



Design Manual

for the

Installation of Network Nodes and Node Support Poles

Pursuant to Tex. Loc. Gov. Code Chapter 284.

Table of Contents

SECTION 1. PURPOSE AND APPLICABILITY.....	3
SECTION 2. DEFINITIONS.....	3
SECTION 3. PROHIBITED AND PREFERRED LOCATIONS OF MICRO NETWORK NODE, NETWORK NODE, NODE SUPPORT POLE AND RELATED GROUND EQUIPMENT.....	8
SECTION 4. GUIDELINES ON PLACEMENT.....	12
SECTION 5. GENERAL AESTHETIC REQUIREMENTS	15
SECTION 6. ELECTRICAL SUPPLY	16
SECTION 7. INSURANCE, INDEMNITY, BONDING AND SECURITY DEPOSITS.....	16
SECTION 8-19 RESERVED.....	16
SECTION 20. DESIGN MANUAL - UPDATES.....	16

SECTION 1. PURPOSE AND APPLICABILITY.

The City of Kyle (“City”) recognizes that the State of Texas has delegated to the City the fiduciary duty, as a trustee, to manage the public right-of-way for the health, safety, and welfare of the public to Texas municipalities.

Purpose: Loc. Gov. Code, Chapter 284 allows certain wireless Network Providers to install in the public rights-of-way their wireless facilities, described and defined in Tex. Loc. Gov. Code, Chapter 284, Sec. 284.002 as “Micro Network Nodes”, “Network Nodes”, and “Node Support Poles”.

As expressly allowed by Tex. Loc. Gov. Code, Chapter 284, Section 284.108, and pursuant to its police power authority reserved in Sec. 284.301¹, the City enacts these Design Guidelines in order to meet its fiduciary duty to the citizens of the City, and to give assistance and guidance to wireless telecommunications providers to assist such companies in the timely, efficient, safe and aesthetically pleasing installation of technologically competitive equipment.

Applicability: This Design Manual is for siting and criteria for the installation Wireless Facilities, including Micro Network Nodes, Network Nodes, Node Support Poles and related ground equipment being installed pursuant to Loc. Gov. Code, Chapter 284

This Design Manual shall apply to any sitings, installations, collocations in, on, over or under the public rights-of-way of Network nodes, Node support poles, Micro network nodes, Distributed Antenna Systems, microwave communications or other Wireless Facilities, by whatever nomenclature, whether they are installed pursuant to Chapter 284, or installed pursuant to an agreement as agreed to and consented to by the City in its discretion, or installed as may otherwise be allowed by state law.

City Rights-of-Way Management Ordinance: A Network Provider shall comply with the City’s Rights-of-Way Management Ordinance except where in conflict with this Design Manual or Chapter 284, Subchapter C.

SECTION 2. DEFINITIONS.

The definitions as used in Tx. Loc. Gov. Code, Chapter 284, Sec. 284.002 shall be used in this Design Manual, unless otherwise noted in this Section 2, below.²

Abandon and its derivatives means the facilities installed in the right-of-way (including by way of example but not limited to: poles, wires, conduit, manholes, handholes, cuts, network nodes and node support poles, or portion thereof) that have been left by Provider in an unused or non-functioning condition for more than 120 consecutive calendar days unless, after notice to Provider, Provider has established to the reasonable satisfaction of the City that the applicable facilities, or portion thereof, is still in active use.

Antenna means communications equipment that transmits or receives electromagnetic radio frequency signals used in the provision of wireless services.

Applicable codes means:

- (A) uniform building, fire, electrical, plumbing, or mechanical codes adopted by a recognized national code organization; and
- (B) local amendments to those codes to the extent not inconsistent with Chapter 284.

City means the City of Kyle, Texas or its lawful successor.

City Manager shall mean City Manager or designee

Chapter 284 means Tex. Loc. Gov. Code, Chapter 284.

Collocate and *collocation* mean the installation, mounting, maintenance, modification, operation, or replacement of network nodes in a public right-of-way on or adjacent to a pole.

Concealment or Camouflaged means any Wireless Facility or Pole that is covered, blended, painted, disguised, camouflaged or otherwise concealed such that the Wireless Facility blends into the surrounding environment and is visually unobtrusive as allowed as a condition for City advance approval under Chapter 284, Sec. 284.105 in Historic or Design Districts. A Concealed or Camouflaged Wireless Facility or Pole also includes any Wireless Facility or Pole conforming to the surrounding area in which the Wireless Facility or Pole is located and may include, but is not limited to hidden beneath a façade, blended with surrounding area design, painted to match the supporting area, or disguised with artificial tree branches.

Decorative pole means a streetlight pole specially designed and placed for aesthetic purposes and on which no appurtenances or attachments, other than specially designed informational or directional signage or temporary holiday or special event attachments, have been placed or are permitted to be placed according to nondiscriminatory municipal codes.

Overlay District means an area that is zoned, or otherwise designated by municipal code, and for which the city maintains and enforces unique design and aesthetic standards on a uniform and nondiscriminatory basis.

Disaster emergency or *disaster* or *emergency* means an imminent, impending, or actual natural or humanly induced situation wherein the health, safety, or welfare of the residents of the city is threatened, and includes, but is not limited to any declaration of emergency by city state or federal governmental authorities.

Distributed Antenna System or DAS shall be included as a type of “Network Node.”

Easement means and shall include any public easement or other compatible use created by dedication, or by other means, to the city for public utility purposes or any other purpose whatsoever. "Easement" shall include a private easement used for the provision of utilities.

Federal Communications Commission or FCC means the Federal Administrative Agency, or lawful successor, authorized to oversee cable television and other multi-channel regulation on a national level.

Highway right-of-way means right-of-way adjacent to a state or federal highway.

Historic district means an area that is zoned or otherwise designated as a historic district under municipal, state, or federal law.

Law means common law or a federal, state, or local law, statute, code, rule, regulation, order, or ordinance.

Local means within the geographical boundaries of the City.

Location means the City approved and lawfully permitted location for the Network Node.

Macro tower means a guyed or self-supported pole or monopole greater than the height parameters prescribed by Chapter 284, Section 284.103 and that supports or is capable of supporting antennas.

Mayor means the Mayor for the City.

Micro network node means a network node that is not larger in dimension than 24 inches in length, 15 inches in width, and 12 inches in height, and that has an exterior antenna, if any, not longer than 11 inches.

Municipal park means an area that is zoned or otherwise designated by municipal code as a public park for the purpose of recreational activity.

Municipally owned utility pole means a utility pole owned or operated by a municipally owned utility, as defined by Section 11.003, Utilities Code, and located in a public right-of-way.

MUTCD means Manual of Uniform Traffic Control Devices.

Network node means equipment at a fixed location that enables wireless communications between user equipment and a communications network. The term:

(A) includes:

- (i) equipment associated with wireless communications;
- (ii) a radio transceiver, an antenna, a battery-only backup power supply, and comparable equipment, regardless of technological configuration; and
- (iii) coaxial or fiber-optic cable that is immediately adjacent to and directly associated with a particular collocation; and

(B) does not include:

- (i) an electric generator;
- (ii) a pole; or
- (iii) a macro tower.

Network provider means:

- (A) a wireless service provider; or
- (B) a person that does not provide wireless services and that is not an electric utility but builds or installs on behalf of a wireless service provider:
 - (i) network nodes; or
 - (ii) node support poles or any other structure that supports or is capable of supporting a network node.

Node support pole means a pole installed by a network provider for the primary purpose of supporting a network node.

Permit means a written authorization for the use of the public right-of-way or collocation on a service pole required from a municipality before a network provider may perform an action or initiate, continue, or complete a project over which the municipality has police power authority.

Pole means a service pole, municipally owned utility pole, node support pole, or utility pole.

Private easement means an easement or other real property right that is only for the benefit of the grantor and grantee and their successors and assigns.

Provider has the same meaning as “Network Provider.”

Public right-of-way means the area on, below, or above a public roadway, highway, street, public sidewalk, alley, waterway, or utility easement in which the municipality has an interest. The term does not include:

- (A) a private easement; or
- (B) the airwaves above a public right-of-way with regard to wireless telecommunications.

Public right-of-way management ordinance means Sec. 38-111, Sec. 41-141(e), and Chapter. 41, Exhibit A, Sec. 12(D)(2) of the Kyle Code of Ordinances.

Service pole means a pole, other than a municipally owned utility pole, owned or operated by a municipality and located in a public right-of-way, including:

- (A) a pole that supports traffic control functions;
- (B) a structure for signage;
- (C) a pole that supports lighting, other than a decorative pole; and
- (D) a pole or similar structure owned or operated by a municipality and supporting only network nodes.

Small cell shall be included as a type of “Network Node.”

Street or public way or public right-of-way or public rights-of-way or rights-of-way or right-of-way means the surface of, and the space above and below a public street, road, highway, freeway, land, path, public way or place, alley, court, boulevard, parkway, drive, or other easement now or hereafter held by or under the control of the city, to which the city holds the property rights

in regard to the use for utilities, excluding easements not intended for public works or public utility facilities but shall not include property of city which is not a dedicated public right-of-way, street, highway, or alley. Neither the inclusion of this definition nor the provisions hereof shall be construed to grant any right or privilege to utilize or occupy the city rights-of-way absent an expressed agreement of the city or by authority expressly granted by state law.

SWPPP shall mean Storm Water Pollution Prevention Plan.

TAS means Texas Accessibility Standards.

Traffic Signal means any device, whether manually, electrically, or mechanically operated by which traffic is alternately directed to stop and to proceed.

Transport facility means each transmission path physically within a public right-of-way, extending with a physical line from a network node directly to the network, for the purpose of providing backhaul for network nodes.

Underground Requirement Area shall mean means an area where poles, overhead wires, and associated overhead or above ground structures have been removed and buried or have been approved for burial underground pursuant to municipal ordinances, zoning regulations, state law, private deed restrictions, and other public or private restrictions, that prohibit installing aboveground structures in a public right-of-way.

User means a person or organization which conducts a business over facilities occupying the whole or a part of a public street or right-of-way, depending on the context.

Utility pole means a pole that provides:

- (A) electric distribution with a voltage rating of not more than 34.5 kilovolts; or
- (B) services of a telecommunications provider, as defined by Chapter 284, Section 51.002, Utilities Code.

Wireless service means any service, using licensed or unlicensed wireless spectrum, including the use of Wi-Fi, whether at a fixed location or mobile, provided to the public using a network node.

Wireless service provider means a person that provides wireless service to the public.

Wireless facilities mean “Micro Network Nodes,” “Network Nodes,” and “Node Support Poles” as defined in Texas Local Government Code Chapter 284.

SECTION 3. PROHIBITED AND PREFERRED LOCATIONS OF MICRO NETWORK NODE, NETWORK NODE, NODE SUPPORT POLE AND RELATED GROUND EQUIPMENT.

A. Prohibited or Restricted Areas for Certain Wireless facilities, except with Separate City Agreement or Subject to Concealment Conditions.

1. ***Municipal Parks and Residential Areas.*** In accordance with Chapter 284, Sec. 284.104 (a), a Network Provider may not install a Node Support Pole in a public right-of-way without the City's discretionary, nondiscriminatory, and written consent if the public right-of-way is in a Municipal park or is adjacent to a street or thoroughfare that is:

(1) not more than 50 feet wide of paved street surface, being the area measured as the shortest distance between the inside of the curb to the inside of the opposite curb, or the area measured as the shortest distance between the two parallel edges of the paved roadway for vehicular travel where there is no curb; and

(2) adjacent to single-family residential lots or other multifamily residences or undeveloped land that is designated for residential use by zoning or deed restrictions.

1.1. In accordance with Chapter 284, Sec. 284.104 (b), a Network Provider installing a Network Node or Node Support Pole in a public right-of-way described above shall comply with private deed restrictions and other private restrictions in the area that apply to those facilities.

Each permit application shall disclose if it is within a Municipal Park and Residential Areas as described above.

2. ***Historic Districts and Overlay Districts.*** In accordance with Chapter 284, Sec. 284.105, a Network Provider must obtain advance written approval from the City before collocating Network Nodes or installing Node Support Poles in an Overlay District with Decorative Poles or in an area of the City zoned or otherwise designated as an Overlay District or Historic District.

2.1. As a condition for approval of Network Nodes or Node Support Poles in Overlay Districts with Decorative Poles or in a Historic District, the City shall require reasonable design or Concealment measures for the Network Nodes or Node Support Poles. Therefore, any request for installations in an Overlay District with Decorative Poles or in a Historic District, must be accompanied with proposed Concealment measures in the permit applications.

2.2. The City requests that a Network Provider explore the feasibility of using Camouflage measures to improve the aesthetics of the Network Nodes, Node Support Poles, or related ground equipment, or any portion of the nodes, poles, or equipment, to minimize the impact to the aesthetics in Overlay Districts or in an Historic District.

2.3. Network Provider shall comply with and observe all applicable City, State, and federal historic preservation laws and requirements.

2.4. Each permit application shall disclose if it is within an Overlay District with Decorative Poles or in an area of the City zoned or otherwise designated as an Overlay District or Historic District.

3. **Historic Landmarks.** A Network Provider is discouraged from installing a Network Node or Node Support Pole within 300 feet of a historic site or structure or Historic Landmark recognized by the City, state or federal government (*see, for example, and not limited to* §442.001(3) of the Texas Government Code, and 16 U.S.C. §470), as of the date of the submission of the permit. It is recommended that each permit application disclose if it is within 300 feet of such a structure.

4. **Compliance with Undergrounding Requirements.** In accordance with Chapter 284, Sec. 284.107, a Network Provider shall comply with nondiscriminatory undergrounding requirements, including municipal ordinances, zoning regulations, state law, private deed restrictions, and other public or private restrictions, that prohibit installing aboveground structures in a public right-of-way without first obtaining zoning or land use approval.

4.1 Areas may be designated from time to time by the City as Underground Requirement Areas in accordance with filed plats, and or conversions of overhead to underground areas, as may be allowed by law.

4.2 Each permit application shall disclose if it is within an area that has undergrounding requirements.

B. Least preferable locations.

1. **Residential Areas and Parks.** A Network Provider is discouraged from installing a Network Node on an existing pole in a public right-of-way without written consent from the City Council if the public right-of-way is located in or adjacent to a street or thoroughfare that is adjacent to a municipal park or single-family residential lots or other multifamily residences or undeveloped land that is designated for residential use by zoning or deed restrictions.

1.1 In accordance with Chapter 284, Sec. 284.104 (b) a Network Provider installing a Network Node or a Node Support Pole in a public right-of-way shall comply with private deed restrictions and other private restrictions in the area that apply to those facilities.

2. **Historic Districts and Overlay Districts.** A Network Provider is discouraged from installing a Network Node or a Node Support Pole in the public right-of-way in any area designated by the City as an Overlay Districts or in an area of the City zoned or otherwise designated as a Historic District unless such a Network Node or a new Node Support Pole is camouflaged.

C. Most preferable locations

1. *Industrial areas* if not adjacent to a Municipal Park, Residential area, Historic District or Design District.

2. *Highway Rights-of-Way* areas if not adjacent to a Municipal Park, Residential area, Historic District or Design District.

3. *Retail and Commercial areas* if not adjacent to a Municipal Park, Residential area, Historic District or Design District.

D. Designated Areas.

1. The City Council may designate an area as a Historic District or a Design District under Chapter 284.105 at any time.

2. Currently designated *Historic Districts* include:

(a) *Historic property*: a district, site, building, structure, significant in American history, architecture, engineering, archeology, or culture at the national, state or local level; and

Historical significance means a district, site, building, structure, or object of 50 years of age, significant in American history, architecture, engineering, archeology, or culture at the national, state or level which has been altered from its original design.

3. The boundaries of the currently designated Overlay Districts are:

- *The I-35 overlay district.* The Interstate Highway 35 corridor conditional use overlay district (the I-35 overlay district) extends from the northernmost city limit boundary at I-35 to the southernmost city limit boundary at I-35, and includes all real property within 1,500 feet of the outer most edge of the highway right-of-way of I-35;
- *The Old Highway 81 overlay district.* The Old Highway 81 corridor conditional use overlay district (the Old Highway 81 overlay district) extends from the intersection of Burleson Street and Old Highway 81 on the north to the intersection of Opal Lane and Old Highway 81 on the south, and includes all real property within 200 feet from the outer most edge of the highway right-of-way of Old Highway 81;
- *The Center Street overlay district.* The Center Street conditional use overlay district (the Center Street overlay district), Center Street is also known as Farm-to-Market Road No. 150, extends from the intersection of Center Street and I-35 on the east to the intersection of Center Street and Rebel Drive on the west, and includes all real property within 200 feet from the centerline of Center Street; and all real property within all central business district-1 (CBD-1) and central business district-2 (CBD-2) zoning districts; and
- *The Rebel Drive overlay district.* The Rebel Drive conditional use overlay district (the Rebel Drive overlay district), Rebel Drive is also known as Farm-to-Market Road No. 150, extends from the intersection of Rebel Drive and Center Street on the south to the

northernmost city limit boundary at Rebel Drive on the north, and includes all real property within 400 feet of the outer most edge of the street right-of-way of Rebel Drive.

- *The FM 1626 Conditional Use Overlay District* (FM 1626 Overlay District). The FM 1626 Overlay District extends from the intersection of FM 1626 and IH 35 on the south and east to the city limit boundary to the north and west, and includes all real property within five hundred (500) feet of the outer most edge of the street right-of-way of FM 150 East.
- *The FM 150 East Conditional Use Overlay District* (FM 150 East Overlay District). The FM 150 East Overlay District extends from the intersection of FM 150 East and IH 35 on the west to the city limit boundary on the east, and includes all real property within four hundred (400) feet of the outer most edge of the street right-of-way of FM 150 East.
- *The Goforth Road Conditional Use Overlay District* (Goforth Road Overlay District). Goforth Road is also known as County Road 157. The Goforth Road Overlay District extends from the intersection of Goforth Road and IH-35 on the west to the city limit boundary on the north and east, and includes all real property within 400 hundred (400) feet of the outer most edge of the street right-of way of Goforth Road.

4. The failure to designate an area in this Chapter shall not mean that such an area is not within a defined district, if so designated by the City Commission. Future areas may be designated as one of these Districts at any time. Such a designation does not require a zoning case.

5. While not required under Chapter 284 to designate Underground Compliance Areas to prohibit above ground Wireless facilities, the City may also, from time to time, also designate Underground Compliance Areas. Network Providers must comply with Sec. 38-111, Sec. 41-141(e), and Chapter. 41, Exhibit A, Sec. 12(D)(2) of the City of Kyle Code of Ordinances.

E. Exceptions

The City by its discretionary consent and agreement may grant exception to the above prohibited locations and sizes, but only in a non-exclusive, and non-discriminatory manner, as allowed or required by Chapter 284, Sec. 284.109 and Sec. 284.110.

F. Order of Preference regarding Network Node attachment to existing facilities and New Node Support Poles.

1. *Existing telephone or electrical lines between existing utility poles.* Micro Network Nodes shall only be lashed on existing telephone or electrical lines between existing utility poles (electric poles or telephones poles), with notice to the pole owner as required by the Federal Pole Attachment Act, and not placed on Utility Poles, Node Support Poles or Service Poles.

2. *Existing Utility Poles* (electric poles or telephones poles), shall be the preferred support facility for Network Nodes and related ground equipment.

3. *New node support poles* shall be the least preferred type of allowed facility for attachment of Network Nodes.

4. *Municipal Service Poles:*

a. *Non-decorative street lights* with a height of more than 20 feet.

b. *Traffic signal structures* when such installation will not interfere with the integrity of the facility and will not interfere with the safety of public and in accordance with an agreement as allowed by Chapter 284, Sec. 285.056 and Sec. 284.101 (a) (3), and (b).

c. *Street signage* shall be a low priority use for attachment of a Network Node.

d. *Other municipal Service pole* use is discouraged.

Ground Equipment. Ground equipment should be minimal and the least intrusive.

SECTION 4. GUIDELINES ON PLACEMENT.

A. Generally.

In accordance with Chapter 284.102, a Network Provider shall construct and maintain Network Nodes and Node Support Poles in a manner that does not:

1. obstruct, impede, or hinder the usual travel or public safety on a public right-of-way;
2. obstruct the legal use of a public right-of-way by other utility providers;
3. violate nondiscriminatory applicable codes;
4. violate or conflict with the municipality's publicly disclosed public right-of-way management ordinance or this Design Manual.
5. violate the federal Americans with Disabilities Act of 1990 (42 U.S.C. Section 12101 et seq.).

B. General Requirements and Information:

1. *Size Limits.* Network Providers shall provide detailed drawings, with calculations to show strict conformity to the size limitations as set forth in Chapter 284, in accordance with, but not limited to Chapter 284, Sec. 284.002, size of a Micro Network Node, Sec. 284.003, Size of Network Nodes, and Sec. 284.103, Max. pole height, with each application and with each request for a permit for each location.³

2. *State and Federal Rights-of-way permit.* If the project lies within a Highway Right-of-Way, the applicant must provide evidence of a permit from the State or Federal Government.

3. *Confirmation of non-interference with City Safety Communication Networks.*

a. The Network Provider needs to provide analysis that the proposed network node shall not cause any interference with City public safety radio system, traffic signal light system, or other city safety communications components in accordance with Chapter 284, Sec. 284.304.

b. It shall be the responsibility of the Network Provider to evaluate, prior to making application for permit, the compatibility between the existing City infrastructure and Provider's proposed Network Node. A Network Node shall not be installed in a location that causes any interference. Network Nodes shall not be allowed on City's public safety radio infrastructure.

4. Improperly Located Network Node facilities, Node Support Poles and related ground equipment:

a. Improperly Located Network Node facilities, Node Support Poles and related ground equipment shall not impede pedestrian or vehicular traffic in the Right-of-Way. If any Network Node facilities, Node Support Poles or ground equipment is installed in a location that is not in accordance with the plans approved by the City Manager and impedes pedestrian or vehicular traffic or does not comply or otherwise renders the Right-of-Way non-compliant with applicable Laws, including the American Disabilities Act, then Network Provider shall promptly remove the Network Node facilities, Node Support Poles or ground equipment.

b. Notice to Remove unauthorized facilities and relocate and penalty: After 30 days' notice to remove Network Node facilities, Node Support Poles or ground equipment that is located in the incorrect permitted location, if not relocated the Network Provider shall be subject to a penalty of \$50 per day penalty until the Network Node facilities, Node Support Poles or ground equipment is relocated to the correct area within the permitted Location, regardless of whether or not the Network Provider's contractor, subcontractor, or vendor installed the Network Node facilities, Node Support Poles or ground equipment in strict conformity with the public right-of-way management ordinance, and other applicable ordinances concerning improperly located facilities in the rights-of-way.

B. Underground Requirement Areas.

1. In accordance with Chapter 284.107, a Network Provider shall, in relation to installation for which the City approved a permit application, comply with nondiscriminatory undergrounding requirements, including municipal ordinances, zoning regulations, state law, private deed restrictions, and other public or private restrictions, that prohibit installing aboveground structures in a public right-of-way without first obtaining zoning or land use approval.

2. If a location is designated by the City to transits to be an Underground Requirement Area, then a Network Provider's permit for the location of the Micro Network Node, Network Node, Node Support Pole, and related ground equipment at such location will be revoked 90 days after the designation, with removal of said the Micro Network Node, Network Node, Node Support Pole, and related ground equipment at such location

within 90 days of such designation, or as otherwise reasonably allowed by the City for the transition of other overhead facilities.

C. Network Node facilities placement:

1. *Right-of-Way:* Network Node facilities, Node Support Poles and related ground equipment shall be placed, as much as possible, within two feet of the outer edge of the Right-of-Way line to minimize any obstruction, impediment, or hindrance to the usual travel or public safety on a public right-of-way.

2. *Height above ground.* Network Node attachments to a pole shall be installed at least eight (8) feet above the ground in accordance with Chapter 284, Sec. 284.108, and if a Network Node attachment is projecting toward the street, for the safety and protection of the public and vehicular traffic, the attachment shall be installed no less than sixteen (16) feet above the ground.

3. *Protrusions.* In accordance with Chapter 284, Sec. 284.003 (a) (1) (C), Sec. 284.003 (a) (2) (C) and Sec. 284.003 (a) (3) (B) no protrusion from the outer circumference of the existing structure or pole shall be more than two (2) feet.

4. *Limit on number of Network Nodes per Site.* There shall be no more than one Network Node on any one Pole.

D. New Node Support Poles.

1. *New Node Support Poles Spacing.* New node support poles shall be spaced apart from existing utility poles or Node Support poles at the same as the spacing between utility poles in the immediate proximity, but no less than at a minimum 300 feet from a utility pole or another Node Support Pole to minimize the hazard of poles adjacent to road ways and to minimize effect on property values and aesthetics on the area.

2. *Height of Node Support Poles or modified Utility Pole.* In accordance with Chapter 284, Sec. 284.103 a Node support pole or modified Utility Pole may not exceed the lesser of:

(1) 10 feet in height above the tallest existing utility pole located within 500 linear feet of the new pole in the same public right-of-way; or

(2) 55 feet above ground level.

E. Ground Equipment.

1. *Ground Equipment near street corners and intersections:* Ground equipment should be minimal and the least intrusive. In accordance with Chapter 284.102 (1), to minimize any obstruction, impediment, or hindrance to the usual travel or public safety on a public right-of-way the maximum line of sight required to add to safe travel of vehicular and pedestrian traffic and in order to maximize that line of sight at street corners and intersections and to minimize hazards at those locations, ground equipment may not be installed within 250 feet of a street corner or a street intersection.

2. *Ground Equipment near Municipal Parks.* For the safety of Municipal park patrons, particularly small children, and to allow full line of sights near Municipal park property, the Network Provider shall not install Ground Equipment in a Right-of-Way that

is within a Park or within 250 feet of the boundary line of a Park, unless approved by the City Manager and Parks Director in writing.

3. *Minimize Ground equipment density*: In accordance with Chapter 284, Sec. 284.102 (1) to enhance the safety requirements of line of sight of pedestrians, particularly small children, the City's designee may deny a request for a proposed Location if the Network Provider installs Network Node ground equipment where existing ground equipment within 300 feet already occupies a footprint of 25 sq. ft. or more.

F. Municipal Service Poles:

1. *In accordance with Agreement*: Installations on all Service Poles shall be in accordance with an agreement as allowed by Chapter 284, Sec. 285.056 and Sec. 284.101 (a) (3), and (b).

2. *Required industry standard pole load analysis*: Installations on all Service Poles shall have an industry standard pole load analysis completed and submitted to the municipality with each permit application indicating that the Service Pole to which the Network Node is to be attached will safely support the load, in accordance with Chapter 284.108.

3. *Height of attachments*: All attachments on all Service Poles shall be at least 8 feet above grade, in accordance with Chapter 284, Sec. 285.108 (a) (1) - (2) and if a Network Node attachment is projecting toward the street, for the safety and protection of the public and vehicular traffic, the attachment shall be installed no less than sixteen (16) feet above the ground.

4. *Installations on Traffic Signals*: Installations on all Traffic signal structures must not interfere with the integrity of the facility in any way that may compromise the safety of the public and must be in accordance with an agreement as allowed by Chapter 284, Sec. 285.056 and Sec. 284.101 (a) (3), and (b). Installation of Network Node facilities on any traffic signal structures shall:

- i. Be encased in a separate conduit than the traffic light electronics;
- ii. Have a separate electric power connection than the traffic signal structure; and
- iii. Have a separate access point than the traffic signal structure.

5. *Installations on Street signage*: Installations on all street signage structures must not interfere with the integrity of the facility in any way that may compromise the safety of the public. Installation of Network Node facilities on any street signage structures that has electrics shall:

- i. Be encased in a separate conduit than any City signage electronics;
 - ii. Have a separate electric power connection than the signage structure;
- and
- iii. Have a separate access point than the signage structure.

SECTION 5. GENERAL AESTHETIC REQUIREMENTS

A. New Node Support Pole Spacing.

New node support poles shall be at a minimum 300 feet from a utility pole or another Node Support Pole to minimize the hazard of poles adjacent to road ways and to minimize effect on property values and aesthetics on the area.

B. Allowed Colors.

Colors in Historic Districts and Overlay Districts must be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances (Historic Districts and Overlay Districts) except to the extent not consistent with Chapter 284.

SECTION 6. ELECTRICAL SUPPLY

A. Provider Responsible for Electricity. Network Provider shall be responsible for obtaining any required electrical power service to the Micro Network Node, Network Node facilities, Node Support Poles and ground equipment. The City shall not be liable to the Network Provider for any stoppages or shortages of electrical power furnished to the Micro Network Node, Network Node facilities, Node Support Poles or ground equipment, including without limitation, stoppages or shortages caused by any act, omission, or requirement of the public utility serving the structure or the act or omission of any other tenant or Network Provider of the structure, or for any other cause beyond the control of the City.

B. Generators Prohibited. Network Provider shall not allow or install generators or back-up generators in the Right-of-Way in accordance with Chapter 284, Sec. 284.002 (12) (B) (1).

SECTION 7. INSURANCE, INDEMNITY, BONDING AND SECURITY DEPOSITS.

1. Insurance, bonding and security deposits shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

2. Indemnity shall be in accordance with Chapter 284, Sec. 284.302, as provided for in Chapter 283, Sec. 283.057 (a) and (b) of the Texas Loc. Gov't Code.

SECTION 8-19 RESERVED

SECTION 20. DESIGN MANUAL - UPDATES

Placement or Modification of Micro Network Node, Network Node, Node Support Pole and related ground equipment shall comply with the City's Design Manual at the time the Permit for installation or Modification is approved and as amended from time to time.

¹ Sec. 284.301. LOCAL POLICE-POWER-BASED REGULATIONS. (a) Subject to this chapter and applicable federal and state law, a municipality may continue to exercise zoning, land use, planning, and permitting authority in the municipality's boundaries, including with respect to utility poles.

(b) A municipality may exercise that authority to impose police-power-based regulations for the management of the public right-of-way that apply to all persons subject to the municipality.

(c) A municipality may impose police-power-based regulations in the management of the activities of network providers in the public right-of-way only to the extent that the regulations are reasonably necessary to protect the health, safety, and welfare of the public.

² The definitions as used in Tx. Loc. Gov. Code, Chapter 284, Sec. 284.002 shall be used in this Design Manual.

Tex. Loc. Gov. Code, Chapter 284, Sec. 284.002. DEFINITIONS. In this chapter:

(1) "Antenna" means communications equipment that transmits or receives electromagnetic radio frequency signals used in the provision of wireless services.

(2) "Applicable codes" means:

(A) uniform building, fire, electrical, plumbing, or mechanical codes adopted by a recognized national code organization; and

(B) local amendments to those codes to the extent not inconsistent with this chapter.

(3) "Collocate" and "collocation" mean the installation, mounting, maintenance, modification, operation, or replacement of network nodes in a public right-of-way on or adjacent to a pole.

(4) "Decorative pole" means a streetlight pole specially designed and placed for aesthetic purposes and on which no appurtenances or attachments, other than specially designed informational or directional signage or temporary holiday or special event attachments, have been placed or are permitted to be placed according to nondiscriminatory municipal codes.

(5) "Design district" means an area that is zoned, or otherwise designated by municipal code, and for which the city maintains and enforces unique design and aesthetic standards on a uniform and nondiscriminatory basis.

(6) "Historic district" means an area that is zoned or otherwise designated as a historic district under municipal, state, or federal law.

(7) "Law" means common law or a federal, state, or local law, statute, code, rule, regulation, order, or ordinance.

(8) "Macro tower" means a guyed or self-supported pole or monopole greater than the height parameters prescribed by Section 284.103 and that supports or is capable of supporting antennas.

(9) "Micro network node" means a network node that is not larger in dimension than 24 inches in length, 15 inches in width, and 12 inches in height, and that has an exterior antenna, if any, not longer than 11 inches.

(10) "Municipally owned utility pole" means a utility pole owned or operated by a municipally owned utility, as defined by Section 11.003, Utilities Code, and located in a public right-of-way.

(11) "Municipal park" means an area that is zoned or otherwise designated by municipal code as a public park for the purpose of recreational activity.

(12) "Network node" means equipment at a fixed location that enables wireless communications between user equipment and a communications network. The term:

(A) includes:

(i) equipment associated with wireless communications;

(ii) a radio transceiver, an antenna, a battery-only backup power supply, and comparable equipment, regardless of technological configuration; and

(iii) coaxial or fiber-optic cable that is immediately adjacent to and directly associated with a particular collocation; and

-
- (B) does not include:
- (i) an electric generator;
 - (ii) a pole; or
 - (iii) a macro tower.
- (13) "Network provider" means:
- (A) a wireless service provider; or
 - (B) a person that does not provide wireless services and that is not an electric utility but builds or installs on behalf of a wireless service provider:
 - (i) network nodes; or
 - (ii) node support poles or any other structure that supports or is capable of supporting a network node.
- (14) "Node support pole" means a pole installed by a network provider for the primary purpose of supporting a network node.
- (15) "Permit" means a written authorization for the use of the public right-of-way or collocation on a service pole required from a municipality before a network provider may perform an action or initiate, continue, or complete a project over which the municipality has police power authority.
- (16) "Pole" means a service pole, municipally owned utility pole, node support pole, or utility pole.
- (17) "Private easement" means an easement or other real property right that is only for the benefit of the grantor and grantee and their successors and assigns.
- (18) "Public right-of-way" means the area on, below, or above a public roadway, highway, street, public sidewalk, alley, waterway, or utility easement in which the municipality has an interest. The term does not include:
- (A) a private easement; or
 - (B) the airwaves above a public right-of-way with regard to wireless telecommunications.
- (19) "Public right-of-way management ordinance" means an ordinance that complies with Subchapter C.
- (20) "Public right-of-way rate" means an annual rental charge paid by a network provider to a municipality related to the construction, maintenance, or operation of network nodes within a public right-of-way in the municipality.
- (21) "Service pole" means a pole, other than a municipally owned utility pole, owned or operated by a municipality and located in a public right-of-way, including:
- (A) a pole that supports traffic control functions;
 - (B) a structure for signage;
 - (C) a pole that supports lighting, other than a decorative pole; and
 - (D) a pole or similar structure owned or operated by a municipality and supporting only network nodes.
- (22) "Transport facility" means each transmission path physically within a public right-of-way, extending with a physical line from a network node directly to the network, for the purpose of providing backhaul for network nodes.
- (23) "Utility pole" means a pole that provides:
- (A) electric distribution with a voltage rating of not more than 34.5 kilovolts; or
 - (B) services of a telecommunications provider, as defined by Section 51.002, Utilities Code.

(24) "Wireless service" means any service, using licensed or unlicensed wireless spectrum, including the use of Wi-Fi, whether at a fixed location or mobile, provided to the public using a network node.

(25) "Wireless service provider" means a person that provides wireless service to the public.

³ Sec. 284.002. DEFINITIONS (8) "Micro network node" means a network node that is not larger in dimension than 24 inches in length, 15 inches in width, and 12 inches in height, and that has an exterior antenna, if any, not longer than 11 inches.

Sec. 284.003. LIMITATION ON SIZE OF NETWORK NODES. (a) Except as provided by Section 284.109, a network node to which this chapter applies must conform to the following conditions:

- (1) each antenna that does not have exposed elements and is attached to an existing structure or pole:
 - (A) must be located inside an enclosure of not more than six cubic feet in volume;
 - (B) may not exceed a height of three feet above the existing structure or pole; and
 - (C) may not protrude from the outer circumference of the existing structure or pole by more than two feet;
 - (2) if an antenna has exposed elements and is attached to an existing structure or pole, the antenna and all of the antenna's exposed elements:
 - (A) must fit within an imaginary enclosure of not more than six cubic feet;
 - (B) may not exceed a height of three feet above the existing structure or pole; and
 - (C) may not protrude from the outer circumference of the existing structure or pole by more than two feet;
 - (3) the cumulative size of other wireless equipment associated with the network node attached to an existing structure or pole may not:
 - (A) be more than 28 cubic feet in volume; or
 - (B) protrude from the outer circumference of the existing structure or a node support pole by more than two feet;
 - (4) ground-based enclosures, separate from the pole, may not be higher than three feet six inches from grade, wider than three feet six inches, or deeper than three feet six inches; and
 - (5) pole-mounted enclosures may not be taller than five feet.
- (b) The following types of associated ancillary equipment are not included in the calculation of equipment volume under Subsection (a):
- (1) electric meters;
 - (2) concealment elements;
 - (3) telecommunications demarcation boxes;
 - (4) grounding equipment;
 - (5) power transfer switches;
 - (6) cut-off switches; and
 - (7) vertical cable runs for the connection of power and other services.
- (c) Equipment attached to node support poles may not protrude from the outer edge of the node support pole by more than two feet.

(d) Equipment attached to a utility pole must be installed in accordance with the National Electrical Safety Code, subject to applicable codes, and the utility pole owner's construction standards.