Utility Right of Way Management Program
Standards and Provisions
March 10, 2017

The following standards and provisions are intended to provide reasonable parameters to the owners of public and private utility facilities located in the existing street Right-of-Way (R/W). As of January 1, 2008, these standards govern the installation, upgrade, relocation and maintenance of all utility facilities. Please note that the adoption of these standards is not a mandate on Utility Companies to improve their existing systems to meet the defined standards. However, the City’s expectation is that Utility Companies will comply with the standards on all future installation, upgrade, relocation and maintenance projects.

The City recognizes that the manner in which past facilities may have been installed varied depending on the environmental and economic conditions of any given location. The City further understands that accommodations may need to be made depending on the specifics of a given project. Therefore, it is the intent of the City to work closely with the Utility Companies to find a mutually agreeable solution to all reasonable requests when the standards and applicable conditions pose unique challenges. Finally, please note that quicker review times can be expected when projects have no or few deviations from the standards.

1.0 General

1.1. All utility construction and maintenance work in City-maintained streets requires a Utility R/W Work Permit issued by CDOT per City Ordinance Chapter 19 Article XIII.

1.1.1. The permit application must be submitted by the Utility Company, and then CDOT has 20 working days to respond. This timeframe applies to standard submissions for new installation requests, unless the City determines that extraordinary factors warrant a longer review period. Existing facility maintenance timeframes will be determined by CDOT on a case-by-case basis.

1.1.2. Construction should not occur or be scheduled to occur before the review is complete and an application is approved.

1.1.3. CDOT may determine, on a case-by-case basis, that a Pre-Construction Conference is warranted.

1.1.4. A copy of the Permit must be kept at the construction site.

1.1.5. As a condition of the Permit, CDOT must be notified 48 hours prior to the actual start of work.

1.1.6. As a condition of the Permit, CDOT’s Street Maintenance Division must be notified 24 hours prior to the actual start of work when the pavement is to be cut.

1.2. North Carolina General Statutes (NCGS) § 89 Article 8A, known as the “Underground Utility Safety and Damage Prevention Act” (as modified from time to time), applies to all construction covered by Permits issued by the City of Charlotte.
1.3. The current version of the Charlotte Department of Transportation’s (CDOT) Work Area Traffic Control handbook (WATCH) shall be in force when performing any work on a utility facility in the City’s streets.

1.4. These standards shall apply to all City-maintained street rights-of-way. Exceptions may be granted by the City on a case-by-case basis in the City’s sole discretion.

1.5. Note that if crossing another entity’s rights-of-way (e.g. NCDOT, rail lines, etc.), the standards and requirements of that entity may differ from, or supersede, these standards. It is the responsibility of the permit applicant to meet all applicable standards and obtain necessary property rights for right-of-way work.

1.6. All utility facilities shall be designed and installed in accordance with appropriate industry standards, applicable laws, and national and state building codes, including, but not limited to, the National Electric Code and National Electric Safety Code.

1.7. Utility entities or their representatives shall take all reasonable steps necessary to protect and structurally support existing utilities, facilities and structures within the City right-of-way.

1.8. The placement of new utility facilities or the major rebuild/upgrade of existing utility facilities shall be consistent with the proposed Urban Street Design Guidelines and associated cross-sections. The cross-sections show preferred locations under ideal conditions. Where these conditions do not exist, it may not be possible for utility facilities to be placed as shown in cross-sections.

1.9. Utilities are encouraged to consolidate their facilities, wherever commercially reasonable, onto one pole line or in one joint-trench or duct bank.

1.10. Pole lines consisting of continuous runs of distribution facilities paralizing a roadway shall be limited to one side of the roadway except when the facilities are within a 3/4 mile radius of existing or future power distribution substation. This standard does not prohibit pole lines from moving from one side of the street to the other or service lines crossing the street.

1.11. Installation of utility facilities on highway structures such as bridges or culverts is generally prohibited. CDOT will review such proposed installations on a case-by-case basis.

1.12. Any relocation involving a streetlight requires prior approval from CDOT.

1.13. All utility installations crossing signalized intersections requiring pole replacements must be bored underground. For maintenance purposes, this does not apply to pole owners.

1.14. The RAW shall be restored to the “equal or better” condition that existed prior to new installation or relocations of utilities and shall meet current accessibility guidelines.

1.15. Utilities shall maintain documentation of their respective facility locations/relocations and shall provide such documentation to the City of Charlotte upon written request. The City recognizes that some of the information provided may be proprietary in nature. In such instances, utilities shall mark clearly and with particularity the sections of information it
considers to be proprietary or otherwise not subject to the Public Records Act so that the City can make any necessary determinations regarding such information.

1.16. Vertical utility markers are not permitted within the City's right-of-way.

1.17. These Standards and Provisions are intended to provide the City with the maximum authority available to the City in the regulation of applicable structures, to comply with the City's obligations under applicable State and federal law, and to promote the public's health, safety, and welfare. Accordingly, they shall be interpreted in light of such intention and consistent with State, federal and local laws and regulations.

1.18. The proposed installation shall be built in compliance with the approved plans on file, including the as-built drawings required after completed construction.

1.19. The applicant shall submit to the City upon request, as-built drawings and photographs depicting the entire facility installation, including all transmission equipment and all utilities, within ninety (90) days after the completion of construction.

1.20. The applicant shall comply with all applicable provisions of these rules, any permit issued under these Standards and Provisions, and all other applicable federal, state, and local laws. Any failure by the City to enforce compliance with any applicable laws shall not relieve any applicant of its obligations under these Standards and Provisions or all other applicable laws and regulations.

1.21. The facility shall be developed, maintained, and operated in full compliance with the conditions of any applicable permit, and any law, statute, ordinance or other regulation applicable to any development or activity on the site. Any violation of the conditions of approval for any applicable permit, or any other law, statute, ordinance or other regulation applicable to any development or activity may result in the revocation of this permit. The remedies specified in this section shall be cumulative and the City may resort to any other remedy available at law or in equity.

1.22. The City may, at its sole discretion, allow for the testing of innovative construction methods that are not explicitly contemplated in these standards and provisions where there is mutual advantage to the City and the utility company. Upon successful evaluation, the City may amend the Standards & Provisions to incorporate the construction methods as a new practice.

2.0 Above Ground

2.1. The permit applicant must provide, if requested by the City, a report describing the technical purpose and function of the proposed facilities.

2.2. Replacement poles or pole modifications shall meet all applicable standards of the pole owner.

2.3. Where pole lines are located in the planting strip the lowest facility attached to the pole line shall be a minimum of 25 feet above existing or proposed grade. This distance will allow the City to plant small maturing trees (20 foot tall or less) with a minimum clearance to the lowest
overhead facility of 5 feet. This standard shall apply to permit requests for new facilities where three or more consecutive poles are installed.

2.4. New pole installations for electrical or telecom distribution/transmission lines are not permitted within the I-277 loop except when the applicant can demonstrate there are no suitable alternatives.

2.5. The maximum pole height above grade shall be 50 feet.

2.6. The longitudinal location of above ground facilities shall be behind the sidewalk as near as practical to the right-of-way line or easement line on a uniform alignment and as close to side property lines as possible.

2.7. If an above ground facility is determined by CDOT to be in a location that has a higher than average accident potential, CDOT may require that the facility be relocated.

2.8. Utility pole guy wires crossing an existing or proposed sidewalk shall allow a clear zone equal to the width of sidewalk plus one foot and a height of 8 feet.

2.9. Damaged poles or above ground facilities shall be "made safe" by the owner immediately following notification by CDOT. Full repair or replacement shall be scheduled to occur within 90 days or as soon as replacement materials are available.

2.10. Abandoned poles shall be removed by the owner within 30 days following notification by CDOT.

2.11. Poles and pedestals shall have a mark or tag identifying the owner.

2.12. Existing decorative/metal street light poles may, upon request of the City, be replaced by the pole owner at the cost of the applicant.

2.13. Wireless communication equipment may be attached to existing poles with the exception of historical Tryon Street lights, traffic signals, pedestrian lights or street car catenary poles. Approval must be granted from the pole owner and the City of Charlotte.

2.14. New poles may not be erected in residential areas solely for wireless communication equipment attachment unless:

2.14.1. The applicant has demonstrated that it has evaluated whether it can reasonably provide service by:

a) Installing poles outside of the residential area;

b) Installing poles in the right-of-way along a street classified on the Charlotte Regional Transportation Planning Organization’s adopted Comprehensive Transportation Plan;

c) Attaching equipment to existing poles within the right-of-way;
d) Installing poles in rights-of-way not contiguous to parcels used for single-family residential purposes, or

e) Installing poles in rights-of-way contiguous to reverse frontage parcels.

2.14.2. At least 10 days prior to submitting an application, the applicant shall complete each of the following pre-submission requirements:

a) Notify all property owners within 500 feet of proposed pole installations, measured along the public right-of-way, via a door hanger, direct mailing or other means approved by the City;

b) Host a community meeting to occur not less than 30 days after initial notice to present in reasonable detail the proposed draft plan of installation, including facility descriptions, locations, applicable screening, and aesthetic characteristics;

c) Receive and consider for a period of 30 days after the initial meeting any community comments or proposed alternative locations and designs;

d) Host a second meeting to occur not less than 35 days after the initial meeting to present in reasonable detail the proposed plan of installation, including facility descriptions, locations, relevant screening, and aesthetic characteristics.

2.14.3. The City agrees in its discretion that the permit applicant has:

a) Documented in reasonable detail its compliance with the pre-submission notification and meeting requirements;

b) Evaluated, considered in good faith, and provided written responses to reasonable design or location alternatives offered by the City, the applicable homeowners association, or affected residents during the pre-submittal period, and

c) Demonstrated that an FCC licensed wireless communications provider will be utilizing the pole for personal wireless communication services within a reasonable time after the issuance of the permit by:

1. A statement from the applicant indicating how and when the proposed facilities will be used to provide personal wireless services, and

2. One of the following, provided that if there is information that the applicant or FCC licensed entity considers to be confidential, proprietary, or otherwise exempt from the disclosure under the North Carolina Public Records Act, the applicant shall mark such sections clearly and specifically to assist the City in determining whether and how to protect such information from disclosure:
a) A copy of the applicant's FCC license;

b) A copy of the applicant's contract with an entity licensed by the FCC to provide personal wireless services;

c) An affidavit in a form provided by the City and signed by an FCC licensed entity indicating that the applicant's proposed facilities will be used within a reasonable time to provide personal wireless services, or

d) An affidavit in a form provided by the City and signed by the applicant indicating that the applicant's proposed facilities will be used within a reasonable time to provide personal wireless services by an FCC licensed entity.

2.14.4. The permit applicant shall include a written description and visual depiction of how the proposed facilities will reasonably maintain the existing aesthetic character of the neighborhood with respect to facility color, facility design, and any proposed attachments or support equipment, including but not limited to light fixtures. The applicant must match the design of any existing decorative poles to the greatest extent possible.

2.14.5. The maximum height of the pole shall be the lesser of 40 feet or the height of existing utility poles, except where in the City's discretion increased pole height is an acceptable alternative to either reduce the total number of new poles or to allow installation of a pole in a location preferred by the community. The maximum height of an antenna on top of the pole shall be no more than six feet above the height of the pole.

2.14.6. The minimum distance of the pole from any single family dwelling structure shall be at least 150% of the pole height and shall not be located directly in front of any single family dwelling located in a single family zoning district. The minimum setback distance shall be measured from the facility installation to the nearest point of a single family dwelling located in a single family zoning district.

2.14.7. The City encourages the installation of wireless transmission equipment on an existing structure for the purpose of transmitting or receiving radio frequency signals for communications purposes to avoid unreasonable duplication of wireless facilities. Collocated facilities and equipment may be separately owned and used by more than one entity.

a) All new communication facilities shall be designed and constructed to provide for collocation and utilize neutral host equipment capable of use by multiple additional wireless communication providers;

b) As a condition of installing a new pole or facility for personal wireless communication services, the owner of a new pole shall reasonably consent to allowing future requests for collocation by other providers of personal wireless services on reasonable terms and conditions that do not
discriminate between similarly situated providers of wireless communication services.

c) New wireless communication poles that cannot be collocated on an existing pole must be separated by a minimum of 400 feet from existing poles.

2.14.8. The City may, in its discretion, require additional screening to be installed in order to minimize the visual impact of any new poles or associated utility cabinets.

2.14.9. The City may, in its discretion, require that associated equipment cabinets or facilities be installed underground.

2.14.10. Nothing in these Standards and Provisions creates, or is intended to create private rights of action by individuals.

2.15. Approval must be granted through the State Historic Preservation Office and the local Historic District Commission within historical areas of the City.

3.0 Underground

3.1. Pull boxes and hand holes 4 feet by 4 feet in area or smaller shall be acceptable. Larger pull boxes, hand holes, manholes, and vaults may be permitted on a case-by-case basis as determined by CDOT.

3.2. Pull boxes and hand holes shall have a mark or tag identifying the owner.

3.3. Pull boxes, hand holes, manholes, and vaults shall not be located in driveways or within the intersection corner radius. A minimum 30-foot (20-foot in Uptown Mixed Use District) corner radius shall be recognized, where the existing corner radius is smaller. If the existing corner radius is greater, then the facility shall be placed beyond the end of the radius.

3.4. Pull boxes, hand holes, manholes and vaults, if permitted to be in pedestrian/non-motorized areas, shall have lids identifying the utility owner with a skid resistant surface. Lids shall have a minimum vertical load capacity of 20,000 lbs. in accordance with ANSI/SCTE 77 and ANSI Tier 15 test provisions. In the Uptown Mixed Use District (CBD) lids shall be one piece for boxes 30 inches by 48 inches and smaller unless otherwise approved by CDOT.

3.5. Pull box, hand hole, and manhole lids shall be flush and centered within a single section of sidewalk. Vertical surface discontinuities shall be no more than ½” maximum and that those between ¼” and ½” shall be beveled with a slope no more than 50%. Any sinking that occurs shall be repaired within 30 days of the notice from CDOT.

3.6. Conduit proposed to be installed by horizontal directional drilling shall be approved with minimum review by CDOT. Drilling details shall be provided on the construction plans and installation shall conform to the requirements noted below for horizontal directional drilling.

3.7. All proposed facility installations crossing laterally at intersection shall be drilled, bored or tunneled to minimize open cuts. If drilling, boring or tunneling are agreed upon by CDOT to
not be cost effective, then open cutting may be permitted. Micro-trenching is only allowed by special exception and will be subject to additional specified requirements.

3.8. Open cuts and trenching may be permitted by CDOT on a case-by-case basis. Open cuts, if permitted, shall conform to CDOT Street Maintenance Utility Cut Specification Manual and Attachments.

3.9. All proposed utilities shall be placed in such a way as to not interfere with the operation and maintenance of existing utilities, facilities, roadway, driveways or pedestrian walkways within the public right-of-way or easements.

3.10. Construction located within planting strips shall comply with the following guidelines:

3.10.1. Parallel conduit installation shall maintain a minimum clearance of 5 feet from the trunk of any tree within the right-of-way when trenching. When boring conduit parallel closer than 5 feet from existing tree trunks a 5" minimum bore depth will be required.

3.10.2. Pull boxes, hand holes, manholes, vaults and bore pits shall be installed outside.

3.10.3. Special attention shall be given to the placement of construction equipment (such as boring rigs and contractor vehicles) in order to avoid compaction of soil and damage to existing roots in the root protection zone areas of protected trees.

3.10.4. Temporary tree protection fencing is required to be installed prior to any trenching.

3.10.5. Variances shall be coordinated/approved by CDOT Right-of-Way Management staff and the City of Charlotte Arborist.

3.11. Vault access panels shall be placed in the sidewalk. Exceptions shall be considered by CDOT on a case-by-case basis.

3.12. Damaged facilities shall be made safe within 24 hours after notification by CDOT. Repair or replacement may take longer.

3.13. All non-metallic underground facilities shall be installed with a tracer wire providing the ability to be tracked from the surface by conventional electronic tracing technology.

4.0 Underground Construction Methods

4.1. When Horizontal Directional Drilling, a three foot (3') minimum depth shall be used and should follow the construction and safety practices as described in the "Horizontal Directional Drilling Installation Guidelines" manual, current edition, published by the National Utility Contractors Association (NUCA).

4.2. Jack Sleeve and Bore
4.2.1. Jack Sleeve and Bore operations should follow the construction and safety practices as described in the "Guide to Pipe Jacking and Micro Tunneling Design" manual, current edition, published by the National Utility Contractors Association (NUCA).

4.2.2. All bore pits less than 5 feet deep shall be minimum distance of 5 feet from the back of curb or from the edge of pavement. All bore pits 5 feet deep or greater shall be a minimum distance from the back of curb or from the edge of pavement based on a ratio of one foot of separation per one foot of depth. By example, a 10 foot deep bore pit shall be a minimum of 10 feet from the back of curb or edge of pavement.

4.2.3. Bore pits shall be protected and made safe by fencing around or plating over.

5.0 Other Provisions

5.1. The City’s permit approval does not authorize any construction on private property, rail right-of-way, utility easement, or state-maintained streets. Any crossing or parallel routing of a system along state maintained streets requires an Encroachment Agreement with the North Carolina Department of Transportation (NCDOT). To obtain a NCDOT Encroachment Agreement in the Charlotte area, contact 704-596-6900.

5.2. Steel plates and construction signs shall have a mark or tag identifying the owner.

5.3. All right-of-way lines are to be shown on submitted plans. City tax plat information is not to be used as right-of-way data. Review of the utility plans by the City is not an approval or verification of right-of-way lines shown on the plans. The City of Charlotte does not guarantee the right-of-way of the road, nor will it be responsible for claims for damages brought by any property owner.

5.4. The contractor shall utilize door hangers, telephone contact, e-mail contact or some other form of notice to notify residents and businesses of pending utility work when the work is of such magnitude and duration that is will unduly limit access or damage the property such as blocking or closing driveways for extended periods of time or open cut excavation. Door hangers shall include the project name; a brief description; the contractor's 24-hour contact information; and the proposed schedule for work in the immediate area. The contractor shall distribute the door hangers to provide a minimum advance notice of 5 days and 7 days within the Uptown CBD area. This does not apply to emergency situations.

5.5. The contractor shall comply with requirements of the City’s Noise Ordinance.

5.6. Special attention shall be given to the placement of construction equipment (such as boring rigs and contractor vehicles) and materials to comply with City Ordinance 19-245, "Obstructions to cross visibility at intersections."

5.7. The contractor shall not close or block sidewalk on both sides of a street or more than two consecutive blocks on the same side of the street.

5.8. Restoration of all improvements shall be completed on a block-by-block basis to reestablish functionality of the right-of-way as soon as possible. The contractor must begin restoration of the “first” block upon starting new installation of the “second” block. In-lieu of this
requirement a temporary and permanent restoration plan prescribing specific restoration phasing may be included with the permit application.

5.9. CDOT shall be provided notice of the final inspection upon completion of the installation. All punch list items shall be addressed within 30 days.

6.0 Above Ground Structures

6.1. New or expanded above-ground utility facilities (other than poles and facilities located on poles) such as pedestals, terminals, cross boxes, interfaces, remote terminals, and other item of industry standard nomenclature ("above-ground structure") that are part of a utility’s distribution system (i.e., does not include facilities or devices that primarily serve individual properties) may be located in the right-of-way only upon issuance of a permit in accordance with the standards set forth below. Above-ground structures shall not interfere with the operation and maintenance of existing utilities, facilities, roadways or walkways within the public right-of-way. Provide GIS coordinates indicating proposed cabinet locations.

6.2. In determining whether to issue a permit for a new or expanded above ground structure in the right-of-way, the Director shall consider whether the structure would create an unacceptable sight obstruction or other safety hazards while considering the location criteria listed below.

6.3. Above Ground Structure Location Criteria: In approving a permit for a new or expanded above-ground structure, the following are preferred locations that minimize the aesthetic impact of the proposed above ground structure.

6.3.1. Dead end streets
6.3.2. Property line between two homes
6.3.3. Heavily wooded areas
6.3.4. Corner lot side yards
6.3.5. In front of residential privacy fences
6.3.6. Next to existing above ground structures
6.3.7. Outside the line of sight from driveways/intersections
6.3.8. Back of City right-of-way
6.3.9. Cabinets are to be placed so that doors do not swing into the sidewalk pedestrian area

Screening on above ground structures still may be necessary on a case-by-case basis and will use the following suggested City Landscape Management list of hardy shrubs suitable for utility cabinet screening:

- Japanese Holly
- Burford Holly
- Emily Brunner Holly
- Hetzi Holly
- Hetzi Juniper
- Inkberry Holly
- Japanese Acuba
- Yaupon Holly
- English Laurel
- Japanese Yew
- Leatherleaf Viburnum

In the event that screening, appearance, or other conditions are not adequate to minimize the impact of the structure, additional reasonable camouflage may be required or the permit may be denied.