or where longer blocks will result in an arrangement of street connections, lots and public space more consistent with this Article and Article 11 of this Ordinance, the *Planning, Zoning & Subdivision Administrator* may approve greater block lengths in accordance with the provisions of G.S. 160D-403(d).

### **13.5 Street Plan**

The layout of streets should provide structure to the neighborhoods. The location of streets as may be shown in the *City Plan 2040* and adopted area plans, per Section 1.5 of this Ordinance, shall govern the location of street design. The formality of the street plan will vary depending upon site conditions and topography. Unique site conditions should be used to create special neighborhood qualities. The street plan for new developments shall reflect the character of the City of Lowell and comply with the standards set forth in section 13.2 above.

### **13.6 Street and Associated Infrastructure Design**

Designs should permit comfortable use of the street by motorists, pedestrians, and bicyclists. The location of streets as may be shown in the *City Plan 2040* and adopted area plans, per Section 1.5 of this Ordinance, shall govern the level of service and design of streets. Pavement widths, design speeds, and the number of motor travel lanes should be minimized to enhance safety for motorists and non-motorists alike. The specific design of any given street must consider the building types as shown in Article 9 which have frontage and the relationship of the street to the overall street network. The following specifications apply to street design:

- 13.6-1 Street trees and sidewalks are required on both sides of public streets except rural roads, lanes, alleys, and the undeveloped edge of neighborhood parkways except that sidewalks on one side of the road directly abutting residential lots of less than 1.2 acres may be permitted in the Agricultural District (AG) to protect water quality. The street tree planting strip shall be a minimum of 8' in width and sidewalks shall be a minimum of 5'-0" in width unless otherwise provided. On commercial streets, sidewalks should be a minimum of 6'-0" in width. A 14' minimum width sidewalk with tree grates or cut-outs is required on "Main Street" within the Main Street (MS)

District and on “Main Street” type street cross sections where buildings are constructed adjacent to the public right-of-way as part of a Development Agreement, TNDO District, or within locations specified to be developed in accordance with an Area Plan illustrating such designs as adopted by the City Council. An 9’ minimum width sidewalk with tree grates or cut-outs is required on the first fifty (50) percent of the block depth of all side streets intersecting the “Main Street” segments described above, as illustrated by the *City Plan 2040* and/or adopted area plans, per Section 1.5 of this Ordinance. Generally, canopy trees shall be planted at a spacing not to exceed 62’-0” on center. Where overhead utility lines preclude the use of canopy trees, small maturing trees may be substituted, planted not more than 31’-0” on center.

- 13.6-2 On-street parking is required where building type and use will generate regular parking use and where on-street parking can be accommodated without additional pavement width. For streets that serve workplace and storefront buildings, on-street parking lane(s) are required and should be marked as such. An on-street parking lane on at least one side of the street is required on streets serving attached houses and detached houses with lots less than fifty (50) feet in width. On-street parking must also be provided on specific street segments as may be shown in the *City Plan 2040* and adopted area plans, per Section 1.5 of this Ordinance and on one side of any street adjacent to a square, park or other Open Space. Parallel on-street parking width is 7’ - 8’ except as may be shown in street segment cross-sections specific to certain street segments shown within the *City Plan 2040* and adopted area plans, per Section 1.5 of this Ordinance. On-street parking should be parallel; angled parking is only permitted as an intentional design element along the main street(s) of the retail centers.
- 13.6-3 Design speeds shall not exceed 30 miles per hour on any neighborhood, mixed-use and/or non-residential street. Only arterials and City boulevards may exceed this design speed. Design speeds for non-residential streets shall not exceed 30 miles per hour on any internal circulation street. Petitioners for acceptance by the City for public maintenance shall include a request for designation of not more than 25 miles per hour.
- 13.6-4 Covenants and restrictions made a part of development shall not restrict vehicle types in conflict with adopted City policies.
- 13.6-5 Traffic control plans showing signage and pavement markings shall be prepared in accordance with the guidance of the *Manual on Uniform Traffic Control Devices*. The developer is responsible for the initial installation of the devices or markings and the maintenance thereof until a public agency (City or NCDOT) accepts the street for maintenance.

Design standards and specifications for City streets are set forth in the City of Lowell

*Technical Standards & Specifications Manual.* The street specifications in this manual may only be varied in accordance with the design principles set forth above and as approved by the City during the site plan or subdivision plat review process appearing in Article 7 of this Ordinance.

13.6-6 Cul-de-sacs. See additional cul-de-sac standards in Article 16.2-7, Street Design of this Ordinance.