



Design Manual
by the City of Shenandoah,
Texas

for the
Installation of Network Nodes and Node Support Poles
pursuant to Tex. Loc. Gov. Code, Chapter 284.

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SECTION 1. PURPOSE AND APPLICABILITY.

The City of Shenandoah, Texas (“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 the installation and construction of 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 construction, 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 Tex. 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 Shenandoah, Texas or its lawful successor.

City Administrator shall mean City Administrator or designee

City Council means the municipal governing body of the City of Shenandoah, Texas.

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. Solar Street lights are considered a decorative pole.

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.

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 and its Extraterritorial Jurisdiction.

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.

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 an ordinance that complies with Chapter 284, Subchapter C.

SCADA or Supervisory Control and Data Acquisition systems means a category of software application programs and hardware used by the City for process control and gathering of data in real time from remote locations in order to monitor equipment and conditions of the City public water and wastewater utility facilities. These systems may utilize both cable and wireless communications.

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 means only the paved portion of the right-of-way used for vehicular travel, being the area between the inside of the curb to the inside of the opposite curb, or the area between the two parallel edges of the paved roadway for vehicular travel where there is no curb. A “Street” is generally part of, but smaller in width than the width of the entire right-of-way, while a right-of-way may include sidewalks and utility easements, a “Street” does not. A “street” does not include the curb or the sidewalk, if either are present at the time of a permit application or if added later.

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:

a. 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, 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 a zoned Residential area, property primarily used for single family residential use, 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.

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

2. ***Historic District and Design Districts.*** A Network Provider must obtain advance written approval from the City before collocating Network Nodes or installing Node Support Poles in a Design District with Decorative Poles or in an area of the City zoned or otherwise designated as a Design District or Historic District.

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

2.3. A 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 a Design District with Decorative Poles or in an area of the City zoned or otherwise designated as a Design District or Historic District.

3. ***Historic Landmarks.*** Network Nodes and Node Support Poles are discouraged within 300 feet of a historic site or Historic Landmark recognized by the City. Only under exceptional circumstances will a Network Node or Node Support Pole be permitted 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). Each permit application must disclose if it is with 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. Most preferable locations

1. *Industrial areas* if not adjacent to a Municipal Park, Residential area, zoned Residential area, property primarily used for single family residential use, Historic District or Design District.

2. *Highway Rights-of-Way* areas if not adjacent to a Municipal Park, Residential area, zoned Residential area, property primarily used for single family residential, Historic District or Design District.

3. *Retail and Commercial areas* if not adjacent to a Municipal Park, Residential area, zoned Residential area, property primarily used for single family residential, Historic District or Design District.

C. 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. 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 Council. Future areas may be designated as one of these Districts at any time. Such a designation does not require a zoning case.

3. 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.

E. Exceptions

The City by its discretionary consent and agreement may grant exceptions 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 and Section 12.1 of this Design Manual.

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. *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 not allowed without the express written permission of the City.

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

5. *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 City'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 or SCADA 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, SCADA 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 Administrator 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 immediately 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 of 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 \$500.00 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 City Rights-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 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.

3. Before commencing underground installation, 811 Dig Texas and the City, Department of Public Works, must be called so that the area can be flagged for underground utilities.

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 without the express written permission of the City.

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:

- a. 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
- b. 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 Administrator 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 other existing ground equipment is located within 300 feet of an area already occupying a footprint of 25 sq. ft. or more.

4. *Water, Sewer and Storm Drainage Lines:*

Special precautions must be taken where underground fiber optic cable is installed in public street right-of-ways commonly used for utility corridors.

- a. Underground utilities and service connections must be identified prior to excavation. "Dig Alert," "One Call," or similar underground utility contractor AND the City must be contacted to identify the locations of subsurface utilities.
- b. If temporary disruption of service is required, the installation contractor must notify the City, the service provider, and customers at least 24 hours in advance. No service on such lines may be disrupted until prior approval from the City and the service provider.
- c. At locations where the fiber optic cable will cross other subsurface utilities or structures, the cable must be installed to provide a minimum of 12 inches of vertical clearance between it and the other subsurface utilities or structures, while still maintaining the other applicable minimum depth

requirement. To maintain the minimum depth requirement, the cable must be installed under the existing utility. If the minimum 12-inch clearance cannot be obtained between the proposed cable facility and the existing utility, the fiber optic cable must be encased in steel pipe of avoid future damage.

- d. *Existing Water Lines:* No communication lines shall be placed on top of a water line but may be placed to the side of a water line at least 5 feet from the center line of the water line. When crossing a water line, a 12-inch vertical or horizontal clearance must be maintained. Poles must be at least 6 feet from a water line.
- e. *Existing Sewer Lines:* No communication lines shall be placed on top of a sewer line but may be placed to the side of a sewer line at least 5 feet from the center line of the sewer line. When crossing a sewer line, a 12-inch vertical or horizontal clearance must be maintained. Poles must be at least 6 feet from a sewer line.
- f. *Existing Storm Drainage Lines:* No communication lines shall be placed on top of a storm drainage line but may be placed to the side of a storm drainage line at least 5 feet from the center line of the storm drainage line. When crossing a storm drainage line, a 12-inch vertical or horizontal clearance must be maintained. Poles must be at least 6 feet from a storm drainage line.

5. Blocking streets, roads, alleys or lanes:

Texas Department of Transportation (TxDOT) standards must be followed for work zone areas that will block streets, roads, alleys or lanes. A traffic plan must be approved to the City prior to construction.

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:

- a. Be encased in a separate conduit than the traffic light electronics and painted to match the pole;
- b. Have a separate electric power connection than the traffic signal structure; and
- c. Have a separate access point than the traffic signal structure; and

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:

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

6. *Restoration of City facilities and private property*: The Network Provider shall be responsible for repairing any damage to any street, street right-of-way, ditch or any structure to its original condition immediately upon completing the installation. Any change to the slope of the land must be remedied, and there must be replacement of top soil and grass to its original condition.

SECTION 5. GENERAL AESTHETIC REQUIREMENTS

A. Concealment.

1. Concealment or camouflaging of Network Nodes and Node support poles is required by the City in Design Districts with Decorative Poles and in Historic Districts.

2. The Network Node facilities shall be concealed or enclosed as much as possible in an equipment box, cabinet, or other unit that may include ventilation openings. External cables and wires hanging off a pole shall be sheathed or enclosed in a conduit, so that wires are protected and not visible or visually minimized to the extent possible 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.

B. New Node Support Pole Spacing.

Unless expressly approved by the City in writing, all 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.

C. Allowed Colors.

1. All poles must be powder coated black. Other equipment must be green or brown as approved by the City Administrator.
2. Colors in Historic Districts and Design Districts must be approved by the City Administrator.

SECTION 6. ELECTRICAL SUPPLY

A. 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.

B. Network Provider shall not allow or install generators or back-up generators in the Public Right-of-Way.

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

A. 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.

B. 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. REQUIREMENTS IN REGARD TO REMOVAL, REPLACEMENT, MAINTENANCE AND REPAIR

A. REMOVAL OR RELOCATION BY NETWORK PROVIDER.

1. Removal and relocation by the Network provider of its Micro Network Node, Network Node facilities, Node Support Pole or related ground equipment at its own discretion, 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. Relocation requires the express written approval of the City.

2. If the Network Provider removes or seeks to relocate a Micro Network Node, Network Node facilities, Node Support Pole or related ground equipment at its own discretion, it shall notify the City Administrator in writing not less than 10 business days prior to removal or relocation. Network Provider shall obtain all Permits required for relocation or removal of its Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment prior to relocation or removal.

3. The City shall not issue any refunds for any amounts paid by Network Provider for Micro Network Node, Network Node facilities, Node Support Poles or related ground equipment that have been removed.

B. REMOVAL OR RELOCATION REQUIRED FOR CITY PROJECT.

1. Removal and Relocation of Network Provider's Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof required for a City project 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, Sec. 284.107, except as provided in existing state and federal law.

2. In accordance with Chapter 284, Sec. 284.107, except as provided in existing state and federal law, a Network Provider shall relocate or adjust Micro Network Node, Network Node, Node Support Pole and related ground equipment in a public right-of-way in a timely manner and without cost to the City managing the public right-of-way

3. Network Provider understands and acknowledges that the City may require Network Provider to remove or relocate its Micro Network Node, Network Node, Node Support Pole and related ground equipment, or any portion thereof from the Right-of-Way for City construction projects as allowed by state and federal law, including the common-law.

4. Network Provider shall, at the City Administrator's direction, remove or relocate the same at Network Provider's sole cost and expense, except as otherwise provided in existing state and federal law, whenever the City Administrator reasonably determines that the relocation or removal is needed for any of the following purposes: Required for the construction, completion, repair, widening, relocation, or maintenance of, or use in connection with, any City construction or maintenance project of a street or public rights-of-way to enhance the traveling public's use for travel and transportation.

5. If Network Provider fails to remove or relocate the Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof as requested by the City Administrator within 90 days of Network Provider's receipt of the request, then the City shall be entitled to remove the Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof at Network Provider's sole cost and expense, without further notice to Network Provider.

6. Network Provider shall, within 30 days following issuance of invoice for the same, reimburse the City for its reasonable expenses incurred in the removal (including, without limitation, overhead and storage expenses) of the Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof.

C. REMOVAL REQUIRED BY CITY FOR SAFETY AND IMMINENT DANGER REASONS.

1. Network Provider shall, at its sole cost and expense, promptly disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment within the time frame and in the manner required by the City Administrator if the City Administrator reasonably determines that the disconnection, removal, or relocation of any

part of a Micro Network Node, Network Node, Node Support Pole and related ground equipment (a) is necessary to protect the public health, safety, welfare, or City property, (b) the Micro Network Node, Network Node, Node Support Pole and related ground equipment, or portion thereof, is adversely affecting proper operation of streetlights or City property, or (c) Network Provider fails to obtain all applicable licenses, Permits, and certifications required by Law for its Micro Network Node, Network Node, Node Support Pole and related ground equipment, or use of any Location, except to the extent not consistent with Chapter 284.

2. If the City Administrator reasonably determines that there is imminent danger to the public, then the City may immediately disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment at the Network Provider's sole cost and expense, except to the extent not consistent with Chapter 284.

3. Network Provider shall, at its sole cost and expense, promptly disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment within the time frame and in the manner required by the City Administrator if the City Administrator reasonably determines that the disconnection, removal, or relocation of any part of a Micro Network Node, Network Node, Node Support Pole and related ground equipment (a) is necessary to protect the public health, safety, welfare, or City property, (b) the Micro Network Node, Network Node, Node Support Pole and related ground equipment, or portion thereof, is adversely affecting proper operation of streetlights or City property, or (c) Network Provider fails to obtain all applicable licenses, Permits, and certifications required by Law for its Micro Network Node, Network Node, Node Support Pole and related ground equipment, or use of any Location under applicable law. If the City Administrator reasonably determines that there is imminent danger to the public, then the City may immediately disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment at the Network Provider's sole cost and expense.

4. The City Administrator shall provide 90 days written notice to the Network Provider before removing a Micro Network Node, Network Node, Node Support Pole and related ground equipment under this Section, unless there is imminent danger to the public health, safety, and welfare.

5. Network Provider shall reimburse City for the City's actual cost of removal of Micro Network Node, Network Node, Node Support Pole and related ground equipment within 30 days of receiving the invoice from the City.

SECTION 9. INSTALLATION AND INSPECTIONS

A. INSTALLATION.

1. Network Provider shall, at its own cost and expense, install the Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment in a good and workmanlike manner 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. Network Provider shall, at its own cost and expense, install the Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment in a good and workmanlike manner and in accordance with the requirements promulgated by the City Administrator, as such may be amended from time to time. Network Provider's work shall be

subject to the regulation, control and direction of the City Administrator. All work done in connection with the installation, operation, maintenance, repair, modification, and/or replacement of the Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment shall be in compliance with all applicable laws, ordinances, codes, rules and regulations of the City, applicable county, the state, and the United States (“Laws”).

B. INSPECTIONS.

1. The City Administrator, or designee, may perform visual inspections of any Micro Network Node, Network Node, Node Support Pole or related ground equipment located in the Right-of-Way shall be allowed 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. The City Administrator, or designee, may perform visual inspections of any Micro Network Node, Network Node, Node Support Pole or related ground equipment located in the Right-of-Way as the City Administrator deems appropriate without notice. If the inspection requires physical contact with the Micro Network Node, Network Node, Node Support Poles or related ground equipment, the City Administrator shall provide written notice to the Network Provider within five business days of the planned inspection. Network Provider may have a representative present during such inspection.

SECTION 10. REQUIREMENTS UPON ABANDONMENT OF OBSOLETE MICRO NETWORK NODE, NETWORK NODE, NODE SUPPORT POLE AND RELATED GROUND EQUIPMENT.

1. Abandoned or obsolete Micro Network Node, Network Node, Node Support Pole and related ground equipment shall be removed 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. Network Provider shall remove Micro Network Node, Network Node, Node Support Pole and related ground equipment when such facilities are Abandoned regardless of whether or not it receives notice from the City. Unless the City sends notice that removal must be completed immediately to ensure public health, safety, and welfare, the removal must be completed within the earlier of 90 days of the Micro Network Node, Network Node, Node Support Pole and related ground equipment being Abandoned or within 90 days of receipt of written notice from the City. When Network Provider removes, or Abandons permanent structures in the Right-of-Way, the Network Provider shall notify the City Administrator in writing of such removal or Abandonment and shall file with the City Administrator the location and description of each Micro Network Node, Network Node, Node Support Pole and related ground equipment removed or Abandoned. The City Administrator may require the Network Provider to complete additional remedial measures necessary for public safety and the integrity of the Right-of-Way.

SECTION 11. GENERAL PROVISIONS.

1. **As Built Maps and Records.** Network Provider’s as built maps and records 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.

1.1 A Network Provider shall maintain accurate maps and other appropriate records of its Network Node facilities, Node Support Poles and related ground equipment as they are actually constructed in the Rights-of-Way, including, upon request, the use of Auto CAD/GIS digital format. Network Provider will provide additional maps to the City upon request.

2. Courtesy and Proper Performance. Courtesy and Proper Performance of Network provider's personnel, and contractors 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.

2.1 A Network Provider shall make citizen satisfaction a priority in using the Right-of-Way. Network Provider shall train its employees to be customer service-oriented and to positively and politely interact with citizens when dealing with issues pertaining to its Micro Network Node, Network Node, Node Support Pole and related ground equipment in the Right-of-Way. Network Provider's employees shall be clean, courteous, efficient, and neat in appearance and committed to offering the highest quality of interaction with the public. If, in the opinion of the City Administrator or designee, Network Provider is not interacting in a positive and polite manner with citizens, he or she shall request Network Provider to take all remedial steps to conform to these standards.

3. DRUG POLICY. Drug policy of Network provider's personnel, and contractors in the public rights-of-way 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.

3.1 It is the policy of the City to achieve a drug-free workforce and workplace. The manufacture, distribution, dispensation, possession, sale, or use of illegal drugs or alcohol by Network Provider's employees, contractors, subcontractors, sub-Network Provider's, or vendors while on City rights-of-way is prohibited.

4. OWNERSHIP. Ownership of Network Node and related equipment shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable codes and ordinances, except to the extent not consistent with Chapter 284.

4.1 No part of a Micro Network Node, Network Node, Node Support Pole and related ground equipment erected or placed on the Right-of-Way by Network Provider will become, or be considered by the City as being affixed to or a part of, the Right-of-Way. All portions of the Micro Network Node, Network Node, Node Support Pole and related ground equipment constructed, modified, erected, or placed by Network Provider on the Right-of-Way will be and remain the property of Network Provider and may be removed by Network Provider at any time, provided the Network Provider shall notify the City Administrator prior to any work in the Right-of-Way.

5. Tree Maintenance. Tree maintenance shall be in strict accordance with the City's rights-of-way management ordinance, its tree preservation ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

5.1 A Network Provider, its contractors, and agents shall obtain written permission from the City Manager before trimming trees hanging over its Micro Network Node, Network Node, or Node Support Pole, to prevent branches of such trees from contacting attached Micro Network Node, Network Node, or Node Support Pole. When directed by the City Administrator, Network Provider shall trim under the supervision and direction of the City Administrator. The City shall

not be liable for any damages, injuries, or claims arising from Network Provider's actions under this section.

6. Signage. Signage 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.

6.1 Network Provider shall post its name, location identifying information, and emergency telephone number in an area on the cabinet of the Network Node facility that is visible to the public. Signage required under this section shall not exceed 4" x 6", unless otherwise required by law (e.g. RF ground notification signs) or the City Administrator.

6.2 Except as required by law or by the Utility Pole owner, a Network Provider shall not post any other signage or advertising on the Micro Network Node, Network Node, Node Support Pole, Service pole or Utility Pole.

7. Graffiti Abatement. Graffiti abatement 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.

7.1 As soon as practical, but not later than fourteen (14) calendar days from the date Network Provider receives notice thereof, Network Provider shall remove all graffiti on any of its Micro Network Node, Network Node, Node Support Pole, and related ground equipment located in the Right of Way. The foregoing shall not relieve the Network Provider from complying with any City graffiti or visual blight ordinance or regulation.

8. Restoration.

8.1 A Network Provider shall restore and repair of the public rights-of-way from any damage to the Right-of-Way, or any facilities located within the Right-of-Way, and the property of any third party resulting from Network Provider's removal or relocation activities (or any other of Network Provider's activities hereunder) 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.

8.2 A Network Provider shall repair any damage to the Right-of-Way, or any facilities located within the Right-of-Way, and the property of any third party resulting from Network Provider's removal or relocation activities (or any other of Network Provider's activities hereunder) within 10 calendar days following the date of such removal or relocation, at Network Provider's sole cost and expense, including restoration of the Right-of-Way and such property to substantially the same condition as it was immediately before the date Network Provider was granted a Permit for the applicable Location or did the work at such Location (even if Network Provider did not first obtain a Permit), including restoration or replacement of any damaged trees, shrubs or other vegetation. Such repair, restoration and replacement shall be subject to the sole, reasonable approval of the City Administrator.

9. Network provider's responsibility.

9.1 A Network Provider shall be responsible and liable for the acts and omissions of the Network Provider's employees, temporary employees, officers, directors, consultants, agents, Affiliates, subsidiaries, sub-Network Provider's and subcontractors in connection with the installations of any Micro Network Node, Network Node, Node Support Pole and related ground

equipment, as if such acts or omissions were Network Provider's acts or omissions 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.

9.2 A Network Provider shall be responsible and liable for the acts and omissions of the Network Provider's employees, temporary employees, officers, directors, consultants, agents, Affiliates, subsidiaries, sub-Network Provider's and subcontractors in connection with the installations of any Micro Network Node, Network Node, Node Support Pole, Transport Facility and related ground equipment, as if such acts or omissions were Network Provider's acts or omissions.

SECTION 12. ADMINISTRATIVE HEARING – REQUEST FOR EXEMPTION

12.1 Should the Network Provider desire to deviate from any of the standards set forth in the Design Manual, the Network Provider may request an Administrative Hearing before the Planning and Zoning Commission for recommendation. The City Council shall make the final decision.

12.2 The process for an application, hearing and vote shall follow the process set out for a Special Use Permit as defined in Chapter 90, the Integrated Development Code.

SECTION 13-19 RESERVED

SECTION 20. DESIGN MANUAL - UPDATES

Placement or Modification of Micro Network Node, Network Node, Node Support Pole, Transport Facility, 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.

³ Sec. 284.002.

It is the responsibility of the owner/contractor to comply with all adopted codes by the City of Shenandoah. Additional information may be required to assure code compliance. Any oversight on the part of the city during plan review or inspection does not relieve the owner/contractor from compliance to all codes.

Plans must be onsite for each inspection.

I have read the information as stated above.

Company Name

Date

Printed Name

Signature

Email Address

Contact Number