

Compact Sec. 13.6 Street Connectivity Requirements

Paragraphs:

- [13.6.1Connectivity Defined](#)
- [13.6.2Required Ratio](#)

An interconnected street system is necessary in order to promote orderly and safe [development](#) by ensuring that streets function in an interdependent manner, provide adequate access for emergency and service [vehicles](#), enhance access by ensuring connected transportation routes, provide access for [people](#) walking and bicycling, and provide continuous and comprehensible traffic routes.

13.6.1Connectivity Defined

A. Except in Design Districts, connectivity shall be defined by the ratio of links to nodes in any [subdivision](#).

1. The connectivity ratio shall be the number of street links divided by the number of nodes or end links (Links/Nodes).

2. A link shall be:

a. Any portion of a street connected by a node at either end. For the purposes of calculating the connectivity ratio, links shall also include:

1. [Stub-outs](#) to [adjacent](#) property.
2. Pedestrian connections, required in accordance with paragraph 13.6.1c Pedestrian Connections Required and section 12.4 Pedestrian and Bicycle Mobility.

For the purpose of determining the number of links in a [development](#), [boulevards](#), median-divided roadways, and divided entrances shall be treated the same as conventional two-way roadways.

b. Connectivity Ratio Link Scoring Matrix

Type of Link	Score
Street (including required sidewalks per paragraph 12.4.2)	1
Stub Out	0.5
Additional Pedestrian Connections within the development (constructed greenway trails, mid-block pedestrian passages linking parallel right of ways, cul-de-sac connection walkways)	2

c. Pedestrian Connections Required

A publicly accessible, all-weather pedestrian walkway between a cul-de-sac head, street turnaround, or street curve (120 degrees or less) and the next closest connection to an adjacent street or pedestrian pathway shall be required whenever a proposed cul-de-sac, street turnaround, or street curve (120 degrees or less):

1. Is in close proximity (500 ft or less) to existing pedestrian infrastructure like sidewalks, cul-de-sacs, trails, or pathway and/or to significant pedestrian generators or destinations such as schools, parks, trails, employment centers, commercial areas, residential neighborhoods or similar features; or
2. Creates an unreasonable impediment to pedestrian circulation.

d. Cross Access Required

In addition to meeting all of the requirements of Sec.13.6.1c, Pedestrian Connections Required, pedestrian connections shall be provided between retail and office uses and the residential units within any development.

~~A pedestrian/bicycle and vehicular access connecting residential to commercial development shall be required whenever a proposed development:~~

- ~~1. Is in close proximity (500 ft or less) with significant commercial centers or services; or~~
- ~~2. Creates an unreasonable impediment to pedestrian circulation.~~

3. A node shall be

- a. The terminus of a street or the intersection of two or more streets. A divided entrance shall only count once.
- b. Where a street curves so that any two adjacent 100-foot chords thereof form an angle of 120 degrees or less, measured along the centerline of the street, such curve shall receive credit as a node.

c. Connectivity Ratio Node Scoring Matrix

Type of Node	Score
Four-Way Intersection	1
Three-Way Intersection	1.25
Street curves of 100-ft chords (120 degrees or less)	1.5
Cul-de-sac	1.5

B. Connectivity in Design Districts

For Design Districts, see Sec. 16.4, Streetscape, Right-of-Way, and Block/Lot Standards.

13.6.2 Required Ratio

A. Street Network

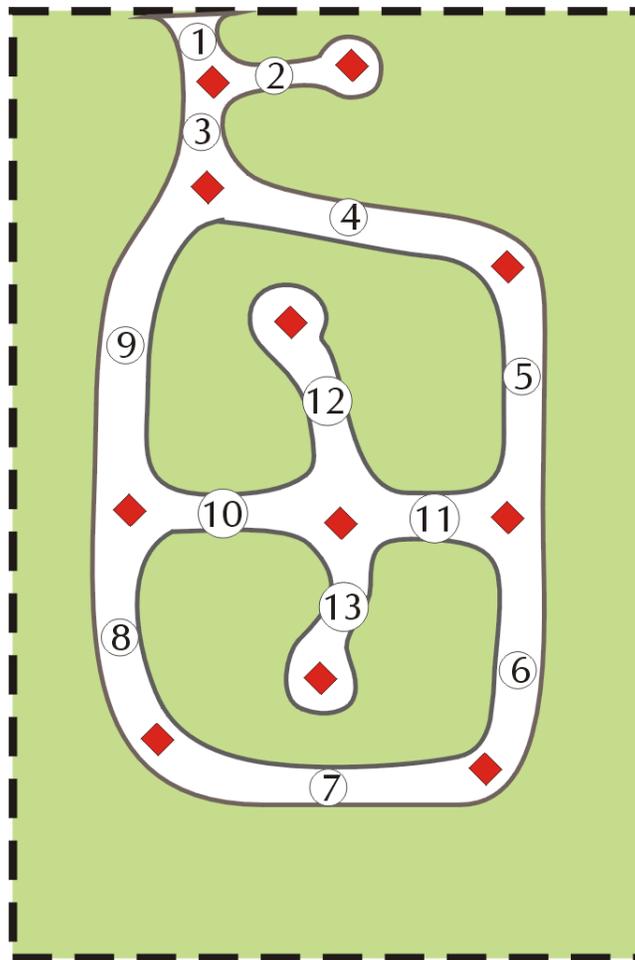
1. The street network, including common access driveways permitted in paragraph 12.2.2B.2.b, Driveways, for any subdivision with internal roads or access to any public road shall achieve a minimum connectivity ratio of 1.15 In the Rural Tier, 1.40 in the Suburban Tier, 1.60 in the Urban and Compact Neighborhood Tiers.

B. Street links and nodes along a collector or arterial street providing access to a proposed subdivision shall not be considered in computing the connectivity ratio.

C. Required stub-outs that cannot be constructed pursuant to paragraph 12.3.1F, Stub Outs, shall be considered as being present as a link at the ratio of one link per side as provided in paragraph 12.3.1F, Stub Outs, for purposes of determining if the required ratio has been met.

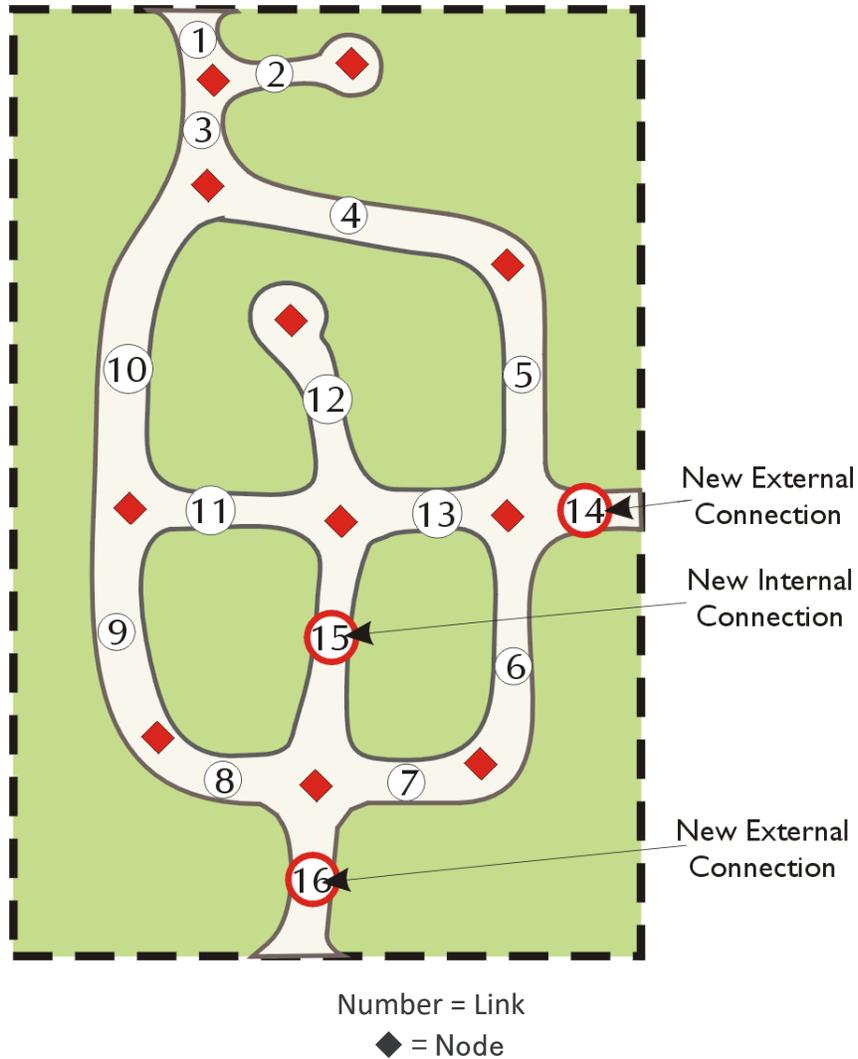
EXAMPLE 1: Does not meet ratio for Any Tier

(13 links (12 street links and 1 stub-out scoring 13) /11 nodes (3 cul-de-sacs, 3 street curves, 4 intersections of less than four streets, and 1 four-way intersection scoring 13.75)= 0.95)



EXAMPLE 2: Modified to meet ratio

(16 links (13 street links and 3 stub-outs scoring 16) / 11 nodes (2 cul-de-sacs, 3 street curves, 3 intersections of less than four streets, and 3 four-way intersections scoring 12.75) = 1.25)



13.4 Block Standards

13.4.1

Blocks shall have sufficient width to provide for two tiers of lots, except where single tier lots are required to separate residential development from arterial traffic, to separate lots from an incompatible use, to accommodate a requirement for single-loaded streets, to allow for unusual topographic conditions or when adjacent to the outer perimeter of the subdivision.

13.4.2

- A. Except as provided in subsection B below, the maximum length of any block within a subdivision containing five or more acres shall comply with the following table. Streets shall be laid out such that

the requirements can be met both within and between proposed and future subdivisions on adjacent land.

Table 1: Block Length Requirements

<u>Zoning Districts</u>	<u>Maximum Average Block Length (ft)</u>	<u>Maximum Block Length (ft)</u>	<u>Maximum Block Perimeter (ft)</u>
<u>RR; RS(-20; -10; 8); I; IL; IP; SRP; UC;</u>	<u>800</u>	<u>1,000</u>	<u>600</u>
<u>RS-M; RU (-5; -M); RC; CC; CN; CI; OI; CG; MU; CD</u>	<u>550</u>	<u>650</u>	<u>2,200</u>

- B. Within a single phase of any subdivision or development, individual block perimeters shall be permitted to exceed the maximum by 25% provided that the average of all block perimeters in the phase does not exceed the maximum.
- C. Pedestrian Passage Requirement
 - a. Where a block exceeds the maximum average block length, a mid-block pedestrian connection shall be provided. The pedestrian connection shall consist of an improved walkway four feet, or as required by the State accessibility code, whichever is greater.
 - b. The maximum block perimeter shall be permitted to extend by 50% where the block includes a pedestrian passage that connects the two streets on opposing block faces including pedestrian passages and alleys that connect dead-end streets.
- D. The requirements for block lengths and block perimeters contained in 13.4.2a shall not apply with the existence of any of the following:
 - 1. Adjacent existing development has not made any accommodation for such connections;
or
 - 2. Adjacent sites are permanently protected from development through conservation easements or ownership that precludes development; or
 - 3. The only point of access would require crossing floodplains, steep slopes, or other similar natural features; or
 - 6. The existing street pattern in the area of the proposed development already provides for vehicular connections at intervals no greater than one-half mile apart in the Rural Tier, one-quarter mile apart in the Suburban Tier, or one-fifth mile apart in the Urban Tier.

13.4.3

For Design District requirements see Sec. 16.4, Streetscape, Right-of-Way, and Block/Lot Standards

12.3.1 Street Layout

F. Stub Outs

1. Unless exempted below, [stub outs](#) shall be required on each side (as defined by each of the [cardinal directions](#)) of a [development](#) as follows:

a. Rural Tier

At least one [stub out](#) for every 2,800 linear feet on any single side of the proposed [development](#).

b. Suburban Tier

At least one [stub out](#) for every 1,400 linear feet on any single side of the proposed [development](#).

c. Urban Tier

At least one [stub out](#) for every 1,000 linear feet on any single side of a proposed [development](#).

d. Compact Neighborhood Tier

At least one stub out for every 1,000 linear feet of any single side of a proposed development.

e. Projects Terminating at the Edge of a Tier

[Stub outs](#) at the standard required for the less intense Tier.

2. [Stub outs](#) shall not be required if:

a. [Adjacent](#) existing [development](#) has not made any accommodation for such connections; or

b. [Adjacent](#) sites are permanently protected from [development](#) through conservation [easements](#) or ownership that precludes development; or

c. The only point of access would require crossing [floodplains](#), steep slopes, or other similar natural features; or

d. The existing street pattern in the area of the proposed [development](#) already provides for vehicular connections at intervals no greater than one-half mile apart in the Rural Tier, one-quarter mile apart in the Suburban Tier, or one-fifth mile apart in the Urban Tier.

3. The proposed street layout in new [development](#) shall be coordinated with the existing street system with connections made at all [stub outs](#). Where no full connection can be made as a result of the topography of the site being developed, the [developer](#) shall install a [cul-de-sac](#) bulb or other turnout facility at the stub out constructed according to the *City Public Works Department Reference Guide for Development*.

12.2.4 External Access Required

1. External motor [vehicle](#) and pedestrian access to [development](#) shall be provided as indicated in Table XXX below. In determining the number of access points that shall be required, the cumulative impacts of prior developments on the [roads](#) shall be considered.

a. External Access Requirements for Residential and Other Developments

Development Type and Size	Minimum Number of Vehicular and Pedestrian Access Points Required
Primarily Residential Uses	
90 Dwellings or Less	1
Between 91 and 179 Dwellings	2
180 Dwellings or More	3
All Other Uses	
Less than 5 Acres	1
5 Acres or More	2

Make a distinction between apartment complexes and other residential developments (standalone apt complexes)

b. Apartment Complex Exemption

Standalone apartment complexes, independent of the number of dwelling units, will require one point of vehicular and pedestrian access. (Not garden apartments – single/one-building complexes)

c. External Access Exemption

The requirements for vehicular and pedestrian access points required in 12.2.4 shall not apply to Design Districts. For Design Districts, see Sec. 16.4, Streetscape, Right-of-Way, and Block/Lot Standards.